



# The Implications of the Federal Ban on Chinese Railcars

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## About the Eno Center for Transportation

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Cover Photo: CRRC-supplied subway train undergoing testing on Beijing Subway's Line 16, September 2016.  
Photo courtesy of user N509FZ on Wikimedia Commons.

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## I. Introduction

The “trade war” between the United States and China continues to play out on the global stage. While it does, a seemingly benign but thorny matter about the manufacture of mass transit vehicles and freight railcars has risen to the surface, pitting macro issues about national security and economic competitiveness against cities’ interest in investing in their transportation systems as well as their budgetary bottom lines.

Specifically, it appears that the United States Congress will soon approve a policy that restricts spending certain federal funds on transit vehicles from companies owned or subsidized by the government of the People’s Republic of China.

The focus of the new policy—at least in part—stems from national security concerns. The 2019 appropriations bills contain several references to potential threats posed by Chinese telecommunications and information technology manufacturers. In addition, the new defense authorization law will require the Department of Homeland Security to perform a study of the national security implications of Chinese-manufactured transit given the proliferation of advanced electronics components in new transit vehicles. Related economic concerns around technology transfer and intellectual property are widespread.

The target of the vehicle ban is CRRC Corporation Limited, the world’s largest supplier of rail transit equipment with annual revenues of around \$30 billion, good enough for 385<sup>th</sup> on the Fortune Global 500 List. CRRC is almost completely dominant in the enormous Chinese railcar market and has been successful abroad in the last few years, handily winning contracts for new rail transit cars in major American cities like Boston, Chicago, Los Angeles, and Philadelphia. In each case, CRRC beat other foreign-owned manufacturers since there are no American transit railcar manufacturers today.

While the relatively low purchase prices clearly benefit transit agencies and governments, proponents of the ban argue that the degree to which CRRC has been able to underbid other manufacturers is due to the heavy subsidies it receives from being a state-owned enterprise (SOE). Competing unfairly in the market this way, ban proponents assert, would allow CRRC to corner the transit railcar market. They then point to domestic freight railcar manufacturers (there are several in the United States) as the next target for CRRC. Of course, being an SOE in a so-called ‘non-market economy’ also sets off alarm bells from many corners of the national security community, especially the perception of growing risks to America’s critical infrastructure.

Opponents of the policy change focus on the relief to taxpayers from the low costs of transit vehicle purchases. They also contend the American jobs created from the construction of vehicle assembly plants—as well as the adherence to local policy and priorities to support

disadvantaged workers—are important counterbalances to the potential loss of market share for domestic freight car manufacturers.

With new vehicle purchases slated in major transit markets like New Jersey and Atlanta, it is important to fully examine the rationale and implications of the ban and contextualize the issue in order to inform the larger national debate. The purpose of this policy brief is to analyze the impetus for the proposed ban on vehicles produced by Chinese SOEs and understand the implications for American cities and manufacturers. It illustrates the recent Congressional action, federal rules such as Buy America, and the broad impacts on American manufacturing jobs. The brief also recognizes and includes the real and valid security worries inherent in the manufacture of modern, connected rail vehicles and the relationship to elevated clashes between the United States and China. Ultimately the goal is to inform the development of a policy framework for lawmakers to consider.

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## II. Background

On May 15, 2018, the House Appropriations Committee released the text of the draft fiscal year 2019 Transportation-Housing appropriations bill. At the behest of Subcommittee chairman Mario Diaz-Balart (R-FL) and Defense Subcommittee chairman Kay Granger (R-TX), the draft bill contained a new and unexpected funding restriction:

*SEC. 165. None of the funds appropriated or otherwise made available to the Federal Transit Administration under this Act may be used in awarding any contract or subcontract for the procurement of an asset within the mass transit and passenger rail or freight rail subsectors included within the transportation systems sector defined by President Policy Directive 21 (Critical Infrastructure Security and Resilience) including rolling stock, and the ensuing regulations if the entity is owned, directed, or subsidized by a country identified as a priority watch list country by the United States Trade Representative in the most recent report required under section 182 of the Trade Act of 1974 (19 U.S.C. 2242) and is subject to monitoring by the Trade Representative under section 306 of the Trade Act of 1974 (19 U.S.C. 2416).*

The ensuing debate on the bill in the committee markups made it clear that the provision was directed towards the People's Republic of China.<sup>1</sup> Rep. Diaz-Balart gave his justification for the China rolling stock language based on two separate but related issues:

- *Unfair competition.* Many Chinese companies receive “disproportionate” subsidies from the government and, because of those subsidies, they win contracts because of their ability to underbid the competition. Diaz-Balart pointed out that this is a part of the Chinese government’s “Made in China 2025” strategy to increase its industrial exports abroad.
- *National security concerns.* Railcars rely on sophisticated technology to ensure safety, some of which is built by the Chinese government. Diaz-Balart noted the “overwhelming evidence” that the Chinese government is involved in cyberespionage in general and said that there is “no reason to think they won’t do it” on freight and transit cars as well.

The draft bill was formally reported to the House on June 12, 2018 as H.R. 6072 (115th Congress) but as of this writing, the House has not yet formally considered the legislation.

The Senate’s FY19 Transportation-Housing appropriations bill, as reported from the Appropriations Committee on June 7, 2018, did not address the ban. But for the FY2019 cycle, the House and Senate collected multiple appropriations bills into larger “minibus” packages. A two-bill package (the Interior/Environment bill and the Financial Services and General Government bill) was passed by the House on July 19, 2018, and Senate leaders immediately took up that legislation and proposed to substitute for its text a new amendment consisting of four appropriations bills reported from the Senate Appropriations Committee, including the bill funding the Department of Transportation.<sup>2</sup> During debate on the four-bill package, Senator John Cornyn (R-TX) filed an amendment that includes language pertaining to the railcar ban.<sup>3</sup> A modified version of the Cornyn amendment was agreed to by unanimous consent by the Senate as part of a larger set of amendments on July 31. (See Appendix.)

The language in both the House and Senate versions of this legislation is clearly targeted at CRRC Corporation Limited, the world’s largest rolling stock manufacturer. The central government of the People’s Republic of China owns 100 percent of CRRC Group, a holding company that owns 53 percent of CRRC Corporation Limited.<sup>4</sup> CRRC Corporation Limited was formed by the merger of two state-owned manufacturers: China CNR Corporation Limited and China South Locomotive & Rolling Stock Corp., Ltd in 2015. The merged company was then transferred to the central government’s State-Owned Assets Supervision and Administration Commission. CRRC Corporation Limited (hereinafter just CRRC) employs over 186,000 persons worldwide.<sup>5</sup> According to its most recent Annual Report, in 2017 the company generated \$26.7 billion in revenue in mainland China and \$2.7 billion elsewhere.<sup>6</sup>

## State-Owned Enterprises

A state-owned enterprise (SOE) is a broad term referring to entities where a governmental unit has a significant controlling role in a company, generally more than being a shareholder in a publicly traded corporation. They are quite common—making up 22 percent of the world’s 100 largest companies.<sup>7</sup> Many were created to stimulate domestic industries that would otherwise not be appealing to private investment especially in infrastructure-related sectors like public transportation, railways, and energy.

A primary apprehension with SOEs today is their role in the global economy and the potential anti-competitive advantages that may come from financial subsidies and support, and special tax and regulatory treatment.<sup>8</sup> Chinese SOEs are the subject of much attention now both because of their proliferation as well as aggressive restructuring that recently took place as part of larger economic transformation efforts to increase global competitiveness.<sup>9</sup>

Foreign investment in the United States for commercial interests by itself generally does not raise national security fears.<sup>10</sup> The unease occurs in defense-related sectors especially with respect to SOEs and their close ties with the military. A recent example was the wave of political opposition to the Dubai Ports World—a state-owned Arab company—bid to operate several major seaports in the United States in 2006.<sup>11</sup>

CRRC began expanding into the United States mass transit railcar market in 2014 with a successful and high-profile relationship with the Massachusetts Bay Transportation Authority (MBTA). The company’s subsidiary—CRRC MA Corp—bid \$567 million and won the contract to replace 285 subway cars for the system’s Orange and Red Lines.<sup>12</sup> Competing manufacturers criticized the deal because of the degree to which CRRC was able to underbid them and the foothold it allowed CRRC to gain in the American transit market, a strategy that company officials acknowledged.<sup>13</sup> CRRC’s total bid was \$154 million less than the next-lowest (see Table 1) generating protests that the subsidies the company receives from the central government owners allowed them to compete unfairly.<sup>14</sup>



**Table 1: Massachusetts Bay Transportation Authority Red and Orange Line Vehicle Procurement Comparisons (in millions)**

	Base Contract	Options	Total
Bombardier	\$858	\$221	\$1,080
Kawasaki	\$716	\$189	\$905
Independent Cost Estimate (Upper Range)	\$636	\$209	\$845
Independent Cost Estimate (Lower Range)	\$576	\$189	\$765
Hyundai	\$556	\$165	\$721
CNR MA (CRRC)	\$430	\$136	\$567

*Source: Beverly A. Scott, “Massachusetts Bay Transportation Authority: Red and Orange Line Vehicle Procurement—Recommendation for Award,” October 22, 2014.*

However, the MBTA’s request for proposals emphasized the best value of the submissions over total price. That is, while management, financial, and technical capabilities were certainly necessary criterion, the agency articulated other policy priorities such as the purchases’ impact on job creation and retention in Massachusetts, economic development in the state, and participation of minority and women owned businesses.<sup>15</sup> As a result, CRRC’s bid was appealing to state and local officials as the company offered to contribute \$60 million to construct a railcar manufacturing plant in Springfield, Massachusetts for vehicle assembly, and promised to boost the local workforce by creating new jobs with competitive wages.<sup>16</sup> Massachusetts’ priorities for domestic content are similar to the federal Buy America requirements (see Text Box). But the state chose to forgo federal money at the outset because the geographic preference elements would not have been permissible with a federally-assisted purchase.<sup>17</sup>

In 2016 another CRRC subsidiary—CSR Sifang America—won a \$1.3 billion contract to build 840 railcars for the Chicago Transit Authority (CTA). Once again, CRRC significantly underbid the competition, coming in nearly a quarter-billion dollars less than the nearest company.<sup>18</sup> As part of its solicitation, the CTA included a provision—known as the U.S. Employment Plan (USEP)—for the bidders to detail the number and quality of jobs impacted by the contract. Proposals are evaluated for their ability to create new jobs, especially for underrepresented workers, provide training opportunities, and invest in American manufacturing facilities.<sup>19</sup> CRRC’s proposal included these elements as well as a \$100 million commitment to construct a new railcar manufacturing plant in the city.<sup>20</sup> The plant is currently under construction and nearing completion.

Also in 2016, CRRC MA won a contract to build railcars for Los Angeles Metro. The initial order is \$178 million for 64 cars with options to produce up to 282 for \$647 million. According to LA Metro’s evaluation, CRRC beat out the only other bidder (Hyundai Rotem) in every technical category including past experience and project management. CRRC also underbid Hyundai on the project’s total cost (\$637 million vs. \$683 million).<sup>21</sup> The final assembly of the vehicles will occur at the Springfield facility with other component manufacturing for heating, ventilation and air conditioning, propulsion, and lighting taking place at a new facility being built in Los Angeles. The construction of the plant is part of CRRC’s adherence to LA Metro’s voluntary Local Employment Program which, like the USEP, gave the agency the ability to evaluate proposals based, in part, on their ability to boost domestic manufacturing and support the local workforce.<sup>22</sup>

CRRC won a smaller contract to supply 45 commuter railcars for Philadelphia’s Southeastern Pennsylvania Transportation Authority (SEPTA) in 2017. The company’s \$137 million proposal came in less than Bombardier’s (\$171 million) and Hyundai Rotem’s (\$185 million).<sup>23</sup> CRRC’s proposal met the federal requirements for domestic manufacturing since the vehicles will also be assembled in the Springfield facility. Ironically, Hyundai Rotem had a facility in South Philadelphia which it used to build commuter railcars for the MBTA in 2013.<sup>24</sup> The facility employed as many as 300 workers and was recently shutdown.<sup>25</sup>

**Table 2: Recent CRRC Winning Bids for U.S. Transit Procurements**

Year	Entity	Agency	Amount	# of Railcars
2014	CNR MA (now CRRC MA)	MBTA	\$567 million	285
2016	CSR Sifang America	CTA	\$1.3 billion	840
2016	CRRC MA Corp	LA Metro	\$178 million	282
2016	CRRC MA Corp	SEPTA	\$137 million	45

*Source: Various*

It is important to note that CRRC does not win all the major transit railcar bids in the United States. CRRC MA teamed up with Bombardier to form the R211 Partners in order to bid on a proposal to supply New York’s Metropolitan Transportation Authority (MTA) with over 500 new vehicles.<sup>26</sup> Earlier this year, the \$1.4 billion contract was awarded to the only other bidder, Kawasaki Railcar Inc., after R211 Partners was eliminated from consideration.<sup>27</sup> According to an internal MTA memo, the agency was wary of Bombardier’s prior performance as well as delays in delivering on prior railcar contracts.<sup>28</sup>

## Buy America

The existing statutory “Buy America” provision regulating domestic content in purchases using Federal Transit Administration (FTA) dollars is codified in 49 U.S.C. §5323(j). The heart of the provision is in (j) (1) and (2):

*(1) In general. The Secretary may obligate an amount that may be appropriated to carry out this chapter for a project only if the steel, iron, and manufactured goods used in the project are produced in the United States.*

*(2) Waiver. The Secretary may waive paragraph (1) of this subsection if the Secretary finds that-*

*(A) applying paragraph (1) would be inconsistent with the public interest;*

*(B) the steel, iron, and goods produced in the United States are not produced in a sufficient and reasonably available amount or are not of a satisfactory quality;*

*(C) when procuring rolling stock (including train control, communication, traction power equipment, and rolling stock prototypes) under this chapter-*

*(i) the cost of components and subcomponents produced in the United States-*

*(I) for fiscal years 2016 and 2017, is more than 60 percent of the cost of all components of the rolling stock;*

*(II) for fiscal years 2018 and 2019, is more than 65 percent of the cost of all components of the rolling stock; and*

*(III) for fiscal year 2020 and each fiscal year thereafter, is more than 70 percent of the cost of all components of the rolling stock; and*

*(ii) final assembly of the rolling stock has occurred in the United States;*

*or*

*(D) including domestic material will increase the cost of the overall project by more than 25 percent.*

For many years, the domestic content threshold for rolling stock was 60 percent. In its GROW AMERICA legislative proposal in April 2015, the Obama Administration proposed to increase that minimum from 60 percent to 100 percent over a four-year period ending in 2020. During Congressional consideration of the proposal, the American Public Transportation Association (APTA) testified before Congress in April 2015 that:

There is no question that the current Buy America requirements at 60 percent plus final assembly in the U.S. has absolutely driven investment in our country and requires there be a good supply base here. However, we must look at how we fit into the overall supply picture. Our bus and train manufacturers do not really make everything. They make the shells and they assemble the rest from supply base that, quite frankly, is a global supply base. Achieving 100 percent is not a realistic opportunity in this current space, and there is a reason there are no U.S. manufacturers of railcars at all. All the railcar manufacturers are from around the world. Our base simply is not big enough, and having uncertainty in long-term funding makes that more challenging. And, as we look at the type of steel and the products we use, sometimes the quantity is not big enough to incentivize U.S. steel suppliers here in the U.S.<sup>29</sup>

Accordingly, Congress did not agree to the Administration’s proposal to take the domestic content requirements for rolling stock up to 100 percent and instead ratcheted up the domestic content minimum from 60 to 70 percent over the same time period. The FTA implemented the changes formally in September 2016.<sup>30</sup>

In addition to the restrictions to rail manufacturers, the funding ban may also apply to other firms like BYD, a multinational corporation founded in China, that is the world's largest manufacturer of electric vehicles. BYD has a manufacturing facility in Los Angeles County and makes regular bids on contracts for electric mass transit buses.<sup>31</sup> While BYD is not—and never has been—state-owned (Warren Buffett's Berkshire Hathaway actually has a sizeable minority stake) the Chinese government does provide subsidies to electric vehicle buyers to incentivize a domestic marketplace in China for electric vehicles. These are not subsidies in the same way the central government supports CRRC as an SOE even though it could potentially be considered to run afoul of the House language ("subsidized") and the Senate language ("receives support from").<sup>32</sup>

The justifications given publicly by the sponsors of these Chinese company rolling stock limitations in the House and Senate have tended to be couched in terms of national security, but behind that justification lie other issues about economic competition in the freight rail industry.

In 2015, CRRC took a minority stake in a joint venture ("Vertex") in a new facility in Wilmington, North Carolina to manufacture rail tank cars to meet the new federal standards for transporting crude oil by rail.<sup>33</sup> Though Vertex received no local or state economic incentives, in July 2016, 55 members of the U.S. House of Representatives, led by Reps. Peter DeFazio (D-OR) and Randy Forbes (R-VA), sent a letter to the Treasury Secretary asking that the CFIUS study the deal.<sup>34</sup> The letter cited both national security and economic concerns:

*Given the ownership and history of these companies, the Chinese government is able to utilize the companies to pursue its international trade agenda. This agenda has aggressively asserted Chinese interests into a range of foreign markets such as Australia, Pakistan, the United Kingdom, and others. CRRC in particular is able to access subsidized financing from the Chinese government, which has already enabled the company to underbid private competitors for railcar contracts in Boston and Chicago. In effect, American railcar manufacturers and its associated industries, such as steel, are now competing against the resources of the world's second largest economy.*

*Furthermore .... China's cybercrimes constitute a threat to national security [and] leave us concerned that critical rail infrastructure and the sensitive cargo that it carries will become increasingly vulnerable to hackers as the proliferation of Chinese state investment continues without adequate scrutiny.*

Two months later, a group of 42 U.S. Senators sent a similar letter but, nevertheless, the joint venture announced in December 2016 that CFIUS cleared it.<sup>35</sup> However, since then the business has lagged due, in part, to a drop in demand for freight cars. As a result, the 100 workers Vertex employs in Wilmington is well short of the 1,300 it initially promised.<sup>36</sup>

### III. Analysis

While the federal ban applies to both freight and mass transit railcars it is important to note that the U.S. markets each are very different. Freight railcars can be owned by privately-held railroads, by car leasing companies, or by the shippers themselves, and come in a variety of forms (boxcar, covered hopper, open hopper, container chassis, tank car, etc.). There are about 1.6 million freight railcars currently in service, and in 2017, about 45,000 new railcars were delivered.<sup>37</sup> Today, five U.S. manufacturers dominate the domestic railcar industry: Trinity Industries, of Dallas; Greenbrier Companies, of Lake Oswego, Oregon; American Railcar Industries, of Saint Charles, Missouri; and FreightCar America and Union Tank Car Company, both of Chicago.

By contrast, the mass transit railcar market has no domestic manufacturers.<sup>38</sup> The companies that build transit railcars and sell them to public transit agencies are all foreign-owned companies with assembly facilities in the United States, like CRRC (Table 3). In fact, two of the largest world railcar manufacturers—Siemens and Alstom—proposed a merger last year to strengthen their competition position vis-a-vis CRRC.<sup>39</sup> The deal is currently under review by the European Commission.<sup>40</sup>

**Table 3: Manufacturers of Railcars for U.S. Transit Agencies**

Company	Company Domicile
Ansaldo Breda	Italy
Bombardier	Canada
CAF	Spain
CRRC	China
Hyundai Rotem	South Korea
Kawasaki	Japan
Kinkisharyo	Japan
Nippon Sharyo	Japan
Siemens Alstom	Germany/France

*Source: Various*

Annual deliveries of mass transit railcars vary widely from year to year due to the periodic nature of new car procurements from the handful of major transit agencies. According to *Railway Age*, the number of new passenger car deliveries plummeted to 169 cars in 2017 from 706 cars in 2016. But as of January 2018, there was an undelivered backlog of over 2,900 transit and non-Amtrak commuter railcars of all varieties: 775 for the Bay Area Rapid Transit in San Francisco, 500 for the CTA, 348 for the Washington Metropolitan Area Transit Authority, 284 for Boston's MBTA, 266 for the New York City MTA, 200 for the Long Island Rail Road, and about 650 for other systems.<sup>41</sup> As of the beginning of this year, *Railway Age* anticipated that there could be between 4,500 and 4,900 orders for new or rebuilt mass transit railcars placed over the next five years. That includes around 2,000 by the New York City MTA and about 1,700 in six other major procurements by city transit agencies.

The mass transit rail market in the United States also functions very differently than does the freight railcar market when it comes to questions of free trade. The U.S. International Trade Commission's Harmonized Tariff Schedule sets a 5 percent tariff rate for imported mass transit railcars and parts and a rate of 14 percent for freight railcars and parts from countries with most favored nation (MFN) status. (Imports from countries without MFN status are at 35 percent and 45 percent, respectively, but that really only applies to Cuba and North Korea, neither of which exports such things.)<sup>42</sup> Protecting the domestic freight railcar market from foreign competition could be accomplished by increasing tariff rates above 14 percent, but that would require lengthy negotiation with the World Trade Organization (WTO) and risks other kinds of retaliation by U.S. trade partners. But when it comes to mass transit railcars, the regular rules do not apply. In fact, the WTO's Government Procurement Agreement specifically states that the WTO rules "shall not apply to restrictions attached to Federal funds for mass transit and highway projects."<sup>43</sup>

CRRC is unique in that it does a big business in both passenger railcars and freight railcars. Hence the move by U.S. freight railcar manufacturers to prevent CRRC from establishing a major manufacturing base in this country by confronting CRRC's transit railcar business. Limits on foreign competition in the federally-subsidized transit railcar market are exempt from WTO tariff rules, while limits on foreign competition in the freight car market are not.

In April 2016 a public affairs firm, Venn Strategies, registered to lobby on behalf of a new client, the "Rail Security Alliance," headquartered in Venn's Washington, DC offices. The vice president and spokesman for RSA is also the Chief Operating Officer of Venn Strategies. The RSA is widely believed to be funded by one or more of the major U.S. manufacturers of freight railcars.<sup>44</sup> A 2017 report commissioned by the RSA showed how CRRC has come to dominate the freight railcar market in Australia and extrapolated those effects to potential CRRC domination of the freight railcar market in the United States.<sup>45</sup>

The report estimated that the U.S. freight railcar manufacturing industry has about \$6.5 billion per year in total economic impact (direct, indirect and induced) across all sectors and supports over 64,000 jobs. It found that for every \$1 billion in current U.S. freight rail rolling stock production that would be shifted to China, \$540 million of annual GDP and over 5,000 U.S. jobs would be lost if final railcar assembly were still completed in the United States and those losses would rise to \$1.3 billion in GDP per year and almost 13,000 jobs if completed freight railcars were shipped directly from China to the United States.

To the extent that this kind of economic analysis could be applied to transit railcar procurement the economic effects would be on the lower end of the spectrum since the federal Buy America law already requires U.S. final assembly and overall domestic content rising to 70 percent of the total finished railcar (See Text Box.) Others point out that Chinese investment in the United States can have positive impacts on the American workforce. Despite sharp drops recently due to lingering tensions between the two countries, Chinese investment supports over 150,000 American jobs across a number of other sectors.<sup>46</sup>

All forms of economic protectionism (whether high tariffs or Buy America requirements) are a statement of principles: that preserving certain kinds of domestic jobs, or certain kinds of industrial or agricultural capacity, are so important to the nation that it's worth forcing all U.S. consumers of those products to pay more. In particular, the original Buy America requirements attached to federal highway and transit funding had their origins in the collapse of the U.S. steel industry in the 1970s and the subsequent decision by Congress to protect what was left by excluding foreign iron and steel products from federally-subsidized projects.<sup>47</sup> The study commissioned by RSA notes that CRRC's rise to dominance in the Australian freight railcar market also coincided with a decline in that country's steel industry, from 7.1 million tons output in 2000 to 4.9 million tons in 2015, along with a 94 percent drop in value-added production of iron and steel over the same period.<sup>48</sup>

In the case of Buy America provisions for mass transit, the financial burden of supporting domestic manufacturing falls on local mass transit agencies and thus on federal taxpayers and on state and local governments themselves. In this way, the CRRC bids have been a boon: both in terms of significant cost savings to agencies and governments, as well as the construction of domestic assembly plants as well as other benefits such as workforce training, especially for disadvantaged workers.<sup>49</sup> A November 2015 report from the nonpartisan Congressional Research Service notes that buses used in public transportation cost significantly more in the United States than they do in Japan and South Korea, resulting in less value per dollar than spent by overseas counterparts.<sup>50</sup> There has been less study of the economic effects of the Buy America requirements for rail rolling stock, but about half of the value of a transit railcar comes from iron and steel, and American-made steel is significantly more expensive than that from other countries.

In addition to the economic concerns, both the legislative and executive branches in Washington are focused on the national security threats. New restrictions on dozens of Chinese SOEs in defense-related industries and fields like aerospace highlight the increasingly blurred lines between that country's military and civilian sectors. One recent report specifically points to the national security threats from certain CRRC officials and their ties to the Chinese government and defense sector.<sup>51</sup>

The annual defense authorization bill signed into law in August 2018 directs the Department of Homeland Security (DHS) and CFIUS—in consultation with the Secretary of Transportation—to assess the “(A) national security risks, if any, related to investments in the United States by state-owned or state-controlled entities in the manufacture or assembly of rolling stock or other assets for use in freight rail, public transportation rail systems, or intercity passenger rail systems; and (B) how the number and types of such investments could affect any such risks.”<sup>52</sup> A report on the assessment must be transmitted to Congress by August 2019.

Cyber threats—like spyware and malware—are a significant concern for the mass transit industry. The sector is undergoing rapid technological change as rail networks become more connected and automated, outfitted with amenities like mobile ticketing and Wi-Fi, and integrated in social networks.<sup>53</sup> While these upgrades allow for operational improvements and enhancements to the customer experience, the worry in the intelligence community is that vehicles produced by Chinese SOEs could allow the central government to conduct espionage or potentially disrupt operations and endanger public safety by exploiting intentional vulnerabilities in software coding, for example.<sup>54</sup> APTA—the industry leader for transit agencies—recommends rigorous practices for cybersecurity.<sup>55</sup>

The implications for the nation's commercial freight rail network are related but different, especially given its direct military applications and its role in transporting hazardous materials.<sup>56</sup> Vehicles could potentially be monitored thereby exposing sensitive information about military equipment.<sup>57</sup> While there may be no specific or direct threats at any given time, trepidation about ongoing global tensions have done little to assuage such fears.



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## IV. Next Steps

In House-Senate conference negotiations, both chambers have longstanding rules and norms as to what kinds of resolutions of House-Senate differences are and are not permissible. The rules (clause 9 of House Rule XXII and paragraphs 3 and 4 of Senate Rule XXVIII) state that House-Senate conferences should not produce outcomes that are not within the “scope” of the differences between the House-passed and Senate-passed versions of the legislation. In other words, if the House and Senate versions of a bill include identical versions of a provision, the conference committee is not supposed to alter those provisions.

The House and Senate versions of the rolling stock ban are not identical, and the traditional points of order enforcing the scope-of-conference rules have become harder to enforce in the age of thousand-page amendments between the Chambers. (There is a technical issue here as well: the House is going to conference with the Senate on H.R. 6147, and the House-passed version of H.R. 6147 did not include a Transportation-Housing appropriations bill at all, much less a Chinese rolling stock provision, which makes the scope of the House-Senate differences extremely broad indeed.) There is still a strong Congressional norm towards obeying the spirit of the scope-of-conference rule, which means that the House-Senate conferees on H.R. 6147 are much more likely than not to include some germane modification of the rolling stock ban in the final legislation.

In terms of timing, the February 2018 bipartisan budget agreement on overall appropriations levels has allowed the Senate to make progress in passing the annual appropriations bills at levels not seen in almost a decade. The first “minibus” appropriations package (three bills – Energy and Water Development, Military Construction/Veterans, and Legislative Branch) was signed into law by President Donald Trump on September 21. The final conference agreement on a second package (Defense and Labor-HHS-Education) passed the Senate on September 19 and is scheduled for House consideration the week of September 24.

Negotiations on the other minibus package (H.R. 6147) containing the Transportation-Housing bill have been conducted at the staff level between the House and Senate Appropriations Committees over the August recess and a formal meeting of House and Senate conferees was held on September 13. It is still unclear if a final version of that package will be presented to the House and Senate before or after the November elections.

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## V. Conclusion

Rising global tensions between the United States and China are top-line issues today. Concerns about how SOEs like CRRC could potentially undermine the competitiveness of American firms that manufacture freight railcars or pose threats to national security are increasingly common. Yet, at the same time, cities, states, and metropolitan transit agencies rely on foreign companies to manufacture mass transit railcars since none are based in the United States.

This policy brief outlines those challenges and opportunities and points out that although railcars for mass transit and railcars for freight are conflated, they should be considered separately. Freight railcar purchasers are almost exclusively private firms while mass transit railcar purchasers are governments and public agencies. While freight rail companies operate with regulatory oversight, mass transit is completely regulated and their operations and purchase decisions are open and supported directly by taxpayer dollars.

These issues are obviously complex and have implications far beyond the narrow focus on railcar manufacturing. Until the DHS/CFIUS report on the potential national security risks is completed, an appropriations ban—which, by its nature, is limited to only one fiscal year and must be affirmatively renewed by Congress thereafter—is more appropriate than a permanent policy change, particularly if it includes provisions to ensure that it cannot be applied retroactively to existing contracts.

This brief also highlights five key points for policymakers to consider:

1. *Lowering the cost of transit vehicles*

Cash strapped transit agencies stand to save significantly on railcar purchases. Companies regularly underbid to gain access to a market and win projects and taxpayers benefit from the subsidies from foreign governments or venture capital. The performance of CRRC railcars and their ability to deliver them in a timely manner is still not proven, though the latest reports indicate they are on track.<sup>58</sup> The ban, as currently written, would allow current contracts to continue but would inhibit transit agencies from exercising options within the contracts for additional cars.

2. *Supporting American workers*

Foreign companies already manufacture all mass transit railcars and federal rules like Buy America help ensure the majority of content is produced and assembled in the United States. It is not clear if a new job created in Massachusetts, for example, replaces another that would have been created in a factory of a competitor elsewhere in the country. However, more and more transit agencies are seeking to use their local taxpayer-funded projects to support employment opportunities for local residents—

especially disadvantaged workers—and boost regional manufacturing.

3. *Competing in the transit railcar manufacturing industry*

Procurements of transit vehicles tend to be both lumpy and lucrative and Table 3 shows there are other railcar manufacturers that continue to compete for—and win—contracts. This may keep a check on current and future prices but there is no doubt that CRRC's significant and rapid success since it entered the American market is astonishing. If CRRC continues to win contracts, it is feasible that it could dominate the industry and eventually raise prices, thus undermining the market and general pro-competition principles.

4. *Entering and dominating the freight railcar manufacturing industry*

CRRC's ambitions appear to be a real and credible threat to the domestic manufacturers of freight railcars. Although CRRC has not pursued this market as aggressively as the mass transit market, evidence from China and Australia underscores their ability to dominate. Protecting American-based manufacturers from state-subsidized foreign competition has merits in and of itself.

5. *Protecting national security*

Concerns about China's threat to U.S. national security are prevalent driven partly by that country's *Made in China 2025* initiative, which includes a focus on promoting and developing advanced rail equipment, among other technologies.<sup>59</sup> Other weighty ramifications related to defense and military transport and engagement receive close scrutiny. The forthcoming DHS/CFIUS study will be illustrative when it comes to fears about China and national security in the manufacture of rail rolling stock. That analysis should make the important distinction between the freight and mass transit industries, as illustrated in this brief, and will inform whether the ban should continue beyond one year.

Clear benefits accrue to cities and transit agencies in the form of cost savings from railcar purchases. Although other foreign transit vehicle manufacturers also have to assemble their railcars in America, procurements can be attractive when they boost regional manufacturing and support disadvantaged workers.<sup>60</sup> Yet ongoing global uncertainties present significantly problematic issues regarding SOEs' impact on national security and need close attention. Understanding and recognizing the differences between mass transit and freight rail may shed some light on those discussions.

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## Appendix

As agreed to by the Senate, the Cornyn Amendment became section 196 of Division D of the Senate amendment to H.R. 6147. It reads as follows:

*SEC. 196. (a) None of the funds appropriated or otherwise made available to the Federal Transit Administration under this title to carry out sections 5307, 5311, 5337, and 5339 of title 49, United States Code, may be used in awarding a contract or subcontract to an entity on or after the date of enactment of this Act for the procurement of rolling stock for use in public transportation if the manufacturer of the rolling stock is incorporated in or has manufacturing facilities in the United States and receives support from the government of a country that—*

*(1) is identified as a nonmarket economy country (as defined in section 771(18) of the Tariff Act of 1930 (19 U.S.C. 1677(18))) as of the date of enactment of this Act;*

*(2) was identified by the United States Trade Representative in the most recent report required by section 182 of the Trade Act of 1974 (19 U.S.C. 2242) as a priority foreign country under subsection (a)(2) of that section; and*

*(3) is subject to monitoring by the Trade Representative under section 306 of the Trade Act of 1974 (19 U.S.C. 2416).*

*(b) This section shall be applied in a manner consistent with the obligations of the United States under international agreements.*

*(c)(1) This section shall not apply to the award of a contract or subcontract made by a public transportation agency with a rail rolling stock manufacturer described in subsection (a) if the manufacturer produces rail rolling stock for an eligible public transportation agency through a contract executed prior to the date of enactment of this Act.*

*(2) A rail rolling stock manufacturer described in subsection (a) may not use funds provided under a contract or subcontract described in paragraph (1) to expand the manufacturer's production of rail rolling stock within the United States to an amount of rolling stock vehicles or rail that is greater than the amount required under contractual obligations of the manufacturer as of the date of enactment of this Act including all options for additional rolling stock.*

*(d) Nothing in this section shall be construed to apply to funds that are not appropriated or otherwise made available to the Federal Transit Administration under this title.*

The language in both the House and Senate versions of the FY19 Transportation-Housing appropriations bill is traditional “appropriations limitations,” making the focus of the federal fund restrictions clear.

Both the House and Senate versions of the legislation contain the following identical or very similar language:

- *“None of the funds appropriated or otherwise made available.”* The distinction between “appropriated” and “otherwise made available” is usually made by Congress so that both the general fund appropriations made by the appropriations bill itself and the use of any trust fund contract authority provided by other laws but limited by an obligation limitation in the appropriations bill are covered.
- *“To the Federal Transit Administration.”* This clearly applies to funding in the five general fund discretionary appropriations accounts and to the Transit Formula Grants account, which is Highway Trust Fund contract authority.<sup>61</sup> It is unclear if this language also applies to contract authority provided by authorizing law to the Federal Highway Administration, limited under the appropriations act, and subsequently transferred by states from their highway departments to local transit agencies (and thus transferred from FHWA to FTA) under the “flex” transfer provisions of 23 U.S.C. §104(f).
- *“Under this Act/title.”* This language is included in all limitation provisions to clarify that the funding restriction does not apply to money provided in prior fiscal years or to funding provided by any other appropriations bill. (The House version of the provision says “under this Act” which in this case means the entire Transportation-Housing bill, while the Senate version says “under this title” which means the DOT title of the bill only.) This also leaves open the possibility that the final House-Senate compromise legislation could move some FTA funding out of title I of the bill and put it in another title of the bill, in which case the funding prohibition might not apply to that money.

However, the Senate amendment then includes an additional restriction not in the House bill:

- The Senate language specifies that the limitation only applies to funding appropriated or limited by the bill for FTA for four specific programs – the urbanized area formula grant program (49 U.S.C. §5307), the rural formula grant program (49 U.S.C. §5311), the state of good repair grant program (49 U.S.C. §5337), and the bus and bus facility grant program (49 U.S.C. §5339). Most importantly, the Senate language does not apply to “new starts” funding under the Capital Investment Grant program.

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## Endnotes

- 1 At the full committee markup, Rep. David Price (D-NC) offered an amendment to strike section 165 and nine other provisions in the draft bill requiring new federal policy changes, but that amendment was defeated on a 21 to 19 party-line vote.
- 2 The four are: Interior/Environment, Financial Services/General Government, Agriculture, and Transportation/Housing.
- 3 Senate Amendment #3496, 115th Congress.
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- 6 CRRC Corporation Ltd. Annual Report 2017.
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- 10 In 1975, President Gerald Ford created the Committee on Foreign Investment in the United States (CFIUS) to scrutinize economic transactions by foreign entities. Since its creation only five transactions have been blocked. Jonathan Masters and James McBride, “Foreign Investment and U.S. National Security,” Council on Foreign Relations, 2018.
- 11 Julio Rotemberg, “The Dubai Ports World Debacle and Its Aftermath,” Harvard Business School Case 707-014, 2007.
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- 22 Los Angeles Metro, RFP HR4000, Amendment No. 11; Purchase of New Heavy Rail Vehicles, December 18, 2015.
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- 24 Jim Saksa, “SEPTA to Pick Massachusetts-Based Company to Build Bilevel Railcars over Hyundai Rotem in South Philly,” *WHYY*, March 17, 2017.
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- 26 R211 refers to the newest line of New York City subway cars.
- 27 Keith Barrow, “Kawasaki Chosen for \$US 1.4bn New York Subway Car Order,” *International Railway Journal*, January 24, 2018.
- 28 New York City Transit and Bus Committee Meeting, Item 1, Contract 34211, January 22, 2018.
- 29 Michael Melaniphy, Testimony before the U.S. Senate Committee on Banking, Housing, and Urban Affairs, April 23, 2015.
- 30 Federal Register, Vol. 81, No. 170, Thursday, September 1, 2016.
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