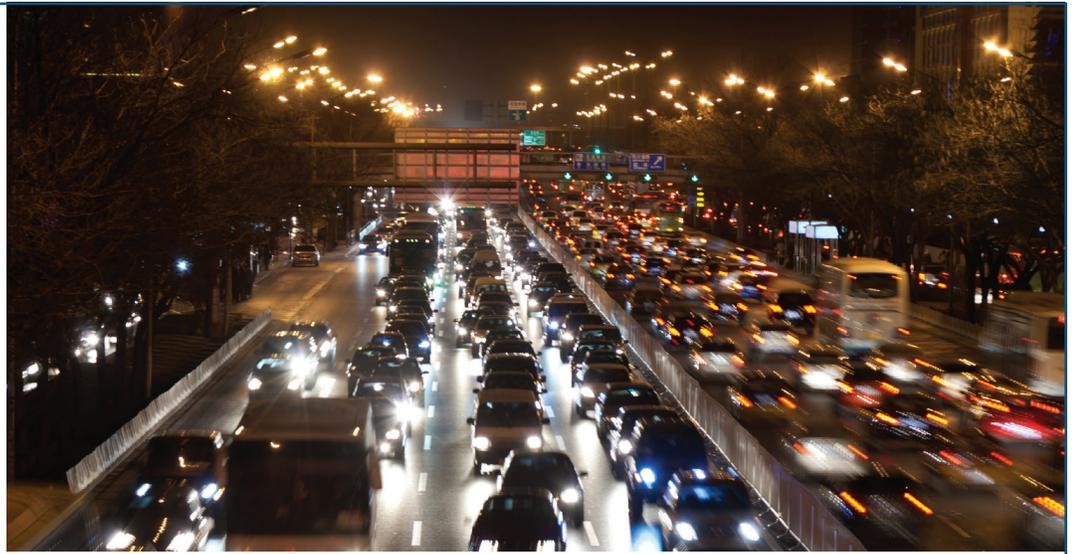




TRADE, ECONOMIC,
AND ENERGY AFFAIRS



CHINESE GOVERNMENT SUPPORT FOR NEW ENERGY VEHICLES AS A TRADE BATTLEGROUND

MARIKA HELLER

China is the world's fastest-growing auto market, with more than 23.6 million vehicles sold in 2016.¹ By 2020, China is projected to have around 300 million automobiles, which would surpass the current U.S. fleet of 265 million.² Although this growth will boost jobs and economic output and increase mobility for the Chinese populace, it will also be a major contributor to the country's severe air pollution crisis, which remains largely unmitigated. Indeed, in January 2017, for the first time ever, China declared a national red alert on air pollution for its northeastern cities after PM2.5 levels (the air particulate matter considered extremely hazardous to human health) reached over one hundred times World Health Organization guidelines.³ In early April the northern cities of Beijing, Tianjin, and Hebei were shrouded in severe smog again, and on April 3 Beijing upgraded its air pollution alert to orange, the second-highest level.⁴ Emissions source assessments conducted in nine of China's largest cities indicate that from 15% to as high as 50% of PM2.5 can be attributed to transportation, mostly automobiles.⁵



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¹ "2016 (Full Year) International Worldwide Car sales," <http://www.best-selling-cars.com/international/2016-full-year-international-worldwide-car-sales>.

² Jack Perkowski, "China's Auto Industry: Alive and Well," *Forbes*, March 4, 2016, <https://www.forbes.com/sites/jackperkowski/2016/03/04/chinas-auto-industry-alive-and-well/#3b031b655389>.

³ "Air Pollution in Northern Chinese City Surpasses WHO Guideline by 100 Times," Reuters, December 19, 2016, <http://www.reuters.com/article/us-china-pollution-idUSKBN1480XM>.

⁴ "Beijing Issues Air Pollution Orange Alert," Xinhua, April 3, 2017, http://news.xinhuanet.com/english/2017-04/03/c_136180342.htm.

⁵ Hui He, "China's Latest Step Forward on Vehicle Emissions Regulation," International Council on Clean Transportation, July 11, 2017, <http://www.theicct.org/blogs/staff/latest-step-forward-on-china-vehicle-emissions-regulation>.

As the world's largest developing country, China has the immense challenge of balancing economic growth with environmental sustainability, and so far it has been a proactive environmental steward in the global effort to combat climate change. Most recently, China reaffirmed its commitment to the UN Paris Climate Agreement and has taken on the mantle of leadership after President Donald Trump announced he was withdrawing the United States from the global agreement on climate change. However, given the incredible scale of overall demand and the ongoing need to promote sustainable development, the growth in the auto sector could affect China's aim to peak its carbon dioxide emissions by 2030.⁶ In particular, China's carbon emissions from vehicles are estimated to rise by 80% to around 1.3 billion tons of carbon dioxide from a 2014 level of approximately 730 million tons.⁷

In order for China to meet its 2020 emissions target to reduce its overall carbon intensity by 18% from 2016, the Ministry of Environmental Protection and Ministry of Industry and Information Technology are pursuing numerous policies to cut vehicle emissions. These include stringent vehicle emissions standards, a cap-and-trade system, and the overall promotion of new energy vehicles (NEV). Of these tools, China's policies on NEVs—a category that includes plug-in hybrid electric vehicles, battery electric vehicles, and fuel-cell electric vehicles—are particularly noteworthy because of their potential both to significantly curtail emissions and to have an impact on foreign manufacturers of NEVs. On September 10, Xin Guobin, vice minister of the Ministry of Industry and Information Technology, the main auto industry regulator in China, stated that the government was working on a timetable to ban the manufacture and sale of cars with traditional fuel engines. This move will have a significant impact on the long-term operations of U.S. auto manufacturers in China, which increasingly rely on sales from the world's fastest-growing auto market.⁸ The Chinese government has prioritized NEV manufacturing for environmental as well as economic

reasons as it steers China into an innovation-driven economy. However, like championed industries in the past, the support for the domestic NEV industry could threaten foreign manufacturers by cutting them out of a critical market, mandating technology transfers that risk corporate intellectual property, or reducing the price of NEVs below competitive market value.

This essay begins by examining Chinese policies that support the development of NEVs and then follows with an analysis of the impact of these policies on foreign auto firms operating within China. It then argues that a trade crisis sparked between the United States and China could stem from the auto industry, as Beijing would retaliate against any U.S. market access restriction by expanding its protectionist NEV policies to affect U.S. auto companies. This scenario grew even more likely with the withdrawal of the United States from the Paris Climate Agreement, and it continues to be a concern after President Trump flagged intellectual property as a key issue in the U.S.-China trade relationship in his August 14 memorandum to U.S. trade representative Robert Lighthizer, who then launched an official investigation into whether China's trade practices "may be harming American intellectual property rights, innovation, or technology development."⁹ The investigation will reportedly also seek to address concerns over China's efforts to dominate the electric vehicle industry. In the past few months, the Trump administration has grown wary of the Chinese government-led effort to make China a leader in electric cars. Yet if the administration targets China's electric vehicle policies, Beijing is likely to take reciprocal actions to protect what it deems a strategically important industry.¹⁰

Overview of China's NEV Policies

China's five key policy support tools for NEVs include reduced taxes, direct subsidies to manufacturers, consumer subsidies, mandated government procurements, and the industrial policy Made in China 2025 (MIC2025). China's industrial

⁶ BP plc, "BP Energy Outlook 2030," January 2016, 33, <http://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2016/bp-energy-outlook-2011.pdf>.

⁷ Zheng Bo, "Cars a Threat to China's 2030 CO2 Peak," *China Dialogue*, August 14, 2015, <https://www.chinadialogue.net/article/show/single/en/8115-Cars-a-threat-to-China-s-2-3-CO2-peak>.

⁸ "China Formulates National Smart Car Industry Strategy," *Xinhua*, September 10, 2017, http://news.xinhuanet.com/english/2017-09/10/c_136598784.htm.

⁹ "Presidential Memorandum for the United States Trade Representative," White House, Office of the Press Secretary, August 14, 2017, <https://www.whitehouse.gov/the-press-office/2017/08/14/presidential-memorandum-united-states-trade-representative>.

¹⁰ Keith Bradsher, "Trump Administration Is Said to Open Broad Inquiry into China's Trade Practices," *New York Times*, August 1, 2017, <https://www.nytimes.com/2017/08/01/business/trump-china-trade-intellectual-property-section-301.html>.

support for NEVs began in the early 1990s with government financial support to develop the industry. As early as 2008, China's Ministry of Finance and the Taxation Services General Office announced that NEVs would be exempt from the standard consumption tax that consumers pay on new automobiles.¹¹ In 2009, the report "Guidelines for Adjusting and Promoting the Automobile Industry" included a three-year plan to build NEV infrastructure through a system of taxes and fees.¹²

Manufacturer subsidies are the second policy tool used to promote NEV development. For years, China has provided immense support for NEVs by spending billions of dollars in direct subsidies to manufacturers. For example, Shenzhen-based manufacturer BYD received \$435 million in subsidies between 2010 and 2015, making it the state-sponsored champion of electric and hybrid vehicles in China. In addition, as part of China's 2012 "Energy-Saving and New Energy Vehicle Industry Development Plan (2012–2020)," the central government allocated over \$15 billion to support the development of energy-efficient vehicles and NEVs, pilot car projects, and electric vehicle infrastructure.¹³

Third, the central government began a consumer subsidy program in 2010 for the purchase of NEVs, providing 60,000 yuan (approximately \$8,700) and 50,000 yuan (approximately \$7,250) per car in subsidies for electric vehicles and plug-in hybrid vehicles, respectively, covering 40%–60% of the cost of the vehicle.¹⁴ Furthermore, to qualify for these subsidies, car models must utilize government-approved NEV battery models—a policy that in the past has favored Chinese lithium-ion-phosphate

batteries over foreign "ternary" lithium-ion batteries. Local governments also created their own subsidy programs that provided additional discounts for NEV purchases through cash subsidies, free parking, or free license plates. In Shanghai, NEVs receive cash subsidies and have their license plate fee waived, which provides a large incentive given that license plates can auction for around 100,000 yuan (approximately \$14,500). Beijing has a matching program, instituted in 2014, whereby the local government provides subsidies equal to those of the central government, doubling the discount for consumers for up to 60% of the cost of the vehicle.¹⁵

The fourth government policy tool for NEVs is to stimulate demand through government procurement contracts that mandate government fleets to include a certain proportion of NEVs.¹⁶ In 2014 the central government began requiring that at least 30% of its vehicle purchases be NEVs by 2016, and it raised that figure to over 50% in February 2016.¹⁷ This policy helped absorb the increase in NEV production that was stimulated by subsidies to manufacturers.

The final and most controversial principal driver shaping the country's NEV policies is the MIC2025 industrial policy, which emphasizes supporting indigenous technology. MIC2025 was enacted in 2015 to encourage the domestic development of ten key strategic industries, including energy-saving vehicles and NEVs. The policy is a continuation of China's "indigenous innovation" (*zizhu chuangxin*) policy that first emerged in the State Council's 2006 "National Medium- and Long-Term Science and Technology Development Plan," which included electric vehicle development as a pillar of domestic technological innovation.¹⁸ The next section

11 "Zhongguo xinnengyuan qiche tuiguang zhengce (zhongyang + defang) quan jixim" [China's NEV Promotion Policies (Central + Local) Comprehensive Analysis], Tengxun Auto, January 21, 2016, <http://auto.qq.com/a/20160121/020348.htm>.

12 Rachel Tang, "China's Auto Sector Development and Policies: Issues and Implications," Congressional Research Service, CRS Report for Congress, R40924, June 25, 2012, 19, <https://www.hsdl.org/?view&did=718658>.

13 "China Promotes Both Fuel Efficiency and Alternative-Fuel Vehicles to Curb Growing Oil Use," U.S. Energy Information Administration, May 13, 2014, <https://www.eia.gov/todayinenergy/detail.php?id=16251>

14 "Zhongguo xinnengyuan qiche tuiguang zhengce (zhongyang + defang) quan jixim"; In-Soo Nam, "Samsung SDI, LG Chem Face Setback in China on Electric-Car Batteries," *Wall Street Journal*, June 21, 2016, <https://www.wsj.com/articles/samsung-sdi-lg-chem-face-setback-in-china-on-electric-car-batteries-1466496080>; and Sabrina Howell, Henry Lee, and Adam Heal, "Leapfrogging or Stalling Out? Electric Vehicles in China," Harvard Kennedy School, Faculty Research Working Paper Series, RWP14-035, May 2014, 41.

15 Mei Feng, "2017 Xinnengyuan butie zhengce" [2017 NEV Subsidy Policy], YJBYS, March 6, 2017, <http://www.yjbys.com/wage/246954.html>.

16 "China Requires 30% of State Cars Use Alternative Energy," Bloomberg, July 13, 2014, <https://www.bloomberg.com/news/articles/2014-07-13/china-targets-30-new-government-vehicles-use-alternative-energy>.

17 "Guowuyuan: Zhengfu bumen ji gongong jigou xingou xinnengyuan qiche bili yao chao 50%" [State Council: Government and Public Organizations NEVs as Proportion of New Purchases Will Surpass 50%], *Caijing*, February 24, 2016, <http://industry.caijing.com.cn/20160224/4074093.shtml>

18 State Council of the People's Republic of China, [Guojia zhongchangqi kexue he jishu fazhan guihua gangyao (2006–2020nian)] [National Medium and Long Term Science and Technology Development Plan (2006–20)] (Beijing, 2006), http://www.gov.cn/jrzq/2006-02/09/content_183787.htm.

will discuss how MIC2025 and the other NEV policies have affected foreign auto firms.

Impact on Foreign Firms

There are two major policies in the MIC2025 initiative that directly affect foreign firms manufacturing NEVs in China. The first, titled “‘Made in China 2025’ Interpretation: To Promote Energy Conservation and the Development of New Energy Vehicles,” was published in May 2016 by the Ministry of Industry and Information Technology. It calls for indigenous electric vehicles and plug-in hybrids to have over 70% of the domestic market by the year 2020 and for NEVs to reach over 80% of the domestic market by 2025.¹⁹ Both the U.S. Chamber of Commerce and the EU Chamber of Commerce released reports in March 2017 voicing concerns over the barriers that the MIC2025 initiative has created for foreign companies involved in NEV development.

Furthermore, foreign governments are concerned by potential NEV-related technology transfers originating from MIC2025 policies. A law introduced on January 7, 2017, as a part of the MIC2025 initiative called the “Administrative Regulations on Market Access of New-Energy Automobile Manufacturers and Products” states that joint ventures must prove they have “mastered” all elements of NEV technology before being permitted to produce in China, raising concerns among foreign auto firms that this could mandate technology transfers to Chinese joint-venture partners.²⁰ The EU Chamber of Commerce in Beijing issued a report on March 7 deriding the law as forcing foreign firms to transfer “critical know-how,” including software codes, to joint-venture partners.²¹ Previously,

foreign firms were required to transfer just one of three essential technologies to their Chinese joint-venture partner in order to operate. According to the U.S. Chamber of Commerce, firms are concerned that this new regulation will require full technology transfers for NEV autos such that all intellectual property must be registered under the local joint venture (rather than the foreign home company). This exacerbates concerns that China will erect market barriers once the technological gap between foreign and Chinese auto manufacturers has been eradicated.²²

The Ministry of Industry and Information Technology released a previous technology transfer policy in 2009 that required domestic Chinese auto manufacturers to display a mastery of only three key electric vehicle components—the motor, inverter, and battery—to be able to sell these vehicles, independent of whether these parts were imported.²³ The 2009 policy aimed to pressure foreign auto manufacturers to transfer the technical know-how of important electric vehicle components as a condition for market access, which would make domestic electric vehicle producers more globally competitive. Though lenient in comparison to what replaced it, this policy at the time solidified foreign companies’ resolve to not manufacture electric vehicles in China—even if that meant that their electric vehicles were then ineligible for subsidies and therefore priced out of the market—because they were already afraid of technology transfers. In March 2017, Chinese officials attempted to assuage these fears by stating that technology transfers in the NEV industry would not be required, asserting that there was a “misunderstanding” and that it was “not mandatory for foreign-funded enterprises to transfer technology to China.”²⁴ However, foreign firms remain skeptical of government claims that technology transfers will not be necessary to comply with the regulations.

In general, government subsidies make it challenging for foreign auto firms to compete in China’s NEV market, despite their vehicles typically having more advanced

¹⁹ Ministry of Industry and Information Technology (PRC), “Zhongguo zhizao 2025’ jieshi zhi: Tuiguang jieneng yu xinnengyuan qiche fazhan” [“Made in China 2025” Interpretation: To Promote Energy Conservation and the Development of New Energy Vehicles] (Beijing, 2016), http://www.gov.cn/zhuanti/2016-05/12/content_5072762.htm.

²⁰ Ministry of Industry and Information Technology (PRC), “Provisions on the Administration of New Energy Automobile Production Enterprises and Products,” 2017, <http://www.miit.gov.cn/n1146290/n4388791/c5466114/content.html>; and Charles Clover, “Foreign Carmakers on Edge Despite China Tech Transfer Assurances,” *Financial Times*, March 29, 2017, <https://www.ft.com/content/adb80896-1462-11e7-80f4-13e067d5072c>.

²¹ “China Manufacturing 2025: Putting Industrial Policy Ahead of Market Forces,” EU Chamber of Commerce, 2017, <http://www.europeanchamber.com.cn/en/china-manufacturing-2025>.

²² U.S. Chamber of Commerce, “Made in China 2025: Global Ambitions Built on Local Protections,” 2017, 27, https://www.uschamber.com/sites/default/files/final_made_in_china_2025_report_full.pdf.

²³ Howell, Lee, and Heal, “Leapfrogging or Stalling Out?”

²⁴ Clover, “Foreign Carmakers on Edge.”

and efficient technology as well as superior range.²⁵ Although “range anxiety”—the fear of running out of electric power before reaching a charging station—can be an important factor that shapes buying habits, import tariffs on foreign autos, as well as lower-priced batteries for subsidized Chinese manufacturers, cause many domestic Chinese consumers to favor Chinese NEVs.²⁶ Moreover, China could still deny U.S. or other foreign auto firms the certification for their hybrid or electric car technology. For example, Samsung and LG—leaders in ternary lithium-ion batteries—built large battery manufacturing facilities within China in order to avoid paying high tariffs on imports.²⁷ In June 2016, however, the South Korean companies had their batteries denied certification for undisclosed reasons. A month later they were excluded from the government’s approved list of NEV batteries, thereby disqualifying any cars using these batteries—mostly foreign vehicles—from receiving the NEV subsidies.²⁸

²⁵ While some Chinese electric vehicles struggle to reach the requirement to go 30 miles on a single charge to be exempt from the 10% state sales tax on cars, many foreign electric vehicles have a range of at least 100 miles on a single charge (and as high as 315 miles in the case of Tesla).

²⁶ Chris Mooney, “‘Range Anxiety’ Is Scaring People Away from Electric Cars—But the Fear May Be Overblown,” *Washington Post*, August 15, 2016, https://www.washingtonpost.com/news/energy-environment/wp/2016/08/15/range-anxiety-scars-people-away-from-electric-cars-why-the-fear-could-be-overblown/?utm_term=.96c95ae5698b; and Bertel Schmitt, “40% Price Drop on Chinese EV Batteries Spells Trouble for Tesla,” *Forbes*, January 19, 2017, <https://www.forbes.com/sites/bertelschmitt/2017/01/19/40-price-drop-on-chinese-ev-batteries-spells-trouble-for-tesla/#33df7d026189>.

²⁷ Some South Korean publications reported that the two companies were excluded because their battery manufacturing facilities had been in operation for less than a year, a prerequisite that was not mentioned in the official Chinese government documents. See Jason Deign, “South Korean Battery Makers Face a Surprise Challenge in China,” *Greentech Media*, June 30, 2016, <https://www.greentechmedia.com/articles/read/South-Korean-Battery-Makers-Face-a-Surprise-Challenge-in-China>. Other analysts believe that the two firms were denied inclusion on the green battery list for geopolitical reasons, as tense relations erupted between China and South Korea when South Korea agreed to deploy the Terminal High Altitude Area Defense (THAAD) missile shield system with the United States. China sees THAAD as an expansion of a U.S. containment strategy to weaken its military capacity rather than solely as a protective missile defense system against North Korean missiles. Other South Korean businesses, specifically the department store chain Lotte, have been the target of forced government shutdowns, inspections, public protests, and boycotts in China due to the deployment of THAAD. Lotte had 87 of its 99 stores in China shut down by the government and consequently decided to sell its Chinese stores. Work on its theme park was also suspended because it allowed the South Korean government to use part of one of its properties in South Korea to lodge THAAD. See Jethro Mullen and Paula Hancocks, “South Korean Company to China: Don’t Blame Us for THAAD Missiles,” *CNN Money*, April 4, 2017, <http://money.cnn.com/2017/04/03/news/economy/lotte-south-korea-china-thaad-shin-dong-bin>.

²⁸ In-Soo Nam, “Samsung SDI, LG Chem Face Setback in China on Electric-Car Batteries,” *Washington Post*, June 21, 2016, <https://www.wsj.com/articles/samsung-sdi-lg-chem-face-setback-in-china-on-electric-car-batteries-1466496080>.

U.S. auto manufacturers are wary that worsening foreign relations between China and the United States could provoke similar treatment of their technology and products. China is now General Motors’ largest market by sales. The company sold 3.87 million cars there in 2016, which helped it sell a record 10 million cars in one year and generate a record operating profit of \$12.5 billion.²⁹ Meanwhile, Ford has made huge strategic shifts to emphasize growth in the Chinese market, where it sold over 1 million cars last year. China is now the company’s largest foreign market. Ford’s strategy relies on growing demand for SUVs in China and the expectation that the country’s luxury sedan market will increase 60% by 2025.³⁰ U.S. automakers will not necessarily benefit greatly from having tariffs on imports lowered because there are significant benefits to manufacturing large consumer products such as autos within the market where they are sold, including lower transportation costs, greater flexibility to meet changing demand, and often lower local wages. However, automakers are likely to turn to the U.S. government to advocate on their behalf on other concerns, such as improved protection of intellectual property rights and the removal of trade barriers for component parts in their supply chains.

U.S.-China Trade Dynamics and NEVs

In the lead-up to the Trump-Xi Summit in April 2017, a widely circulated report by Axios stated that senior White House officials were preparing to pursue what they deem unfair Chinese trade practices in the auto industry during discussions with China.³¹ The *New York Times* then reported that former treasury secretary Lawrence Summers flagged auto trade during a closed-door meeting with Premier Li Keqiang.³² On March 22,

²⁹ Chris Isidore, “GM Sells 10 Million Cars for First Time Thanks to China,” *CNN*, February 7, 2017, <http://money.cnn.com/2017/02/07/news/companies/gm-record-sales-profits/index.html>; and Phoenix Kwong, “China 2016 Car Sales Surge at Fastest Rate in Three Years,” *South China Morning Post*, January 12, 2017, <http://www.scmp.com/business/china-business/article/2061642/china-2016-car-sales-surge-fastest-rate-three-years>.

³⁰ “China’s Car Sales Have Been on a 26-Year Record Streak,” *Bloomberg*, December 8, 2016, <https://www.bloomberg.com/news/articles/2016-12-08/china-wraps-up-26th-straight-car-sales-record-with-month-to-go>.

³¹ Jonathan Swan, “Car Wars: Trump Plans Auto Fight with China,” *Axios*, March 19, 2017, <https://www.axios.com/trump-preparing-to-confront-china-over-cars-2320999602.html>.

China responded with an unofficial warning in an article published in the *Global Times*, a state-run nationalist newspaper, that should the United States target China's auto industry, U.S. auto manufacturers in China would lose the most, given that the Chinese government would respond firmly.³³

Therefore, there is a possibility that any trade showdown between the United States and China—sparked by a deterioration of the overall economic relationship—could begin with the auto industry. For example, if the U.S. government hit China with barriers to entry into the auto market, China would likely respond with direct and indirect retaliatory measures involving countervailing duties against autos and auto parts imported from abroad, as well as regulatory barriers that would either reduce market access for U.S. firms or magnify pressure for technology transfers to local joint-venture partners.

China could also try to use its 2008 Anti-Monopoly Law to fine foreign auto firms, as it has done in the past, but the structure of the Chinese auto market makes this a conundrum for the central government. The country's high import tariff, currently 25% on autos manufactured abroad, compelled U.S. companies early on to manufacture within China, providing it with welcomed FDI and job opportunities.³⁴ In addition, the Chinese government mandated in 1982 that foreign auto firms could only manufacture in China under joint-venture partnerships with Chinese manufacturers and limited foreign ownership to no more than 50%. Due to this structure, implementation of the Anti-Monopoly Law would also harm Chinese joint-venture partners—often state-owned enterprises with strong government connections—given that it is difficult to fine only the parent foreign company of a joint venture through the law.

With this in mind, China would likely implement more strategic retaliatory measures against U.S. auto firms operating within China, such as regulations on critical technology imported by foreign firms. China's climate change and air pollution goals would provide a good cover for this set of protectionist policies—particularly those that promote domestic NEV technology—that could be expanded to harm market share for U.S. auto firms. The likelihood of this scenario also increased with the U.S. withdrawal from the Paris Agreement. U.S. auto manufacturers could either become associated with the United States as a “bad actor” or lose global competitiveness were they to lose momentum in the NEV and fuel-efficiency markets as a result of lower domestic regulations. Given these possible implications, U.S. auto manufacturers will likely petition the Trump administration to not intercede too forcefully on their behalf. China is a key component of every U.S. automaker's future growth strategy as sales in China become a larger portion of their total sales and as domestic sales peak. No other foreign market presents the same growth potential as the world's fastest-growing auto market.

Earlier this year, both China and the United States took steps to mitigate tensions that could escalate to trade disputes through improved relations and by creating opportunities for cooperation. The Trump-Xi Summit established a strong rapport between the two leaders that Trump even characterized as the building of a friendship. The 100-day trade plan that resulted from the meeting also created initial steps for engagement, although thus far the outcomes have yielded only low-hanging fruit that China had already ceded, such as granting market entrance for electronic payment companies like Visa and MasterCard, allowing U.S. beef exports to China, and expanding market access to China's financial services industry. China and the United States held the bilateral Comprehensive Economic Dialogue (CED) in July, which was the first meeting of the mechanism that is replacing the Obama administration's Strategic and Economic Dialogue. However, the CED yielded very little, and the recent launch of an investigation by the U.S. trade representative into China's trade practices on intellectual property has once again ratcheted up the risk of a trade

³² Keith Bradsher, “China's Taxes on Imported Cars Feed Trade Tensions with U.S.,” *New York Times*, March 20, 2017, <https://www.nytimes.com/2017/03/20/business/economy/china-us-trade-tariffs.html>.

³³ Wang Cong, “U.S. Auto Makers at Risk if Trump Targets China's Industry,” *Global Times*, March 22, 2017, <http://www.globaltimes.cn/content/1039085.shtml>.

³⁴ Keith Bradsher and Karl Russell, “Building Trade Walls,” *New York Times*, March 7, 2017, <https://www.nytimes.com/interactive/2017/business/trade-china-protectionism.html>.

showdown. Trump reportedly said in a closed-door White House meeting that he strongly desires more tariffs against China, telling his newly appointed chief of staff John Kelly, “I know there are some globalists in the room right now. And they don’t want them, John, they don’t want the tariffs. But I’m telling you, I want tariffs.”³⁵ Unfortunately, predicting outcomes in the current political climate can be an exercise in futility. What is certain is the business risk conjured from an unstable trade relationship between the world’s two largest economies, with NEVs at the front line of a prospective trade war.

Conclusion

China’s policy tools to combat climate change by championing NEVs created concerns for foreign automakers over mandated technology transfers and uncompetitive practices that favor domestic manufacturers. The Trump administration has previously cited the auto industry as a key area where it hopes to improve trade relations by increasing market access for U.S. auto manufacturers exporting U.S.-made cars. But manufacturers stand to lose more than they would gain if Trump were to push for greater access for U.S.-manufactured vehicles. A nuanced trade policy may be challenging to implement under leadership that is still learning the fundamentals of trade and tariff policies and does not fully understand the repercussions of different policy tools, such as Section 301 or Section 302 trade investigations.

Auto manufacturers will be best served by educating the administration on issues that they are concerned about—such as technology transfers and potential retaliatory measures that result from bilateral disputes—while buffering against trade measures in China by reinforcing government relations and their reputations as responsible players in the Chinese economy. In fact, recent decisions by U.S. automakers to build NEVs inside China could be a way to comply with new regulations while ensuring market access during any future

bilateral trade disputes. Manufacturing NEVs in China also demonstrates that foreign firms are responsible stakeholders in the government’s mission to combat climate change and promote the domestic NEV industry. Thus, similar to how joint-venture partnerships can help shield foreign firms from trade disputes, a NEV operation in China could protect companies from government retribution should bilateral relations deteriorate.

The policy tools of reduced taxes, subsidies, government procurement, and the MIC2025 plan have greatly boosted the production of NEVs in China, with sales quadrupling in 2016 to 351,000 vehicles.³⁶ The support programs have been so robust that hundreds of NEV automakers proliferated in China. Many companies exploited the subsidies by manufacturing cheap, subpar vehicles and then purchasing the vehicles through their own secondary companies, pocketing the subsidies greater than the cost of production for the vehicles and defrauding the government of at least 1 billion yuan (roughly \$147 million).³⁷

Last year the government cracked down and released a series of regulatory measures to consolidate the industry and prosecute violators of the subsidy program. These measures included increasing the regulatory standards to make it more difficult to qualify to manufacture NEVs in China. The central government also vowed to wind down subsidies, with 20% cuts from 2017 to 2018 and 40% cuts from 2019 to 2020.³⁸ The subsidy program will be superseded by mandated manufacturing quotas, in which NEVs must make up at least 8% of an auto manufacturer’s production by 2018, or manufacturers must buy credits for produced NEVs from other manufacturers. The quota system is part of the national cap-and-trade system that began this year. Both domestic and foreign firms fear

³⁵ Everett Rosenfeld, “Trump Reportedly Demands China Action: ‘I Want Tariffs. And I Want Someone to Bring Me Some Tariffs,’” CNBC, August 27, 2017.

³⁶ Mark L. Clifford, “Chinese Government Subsidies Play Major Part in Electric Car Maker BYD’s Rise,” *Forbes*, July 26, 2016, <https://www.forbes.com/sites/mclifford/2016/07/26/with-a-little-help-from-its-friends-lavish-chinese-government-help-for-top-electric-car-maker-byd/#50fd495f115e>.

³⁷ Laura He, “Crackdown on Electric-Vehicle Subsidy Cheats Expected to Favour Industry Leaders,” *South China Morning Post*, September 14, 2016, <http://www.scmp.com/business/companies/article/2019315/crackdown-electric-vehicle-subsidy-cheats-expected-favour>.

³⁸ “China Plans to End New-Energy Vehicles Subsidies after 2020,” Bloomberg, January 23, 2016, <https://www.bloomberg.com/news/articles/2016-01-23/china-plans-to-end-new-energy-vehicles-subsidies-after-2020>.

that supply-driven mandates for production quotas not determined by consumer demand will result in thousands of unsold NEVs and large production losses.

As a consequence of the new NEV quota system, foreign automakers in Germany, the United States, and South Korea have announced that they will build new NEV models in China for the first time, despite continued concerns over technology transfer mandates. Japan's Toyota even announced what it termed an "agonizing" U-turn in its business strategy to divert resources from developing hydrogen vehicles in favor of producing a fully electric vehicle by 2020. The decision was in response to the quota system that only counts fully electric vehicles. Toyota's flagship hybrid, the Prius, will not qualify for the NEV quotas, demonstrating that the quotas are already acting as market impediments.³⁹ Tesla, Daimler, and General Motors all announced this year that they will begin manufacturing electric vehicles in China. Ford reported in August that it may establish a joint venture with Chinese company Zotye Auto to build a new brand of electric vehicles, and it already plans to offer hybrid or fully electric vehicles of all models built in

³⁹ Norihiko Shirouzu, "Hybrid Blues: China Policies Force Toyota into Electric U-Turn," Reuters, April 19, 2017. <http://www.reuters.com/article/us-autoshow-shanghai-electric-idUSKBN17L1VC>.

China with its joint-venture partner Chongqing Changan Auto by 2025.⁴⁰ Therefore, global auto companies are responding to the Chinese government's efforts to impel NEV industry growth by complying with new domestic policies and building supply chains to be within the bounds of impending production mandates.

The question remains as to whether these companies will be able to protect their core NEV intellectual property that gives them advantages over domestic firms once they begin manufacturing the technology inside China. Foreign automakers walk the line between maintaining short-term profits through ensured market access and risking long-term losses should their technology be stolen by Chinese manufacturers that increasingly rival them in developing markets and perhaps one day will rival them on their home turf as well. Time will also tell if auto companies can convert NEVs from being a battle line in a trade war into a hedge against trade retaliation in China. 

⁴⁰ Brenda Goh, "Ford, China's Zotye Auto Plan JV to Build Electric Vehicles," Reuters, August 22, 2017, <https://www.reuters.com/article/us-ford-china-electric-vehicle-idUSKCN1B20QA>.