"BIG" TREATIES, SMALL EFFECTS
The RTAA Agreements

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IT seems obvious that agreements to cut tariffs will raise trade between their signatories. Indeed, an abundant theoretical literature attests to the essential role played by agreements and institutions when any of several market failures occurs.[1] Perhaps the most widely cited among them is the negative externality that arises when a large state, that is, a state that wields market power, adopts a tariff. The import levy improves its terms of trade, but only at the expense of its trading partner. Because a tariff is the dominant strategy of large states, efforts to lower trade barriers between them entraps them in a Prisoner's Dilemma (PD) game. An institution can help them realize the Pareto-superior outcome if, for example, it monitors and disseminates information about compliance that no state has an incentive to collect on its own.

It's not surprising then that social scientists have long attributed secular increases in global trade partly to the agreements and institutions that states created to enable them to open their markets to each other. Among them are several landmarks in economic history—the 1860 Cobden-Chevalier Treaty network and the General Agreement on Tariffs and Trade (GATT/1947) and its successor, the World Trade Organization (WTO/1995). Despite the status of these agreements, recent analyses find that none of them raised aggregate trade between their member states. In a seminal paper, Andrew Rose found that the GATT/WTO had no significant impact on trade between its contracting parties.[2] Soon after, Olivier Accominotti and Marc Flandreau reported

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[1] For example, Keohane 1984; Bagwell and Staiger 2002.

[2] Rose 2004, 104. Adding country fixed effects to his analysis, Rose finds that the GATT/WTO increased trade by a statistically significant 16 percent, but he dismisses the effect because it is "small" relative to the "long-term growth of trade" and the "hype surrounding the GATT/WTO."

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the same result about trade between parties to the Cobden-Chevalier network.[3]

The puzzling coexistence of widespread tariff cuts and vanishingly small impacts on trade challenges the central role that the theoretical literature assigns to agreements and institutions. Rose suggests—but does not test—that the puzzle is due to the fact that large contracting parties apply the same tariffs to their trading partners whatever their regime status.[4] Accominotti and Flandreau show that "nineteenth-century bilateralism did not give any boost to international trade." Indeed, they point out, "trade expansion began to lose its momentum after 1860."[5] Others maintain that the null findings arise because the models used to produce them aren't correctly specified.[6] Rose believes that the most compelling criticism of his work is that he failed to take into account trade on the extensive margin.[7] But the relevant literature does not offer any compelling explanation of why the GATT/WTO should facilitate trade between countries or in products that had not been traded ex ante.[8] The explanatory variables it relies upon, that is, reduction of uncertainty and tariff cuts, should also apply to the intensive margin of trade, especially given that the GATT's raison d'être was to secure postwar peace by increasing transatlantic and intra-European trade.

In this article, we argue that the puzzling gap between theory and evidence originates in the most-favored nation (MFN) rule that governed tariff bargaining. The rule requires each party to a trade agreement to apply any tariff cut it makes to all states entitled to MFN treatment. Its objective is to secure nondiscrimination in trade and to reduce incentives to delay negotiations.[9] But the rule also has an unintended consequence: it encourages states to free ride on the concessions other states make. As such, it creates rather than corrects an externality, impeding the ability of countries to "fully internalize the benefits of their liberalization."[10]

To prevent free riding, states have incentives to make their concessions private rather than public goods. A principal-supplier rule helps them do this. It provides that each party to a negotiation will entertain

[3] Accominotti and Flandreau 2008, 175.
[4] Rose 2004, 112.
[5] Accominotti and Flandreau 2008, 181.
[6] Goldstein, Rivers, and Tomz 2007.
[7] Rose 2010.
[8] Some attribute the rise in trade on the extensive margin to the reduction in uncertainty about tariffs or the trade cuts delivered by the postwar regime. The mechanism that increases trade on the extensive margin but not the intensive margin is unclear.
[9] For a comprehensive discussion of the rule, see Mavroidis 2016, chpt. 4.
[10] Ludema and Mayda 2009, 137.

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requests for tariff cuts only on goods it imports chiefly from its prospective treaty partner.[11] States can also create new tariff lines or split existing tariff lines to narrow the goods and countries to which their tariff cuts apply, which enables them to adhere to the MFN rule de jure but not de facto. The net effect is that agreements are more likely to raise bilateral trade in a set of narrowly defined goods and countries rather than to raise aggregate trade.

The appeal of the principal-supplier rule extends beyond its ability to preempt free riding. It also gives officials the opportunity to cherry-pick the goods on which to cut tariffs. The item-by-item approach embedded within it allows states to avoid cutting import levies on the products of politically powerful import-competing firms, thereby minimizing the opposition of domestic interests that might thwart the cuts. The alternative approach to cutting tariffs, that is, an across-the-board cut of a given percentage, would make it impossible for the parties to an agreement to avoid tariff cuts on goods that threaten their import-competing industries. The principal-supplier rule governed the tariff bargaining that produced the Cobden-Chevalier accords and a series of postwar tariff cuts.

The same rule also governed the bilateral treaties signed by the United States pursuant to the passage of the Reciprocal Trade Agreements Act (RTAA). In this article, we examine whether their impact on trade is consistent with our argument about the role played by the principal-supplier rule.[12] Although it may seem to make more sense to examine the landmark agreements of the late nineteenth or mid-twentieth centuries, only in the case of the RTAA is it feasible to collect data about the specific products and countries on which tariffs were cut and to track the subsequent trade in each.[13] Because no widely used system of tariff classification existed until the 1960s, it's not feasible to track tariff and trade changes at the product- and country-specific level for multiple countries. The RTAA agreements are more readily susceptible to close analysis because the United States is party to all of them. This allows us to rely on US import data to keep commodity classifications relatively constant across treaties.

[11] Ludema and Mayda 2009, 138, show that the principal-supplier rule "is an optimal response to the MFN free rider problem" when the full participation of all parties is infeasible.

[12] Table S1 in the supplementary material lists the agreements and the dates they were signed; Gowa and Hicks 2018.

[13] Lampe 2009 examines the impact of the Cobden-Chevalier treaties on trade in twenty-one broad product groupings among seven of its members using cross-sectional analyses. Lampe finds that tariff cuts exerted positive and significant effects on ten product groupings at the ten points in time examined. See also Tena-Junguito, Lampe, and Fernandes 2012.

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The data set we construct includes about 260,000 observations on some 7,300 product lines across 135 US trading partners. For reasons explained in more detail below, we cannot track all changes in trade that the RTAA agreements may have produced. We lack data about US exports to its RTAA treaty partners. Moreover, no data exist about ex ante trade in goods that ex post were the subject of new tariff lines, making it impossible to examine all changes in trade that the agreements produced. This is, of course, also true of other agreements, including those negotiated under the auspices of the GATT/WTO. Thus, our analysis is based on the 1,332 existing tariff lines that were cut, representing almost 60 percent of the products on which the RTAA cut tariffs, and on data on all other US imports from its trading partners at the country-product level.

We test the hypothesis that RTAA tariff cuts raised US imports of goods only from the treaty partner that was the principal supplier of those goods to the American market. To begin, we examine whether overall US imports from its RTAA partners rose compared to its imports from non-RTAA countries. Consistent with earlier findings about trade agreements, we show that the set of agreements negotiated under the act did not produce a positive and significant increase in aggregate US imports from its signatories. Next, we examine trade at the country-product level to test whether imports increased in the goods on which the United States cut tariffs. We find a positive and significant increase in US imports of these products. But neither analysis addresses the single most important prediction we make: that the United States de facto limited the benefits of any RTAA tariff cut to only the country that had originally requested it—its principal supplier.

Next, we ask whether US imports from specific RTAA partners increased more than its imports from other partners in other products, that is, we ask if the increase in exports of a particular good to the US market originated exclusively or largely in the country that was the principal supplier of it and that had requested and received a US concession on the good. We find spikes in imports of these goods, and we show that each spike is limited to one country alone. The effort to restrict free riding was a spectacular success: the only country within or outside the RTAA network to benefit from a US concession on a given good was the country that had originally requested it. The results we report here suggest that measuring the impact of trade liberalization in other cases may also require examining trade at the product- and country-specific levels.

Because MFN treatment and the principal-supplier rule were also

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integral elements of the Cobden-Chevalier treaties and the GATT/WTO tariff cuts, our analysis of the RTAA agreements can shed light on the broader literature on agreements and institutions. As noted, the relevant literature emphasizes the externalities that agreements and institutions enable states to resolve. It typically fails to point out that they can also create new externalities, as in the case of the MFN rule. As Petros Mavroidis observes, MFN treatment is "a bit like Churchill's saying about democracy: to paraphrase, it is the worst system we know of except for everything else."[14]

US Trade Policy and the RTAA: A Brief Overview

Signed on June 12, 1934, the RTAA reputedly changed the trade-policy process and US tariffs radically. Michael Bailey, Judith Goldstein, and Barry Weingast, for example, label it "a turning point" in US trade history because it delegated to the president the authority to negotiate reciprocal trade agreements and eliminated the need for ex post congressional ratification of them.[15] Stephan Haggard advances much the same argument, asserting that the RTAA was "a watershed in U.S. trade policy."[16] The profound change in the trade-policy process led many to believe that it brought large cuts in tariffs and a concomitant boom in trade.[17] But as Douglas Irwin observes, the subsequent fall in tariffs should be attributed also to the increase in world prices that reduced the burden imposed on imports by specific tariffs.[18]

The RTAA did indeed change the process of setting tariffs. Until 1934, Congress set import duties unilaterally, encouraging log rolls across congressional districts that often raised tariffs on large numbers of products simultaneously. The adoption of the 1930 Smoot-Hawley Tariff Act set the stage for the RTAA. The Smoot-Hawley tariff, among the highest in US history, had its origins in the post-1918 rebound in global output that created gluts on world markets, driving down prices of agricultural products. As other states also raised their trade barriers, a large fall in global imports and exports ensued, prompting the formation of discriminatory trade and exchange blocs.

[14] Mavroidis 2016, 198.

[15] Bailey, Goldstein, and Weingast 1997, 327. Goldstein recently changed her view about the RTAA; see Goldstein and Gulotty 2014.

[16] Haggard 1988, 91.

[17] For example, Nelson 1989, 93; Eckes 1995, 177.

[18] Irwin 1998, 326. The same was true of the early GATT, as Irwin 1998, 346, points out. But the United States could have initiated a process—though it would have been labor-intensive—that kept the level of tariff protection constant by changing specific tariffs in response to price changes.

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When the Democratic Party took office in 1932, a reversal in US trade policy seemed imminent, and not just because the party was traditionally in the free-trade camp. The Smoot-Hawley tariffs only exacerbated the decline in US trade that occurred with the onset of the Great Depression. The active pursuit of trade liberalization began when President Franklin D. Roosevelt authorized Cordell Hull, his secretary of state, to shepherd a trade bill through Congress. Its passage enabled the United States to join the long list of "major commercial countries" in Europe and Latin America that by 1934 had "granted their executives authority to enter into reciprocal trade pacts with other countries."[19]

Nonetheless, the final text of the bill tied the president's hands in several important ways. Congress required the president to seek its approval to extend the bill every three years, making it clear that executive-branch officials could only "orchestrate tariff reductions in the shadow of congressional power."[20] (But it was also true that renewing the RTAA required "only a simple majority in Congress, whereas any treaty negotiated by the president prior to the RTAA had to be approved by two-thirds of the Senate."[21]) In addition, the bill institutionalized a voice for domestic political interests. Congress required "the administration [to] give public notice of its intent to negotiate an agreement and allow interested parties to have a voice in the process."[22] It required the executive branch to ex ante supply a list of the products on which it might offer tariff cuts.[23] The House Ways and Means Committee and the Senate Finance Committee also mandated that the choice of the goods on which to cut tariffs must "be guided by the general principle that only commodities of which the negotiating country is the chief or an important source of supply should be included."[24] Otherwise, they pointed out, "a foreign country would not be likely to grant us concessions in return for tariff reductions which would be more valuable to some third competing country than to it."[25]

The Roosevelt administration appointed a Trade Agreements Committee to supervise the new process. It, in turn, created a series of country committees, one for each prospective RTAA trading partner, to make an "intensive study, commodity by commodity, of each item of our

[19] Tasca 1952, 45.
[20] Goldstein and Gulotty 2014, 267.
[21] Irwin 2017, 432.
[22] Irwin 2017, 438.
[23] The contact point for domestic interests was the Committee for Reciprocity Information. The process that allowed domestic interests to have a voice "cut down much opposition to the bill"; Sayre 1939, 58.
[24] Sayre 1939, 76.
[25] Sayre 1939, 76.

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imports from the country in question."[26] Before a country committee recommended any good for a potential concession, it undertook a painstakingly thorough examination of the good

> in the light of our past tariff treatment of the commodity, of the proportion of imports to domestic production, of the status and conditions of the domestic production of the commodity, of the probable effects upon domestic production of greater competition from the country under consideration and from all other countries, and of possible effects upon allied or competing domestic industries.[27]

These exegeses of trade enhanced the credibility of FDR's promise to cut tariffs if and only if doing so would not injure any "sound and important American interest."[28] Prior to talks with Belgium in 1934, for example, US officials compiled a fifteen-volume series that singled out the goods that were "most complementary to the American economy," that is, the products on which the United States could make concessions without "seriously injuring the economic interest of any specific industry."[29]

In addition, the Tariff Commission took note of the goods on which the United States could cut tariffs without threatening domestic firms. It also made clear those goods on which tariff cuts would instead endanger the survival of domestic import-competing firms. A 1934 report of the Tariff Commission, for example, enumerated: (1) "1,021 separate items, imports of which were less than 5 percent of domestic production," (2) 540 products with tariffs over 50 percent, and (3) "360 dutiable commodities of a non-competitive nature on which foreign producers have a clear, inherent advantage."[30] As Percy Bidwell observed after the adoption of the RTAA, the Tariff Commission reports enabled US officials to limit tariff cuts "to specialties not directly competitive with any American product (e.g., handmade lace)," "commodities in which American production so dominates the home market" that imports would have "little or no effects on products," and "commodities of which the domestic supply is deficient."[31]

Assistant Secretary of State Francis Sayre, the son-in-law of Woodrow Wilson and a Harvard law professor,[32] also assured Congress that

[26] Sayre 1938, 424.
[27] Sayre 1938, 424.
[28] Cited in Tasca 1952, 60.
[29] Letiche 1948, 18.
[30] Lockwood 1936, 47.
[31] Bidwell 1938, 35–36. The 1934 report of the US Tariff Commission on lace alone was 126 pages in length. See www.usitc.gov/publications/other/pub83.pdf.
[32] Irwin 2017, 437.

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the administration would make tariff cuts that delivered only private rather than public goods. The chair of the Tariff Commission adjudged this a reasonable goal given that the "hundreds of products" imported by the United States were often sourced in only one country. A year before the RTAA became law, the Department of State had compiled a list of goods that the United States imported from countries that "constituted the chief or an important source of supply."[33] It found that "each of some 29 nations was the leading supplier to the United States of at least one and in most cases of numerous important commodities."[34] These countries, Sayre pointed out, together accounted for 96 percent of American imports. As such, it was eminently feasible to cut tariffs without precipitating free riding.[35] The key to doing so, as Benjamin Wallace, a member of the US Tariff Commission, observed at the time, depended on

> one very simple formula, namely, that ordinarily no concession is made to any country except in respect of articles imported chiefly from that country. By this formula the substance of the concessions is reserved for the two countries which make the bargain, even though all the concessions are scrupulously extended to third countries. These other countries may pick up some fragments of trade, but their gain from the reduced tariff rates consists mainly in the spiritual satisfaction of receiving equality of treatment, since they are unimportant exporters of the products forming the subject of the bargain. In spite of technical progress which tends to enable any country to produce any sort of product, an examination of international trade item by item shows that national specialization is still dominant. In the greater number of items, one country predominates in export trade, or if there are several important exporting countries . . . , they send their products to different markets.[36]

The US practice was consistent with the congressional mandate to thwart the effects of the MFN rule. The United States had bound itself to extend any tariff cut not only to all its RTAA partners, but also to all its other trading partners, except for Germany and Australia.[37] The principal-supplier rule minimized the chances that the RTAA agreements would give something away for free to non-negotiating countries, thus preserving US bargaining power in future agreements. Because a prospective treaty partner could only request a concession on a good if the partner was the principal supplier of that good to the US market, the RTAA bargaining protocol required a product-by-product or

[33] Sayre 1935, 10.
[34] Sayre 1935, 10.
[35] United States Tariff Commission 1935, 9.
[36] Wallace 1933, 624–25.
[37] Germany and Australia both discriminated against US imports.

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item-by-item approach to freeing trade.[38] Principal suppliers weren't ex ante hard to identify. As we show below, US imports of a good that received an RTAA tariff cut were thirteen times higher from the country that was its principal supplier than from other suppliers to the US market *before* the RTAA agreements went into effect.

The protocol added new lines to the US schedule whenever the schedule did not "describe with sufficient accuracy commodities on which a given country . . . is the principal supplier."[39] The agreement with Canada, for example, produced a new tariff line applicable only to cattle weighing more than seven hundred pounds, conferring gains on Canadian trade in bovine goods, but not Mexican.[40] The US-Swiss agreement created separate tariff lines for the emmentaler and gruyère cheeses that neither Denmark nor Canada produced. The agreement with Belgium added a tariff line that applied only to laces valued at a minimum of $50 per pound to exclude "low-grade" Chinese laces.[41]

The principal-supplier rule enabled US policymakers to assure its prospective treaty partners that they would realize gains from trade should they sign an RTAA agreement. The United States based its requests for concessions on the same rule, seeking lower tariffs abroad for those goods on "which it felt it could favorably compete with other countries."[42] As a result, the principal-supplier rule institutionalized the reciprocity that is typically an essential element of trade agreements.[43] It was also the "most basic" of the mechanisms used "to assure the compatibility of the unconditional most-favored-nation clause with a conventional tariff bargaining program."[44]

The item-by-item approach to tariff cuts mandated by the principal-supplier rule had another very important purpose: it allowed the parties to avoid making tariff cuts on goods that would adversely affect their politically most powerful import-competing industries. Existing evidence shows that the United States succeeded in doing this. The RTAA did not, for example, cut tariffs on the products of industries "that were most protected before, and in the Smoot-Hawley tariff retained their high tariffs abroad. . . . Instead, the bulk of tariff concessions were made from industries that had relatively lower tariffs and presumably

[38] Senate Report No. 871, "Reciprocal Trade Agreements." April 26, 1934. At https://www.finance.senate.gov/imo/media/doc/Spt73-871.pdf, accessed January 17, 2018.
[39] de Rycke 1952, 137.
[40] Lockwood 1936, 45.
[41] Lockwood 1936, 45.
[42] Tasca 1952, 144.
[43] For example, Bagwell and Staiger 2002.
[44] Tasca 1952, 146.

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less clout in Congress."[45] Albeit somewhat early in the process, William Wirt Lockwood also pointed out "that there have been few widespread cries of pain from important, protected industries, once the agreements have been announced."[46]

When US officials cut tariffs on goods that had domestically produced substitutes, the cuts applied "only to goods of a specific value, to goods produced during particular seasons, or to only one product among a group of products."[47] Noting that some British exports "bear the same designation as domestic goods," Bidwell pointed out that "in reality" British yarn was "mostly mule-spun from Egyptian cotton," while US yarn is "the product of ring spinning."[48] To protect domestic producers, RTAA agreements specified import levels that would trigger an automatic reversion to ex ante tariff levels. The US-Czech accord, for example, included a clause that allowed the United States to raise tariffs on shoe imports if those imports exceeded 1.25 percent of its domestic production.[49]

The administration also pledged that if no "reasonable reclassification" could restrict the gains from a tariff cut to its prospective treaty partner, it would not lower the relevant tariff.[50] Alternatively, as Harry Hawkins, chief of the State Department's Trade Agreements Division, noted, the United States might conduct simultaneous talks with multiple nations that produced the good. Talks with Argentina and Uruguay, for example, would be held only if they occurred simultaneously because their similar production profiles meant that "a trade agreement negotiated with either country would necessarily have covered virtually every product of interest to the other, and the generalization of the concession under the most-favored-nation principle would have seriously impaired our negotiation position."[51]

To preempt the threat that other countries would shift their production profiles to exploit RTAA concessions, Secretary of State Hull made it clear that if "some other country at any later stage profits unduly" from a concession, "we retain the right . . . to modify the original

[45] Goldstein and Gulotty 2014, 264.
[46] Lockwood 1936, 48.
[47] Beckett 1941, 24.
[48] Bidwell 1937, 111.
[49] Buell 1938, 35.
[50] The classic example is a German tariff cut in Germany's 1904 agreement with Switzerland on "large dapple mountain cattle or brown cattle reared at a spot at least 300 metres above sea level and having at least one month's grazing each year at a spot at least 800 metres above sea level"; Viner [1931] 1951, cited in Ludema and Mayda 2009, 138, n. 7.
[51] Hawkins 1951, 80. This is very similar to the GATT/WTO practice. Concessions were not enacted into law until countries that exported a good, but were not its principal supplier, also made reciprocal concessions. Bagwell, Staiger, and Yurukoglu 2015 document the process in the Torquay Round.

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grant."[52] The 1935 US agreement with Belgium, for example, allowed either party to withdraw a tariff cut when "imports from third countries are increasing unduly and such countries are obtaining the major benefits from the concession."[53] Accordingly, Sweden withdrew its concession on salted pork in 1939 because Argentina and Brazil had replaced the United States as its principal supplier,[54] while the United States withdrew its concession on Swiss handkerchiefs in 1940.

The administration also selected its prospective treaty partners strategically, particularly right after the passage of the RTAA. During the subsequent four years, it signed accords with ten tropical or semitropical countries that exported to the United States goods that were already on its free list,[55] for example, coffee, cocoa, bananas, tropical wood and nuts, and platinum.[56] US concessions often took the form of pledges to keep goods duty free. In some cases, bindings accounted for a sizable share of all US concessions: they applied to about "two-thirds of imports from Sweden in 1934, 88 percent of imports from Colombia, and over 90 percent of imports from Finland, Brazil, Nicaragua, and Guatemala."[57] As Goldstein notes, "both reductions and binding of tariffs are consequential. Binding provides predictability—insurance that the tax will not capriciously be changed."[58]

Data and Analysis

Data

Foreign Commerce and Navigation of the United States, a series of annual reports by the Secretary of the Treasury, provides much of our data. These reports record import values for each US trading partner in each product line; the quantity of imports of each product, if available; the tariff rate for each product line; and whether the line had an agreement rate. We coded this information for the years between 1934 and 1946, giving us complete information on all US imports of each product from every country. Unfortunately, we don't have comparable data on US exports. Each RTAA signatory had its own tariff and commodity classification system. Because no uniform cross-national classification of goods

[52] Cited in Lamp 2013, 28, n. 59.
[53] United States Tariff Commission 1935: S 55.
[54] de Rycke 1952, 160.
[55] Buell 1938, 33.
[56] Lockwood 1936, 39.
[57] Lockwood 1936, 40.
[58] Goldstein 2017, 552.

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TABLE 1
DESCRIPTIVE STATISTICS ON US COMMODITY LINES

	Number	*Percent*
Total commodity lines	7,221	
Tariff-free lines	1,047	14.5
RTAA product lines	2,272	31.5
of which:		
New product line	940	41.4
Existing product line	1,332	58.6

existed at the time, it's not possible to identify the US exports on which RTAA treaties cut tariffs.[59] Thus, we can only analyze the impact of the treaties on US imports.

Each year during this period, the United States imported about 4,000 unique commodities annually. We record data about them at the highest possible level of disaggregation, creating a data set that includes 260,000 observations on about 7,300 lines[60] and 135 countries.[61] The United States granted an RTAA concession on 32 percent of these tariff lines, not including the free rates bound during the RTAA negotiation process. Table 1 records descriptive statistics on the number of product lines in our data, the number of lines with no tariffs (*tariff-free lines*), and the number of RTAA lines, including splits in existing lines and continuations of existing lines.

Because the RTAA process revised the tariff schedule, commodity-line numbers shift across time. Taking the shifts into account requires comparing descriptions of commodities across years to determine whether the line numbers refer to the same goods. In 1943, for example, a zero was added in the middle of many line numbers, so that "fishing tackle, artificial bait" switched from 9421.0 to 9420.10. Sometimes the change occurred because the same line number referred to different products before and after 1943. In other cases, splits in commodity lines had a knock-on effect that led to changes in other lines. For maximum data coverage, we examined all the commodity lines in our data set to ensure that they had the same description, and we matched numbers to line numbers that changed but still referred to the same product.

[59] The Geneva nomenclature started in 1931 but was not widely adopted, especially after the decline of the League of Nations. The Brussels tariff nomenclature that standardized goods and tariff lines was established in late 1950, but was adopted by only a handful of countries. The Standard International Trade Classification (SITC) was adopted in 1960; in 1962 the Brussels tariff nomenclature and the SITC were combined into a single SITC classification that most countries have used since then.

[60] Over time, splits in lines, the addition of new lines, and the deletion of old lines increase the number of unique lines.

[61] There were also about 250 lines with multiple tariff rates.

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The *Foreign Commerce* series reports whether a commodity line has an agreement rate, but doesn't specify the country that originally negotiated that rate.[62] To determine this, we cross-referenced the commodity lines with the US Schedule A publications. Schedule A records the tariff rates for every commodity line in each year, the tariff as set by the Smoot-Hawley Tariff Act, the agreement rate for a product where applicable, and the country that requested the agreement rate.[63] But the series doesn't have import or export data about trading partners. After combining the *Foreign Commerce* series and Schedule A data, we know for each US import the value of the import from each country, the tariff rate on the product, whether the product was subject to an agreement rate, and the country that negotiated the agreement rate.[64]

Analysis

Unless otherwise noted, all analyses cover the years between 1934 and 1946. First, we examine the impact of the RTAA accords using the specification that's the industry standard. That is, we ask whether the accords increased overall US imports from their signatories relative to US imports from other states. The dependent variable is the logged value of total US imports from each country in a given year. The key independent variable is a dichotomous variable that equals 1 if imports originate in an RTAA signatory. This is analogous to, for example, Rose's analysis of the GATT/WTO. In it, the dependent variable is the log of overall trade between members of country pairs, and the key independent variable takes on a value of 1 when both members of a dyad are GATT/WTO contracting parties.

We include in the analysis *exporter fixed effects*, that is, a dummy variable for each country in the analysis other than the United States, to control for time-invariant country-level factors that may affect trade but aren't observable. We also include *year fixed effects* to control for US-specific factors, such as inflation or recession, which may affect its

[62] As mentioned above, the MFN rule meant that when an agreement rate on a specific product was negotiated and put into effect, it would apply to imports from all countries of that good rather than to imports only from the country that negotiated the rate. Thus, it's necessary to separate out the negotiating countries to determine whether they too benefited more from the agreements.

[63] The Schedule A publication was not available for every year. We found copies for 1933, 1936, 1941, and 1946. The agreement with Czechoslovakia was only in effect from April 1938 to April 1939, so it wasn't listed in the Schedule A publications. Because the agreement was in effect for part of the year, we could identify the Czechoslovakian agreement rates from the trade publications if they mentioned whether the agreement rate was in effect for only part of the year. We were able to use the partial-year information to determine the agreement country for commodity lines that changed number and didn't have a match in later years.

[64] Many values of missing trade exist because countries don't produce all possible products that the United States imports. As we explained above, the United States imported most products from a small set of countries. See the section on robustness tests for a detailed description of how we deal with this.

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TABLE 2
AGGREGATE IMPORTS FROM US RTAA PARTNERS, 1934–1946 [a]

RTAA	0.330
	(0.278)
Log of GDP	2.649***
	(0.527)
Constant	−9.625*
	(5.142)
Number of observations	585
Countries	58
RTAA countries	23
Log-likelihood	−867.57

*** significant at 0.01, ** significant at 0.05, * significant at 0.1
[a] Dependent variable is log of total imports from each partner. Model includes country fixed effects and year fixed effects.

imports in any given year.[65] As is standard in gravity models of trade, we also include the log of the partner's *GDP* (from Angus Maddison[66]). Missing GDP data for many countries dramatically reduce the sample size.[67] The results in Table 2 are consistent with those found by other studies of historic trade agreements: no significant change occurs in the aggregate imports of the United States from its RTAA partners relative to its imports from other states. As we discuss in more detail below, this is probably because RTAA tariff cuts were made on a relatively small subset of US imports.

Second, we ask whether a significant increase occurs in US imports of those products on which the RTAA agreements cut tariffs. For this analysis, we look at the country-product level of trade. The dependent variable is the log of US imports from a country in a specific product in a given year. The main independent variable in Table 3, column 1, is a dichotomous variable that is equal to 1 if a product received an RTAA tariff cut. The models include product-level fixed effects and exporter-year fixed effects. Because of the product fixed effects, the RTAA variable

[65] For more information about the proper specification of gravity models, see Head and Mayer 2014. They advocate using two-way fixed effects in gravity models. Because our analysis is based on US imports, we can't control for exporter-year fixed effects in the model in Table 3. For the analysis at the product level, we include product-level fixed effects except where noted and use exporter-year fixed effects to control for multilateral resistance.

[66] At https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018.

[67] Because some studies find that democracies engage one other in more trade than do other states, we also initially included a country's polity score. Because its coefficient is both minuscule and insignificant, we drop it from the analysis.

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TABLE 3
BASELINE RESULTS, 1934–1946[a]

	(1)	(2)	(3)
RTAA agreement rate	0.260**		
	(0.128)		
RTAA originating country		2.920***	0.798***
		(0.190)	(0.053)
Other RTAA signatory		0.0816	0.0153
		(0.112)	(0.043)
Pre-RTAA originating country		2.630***	0.680***
		(0.178)	(0.055)
Pre-RTAA other signatory		–0.165	–0.0974***
		(0.103)	(0.037)
Lagged imports			0.699***
			(0.010)
Number of observations	259,725	259,725	182,236
Countries	135	135	128
Log-likelihood			
Pre-/post-RTAA difference		0.001	0.000

*** significant at 0.01, ** significant at 0.05, * significant at 0.1

[a] Model 1 contains product-line fixed effects. Models 2 and 3 include country-year fixed effects and product-line fixed effects.

measures the change in trade before and after a product is covered by an RTAA. A positive and significant effect in Table 3, column 1, means that trade increased in RTAA products compared to non-RTAA products after an RTAA rate went into effect. As column 1 shows, there is indeed about a 30 percent increase in the imports of RTAA products once an agreement rate is in place.

The increase recorded in Table 3, column 1, is the average across all countries that exported the product. But the core prediction of our argument remains to be tested. We argue above that the benefits of an agreement rate on a specific product should accrue largely, if not exclusively, to the principal supplier of that good to the US market. Next, therefore, we ask whether the principal supplier's post-RTAA exports to the United States increased compared to its pre-RTAA trade, and whether the increase differed from that of the base group. In other words, we want to know if the agreement had different effects across different groups of countries.[68]

[68] Any analysis of the effects of trade agreements raises a concern about endogeneity. Countries that trade more are also more likely to sign trade agreements, making it difficult to isolate the impact of trade agreements. Limão 2016 suggests several options to control for endogeneity, including instrumental variables and matching. Neither solution works well for our case. Instead, we follow the final

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To address this question, we include variables for pre-RTAA and post-RTAA US imports from different sets of countries.[69] In columns 2 and 3 of Table 3, we include four RTAA-specific variables. The first variable, *RTAA originating country*, assumes a value of 1 if a country had successfully requested a concession on a specific product, that is, if it's the principal supplier of the good in question, and is 0 otherwise. The second variable, *other RTAA signatory*, assigns a value of 1 to a country that was a party to an RTAA accord, but did not request the tariff cut.[70] Both take on a value of 1 only after the agreement is signed. To compare pre- and post-RTAA trade for the different categories of countries, the second set of variables is analogous to the two above. *Pre-RTAA originating country* is equal to 1 in the years before the principal supplier successfully requested a concession on a specific product. At the bottom of the table we report the significance level of a test of the difference between the *RTAA originating country* and the *post-RTAA originating country* coefficients. If our argument is correct, the coefficient on *RTAA originating country* should be significantly different from zero, and the difference between the *pre-* and *post-RTAA* coefficients should be positive and significant as well.

As columns 2 and 3 of Table 3 show, the results are consistent with our argument. Originating countries trade much more in a product than do other groups of countries, both before and after an RTAA agreement. US imports of their products are about thirteen times larger than imports of non-RTAA products before the RTAA and about seventeen times larger than imports of non-RTAA products after the RTAA. More important, we find a significant increase in US imports of a particular good only if its supplier is the RTAA signatory that originally requested a concession on it. The results show that the exports of these signatories to the United States increase by a large and significant amount. Compared to pre-RTAA trade, the increase is about 33 percent. Recall that the findings in Table 3, column 1, show that trade in RTAA products increased by about 30 percent after an RTAA treaty went into effect. The

fix offered and one that is generally used. In studies of aggregate trade, dyadic fixed effects transform the dependent variable such that the trade agreement variable is the difference between pre- and post-trade for a pair of countries. The effect is less influenced by high values of preexisting trade within a pair of countries. As we note in the next paragraph, the equivalent for us is to include separate variables for pre- and post-RTAA trade for a country in a product.

[69] Another option would be to include country/product fixed effects. But given that there are 7,300 unique commodity lines over the years in the sample and 135 countries, these fixed effects would erase most of the degrees of freedom in our models.

[70] When we include product-level fixed effects, we need to leave an open category so we exclude a dummy variable for non-RTAA signatories. In the models with fixed effects at the one- or two-digit product level, we create a dichotomous variable that assumes a value of 1 when a country did not sign an RTAA (*non-RTAA signatory*) to test whether nonsignatories were able to free ride on agreement rates.

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results together suggest that all the gains from the RTAA accords accrued to the principal supplier of the goods on which it cut tariffs.

In Table 3, column 3, we include a lagged dependent variable to try to control for past trade. There's a great deal of stickiness in trade—the coefficient on lagged imports suggests that previous trade explains about 70 percent of a current year's trade. Again, we find that the originating countries account for all the increase in trade in RTAA products. It seems clear that the US effort to privatize its tariff concessions was extraordinarily successful. It's no wonder that estimates of ex post changes in aggregate trade flows are insignificant: all the action occurs exclusively in the exports of a particular good from its principal supplier.

What explains the difference between tables 2 and 3? That is, why don't aggregate US imports increase for the agreement partners as a whole, given the increase in trade in products for which they are the principal supplier? The coefficient on the *RTAA* variable in Table 2 on aggregate trade is very imprecise. The standard error is very large, suggesting that the effects of an agreement on a country's total exports to the United States vary widely. This isn't surprising because the proportion of a signatory's trade that was covered by an agreement varied greatly, ranging from 0 to about 70 percent. The smaller the proportion of a signatory's products that were covered by an RTAA, the smaller the effect on aggregate trade. The median value was about 9 percent, implying a 3 percent increase in aggregate US imports from RTAA signatories. Indeed, for many Central American and South American countries that signed an RTAA treaty, the main benefit was to bind free rates. Those countries received US tariff cuts on less than 1 percent of their goods, so the impact on aggregate trade would be tiny.

Moreover, the results in Table 3 show that the principal supplier captured all the increase in US imports of RTAA products. There didn't seem to be a clear redistribution of trade after an RTAA. Instead, because most countries couldn't benefit from the RTAA rates, the benefits accrued only to the principal supplier. The absence of a significant impact on aggregate US imports from their signatories is explained by two facts: increases in trade from the RTAA were limited to the principal suppliers, and the number of products negotiated by each of them varied. Had the agreements covered more products, the effect on aggregate trade might have been larger. Of course, it would have been harder for the United States to restrict the benefits of the agreements only to the originating country.[71]

[71] There's little reason to believe that the ex ante principal supplier was not the low-cost producer of the good in question. Moreover, any tariff cut applied to all US trading partners. Trade diversion, therefore, is not a concern here.

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Given the discrimination across countries inherent in the RTAA, it's also possible that the agreements signed under its auspices produced trade diversion. That is, by tailoring its tariff cuts to individual countries, the United States may have actually diverted its imports from more to less efficient producers. Although all countries would have been subject ex ante to the same tariff rate for a product, it's possible, though unlikely, that the largest supplier was not the most efficient one. Although we can't rule out this possibility, it wouldn't affect our estimates of an RTAA's effect on goods from the principal supplier. Trade diversion might occur due to product line splits, but, as we discuss immediately below, the absence of pre-RTAA data means that we can't include the split lines in our product-level estimates.

Tariff Line Splits

As we note above, no pre-RTAA trade data exist for the goods subject to RTAA tariff splits, so we can't estimate their impact in our regression models. We can only measure changes in trade when lines existed before and after the signing of an RTAA accord. To evaluate whether our argument also applies to tariff lines that split, we must rely on descriptive statistics. Based on our argument and on the analyses, we have two expectations about the new lines. First, we expect fewer trading partners in new lines than in ongoing lines. Second, we expect the principal supplier to make up a larger proportion of trade in new lines than in existing lines.

To see whether our expectations apply to new tariff lines, we compare the pattern of trade after an RTAA goes into effect for lines that remained consistent and for those that split. In Table 4, we show the percentage of US imports from each of three groups of countries after an RTAA treaty took effect. The first (*originating country*) includes the countries that originally requested a concession on a specific product. The second (*other RTAA signatory*) includes countries that were party to an RTAA accord but did not request the tariff cut. Finally, to see whether nonsignatories were able to free ride on agreement rates, the third group includes countries that didn't sign an RTAA (*non-RTAA signatory*), but traded in the product.

For continuing lines, originating countries accounted for 64 percent of US imports of a product's trade after an RTAA went into effect. The corresponding statistics are 12 percent for countries party to another RTAA agreement and 24 percent for other states. By contrast, an analysis of the lines that split shows that the originating country makes up on average 72 percent of a product's import share. Other RTAA countries

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TABLE 4
POST-RTAA TRADE BY COUNTRY TYPE (PERCENTAGE)[a]

	No Line Split	*Product Line Split*
No. trading partners	4.8	4.3
RTAA Originating country	64.2	71.7
Other RTAA signatory	12.3	11.8
Non-RTAA signatory	23.5	16.5

[a] *No line split* shows the proportion of trade for lines that had a consistent product number pre-and post-RTAA. *Product line split* shows the proportion of trade for lines that were created after an RTAA.

account for about 12 percent and non-RTAA countries account for about 17 percent of a product's import share. Thus, pre- and post-RTAA trade in split lines displays the same pattern as do tariff cuts on existing lines: the principal supplier appears to be the principal beneficiary of any tariff cut.

Relying on descriptive statistics, of course, is not the optimal way to estimate the impact of line splits. But it's also true that the problem of tariff splits isn't unique to this article. Tariff splits and line changes will affect any longitudinal study of product-level trade. Changes in classification systems occur over time and countries are free to devise their own classification systems beyond the six-digit level, meaning that they have the ability to split lines. Indeed, the number of lines in the US tariff schedule doubled between 1989 and 2011, going from 8,600 to 17,000.[72]

ROBUSTNESS TESTS

We also tested whether our results are robust to a variety of different specifications. Table 5 displays the results from our first robustness tests. Because of the large number of products in the data, the models we specify in Table 3 include a multitude of fixed effects and a relatively short time span. As a robustness test, we generate a new product-line code that's equal to the first two digits of the existing seven-digit code. This reduces the number of product fixed effects from more than seven thousand to eighty-six, and does not change the results. A significant increase in trade in a good with an agreement line remains limited to the country that had originally requested a concession on the good. As a further test, we create a product line as the first digit of the seven-digit product line. This doesn't affect the results either. The third column excludes all product fixed effects, and still the results do not change. In each case, the models include controls for country-year fixed effects.

[72] Kim 2013.

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TABLE 5
ROBUSTNESS TESTS[a]

	(1) 2-dig. Commod.	*(2) 1-dig. Commod.*	*(3) No Prod. FEs*	*(4) Trade > $100*	*(5) Trade > $1,000*	*(6) Tot. Trade > $10,000*	*(7) Never < $10,000*	*(8) Year< 1942*	*(9) Drop Occupied*
RTAA orig. country	2.608***	2.673***	2.779***	2.259***	1.620***	3.389***	3.539***	3.188***	2.966***
	(0.335)	(0.401)	(0.444)	(0.143)	(0.113)	(0.211)	(0.214)	(0.197)	(0.202)
Other RTAA signatory	−0.243***	−0.320***	−0.309***	0.0741	−0.0645	−0.00901	−0.225	0.0162	0.0650
	(0.074)	(0.067)	(0.075)	(0.115)	(0.107)	(0.135)	(0.154)	(0.143)	(0.114)
Non-RTAA signatory	−0.125	−0.204*	−0.151						
	(0.117)	(0.118)	(0.127)						
Pre-RTAA orig. country	2.333***	2.382***	2.480***	2.066***	1.464***	3.126***	3.203***	2.758***	2.631***
	(0.285)	(0.333)	(0.366)	(0.136)	(0.111)	(0.227)	(0.225)	(0.205)	(0.176)
Pre-RTAA other signatory	−0.209***	−0.143**	−0.092	−0.155	−0.190*	−0.227*	−0.447***	−0.136	−0.171*
	(0.064)	(0.062)	(0.065)	(0.112)	(0.111)	(0.123)	(0.132)	(0.123)	(0.103)
Pre-RTAA/non-RTAA sign.	−0.093	0.0072	0.093						
	(0.109)	(0.132)	(0.141)						
Number of observations	259,725	259,725	259,725	194,162	127,214	201,224	128,590	182,007	252.899
Countries	135	135	135	134	133	135	134	104	135
Pre-/post-RTAA difference	0.016	0.028	0.029	0.012	0.025	0.002	0.000	0.000	0.000
Years	1934–46	1934–46	1934–46	1934–46	1934–46	1934–46	1934–46	1934–41	1934–46

*** significant at 0.01, ** significant at 0.05, * significant at 0.1

[a] All models include country-year fixed effects. Models 4 through 9 also include product-level fixed effects.

The high levels of disaggregation at which we measure changes in trade mean that some trade transactions were very small, involving less than $100. Some small countries and colonies shipped only a handful of different products to the US market. This may raise concerns about whether these small values may skew the findings, since the principal supplier did have larger values of trade and would presumably witness larger changes in trade naturally. Using the log of imports should ameliorate some of these concerns, since the change in the coefficients on the RTAA variables measures the percentage increase in trade. In column 4, we exclude country-product years where imports didn't exceed $100. We lose about 65,000 observations, but the results do not change. In column 5, we only include trade values that exceed $1,000. This drops more than half the observations from the data, but doesn't change the results. In column 6, we exclude any product lines where the United States imported less than $10,000 in a year; in column 7, we exclude all observations of a product line if the United States ever imported less than $10,000 annually. The results are robust to both these changes.

It also seems plausible that the advent of World War II affected trade. Because the United States signed a lot of agreements with countries that didn't participate in the war, the RTAA effect could be due to the fact that their signatories supplied imports that had been ex ante provided by the belligerent countries. To test this idea, we ran the analysis between 1934 and 1941. As column 8 of Table 5 shows, the results remain intact.[73] In column 9 we exclude countries with an RTAA that were occupied by the Axis during World War II (France, Belgium, and the Netherlands). The results do not change.

Thus far, the results are remarkably robust to the different exclusions we have tried. But it may be that increasing specialization across time explains the changes we observe in the trade of the principal supplier. To address this issue, we introduce two sets of placebo tests. Germany was a principal supplier of many highly protected US products during the interwar years.[74] If our findings can be explained by the fact that principal suppliers in general increased their exports to the United States, then we would expect products for which large countries such as Germany, Japan, and China were principal suppliers to show the same effect. First, we simply take all those products for which Germany, Japan, and China were principal suppliers for more than half the years in the sample, and assume an agreement was signed with each in 1938. As

[73] We obtain similar results when we run the same models including the lagged dependent variable. The tables are available from the authors upon request.

[74] Goldstein and Gulotty 2014.

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in our main models, we set up pre-RTAA variables equal to 1 in the years before 1938.

Columns 1 and 2 of Table 6 report our results. The coefficient on the *post-RTAA placebo* is large and different from zero, but it's smaller than the *pre-RTAA placebo* coefficient. In fact, the difference between *pre-* and *post-RTAA trade* is negative and significant, presumably the result of the onset of World War II. We note that the size of the coefficient on *post-RTAA* trade in these products is still very large, suggesting that trade in these products remained substantial. Despite the war, these countries remained the principal supplier of the products, but US imports of those products did not increase.

As a second test, then, we create a second set of placebos using any product for which a non-RTAA country was the principal supplier for more than half the years in the sample. This identifies all principal suppliers that did not sign an RTAA agreement. As before, we create *pre-* and *post-RTAA* variables, assuming an RTAA was signed in 1939 to give greater pre-RTAA coverage. The coefficient on this variable is positive and large. As with the previous placebo test, the pre/post difference in coefficients is negative, albeit in this case not significant. The results strongly indicate that increasing product specialization cannot account for our main results. It seems much more likely that the increase we observed in exports to the US market of the principal supplier was due to the signing of an RTAA agreement.

In the supplementary material, we present further robustness tests.[75] Table S2 excludes RTAA countries one by one to determine whether a single country's trade is driving the results. Although it's not surprising that the size of the coefficient is similar when we exclude small RTAA countries like Costa Rica or Guatemala, excluding big countries, such as Canada or the UK, also does not significantly change the coefficient on the principal supplier.

Zero values of trade might be important as well. The tariff reductions from the RTAAs might encourage a surge of trade on the extensive margin. If some countries didn't export the relevant products to the US market in the pre-RTAA period, our analyses wouldn't pick up any trade that might have occurred between them in the wake of the interwar agreements. Moreover, as we note above, the original signatories could and did withdraw RTAA concessions if third-party countries shifted their production profiles to exploit them. Filling in zero values of trade for each country for each product and year would lead to an

[75] Gowa and Hicks 2018.

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TABLE 6
PLACEBO TESTS OF PRINCIPAL SUPPLIERS, 1934–1946[a]

	(1)	(2)	(3)	(4)
RTAA originating country	2.794***	0.770***	2.691***	0.768***
	(0.171)	(0.051)	(0.183)	(0.053)
Other RTAA signatory	–0.0374	–0.0313	–0.158*	–0.0732*
	(0.089)	(0.038)	(0.096)	(0.042)
Other placebo signatory	–0.436***	–0.124***	–0.464***	–0.190***
	(0.085)	(0.043)	(0.142)	(0.064)
Pre-RTAA originating country	2.523***	0.657***	2.457***	0.662***
	(0.164)	(0.055)	(0.172)	(0.057)
Pre-RTAA other signatory	–0.264***	–0.141***	–0.344***	–0.171***
	(0.081)	(0.032)	(0.086)	(0.035)
Post-RTAA Germany, China, Japan	3.485***	1.009***		
	(0.174)	(0.067)		
Pre-RTAA Germany, China, Japan	3.984***	1.211***		
	(0.328)	(0.071)		
Post-RTAA principal supplier			3.977***	1.182***
			(0.168)	(0.068)
Pre-RTAA principal supplier			4.124***	1.205***
			(0.161)	(0.047)
Pre-RTAA other placebo signatory	0.258*	0.0170	0.0361	–0.0792*
	(0.146)	(0.050)	(0.117)	(0.043)
Lagged imports		0.691***		0.679***
		(0.008)		(0.008)
Number of observations	259,725	182,236	259,725	182,236
Countries	135	128	135	128
Pre-/post-RTAA difference	0.002	0.001	0.005	0.001
Pre-/post placebo difference	0.008	0.000	0.475	0.729

*** significant at 0.01, ** significant at 0.05, * significant at 0.1
[a] Models include country-year fixed effects and product-level fixed effects.

unwieldy data set. It's also unrealistic because no countries export every product in the US classification scheme.

To examine whether values of zero trade affect the results, we recode a country as having zero trade in a good if it traded in that product at any time during our sample period. A country that exported cattle to the US only in 1937, for example, would be recoded to have zero values for the missing years. We first run a Poisson model with product-level fixed effects and country and year dummy variables. The dependent variable is the actual value of imports divided by one million. Because there are no country-year fixed effects in the model, we control for GDP, resulting in a sample size of five hundred thousand observations. As Table S3 in the supplementary material shows, our results do not change.

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In addition, we control for country-year and product fixed effects to make the analysis as similar as possible to our earlier regressions. Because this creates too many dummy variables to include in a standard Poisson model, we use the Paulo Guimarães and Pedro Portugal Stata command that incorporates two sets of fixed effects into a Poisson model by conditioning them out.[76] Doing so allows us to more directly compare with our baseline results the results of running a Poisson model that includes zero trade. In this model (Table S3, column 2), the difference between pre- and post-RTAA imports just misses significance at the 0.10 level for originating countries, but the dependent variable is highly skewed. There are thirty-five observations with values greater than one hundred. These values may skew the results, so in the third column we drop values greater than one hundred. Again, the difference between pre- and post-RTAA imports is highly significant.

Because the Guimarães and Portugal Stata command is relatively new, we also run an ordinary least squares analysis, recoding zero values to the log of 0.5 to control for country-year and product-level fixed effects. The number of observations remains at about 665,000. The coefficient on RTAA negotiating countries alone is still positive and significant. The results remain remarkably consistent to a series of perturbations—only the countries that initially negotiated a cut in a US tariff witnessed a rise in their exports.

Conclusion

The principal-supplier rule that governed bilateral tariff bargaining under the RTAA implies that the series of agreements it produced would raise some US imports from its treaty partners, but certainly not all. Because the United States cut tariffs on specific products at the request of specific countries, analyzing the treaties' effect on aggregate US import flows does more to obscure their impact than to clarify it. The logic of the principal-supplier rule implies that estimating the impact of the RTAA on trade requires examining US imports in specific goods from specific countries, that is, at the product level for each country.

It seems highly plausible that a similar explanation applies to the gap between theory and empirics evident in cases of other trade agreements. As Markus Lampe observes, parties to the Cobden-Chevalier treaties "did not simply mow equally across all tariff lines. Rather, they should

[76] Guimarães and Portugal 2010. The command "poi2hdfe" is available from SSC. Within Stata, type, "net describe poi2hdfefmwww.bc.edu/RePEc/bocode/p".

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be viewed as skillful gardeners, who aimed to trim specific tariffs in their partners' tariff regimes."[77] As in the case of the RTAA agreements, parties to the nineteenth-century bilateral treaties sought "to promote the goods only of the two signatory states in each case, to the detriment of competing countries even when they were entitled to most-favored-nation treatment."[78] Much the same is true of the tariff rounds that occurred under the auspices of the GATT. Historical accounts of the postwar trade regime show that the principal-supplier rule governed the bilateral talks between the large countries that dominated successive tariff rounds.[79] The increasing number of tariff lines in the postwar US schedule is consistent with our hypothesis: in 1972, the United States had 7,731 unique product categories for its imports; by 2016, the number had jumped to 17,000.[80]

The argument and evidence we present here suggest that theories about the agreements and institutions that facilitate trade liberalization have yet to adequately account for the politics that strongly influence interactions among their parties. The ways in which the parties to them seek to promote trade are often at odds with the formal rules of the game. States routinely undercut the MFN rule that they themselves designed to secure nondiscrimination in trade. They do so because the rule encourages free riding, preventing them from internalizing the benefits of the tariff cuts they exchange. The item-by-item approach to cutting tariffs also allows states to cherry-pick the goods on which they cut import levies, enabling them to minimize opposition from import-competing industries. As a result, a large gap can exist between the stated purpose of trade agreements and institutions and the objectives their members actually seek.

Supplementary Material

Supplementary material for this article can be found at https://doi.org/10.1017/S0043887117000302.

[77] Lampe 2009, 1036–37.
[78] Marsh 1999, 6.
[79] See, for example, Barton et al. 2008.
[80] Kim 2017, 2. Recent work also shows that the initial postwar tariffs were lower than conventional wisdom assumes. Many studies assume that 1947 tariffs for the major participants averaged about 40 percent. Reexamining the data, Bown and Irwin 2015 conclude that average 1947 tariffs were only about 20 percent. The WTO estimates that 1947 rates were "in a range between 20 and 30 percent"; World Trade Report 2007, 250.

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