Buying Time: The Political Economy of Tariff Staging in Free Trade Agreements

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Contents

Chapter 1

Courting the Median: Strategic Presidents and the Distribution of Tariff Phaseouts in U.S. Free Trade Agreements

Abstract

How do presidents design trade agreements? I argue that presidents use tariff phaseouts, which delay and soften import competition, as precise, distributable political resources to build majority coalitions. Constrained by international reciprocity, presidents target these scarce concessions to median legislators rather than staunch protectionists to offset the political costs of ratifying politically costly trade agreements. To test this, I introduce an original database of tariff-line treatments across 14 U.S. free trade agreements. Using a 2SLS framework, I find that a legislator's proximity to the trade median strongly predicts concession targeting, which subsequently increases the likelihood of a ratification vote. Notably, this political transaction is specific to the incumbent; the effect disappears if a district replaces its representative before ratification. Ultimately, this research highlights how flexible treaty design enables executives to navigate domestic constraints and secure trade liberalization.

Key words: free trade agreements, tariffs, phaseout, Congress, ratification

1.1 Introduction

How do presidents design trade agreements in anticipation of domestic ratification? Domestic ratification represents a critical hurdle in trade liberalization: it requires the leg-

islature to not only consent to new regulations and tariff reductions but also forces individual legislators to cast politically consequential votes. While conventional wisdom suggests that legislative support for free trade largely reflects district-level economic interests (Baldwin and Magee 2000) and that agreements are negotiated in anticipation of these domestic constraints (Putnam 1988), a notable gap remains in the literature. No study has investigated whether specific trade concessions — an area where presidents exercise broad negotiating discretion — are targeted toward pivotal voters and actually mobilize legislative support.[1] Therefore, for whom do presidents extract concessions in trade deals, and do these concessions build legislative support for ratification?

This study highlights an overlooked instrument in trade negotiations: tariff staging. Ubiquitous in modern FTAs, these rules allow negotiators to apply differential timelines for tariff elimination across individual product lines. Economically, these phaseouts have been shown to ease factor adjustments and facilitate resource reallocation (Riker 2021; Mussa 1984; Leamer 1980), thereby mitigating the immediate employment shocks associated with trade liberalization (Thai 2025*b*). Consequently, this economic easing delays and softens the political backlash for incumbents (Thai 2025*b*). Because industries spatially agglomerate,[2] tariff phaseouts defined at the product line can be geographically targeted to specific congressional districts. Thus, what appears to be a technical economic adjustment is, in practice, a *precise*, *distributable* political resource.

However, the use of such a resource is constrained by the reciprocal exchanges in trade negotiations. While phaseouts provide valuable adjustment time for import-competing industries, they impose opportunity costs on exporters, who —— under reciprocal terms -—- must endure slower market access abroad. This trade-off renders tariff phaseouts a *finite*, *scarce* political asset. To build a majority coalition for ratification, I argue that presidents strategically allocate this scarce resource to secure the votes of pivotal legislators. Because the *fast track procedures* in the United States eliminate the possibility of amendments and filibusters, supermajoritarian pivots are effectively nullified (Krehbiel 1998), leaving the median voter as the decisive player in Congress. Targeting these median legislators with concessions is efficient; they are 'cheaper' to buy than staunch protectionists

[1]The closest study to this particular research gap is Goldstein and Gulotty (2014), who examine the strategic negotiating behavior of the president in relation to Congressional reauthorization of trade policymaking authority during the RTAA and GATT eras. Furthermore, at the international organization level, Schneider (2008) argues that differentiated membership, i.e., the phasing in of membership benefits for new European Union members, can help secure the votes of member states who oppose the accession of certain new members. However, neither scholarship examines how granular benefits are targeted toward the pivotal voter in the legislature or the EU member state.

[2]See Krugman (1992); Ellison and Glaeser (1997, 1999); Ellison, Glaeser, and Kerr (2010); Shaver and Flyer (2000); Rosenthal and Strange (2001).

and more credible in their commitment to ratify. By concentrating concessions on the median legislator, the executive efficiently maximizes the likelihood of ratification while minimizing the aggregate costs borne by consumers and exporters. Representatives who secured concessions through their positional leverage during negotiations are likely to ratify the treaty, thereby strengthening their reputation for future trade agreement concessions.

To test my argument, I introduce an original database, PTARIFF, to measure districts' receipt of trade concessions. Using Van Lieshout (2021*b*)'s procedure, I code tariff-line treatment for all 14 negotiated U.S. FTAs, from the North American Free Trade Agreement (NAFTA) to the Trans-Pacific Partnership (TPP). Using this, I compute the average industry share of workers insulated from tariff phaseouts for each district. To measure legislators' pivotal positioning, I leverage Shin (2025)'s ISSUEIRT scores to measure each legislator's dynamic, time-varying trade ideology. I use a two-stage least squares (2SLS) framework to isolate the specific variation in tariff phaseouts that is associated with a legislator's ideological proximity to the trade median; doing so allows me to examine the relationship between strategic concessions and subsequent ratification votes.

I find that a legislator's proximity to the median is a strong predictor of concession targeting,[3] which in turn correlates with a significantly higher likelihood of that legislator ratifying the FTA. I further demonstrate that this relationship is contingent on legislative continuity: the correlation between targeted concessions and ratification support disappears if a representative is replaced between the negotiation and ratification stages. In cases of turnover, the concessions secured by a predecessor's pivotal positioning do not predict the voting behavior of the new representative, suggesting that these concessions function as part of a personal political transaction rather than a permanent shift in district-level interests.

This paper makes three distinct contributions to the literature on the political economy of trade. The paradigm in open economy politics (OEP) typically assumes that interests aggregate through institutions into policies; hence, constituency and industry interests are assumed to translate directly to trade policy outcomes.[4] Yet, this overwhelming focus on constituency and industry interests often leaves no room for agency for key players,

[3]This effect holds even when controlling for FTA partners' specific import threats, which dwarf the main covariate in magnitude (Thai 2026).

[4]Trade policy outcome broadly covers legislative voting, design, and tariff levels, among other issues. See Busch and Reinhardt (1999, 2000, 2005); McGillivray (2004, 1997); Baccini, Dür, and Elsig (2018); Van Lieshout (2021*a*,*c*); Chase (2003, 2015); Choi (2011); Clark (2007); Rogowski (2002); Schiller (1999); Bailey and Brady (1998); Amodio et al. (2022); Baldwin and Magee (2000); Raimondi et al. (2023); Buzard (2017); Lee (2017); Deardorff and Hall (1997); Dür et al. (2023); Deardorff and Sharma (2021).

namely the executive and pivotal legislators in Congress.[5] Here, I present new insights into the (1) constraints and (2) incentives of presidents and (3) their interactions with Congress in negotiating modern trade agreements.

First, this paper does not deny the fundamental mechanism of OEP: that constituency and industry interests aggregate through institutions and, thus, are represented in the final design of trade deals (Lake 2009).[6] It acknowledges outright how such interests are communicated through the fast track procedure's consultation mechanism (Bowen and Broz 2022; Celik, Karabay, and McLaren 2012; Conconi, Facchini, and Zanardi 2012; Casey and Cimino-Isaacs 2024; Thai 2026), resulting in greater phaseout coverage for import-sensitive districts. However, it also considers the oft-ignored *constraints* imposed by reciprocity in international negotiation, which force the president to narrowly target concessions to pivotal legislators who can credibly promise ratification. In the OEP world, industry interests with political clout (i.e., campaign donation and lobbying[7] or concentration in key electoral districts[8]) would have their interests represented in the FTA design; however, after controlling for import-exposure of districts, corporate PAC donations, electorally competitive districts and states, I demonstrate that industry interests are more likely to be heeded by negotiators when represented by pivotal legislators. In other words, I introduce a new layer in institutions through which industry interests may aggregate.

Second, trade concessions under reciprocal exchanges follow a different logic of distributive politics. Conventional wisdom holds that presidents' electoral incentives govern the distributive politics of trade protection (Lowande, Jenkins, and Clarke 2018; Ma and McLaren 2018; Kriner and Reeves 2015*a*; Bown et al. 2024) and issue areas in which presidents have broad discretion (Kriner and Reeves 2015*b*; Berry, Burden, and Howell 2010; Ha 2023). Yet, in the context of free trade agreements, and perhaps more conservatively in the context of tariff phaseouts, I find no such evidence of particularism by the president.[9] Given recent protectionist policies that overturn decades' worth of assumptions

[5]With the following key exceptions that afford agency to the executives Milner (1997); Goldstein and Gulotty (2014).

[6]See Baccini, Dür, and Elsig (2018); Van Lieshout (2021*a*,*c*,*b*); Kowalczyk and Davis (1998); Chase (2003); Choi (2011); Clark (2007) for empirical studies linking industry interests with the allocation of tariff phaseouts.

[7]See Grossman and Helpman (1994); Gawande and Bandyopadhyay (2000); Baldwin and Magee (2000); Gawande, Krishna, and Olarreaga (2012); Blanga-Gubbay, Conconi, and Parenti (2023); Kim (2017).

[8]See Lowande, Jenkins, and Clarke (2018); Ma and McLaren (2018); Muûls and Petropoulou (2013); Bown et al. (2024)

[9]While the *Distance to Trade Median* is not statistically significant in Table 1.3, *Distance to DW-NOMINATE* median is significant, suggesting that the president is partial in allocating concessions to moderate legislators' districts.

that presidents latently prefer free trade (Lohmann and O'Halloran 1994), understanding presidents' interests in trade and the conditions under which they prefer to distribute protection is more important than ever.

Third, although many scholars have examined the relationship of legislators on trade policies[10] and their interactions with the executive,[11] none has examined to whom concessions are targeted and whether they mobilize legislative support for ratification. Presidents have been shown to build coalitions in Congress through various means, such as side payments (Evans 2004) and subsidies (Kim, Naoi, and Sasaki 2025); yet, evidence of coalition-building through treaty provisions has been lacking due to data availability. With the introduction of a highly granular tariff treatment data, I am able to demonstrate (1) how tariff phaseouts are allocated to build a majority coalition for ratification under specialized context, a novel finding in the negotiation and tariff phaseouts literature,[12] and (2) how flexibility in tariff elimination can promote cooperation at the ratification stage, contributing to a well established literature on flexibility in international treaties and cooperation (Rosendorff and Milner 2001; Kucik and Reinhardt 2008). Uncovering these findings would not otherwise be possible under regular treaty provisions that are neither observably targetable nor divisible with clear beneficiaries.

1.2 Politics of Ratification

Every democracy has some form of domestic consent to international treaties. The ratification process expresses the will of the constituents, as represented by legislators, thereby conveying domestic commitment to comply with the treaty's rules (Martin 2005). This ratification process can also constrain the degree of cooperation (Putnam 1988), whether through procedural difficulties (Hug and König 2002), the number of veto players (Mansfield, Milner, and Pevehouse 2007), or electoral uncertainty (Milner and Rosendorff 1997). In the context of trade cooperation, scholars have assumed a fundamental difference in trade preferences between the branches of government stemming from differences in constituency. An executive who represents the country would prefer free trade, whereas a

[10] See for example: Fredriksson, Matschke, and Minier (2011); McGillivray (2004); Hansen and Prusa (1997); Hansen (1990); Dür, Huber, and Stiller (2024); Choi et al. (2023); Amodio et al. (2022); Lee and Osgood (2019); Baldwin and Magee (2000)

[11] Goldstein and Gulotty (2014); Naoi (2015); Kim, Naoi, and Sasaki (2025); Evans (2004); Milner (1997); Putnam (1988)

[12] While this is not the first paper on tariff phaseouts (Baccini, Dür, and Elsig 2018, 2015; Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022; Khan and Khederlarian 2021; Van Lieshout 2021*a*,*c*,*b*; Kowalczyk and Davis 1998; Chase 2003; Grossman and Helpman 1995; Choi 2011; Jestrab 2024; Clark 2007), very few have theorized on their political function beyond the OEP framework.

legislator who represents a smaller constituency would prefer protection (Lohmann and O'Halloran 1994). Therefore, domestic politics directly shape the degree of trade cooperation.

Countries with a presidential system face unique challenges in ratification. Not only do they hold regular elections, but legislators also represent vastly smaller constituencies than the executive, resulting in frequent division within the government. Divided government can strengthen the executive's bargaining leverage, leading to more protectionist outcomes (Schelling 1960; Putnam 1988), but only under complete information (Milner and Rosendorff 1997). Elections generate uncertainty, leading to incomplete information about the legislature's composition when a treaty is up for ratification, thereby increasing the likelihood of ratification failure (Milner and Rosendorff 1997).

Such problems for ratification are less salient in parliamentary democracies. Elections are often irregular, and the resulting composition of the legislature determines the head of government, which is usually united under a single party.[13] Countries with strong party discipline may further emphasize the effects and disadvantages of a unified government in negotiation, such as more certain domestic ratification but with lesser bargaining leverage.

An enduring question of this literature is what increases the likelihood of ratification of international treaties? In broader terms, what helps promote the likelihood of reaching international cooperation? Presidential systems present a hard case for studying treaty ratification. The United States, in particular, is an ideal case to examine the linkage between negotiation and ratification. It has a comprehensive set of domestic institutions that allow domestic preferences to be communicated to negotiators. The government is often divided between the two major parties, making it well-suited to examining the strategic interaction between the executive and the legislature. Finally, the United States currently faces backlash against globalization despite being a leader in postwar economic liberalization. Since 1990, the United States has entered into 13 trade agreements that eliminate substantially all trade barriers with its trading partners, which have undeniably contributed to growing dissent against trade alongside the Chinese import shock (Autor et al. 2020; Ritchie and You 2021; Flaherty 2025*b*, 2024). Given the population's latent opposition to free trade, understanding the mechanisms that enable legislators to cast politically consequential votes in favor of trade liberalization is critical.

[13] Although it may be the case that coalition governments would lead to outcomes similar to divided government if the governing parties' preferences on the treaty issue largely diverge.

1.2.1 US Domestic Trade Institutions

Before examining mechanisms that increase the likelihood of ratification, we must understand the domestic institution governing trade in the United States. The United States Constitution assigns Congress authority over taxation, including tariffs. While Congress exercised such authority for the first 150 years of the United States, it was delegated to the president by the Reciprocal Trade Agreement Act (RTAA) in 1934 (Conconi, Facchini, and Zanardi 2012; Bailey, Goldstein, and Weingast 1997). The act established the norm of reciprocity in tariff reductions in exchange for the delegation of trade policymaking authority, thereby empowering exporting interests (Gilligan 1997), while periodic renewals kept trade liberalization in check (Goldstein and Gulotty 2014).[14]

Until 1974, reciprocal trade agreements under RTAA were not subjected to Congressional approval or ratification.[15] The Trade Act of 1974 limited such a blank check in the "fast track authority" by requiring Congressional ratification in both chambers. While the threshold for approval is lowered to a simple majority, compared to a two-thirds majority in the Senate for international treaties, including the House of Representatives introduces additional stakeholders and pivot points. House Representatives represent small, parochial interests that may not align with the broader national or statewide trade liberalization agenda, which may limit the depth of trade liberalization (intensive margin) and force a broader range of exemptions (extensive margin).

Additionally, the Trade Act of 1974 permits an "expedited procedure" for domestic ratification of international trade agreements, subject to consultation, reporting, and notification requirements, and to fulfilling negotiating objectives set out in the trade authorization bill (Casey and Cimino-Isaacs 2024). The expedited procedure includes mandatory introduction, automatic discharge from the committees of jurisdiction, limited floor debates, and no amendments. Each of these benefits allows trade agreements to bypass various political "choke points" where influential legislators could otherwise prevent a bill from being discharged from committee, introduced to the floor, or achieving cloture. As discussed later, Fast Track Authority effectively reduced the pivotal player in Congress — as described in Krehbiel (1998) — to the median voter in both chambers.

Finally, the Trade Act of 1974 also established a three-tiered system of stakeholder consultation (Bowen and Broz 2022), which plays a vital role in conveying stakeholders' interests to negotiators. Because of this mechanism, interest group preferences are known

[14] Furthermore, RTAA limits the tariff reduction to 50% of the base rate.

[15] Even with such a blank-check, Goldstein and Gulotty (2014) demonstrate that presidents were strategically selective in trade partners and the kind of products they reduced barriers on.

to negotiators. Interviews of former negotiators reveal that they "know" which sectors are sensitive and their priorities from the consultation process. Before major negotiations, the United States Trade Representative would accept public comments on the Federal Register, allowing for any stakeholders, not just industry groups, to provide input. However, not all interests are represented in the final trade agreement. Because reciprocity constrains negotiators' ability to fulfill the needs of every interest group, negotiators prioritize certain interests as filtered through the pivotal ratification voter.

1.2.2 What Promotes Ratification of Trade Agreements?

Congress has long been assumed to be protectionist (Lohmann and O'Halloran 1994). However, such protectionism is not due to representing smaller constituencies (Karol 2007; Ehrlich 2009), but rather the electoral horizon and frequency of elections. Conconi, Facchini, and Zanardi (2014) document that representatives are more protectionist than senators due to their shorter election cycles; senators, by contrast, are protectionist only when reelection is imminent. Furthermore, when looking within each chamber, it is well documented that Democratic legislators are more likely to oppose free trade (Conconi, Facchini, and Zanardi 2012; Owen 2017; Choi 2015). Given Congress's baseline protectionist stances, how have prior trade agreements secured a majority and bipartisan support during ratification?

Legislators' voting behavior on free trade agreements depends on the industry characteristics of their districts (i.e., their constituencies' interests) (Baldwin and Magee 2000; Choi 2015; Stiller 2023). Legislators representing districts with more export-oriented industries have been shown to support free trade (Conconi, Facchini, and Zanardi 2012; Malcolm 2017). In contrast, those whose districts are import-competing or have been exposed to negative trade shocks oppose free trade (Owen 2017; Che and Xiao 2020; Feigenbaum and Hall 2015). This may, in part, explain why some Republicans oppose free trade while Democrats support it. Beyond factors internal to the district itself, what are external factors that may mobilize support for free trade?

The existing literature points to four distinct instruments that can facilitate trade cooperation. Table 1.1 summarizes each instrument's characteristics. First, central to the embedded liberalism hypothesis (Ruggie 1982), free trade is achieved, in part, by compensating the opposition through redistributive programs. Programs such as the Trade Adjustment Assistance (TAA) may reduce legislators' hesitancy to vote to liberalize trade, as their trade-affected constituents would receive income support, retraining programs, and relocation assistance; however, no empirical work has examined this connection.

Moreover, redistributive programs such as TAA are eligibility-based and therefore not targetable. They are also highly procedural and bureaucratic, which prevents legislators from claiming credit to offset potential electoral consequences of voting for trade liberalization (Kim, Naoi, and Sasaki 2025). Additionally, new evidence from Kim (2024) suggests that the President's party determines the pace and approval rate of TAA investigations; therefore, a commitment problem exists between the two branches of government, thereby weakening the credibility of redistributive program delivery.

Table 1.1: Instrument to Promote Ratification

Instruments	**Credit Claim**	**Commitment Problem**	**Eligibility**	**Targetable**	**Controlled By President**
Redistribution	No	Yes	Yes	No	Yes
Subsidies	Yes	Yes	No	Yes	Partial
Trade Remedies	No	No	Yes	No	Yes
Side Payments	Yes	No	No	Yes	No
Tariff Staging	Maybe	No	No	Yes	Yes

Second, while subsidies are often distinct from the trade policy at hand that requires ratification, Kim, Naoi, and Sasaki (2025) argue that trade liberalization and subsidies are inextricably linked as an inter-branch compensation contract to promote trade cooperation. The president plays a key role in drafting a budget for subsidies, but Congress authorizes and appropriates funds, allowing both sets of actors to claim credit for targeted subsidies. However, because subsidies are separate from trade deals, such a promise (increased subsidies in exchange for legislative support for trade deals) also suffers from commitment problems, especially when there is a change in Congressional composition.

Third, trade remedies or escape clauses have been shown, both theoretically and empirically, to promote the likelihood and depth of trade cooperation (Rosendorff and Milner 2001; Kucik and Reinhardt 2008). While escape clauses are FTA provisions, they typically do not specify the target of the benefits because they are eligibility-based. Allowing for trade remedies means that domestic industries can apply for safeguards, antidumping, and countervailing duties. However, bureaucrats who review such petitions make determinations based on the validity of these claims. Otherwise, invalid application of trade remedies would subject the United States to costly WTO disputes. Given the highly bureaucratic nature of receiving trade remedies, the good itself cannot be targeted to specific constituencies; therefore, neither legislators nor the executive can claim credit to offset the political consequences of their support for free trade.

Finally, side payments, or earmarks, have been used to secure legislative support for free trade policies in the United States, such as NAFTA (Evans 2004, p. 148), and in Japan (Naoi 2015). However, side payments are often characterized as *intra-branch* contracts among legislators to grease the legislative machine, meaning that the executive is largely absent from the negotiation and distribution of earmarks. Because district-specific projects are highly visible, legislators can claim credit.

So far, existing mechanisms lack both presidential control and targetability. According to the negotiation literature, it is well acknowledged that the executive negotiates international treaties in anticipation of the domestic legislature (Putnam 1988) and that it has broad discretion in designing the treaty. Therefore, although one would expect concessions to be made to secure key votes in the legislature, no empirical study has examined this relationship. Such a relationship, if it existed, would be taboo to discuss, similar to vote trading with earmarks (Evans 2004). A key challenge in studying the targeting of concessions is that treaty provisions are primarily rules and regulations that countries must adhere to. Therefore, treaty provisions are not clearly targeted at any single domestic actor, even though some may be negotiated as carve-outs for specific legislators. For example, former trade negotiators have attested that "beef provisions" were needed for Senator Baucus, who was the chairman of the Senate Finance Committee. While the provision is targeted at Senator Baucus, its effects would spill over to the constituencies of other senators and representatives who raise cattle. As a result, systematic studies of concession targeting are difficult because the targeting process (i.e., the reasoning behind specific provisions being negotiated) is black-boxed. However, I demonstrate that tariff staging provides an opportunity to examine the black box of concession targeting.

1.2.3 Targetable Provision: Tariff Staging

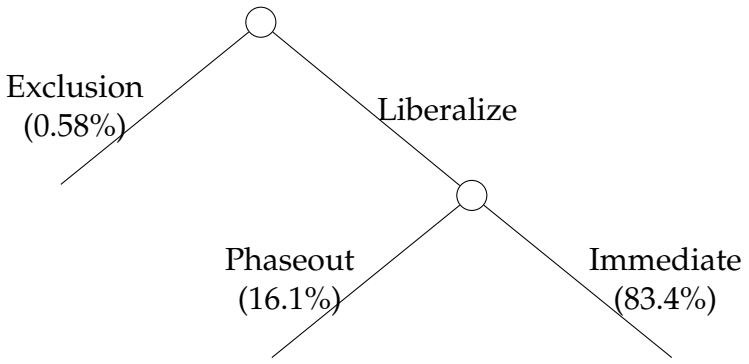
Since the conclusion of the GATT Uruguay Round in 1994, WTO members have been unable to agree on a subsequent round of trade liberalization (the Doha Round). In lieu of multilateral trade cooperation, countries quickly enter into bilateral and plurilateral trade agreements (Baccini 2019). Distinct from the gradual tariff cuts of the GATT era, these preferential trade agreements are often comprehensive and deep (Dür, Baccini, and Elsig 2014). Notably, most, if not all, tariffs are eliminated, as required by GATT Article XXIV. Instead of variable cuts in tariff rates for specific products where the strategic allocation of protection has facilitated trade cooperation in the past (Goldstein and Gulotty 2014), all dutiable goods tariffs in most preferential trade agreements are legally bound to be duty-free; hence, these preferential trade treaties are often referred to as "free trade agreements" (FTAs).

An often overlooked instrument that is ubiquitous in free trade agreements (FTAs) is the staging of tariffs.[16] Tariff stagings prescribe the means and duration of how tariffs are to be treated. Is it excluded from liberalization or scheduled for elimination? If the latter, how long would the tariffs be phased out? Since all tariffs are expected to be eliminated under free trade agreements (GATT Article XXIV), phasing out tariffs provides flexibility under WTO rules (Baccini, Dür, and Elsig 2015; Van Lieshout 2021*a*). In rare cases, tariffs can be excluded from being reduced (Deardorff and Sharma 2021; Grossman and Helpman 1995). While exclusion is preferred for domestic industries, tariff phaseout is more prevalent. What makes tariff phaseout and exclusion unique and different from one another?

Tariff phaseouts are situated between two extremes of tariff staging: immediate elimination and exclusion (i.e., the status quo). Exclusion is rare (0.58%). The reasons for its rare use are two-fold. Beyond international law in that GATT Article XXIV limits the use of exclusion, export-oriented countries fear that protecting import-competing industries with exclusion would be reciprocated in limiting exporters' market access.

[Figure 1.1 about here]

Figure 1.1: Free Trade Agreement Decision Tree



If "substantially all trade barriers" must be eliminated (GATT Article XXIV), in which 99.5% of dutiable products are, the executive primarily has two choices in how tariffs are to be reduced. They can either eliminate tariffs immediately upon implementing the FTA or phase them out over multiple years. The decision tree in Figure 1.1 outlines the choices, as well as the share of dutiable product codes and their tariff treatment across 14 US FTAs.[17] Figure 1.2 visualizes the share of products and the tariff treatment categories

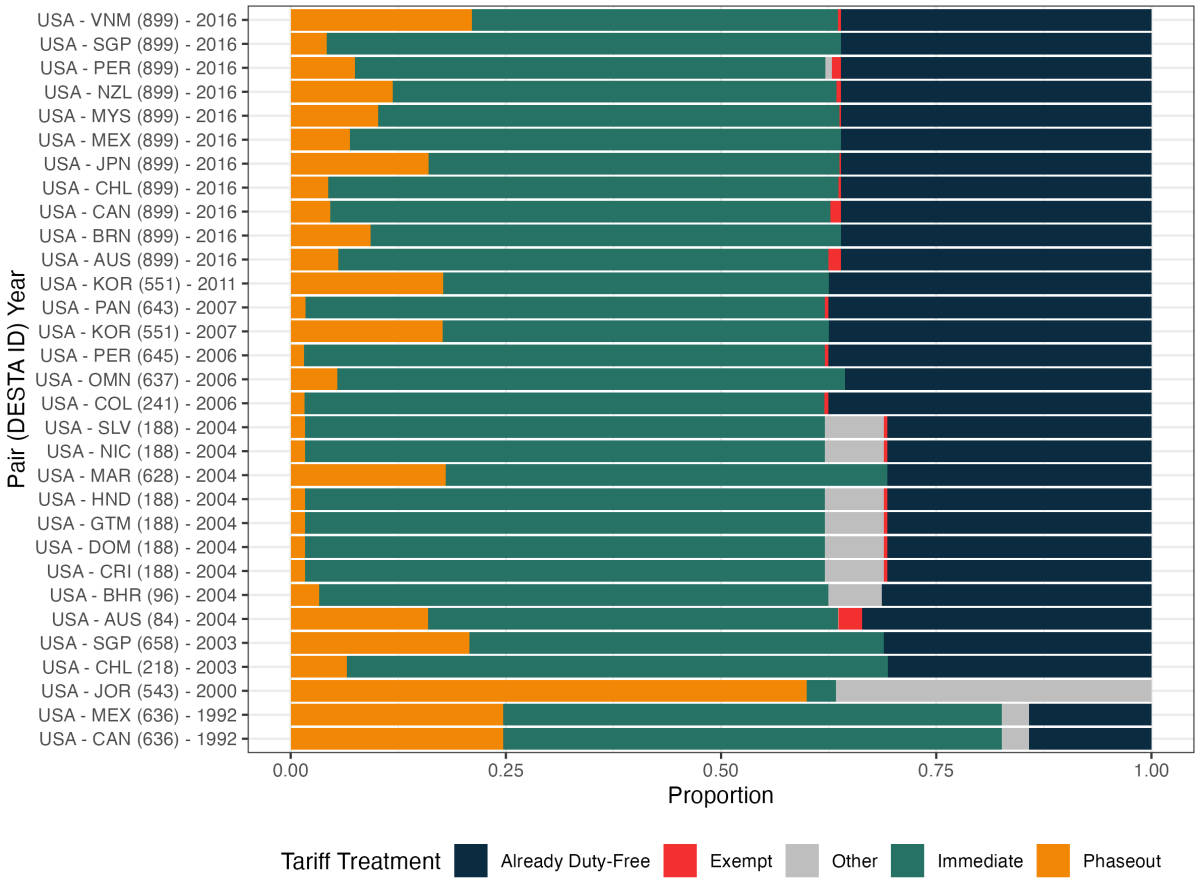
[16] With the exception of the following studies: Baccini, Dür, and Elsig (2018); Besedes, Kohl, and Lake (2020); Dong and Jestrab (2022); Khan and Khederlarian (2021); Van Lieshout (2021*a*,*c*,*b*); Kowalczyk and Davis (1998); Chase (2003); Grossman and Helpman (1995); Choi (2011); Jestrab (2024); Clark (2007).

[17] I exclude products that were "already duty-free" or are reduced by "other" means, such as WTO commitments, from the calculation.

they can fall under across various US FTA tariff schedules. The share of products that were phased out varies not only across different trade agreements but also across trade partners within the same agreement (see TPP [DESTA ID = 899]).

[Figure 1.2 about here]

Figure 1.2: Tariff Treatment in US Free Trade Agreements



Note: Country pair is formatted as home-partner, where the home country sets tariff treatment toward the partner country. "Other" indicates that the product's tariff reduction is governed by other means, such as the WTO commitment. Original data collected by Author with procedure introduced in Van Lieshout (2021*b*). Created by Author 5/27/24.

Trade negotiators spend approximately 60% of their time on the market access chapter, bargaining over tariff staging (TN02-01, 4:48). The remainder is spent on the chapter text. The final agreement often includes a 500-page or longer Tariff Schedule annex for each importing country, as shown in Figure B1. The schedule lists each unique tariff line, its description, base rate, and staging. The staging categories are defined in the Annex of the Market Access chapter (Figure B2) or in the headnote of importing countries' tariff

schedule (Figure B3). For instance, tariffs on "olives that are pitted or stuffed" (0711.20.40) fall under the staging category "A," which indicates that these tariffs will be eliminated immediately. In contrast, tariffs on "mushrooms" (0711.59.10) are staged under category "D," meaning they will be reduced gradually in equal steps over 10 years.

Negotiators are highly specific and strategic about which products they seek to phase out and for how long. This is best illustrated by Figure A4, which graphs *which* 8-digit tariff lines in the US tariff schedule are phased out and colors the duration. Each line represents a product code that is phased out over (1) 1-5 years, (2) 6-10 years, or (3) over 10 years. A simple look would suggest that certain sectors are generally protected, such as the apparel and footwear sector (HTS Chapter 50-64), where products from those chapters are often phased out in various FTAs, with duration varying across and within trade agreements.

1.2.4 Strategic Importance of Tariff Phaseout

Tariff phaseouts serve as a strategic policy alternative to excluding products from liberalization. When trade negotiation is governed by reciprocity, exclusion is a non-starter to protect domestic industries, as it would limit exporters' market access. Additionally, exclusions can encourage other industry groups to seek their own exemptions, complicating the negotiation process. As one former trade negotiator noted, the guiding "principle [in negotiation] was no exclusion" because "the things that our partners wanted to exclude were things that mattered to us" (TN02-01).

Industry groups and labor unions recognize that exclusions are non-starters, leading them to request tariff phaseouts. In an interview, a former trade negotiator (TN02-01) said that "people who are more sophisticated, who have been through the process a number of times, will say things like, 'we would like to be excluded. But if that's not possible, we would want the longest staging available.'" Interestingly, while unions are typically against trade agreements, the United Auto Workers cited tariff phaseouts as one of the reasons for its endorsement of the KORUS agreement (See Figure A5). The demand for tariff phaseouts by both unions and industries indicates that, although U.S. tariffs are generally low (Ethier 1998), full elimination, especially if immediate, would significantly harm domestic industries.

Although tariffs are scheduled for elimination, the gradual phasing out of tariffs serves as a temporary form of targeted protection. Phasing out tariffs offers two key economic benefits to domestic producers. First, although imported products may still enter the market early in the phase-out period (Besedes, Kohl, and Lake 2020; Dong and Jestrab

2022), the remaining tariffs during the implementation period help maintain the competitiveness of domestic producers. However, as tariffs are reduced year by year, there may come a point when imported goods become more competitive than domestically produced goods. Therefore, producers generally prefer a more extended phase-out period that allows tariffs to remain at their initial rates for several years before declining (refer to Figure B4 for a comparison between linear and backloaded phaseout models).

Additionally, the established brand recognition and reputation of domestic companies can help prevent consumers from quickly switching to foreign brands in the early stages. As a result, phasing in pressure from import competition may help motivate firms and provide breathing room to adjust. Indeed, economists have argued that phasing out tariffs can facilitate industry adjustments and resource reallocation (Lehr and Restrepo 2023; Riker 2021; Mussa 1984; Leamer 1980). Thai (2025*b*) demonstrates that the US employment decline following US entry into NAFTA is delayed for industries granted longer maximum phaseout durations.

Second, maintaining some level of tariffs during the early phase-out period can reduce the immediate incentives for firms to offshore jobs to trade partners. Companies are likely to offshore only when the cost of producing goods abroad is lower than the cost of making them domestically. Factors such as labor and transportation costs, as well as tariffs, influence this cost assessment. Therefore, if tariffs take longer to decline to a level that makes offshoring more profitable than domestic production, firms will likely delay decisions to offshore jobs or lay off their domestic workforce.

Politically, tariff phaseouts provide the executive and negotiators with immense flexibility in designing free trade agreements that comply with GATT Article XXIV while also garnering support from key legislators. Constrained by the elimination of "substantially all trade barriers" under the WTO rule, the executive would otherwise face an uphill battle in ratifying the treaty in Congress if it did not allocate concessions.

Congressional members' vote on trade is responsive not only to the material interests of their constituency (Dür, Huber, and Stiller 2024; Conconi, Facchini, and Zanardi 2012; Choi 2015; Owen 2017; Feigenbaum and Hall 2015) and campaign donations from industry and labor groups (Baldwin and Magee 2000; Choi 2015),[18] but they are also responsive to side payments that raise theirs and their districts' utilities (Evans 2004; Naoi 2015). Therefore, it is also possible that targeted concessions embedded in an international trade

[18]One must also acknowledge the significant role firms play in lobbying on trade policies (Kim 2017; Blanga-Gubbay, Conconi, and Parenti 2023; Zhang 2025; Osgood 2021). While firms tend to lobby more for free trade, as predicted by the New New Trade Theory, it is not easy to estimate the average effect lobbying has on vote patterns due to counter-lobbying and other unobserved factors (Bombardini and Trebbi 2020).

agreement can sway key legislative votes.

There is a strong theoretical reason why concessions, such as tariff phaseouts, are targeted at specific legislators rather than being comprehensive. While firms and industries may lobby for the extensive (coverage) and intensive (duration) margins in tariff phaseouts, reciprocated phaseouts would impose opportunity costs on exporters. Exporters generally benefit and, thus, lobby in support of free trade agreements to gain market access (Blanga-Gubbay, Conconi, and Parenti 2023); however, because they compete with third-country exporters (Baccini and Dür 2012), a long reciprocated phaseout period would hamper their ability to dominate the market share earlier. Therefore, to balance the interests of exporters and the import-competing sector, negotiators are constrained from over-allocating tariff concessions. Hence, negotiators prioritize phasing out tariffs that are important to legislators who are pivotal to ratification. Given that industries tend to agglomerate in specific regions,[19] tariff phaseouts can confer clear benefits to specific Congressional districts. Because tariff stagings are highly targeted, product-level provisions, they enable the executive to unilaterally distribute agreement benefits to facilitate ratification in Congress. The next section develops the logic for how trade agreements' tariff schedules can be designed to facilitate ratification in Congress.

1.3 Theory of Concession Targeting

1.3.1 Premises

The theory is predicated on well-established assumptions and facts from the United States' trade policymaking process and international trade negotiation dynamics. First, I assume that concessions are reciprocal in value. This is an undisputed assumption, since reciprocity is the guiding principle of RTAA, which has enabled trade liberalization since 1934 (Bailey, Goldstein, and Weingast 1997; Gilligan 1997). It has since governed how trade liberalization operates (Bagwell, Staiger, and Yurukoglu 2020).

Second, I assume legislators are office-seeking; as a result, they are responsive to consumers, industry, and labor groups in their districts. In other words, their net utility from an FTA is aggregated by the expected payoffs from their constituents, who are assumed to hold their representatives accountable.[20] This assumption has broad empirical support

[19] See Krugman (1979, 1992); Ellison and Glaeser (1997, 1999); Ellison, Glaeser, and Kerr (2010); Shaver and Flyer (2000); Rosenthal and Strange (2001).

[20] Of course, the extent to which particular constituent interests constrain legislators' votes is subject to varying institutional features that may amplify certain voices over others, such as campaign contribution laws and industrial policies, like right-to-work laws, that systematically weaken labor voices.

in the literature (Stiller 2023; Choi 2015; Dür, Huber, and Stiller 2024).

Third, I assume that the president is both policy- and office-seeking. While a universalist president may enhance the aggregate welfare through free trade (Lohmann and O'Halloran 1994), some may use free trade to boost their electoral prospects through lowering prices or signaling commitment to improve the economy (Mansfield, Milner, and Rosendorff 2002; Rogowski and Kayser 2002).[21]

Fourth, trade negotiators are assumed to be perfectly delegated agents of the president. The bureaucrats in the Office of the United States Trade Representative (USTR) have little reason to work against their principal's interests, the president. Given presidents' preferences for free trade, negotiators are afforded leeway and flexibility to design trade agreements that achieve the president's objectives, including ratification.

Fifth, pivotal legislators have greater political influence than other legislators. In American Politics, Krehbiel (1998) characterizes four distinct pivotal actors: the median voter, the filibuster pivot,[22] the veto pivots,[23] and the president.[24] In the context of trade treaties, we can assume that the presidential pivot is out of the question for free trade agreements that they themselves initiated. If the president does not ultimately veto the implementing bill for trade agreements, then the veto pivots are not salient players. Finally, the fast-track procedure under the Trade Act of 1974 offers time-limited debates upon satisfactory compliance with requirements set forth by Congress. Therefore, the FTA implementing bill is not subject to the filibuster, eliminating the filibuster pivot. Therefore, in the context of trade agreements — when negotiated under fast track authority or trade promotion authority, the only pivotal player with political influence is the median legislator in both chambers. I further assume that interest groups' preferences are stronger when filtered through such a pivotal legislator, making their ask for concessions more likely to be heeded by trade negotiators.

Finally, I assume that negotiators have complete information on the preferences of interest groups and legislators. As mandated by the requirements to qualify for the fast track procedure, negotiators are in constant consultation with stakeholders and Congressional members; hence, preferences of private sector permeates into the negotiation process not only *directly* through varied consultation venues but also *indirectly* through

[21] Of course, the office-seeking justification for pursuing free trade policies may be limited to presidents with an electoral horizon; however, the policy-seeking assumption that motivates the president stands regardless of their lack of an electoral horizon.

[22] The 60th Senator to invoke cloture, thereby ending a filibuster.

[23] The two-third of representatives and senators required to override a presidential veto.

[24] The president has the power to veto a bill.

Congress.[25]

Negotiators generally have priors regarding each legislator's position on trade, based on their stated views and reservations, as expressed verbally (TN02-02) or through prior roll-call votes (TN01-01). From elite interviews, trade negotiators are most responsive to Ways and Means and Finance committee chairpersons, Congressional whips, or senior legislators with political influence (TN01-02, TN02-02). While these committee chairpersons have *de facto* influence, they do not have the *de jure* authority to prevent implementing bills from being voted on by the floor under the fast track authority's expedited procedure. I further assume that the preferences of rank-and-file legislators, who may be pivotal in the final roll call vote, are filtered through these channels.

1.3.2 The Logic of the Median

Consider a three-person legislature with a uniform distribution of preferences on trade that range from pro- to anti-trade, where the median legislator is unsure or is on the fence. These preferences are endogenous to various factors; however, for simplicity, let us assume that legislators derive net-positive, net-zero, and net-negative utility from implementing a free trade agreement, which ultimately shapes their preferences regarding trade.[26] For instance, Conconi, Facchini, and Zanardi (2012) demonstrated that the export orientation of a district explains legislative votes to authorize fast track authority, which delegates trade-making power to the president. This aligns with the second assumption, which states that legislators are responsive to their constituents.

Let us also assume that legislators with a net positive gain from a trade agreement will vote to ratify the treaty. In contrast, those with a net negative gain will vote against ratification. The median and anti-trade legislators can be persuaded to vote "yes" if the trade agreement is structured to raise their net-negative outcome to at least a "net-zero plus one" outcome. Achieving this requires trade negotiators to secure concessions that protect key industries in both districts, with more significant concessions needed to sway the anti-trade legislator.

These concessions are reciprocal in value, meaning that the trading partner can now secure concessions on trade protection, which adversely affect exporters in the home country. If the costs are evenly distributed across all legislators, obtaining the median legislator's ratification would be more costly, since all legislators' utilities would decrease

[25] See Bowen and Broz (2022) for a review of the three-tiered consultation system; however, the most significant is the Advisory Committee for Trade Policy and Negotiation and the Federal Register.

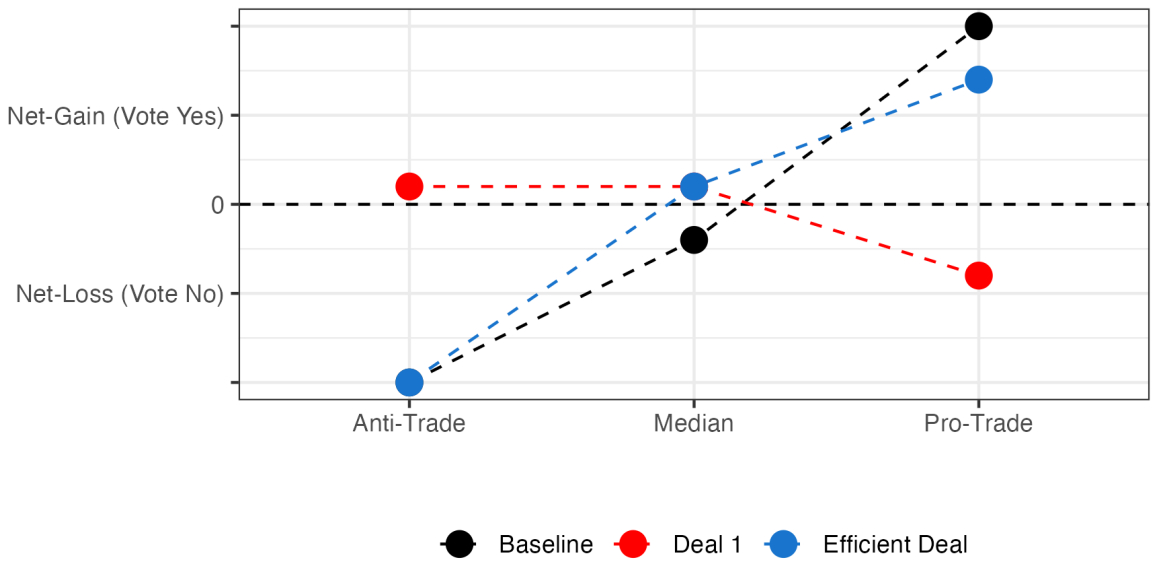
[26] This follows a similar theoretical setup in Naoi (2015).

linearly. Therefore, I assume that the costs of these reciprocal concessions fall primarily on the pro-trade legislator representing exporting interests. Figure 1.3 illustrates this theoretical setup, alongside two possible deals, colored in red and blue.

The first trade deal, in red, outlines the net utility relative to the baseline (in black) for each legislator if negotiators were to prioritize anti-trade and median legislators. By providing protection that raises the utility of both legislators from a net loss to a net gain, the pro-trade legislator's net utility collapses. Now, a trade agreement that would have brought net gains to exporters, and hence the pro-trade legislator, is now bringing a net loss. The resulting trade agreement would not necessarily improve the general welfare, as it is riddled with protection, nor would it increase exporters' market access. The president would not gain much in their utility function as a policy and office-seeking actor; furthermore, given that the president and his negotiators set the agenda on how a trade agreement is negotiated before being brought to a vote in Congress, it is unlikely that they would design such a trade deal to begin with.

[Figure 1.3 about here]

Figure 1.3: Theory Visualization



Note: The cost function is assumed to be disproportionately borne by exporters, hence the sum of value extracted for either anti-trade or median legislator is reciprocated onto the pro-trade legislator. Created by Author 9/4/24.

Alternatively, negotiators can design a more efficient trade agreement (in blue) that not only facilitates ratification but also maximizes welfare gains to consumers and exporters

by targeting protection to the median legislator. The median legislator would require much less concessions than the protectionist legislator to be persuaded to vote "yes." As a result, less protection is needed, leading to greater utility for consumers and the president and fewer costs borne by exporters. Here, a simple majority is achieved with substantially lower costs for stakeholders.

The logic for targeting the median because of lower costs is not new. My theoretical setup and conclusion resemble Naoi (2015)'s *Globalization as Legislation* framework, which predicts that side payments (pork, policy, and institutional reforms) are allocated to legislators with marginal losses from globalization to build a ratification coalition. However, the distinguishing feature of my theory is that reciprocity mirrors the costs of each extracted concession, with those costs falling primarily on the exporting sector.

In Naoi (2015), side payments are drawn from the government budget, in which the costs are dispersed across the actors. A rational party leader would prefer to conserve resources for public goods provisions and other programs that enhance their party's electoral prospects. Therefore, they may find it cheaper to buy the support of fence-sitting legislators who would stand to lose only marginally from globalization, rather than those who would stand to lose more.

On the other hand, extracting trade agreement concessions to protect the import-competing sector empowers trade partners to exclude exporters from market access through reciprocity. Protection not only generates concentrated opportunity costs for exporters but also dispersed costs for consumers. Hence, an office-seeking president would prefer to lower prices for voters by minimizing the level of protection extracted. The most efficient way to achieve this would be to target concessions to buy off the median legislator, who requires less to be convinced than the protectionist legislator.

As discussed earlier, the president and negotiators prefer not to protect industries through exclusion, as exporters would not have freer access to the trading partner's market. Therefore, protection in this case refer to tariff phaseouts, which mimics the effect of exclusion, but does not impose realized opportunity costs on exporters; instead, tariff phaseouts, and its reciprocant, imposes diminishing opportunity costs, which exporters can tolerate if the two alternatives are either (1) no trade agreement (status quo) or (2) trade agreement with protection that does not improve their access to foreign markets.

Credible Promises

A second reason why the median legislator is likely to be targeted is that they are more credible in their promises to ratify if certain concessions are granted. Legislators with

inconsistent preferences and voting records on trade are more credible because they have proven that they can be persuaded. They are not staunch ideologues nor heavily constrained by their district's material interests. Compared with anti-trade or free-trading legislators who cannot credibly promise or threaten to withhold a ratification vote, respectively, if concessions are extracted, median legislators are less strongly constrained by their constituencies to vote in alignment with material interests.

Why would the median legislator follow through with their promises once concessions are allocated? Trade agreements are designed and ratified sequentially. Once the agreement is signed between countries, after concessions have been negotiated, there is no mechanism to ensure that the median legislator would vote to ratify it. Revisiting the assumption that legislators are office-seeking, it is likely that they expect a long political horizon barring their exit from office through election. As such, any legislator seeking to be effective at securing carveouts for their districts would build their credibility through any means possible — one of which is following through on their promises. Therefore, instead of a one-shot Prisoners' Dilemma game where the median legislator might be incentivized to defect (i.e., vote against ratification), the game is iterated over a long horizon where they are incentivized to "cooperate" (i.e., follow through on their promises) as it would yield better long-run utility for them and their districts.

This yields two hypotheses on allocation and ratification.

> **Hypothesis 1 (H1):** *Allocation:* The closer legislators are to the median, the more their constituent industries would receive tariff phaseouts in free trade agreements.
>
> **Hypothesis 2 (H2):** *Ratification:* Median legislators whose constituent industries received more tariff phaseout concessions are more likely to vote to ratify the free trade agreement.

1.4 Data and Research Design

I test my hypotheses using a sample of U.S. House Members. I limit the scope of this study to the House of Representatives for three reasons. First, the House is historically more protectionist than the Senate (Conconi, Facchini, and Zanardi 2014). Second, the House's two-year election cycle introduces more frequent uncertainty regarding incumbent tenure than the Senate (Milner and Rosendorff 1997). These two factors, when combined, constitute a "hard test" for the theory. Third, the House allows for more precise attribution of concessions. Unlike the Senate, where concessions on tariffs cannot be distinguished

between two senators representing the same constituency, House districts offer clearly defined boundaries for linking district-targeted concessions to specific legislators. Overall, focusing on the House enables more precise analysis of distributive politics and provides stronger evidence of the relationship between concessions and legislative voting.

1.4.1 Average Industry Phaseout Coverage

To measure targeted trade concessions in tariff phaseouts, I collected original data on U.S. tariff treatment across all free trade agreements from NAFTA to TPP using the procedure described in Van Lieshout (2021*b*). The PTARIFF database codes information on the treatment of each tariff line code at the eight digits U.S. harmonized tariff system (HTS) level.

I constructed the dataset by first collecting PDF tariff schedules from the U.S. Trade Representative website. These tariff schedules primarily consist of tables with more than 8,000 distinct tariff lines (rows), the descriptions of Harmonized Tariff Schedule (HTS) codes, their base rates, and their unique staging categories (See B1 for an example).[27] Second, I extract the tables from the PDF using Tabula, a Python software that "liberates data tables trapped inside PDF files."[28] Third, I manually code each unique staging category by hand, referring to the FTA main text to make a determination on whether the tariff line with the category is (1) reduced, (2) eliminated, and if so, whether it is (3) immediately eliminated. Next, I code the (4) duration of the phaseout in years and (5) the means of reduction (linear or back-loaded).[29] If the category backloads the phaseout, meaning there is a momentary pause prior to reduction, I also code (6) the duration of the initial pause. Figure B2 provides an example of the language on staging categories that is common between the USA and Australia, and Figure B3 is an example of a headnote staging categories specific to the United States' tariff schedule. Fourth, I merge the schedule table with the coded categories.

Although the raw data provide highly granular information on tariff schedules, I employ a binary measure indicating whether a dutiable product's tariff is subject to a phaseout. Given that the unit of analysis is the congressional district, I aggregate these product-level indicators to calculate the extent of tariff phaseout coverage among the district's workforce. I aggregate using an averaging function to measure the average industry workforce that is covered by tariff phaseout. The measure is calculated as follows:

[27] The author thanks Besedes, Kohl, and Lake (2020) for providing digitized NAFTA tariff data from their replication package. The original NAFTA tariff schedule was scanned and was not fitted for optical character recognition (OCR). The author manually coded approximately 1,100 tariff lines with multiple tariff treatments that Besedes, Kohl, and Lake (2020) had not coded.

[28] Click here for more information on Tabula.

[29] Figure B4 illustrates the difference between tariff phaseouts that are "linear" and "backloaded."

$$\text{AvgPhaseout}_{dj} = \frac{1}{K_d} \sum_{k \in \mathcal{K}d} \left(\frac{E_{dkt}}{E_{dt}} \times \frac{\sum_{p \in \mathcal{P}k} PO_{pj}}{|\mathcal{P}_k|} \right), \tag{1.1}$$

where PO_{pj} is a binary indicator of whether a dutiable product p is phased out (1) or not (0) in agreement j. This inner term represents the share of products subject to phaseouts within industry k. The denominator $|\mathcal{P}_k|$ denotes the total number of dutiable product codes in the industry, excluding those that were duty-free prior to the agreement. This ensures the proportion accurately reflects protection on relevant trade lines.[30] This industry-specific exposure is then weighted by the industry's labor share, $\frac{E_{dkt}}{E_{dt}}$, where E_{dkt} is employment in industry k and district d, and E_{dt} is the total district workforce at time t (averaged over the 5 years prior to the agreement).[31] Finally, to arrive at the district-level measure, I sum these weighted exposures and divide by K_d, the number of active industries in district d.

Individually, the product of the inner two terms should give an estimate of the proportion of industry k workers as a share of the total employed workforce in district d that is "covered" by tariff phaseouts. After averaging across industries within a given district, the resulting district-level measure captures the *Average Industry Phaseout Coverage*. Figure A8 shows the phaseout coverage from the 2011 version of KORUS, grouped into quartiles.

1.4.2 Trade Ideal Points

The key explanatory variable is a legislator's relative proximity to the median where the closer the more concessions their districts receive. First, I use Shin (2025)'s IssueIRT database of legislators' ideal points on *Foreign Trade and International Finance* issue area.[32] IssueIRT is at the frontier in ideal point estimation with Bayesian Item Response Theory. Acknowledging the issue arriving from calculating issue specific ideal points with a subset of roll call votes is the high uncertainty from a lack of information, Shin (2025) estimates legislator's issue specific ideal point by using roll call votes from *other* issue areas to help improve model statistical efficiency. Additionally, IssueIRT is a dynamic model that takes a legislator's ideal point from the previous congressional session as a prior for

[30] I concord different HS revisions across agreements to HS rev. 2002, linking it with industry-level variables at NAICS rev. 2012. I used Liao et al.'s 2020 `Concordance` package to translate 6-digit HS codes (2002 revision) to 6-digit NAICS (2012 revision).

[31] Industry employment data is from Eckert et al.'s 2020 version of the County Business Pattern data, harmonized to the 2012 NAICS revision. I used the Missouri Census Data Center's county-district crosswalk files to map employment from the county to the district level.

[32] The author thanks Sooahn Shin for data access.

the random-walk model. This means that the ideal point of a legislator in the current session is determined by their previous ideal point with some noise (Shin 2025).

Figure 1.4 visualizes the distribution of ideological estimates for Foreign Trade and International Finance and an average of all other issue areas. Because ideal points are mapped onto a common latent policy space (left - right wing positions), estimates are directly comparison across time and issue areas. Here, trade ideology seems to be distinct from all other issue areas. Democrats tend to be more left-wing than Republicans, although this relationship for trade issue seemingly flips for some Congressional session (104, 111, 113, and 114), all of which during a Democratic presidency. The red vertical dashed line indicate the median legislator's ideology.

[Figure 1.4 about here]

Using IssueIRT ideal point estimates on trade, I calculate each legislator's ideological distance from the median ideal point for each congressional session. The further a legislator is from the median, the less concession they would receive, and vice versa.

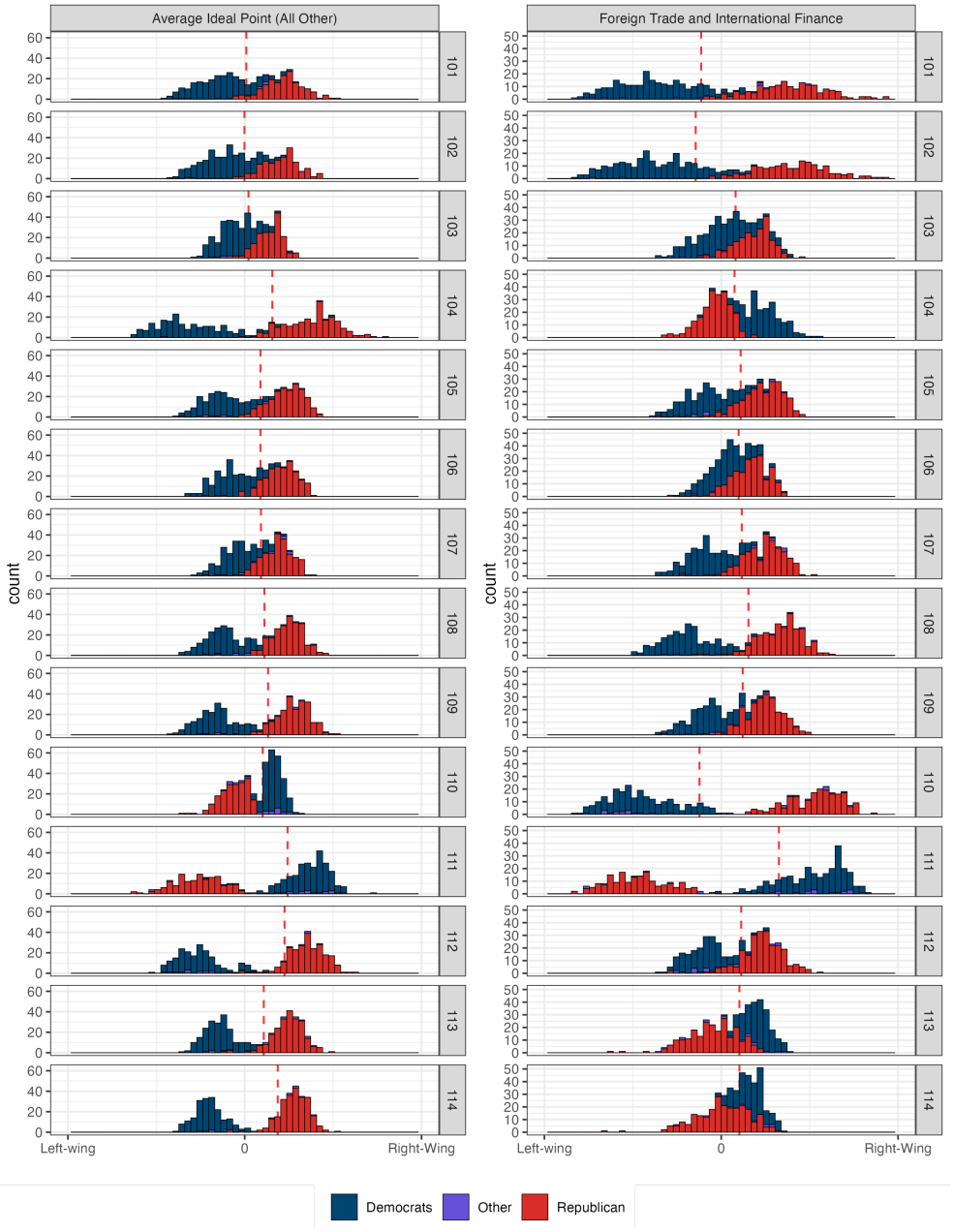
1.4.3 Controls

District-Level Controls

The first set of controls focuses on district characteristics. First, *District's Exposure to Import Threat* captures a district's import sensitivity to specific trade partners based on the partner's capacity to fulfill import demand. This is an important variable to construct, given the intuition that phaseouts are allocated based on the industry-specific threat a partner poses to American industries (See Figure A4). This variable should account for most of the variation in phaseout allocation, suggesting that other statistically significant covariates are equally strong predictors. Thai (2026) describe the measurement creation in greater detail. Second, *District Election Competitiveness* proxies for electoral vulnerability, measured as the inverse distance of the top two candidates' average vote share to 50% over three previous cycles (MIT Election Data and Science Lab 2017*a*). Third, I control for local labor market conditions using the *Unemployment Rate*, sourced from the Bureau of Labor Statistics. Finally, *District Net Exports* measures the district's trade orientation. I calculate this by taking the difference between logged exports and logged imports at the industry level (using UN Comtrade data) and aggregating to the district level.[33]

[33] I use a summation function to aggregate district-specific industry net-export values to the district level.

Figure 1.4: IssueIRT Ideological Point Estimates For *Foreign Trade and International Finance* And All Other Issues Across Time



Note: Red dashed lines indicate the ideal point score of the median legislator for each Congress. Created by Author 5/18/25.

Legislator-Level Controls

At the legislator's level, I control for corporate interests and legislative factors. First, *Corp PAC (ln)* measures logged corporate donations to the incumbent, averaged over three previous cycles (Bonica 2023). Second, *House Ways & Means* identifies committee members

using data from Stewart III and Woon (2024), supplemented by original coding for the 102nd Congress. Finally, I control for *Seniority* and *Legislative Effectiveness Scores* (LES), sourced from the Center for Effective Lawmaking (Volden and Wiseman 2014).

State-Level Controls

At the state level, I control for electoral competitiveness and labor interests. *Presidential Election Competitiveness* is measured as the inverse average *two-party* vote share distance to 50% over three previous presidential elections (MIT Election Data And Science Lab 2017*b*). I also include the states' *Electoral College Votes* to account for their electoral weight. Finally, *Union Membership Rate* captures labor strength using data from Hirsch, MacPherson, and Even (2024).

Table A1 provides the summary statistics of all variables discussed so far. Figure A9 provides a simple correlation matrix heatmap, displaying the correlation among the covariates.

1.5 Predicting District-Specific Trade Concessions

To test the allocation hypothesis, I estimate a simple OLS model with trade agreement fixed effect δ_j to hone in on the within-agreement differences across legislators' proximity to the median on trade and their correlation with *Average Industry Phaseout Coverage* or *Avg Phaseout* for short. $AvgPhaseout_{djc}$ is the average share of workers across industries in district d that is covered by tariff phaseout in agreement j negotiated in congress c. I log *Avg Phaseout* to normalize the right-skewed distribution. $DistanceMedian_{idc}$ is legislator i in district d's distance to the median legislator in Congressional session c. $\mathbf{X}_{dc}$ denotes the district characteristics controls, $\mathbf{X}_{ic}$ — legislator characteristics, $\mathbf{X}_{sc}$ — state characteristics; all of which vary across congress, or time, denoted by c.

$$\ln(AvgPhaseout_{djc}) = \delta_j + \beta_1 DistanceMedian_{idc} + \beta_2 \mathbf{X}_{dc} + \beta_3 \mathbf{X}_{ic} + \beta_4 \mathbf{X}_{sc} + \eta_{djc} \quad (1.2)$$

Table 1.2 presents five models to test the first hypothesis. Since the US-Jordan FTA was ratified by voice vote and the Trans-Pacific Partnership was never put to a vote, they do not appear in the ratification analysis (Table 1.4). However, I include them in this stage to provide a more complete analysis. All covariates are standardized to improve inter-

pretability and comparability.[34] The standard errors are corrected for heteroskedasticity and clustered at the district level.

[Table 1.2 about here]

Table 1.2: Legislators' Ideological Distance from the Median and District's Exposure to Import Threat on Tariff Phaseout Coverage

Dependent Variables:	Avg Phaseout			Avg Exclusion	Total Protection
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
Distance from Trade Median	-0.126***	-0.039**		-0.026	-0.041**
	(0.024)	(0.019)		(0.031)	(0.019)
Issue IRT Trade		0.030		-0.019	0.024
		(0.019)		(0.030)	(0.019)
District's Exposure to Import Threat		0.507***	0.505***	0.662***	0.511***
		(0.055)	(0.055)	(0.123)	(0.054)
Distance from DW-NOMINATE Median			-0.071***		
			(0.018)		
DW-NOMINATE			-0.014		
			(0.022)		
Controls		✓	✓	✓	✓
Fixed-effects					
FTA	✓	✓	✓	✓	✓
Fit statistics					
Observations	6,520	6,257	6,258	2,500	6,257
R^2	0.824	0.897	0.897	0.474	0.889
Within R^2	0.021	0.428	0.431	0.172	0.426
Dependent variable mean	-10.5	-10.5	-10.5	-13.5	-10.4

Clustered (District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 14 FTAs negotiated. Standard errors are corrected for clustering at the district level. All covariates are standardized. See Table A3 for the full regression table.

Model 1 is a simple bivariate regression between legislators' distance from the median on trade ideology and *Average Industry Phaseout Coverage*. This establishes a simple empirical relationship regarding the extent to which a median legislator's district's workforce is temporarily insulated from import competition. It shows that the further (closer) a legislator is to the median, the less (more) phaseout their local industries received. Model 2 adds in all of the controls, including *Issue IRT Trade* to account for directionality (since the score ranges from anti-trade (-1) to pro-trade (1)) and *District's Exposure to Import Threat*. Here, *Distance from Trade Median* remains significant at the 95% confidence level, although

[34] While variables are standardized in this set of results to examine the relative magnitude of *Proximity to Trade Median* compared to *District's Exposure to Import Threat*, I do not standardize the covariates in the 2SLS estimation presented in Table 1.4 to minimize complicating the interpretation of logged *Average Industry Phaseout Coverage*.

the magnitude is reduced threefold. Substantively, for every one standard deviation increase in a legislator's ideological distance from the trade median, the district's *Average Industry Phaseout Coverage* is decreased by 3.9%.[35] Additionally, this result is robust to the traditional DW-NOMINATE score. Generally, *Allocation* hypothesis [H1] is supported.

The statistical insignificance of *Issue IRT Trade* supports the theory's core premise: protectionist legislators lack credibility when threatening to withhold ratification votes. The null result implies that negotiators avoid squandering scarce resources on these legislators and instead target concessions toward the pivotal median legislator.

District's Exposure to Import Threat is positive and highly significant. Since covariates are standardized, we can directly compare magnitudes: a one standard deviation increase in import sensitivity yields an effect roughly 13 times larger than a one standard deviation increase in distance from the trade median. While economic exposure is clearly the dominant driver (Thai 2026), thereby supporting predictions from the OEP framework, controlling for these interests allows us to isolate the distinct, marginal effect of a legislator's pivotal status.

Model 4 is a placebo test that uses *Average Industry Exclusion Coverage* to demonstrate that median-legislator targeting is primarily limited to tariff phaseouts.[36] Exclusion is rare in US FTAs; hence, if used, exclusion would be reserved for truly exceptional cases where the threat of import competition is so significant that it may derail the trade deal. Negotiators often avoid using exclusion because it would open the floodgates for other stakeholders to demand it; hence, exclusion is not a tool to "buy" support from median legislators. In fact, only six FTAs have tariff-liberalization exclusions,[37] which explains the reduction in the sample size, as there would be no variation in FTAs without exclusion. Indeed, I find that a district's potential exposure to *Import Threat* is positively and significantly correlated with *Avg Exclusion*, whereas proximity to the median is not statistically significant. This model demonstrates that while both tools are allocated in response to economic need, only phaseouts are seemingly allocated toward pivotal legislators to build a majority coalition.

Finally, Model 5 combines both *Average Industry Phaseout Coverage* and *Average Industry Exclusion Coverage* into *Total Protection*. Similar to other models, *Distance from Trade Median*

[35] Because the dependent variable is logged, 3.9% is calculated by exponentiating the coefficient of -0.039 and taking a difference with 1.

[36] *Average Industry Exclusion Coverage* is constructed in the same way as *Average Industry Phaseout Coverage* but with the share of products within an industry that are excluded from liberalization. See Figure 1.2 on the share of products within each FTA tariff schedule that were excluded from liberalization.

[37] These are US-Australia, CAFTA-DR, US-Colombia, US-Panama, US-Peru, and TPP.

remains negative and significant at the 95% confidence level.

One may suspect that the relationship observed above is a statistical artifact of the president targeting concessions to serve his or his copartisans' electoral prospects. This is a widely held convention in the American presidential particularism literature (Kriner and Reeves 2015*a*,*b*, 2012; Berry, Burden, and Howell 2010; Lowande, Jenkins, and Clarke 2018; Ha 2023). Scholars generally hypothesize that in policy areas where the president has broad discretion, the president is incentivized to distribute benefits in ways that serve their political interests. Trade agreements appear to meet this condition, as Congress delegates authority to negotiate trade agreements to the president. As a result, electorally inclined presidents may prefer to distribute tariff phaseouts to help swing-state industries adjust to free trade.

Indeed, scholars have found a litany of swing-state targeting with various protectionist instruments, such as unilateral tariff hikes (Lowande, Jenkins, and Clarke 2018; Kriner and Reeves 2015*a*), non-tariff trade barriers (Bown et al. 2024), and lower tariff cuts in multilateral trade rounds (Ma and McLaren 2018). Other scholars have found co-partisan and committee-member targeting effects in other policy areas (Berry, Burden, and Howell 2010; Ha 2023; Dynes and Huber 2015), but not in trade. Table 1.3 controls for presidential election competitiveness (a measure of a state's swing-ness), district competitiveness, whether the legislator is a copartisan, part of the majority, or is a member of the House Ways and Means committee.

The results suggest that presidents are not particularistic in targeting phaseouts, nor tariff liberalization exclusion for electoral insulation (see Table A4). Table 1.3 presents the results for tariff phaseout. Each presidential particularism covariate is expected to have a positive coefficient; however, it becomes negative or statistically insignificant when included in the main specification in Models 7 and 8. While *Distance from Trade Median* is only statistically significant at the 90% confidence level here, *Distance from DW-NOMINATE Median* remains statistically significant. These results provide some evidence that tariff phaseouts are allocated to build a ratification coalition rather than to serve the president and his copartisans' interests.

[Table 1.3 about here]

1.6 Trade Concessions and Ratification

Next, I regress legislators' ratification vote against all covariates, including phaseout coverage. Ratification vote is taken from VoteView database (Lewis et al. 2023). Model 1

Table 1.3: Testing Alternative Explanations

Dependent Variable:	Avg Phaseout							
			Bivariate			Multivariate	IssueIRT	DW-NOMINATE
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
Distance from Trade Median							-0.040*	
							(0.023)	
Issue IRT Trade							0.063***	
							(0.020)	
Distance from DW-NOMINATE Median								-0.097***
								(0.023)
DW-NOMINATE								0.013
								(0.018)
Pres. Election Competitiveness	0.033					0.022	-0.059***	-0.062***
	(0.027)					(0.027)	(0.018)	(0.017)
District Election Competitiveness		0.049**				0.037	-0.012	-0.016
		(0.025)				(0.025)	(0.017)	(0.017)
Co-partisan			0.058			0.019	-0.084***	-0.039
			(0.043)			(0.038)	(0.032)	(0.028)
Majority				0.164***		0.155***	0.0003	-0.094***
				(0.039)		(0.033)	(0.032)	(0.033)
House Ways & Means					-0.034	-0.038*	-0.006	-0.007
					(0.021)	(0.022)	(0.016)	(0.016)
Controls	No	No	No	No	No	No	Yes	Yes
Fixed-effects								
FTA	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics								
Observations	6,521	6,446	6,421	6,421	6,507	6,332	6,164	6,165
R^2	0.820	0.821	0.820	0.822	0.820	0.824	0.898	0.898
Within R^2	0.002	0.005	0.002	0.013	0.002	0.020	0.432	0.436
Dependent variable mean	-10.5	-10.5	-10.5	-10.5	-10.5	-10.5	-10.5	-10.5

Clustered (District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 14 FTAs negotiated. Standard errors are corrected for clustering at the district level. All covariates are standardized.

in Table 1.4 reports that a district's phaseout coverage is statistically insignificantly correlated with a legislator's support for the free trade agreement. The coefficient present a negative sign, which is expected due to endogenous selection. Phaseouts are not randomly assigned; they are targeted at pivotal legislators with lower likelihood of ratifying rather than reliable free-trade supporters. Consequently, the naive model compares these on-the-fence legislators — who have a lower natural baseline probability of ratification (See Figure A7) — against pro-trade legislators who receive no concessions but vote "Yes" almost automatically. This "pooling problem" biases the estimate downward. While it appears as if phaseouts reduce support, high levels in phaseout coverage are simply a proxy for a legislator being a "tougher customer" who needs to be convinced with trade concessions.

[Table 1.4 About Here]

Table 1.4: Ratification: Main Results

Dependent Variables:	Ratification: Yes		Avg Phaseout	Ratification: Yes		Avg Phaseout	Ratification: Yes
	Naive	Reduced	IV 1st	IV 2nd	Reduced	IV 1st	IV 2nd
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables							
Avg Phaseout	-0.031*			0.933***			1.42**
	(0.016)			(0.225)			(0.721)
Distance from Median (Issue IRT)	-0.445***	-0.776***	-0.832***		-0.435***	-0.306**	
	(0.074)	(0.104)	(0.161)		(0.075)	(0.141)	
District's Exposure to Import Threat	-0.034**				-0.047***	0.438***	-0.671**
	(0.016)				(0.015)	(0.030)	(0.322)
Controls	✓	×	×	×	✓	✓	✓
Fixed-effects							
FTA	✓	✓	✓	✓	✓	✓	✓
Fit statistics							
Observations	4,046	4,189	4,189	4,189	4,046	4,046	4,046
R^2	0.387	0.094	0.778	0.094	0.386	0.862	0.386
Within R^2	0.363	0.059	0.026	0.059	0.361	0.389	0.361
F-test (1st stage)			110.3			19.1	
F-test (1st stage), Avg Phaseout				110.3			19.1
Dependent variable mean	0.644	0.642	-10.9	0.642	0.644	-10.9	0.644

Clustered (legislator & District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 12 FTAs negotiated and ratified. US-Jordon FTA was ratified with a voice vote and TPP was never voted on. Standard errors are corrected for clustering at the district and legislator level. See Table A5 for the full regression table.

To better explore the relationship between tariff phaseout coverage and legislator's support for the trade deal, I employ a two-stage least squares (2SLS) framework. While the exclusion restriction for Distance to Trade Median may not strictly hold for a formal causal instrumental variables (IV) analysis, this approach allows for a decomposition of the variation in phaseout coverage. Specifically, I isolate the component of phaseout coverage that is linearly associated with legislator's distance to the median, which I have demonstrate to be a modest determinant in the Allocation analysis (Table 1.2).

By focusing on this predicted variation ($\ln(\widehat{AvgPhaseout_{djc}})$), I filter out idiosyncratic noise in the treatment variable, providing a 'reduced-form' perspective on how Distance to Trade Median-driven shifts in policy relate to Ratification Vote. The second stage is estimated with:

$$\text{Vote}_{idjc'} = \delta_j + \beta_1 \ln(\widehat{AvgPhaseout_{djc}}) + \beta_2 \mathbf{X}_{dc} + \beta_3 \mathbf{X}_{ic} + \beta_4 \mathbf{X}_{sc} + \varepsilon_{idjc'} \tag{1.3}$$

where Vote_{idjc} is the ratification vote for agreement j from legislator i who represents district d in congress c'. Some agreements, such as KORUS and US-Colombia, are ratified in a later congressional session; therefore, I denote congressional sessions with a c'. All covariates are set to the negotiation stage since they predict the phaseout allocation $\ln(\widehat{Phaseout_{djc}})$. Because the US-Jordan FTA was ratified by voice vote and the TPP was never put to a vote, I omit these two FTAs when running the 2SLS. The first-stage results remain robust to such an omission. I cluster the standard errors at both the district and legislator level.

Furthermore, the main 2SLS estimation will focus only on legislators present at both the negotiation and ratification stages to demonstrate the vote-buying effect. A large majority (82.3%) of districts retained their representative from the negotiation stage. Among the remaining 17.7% of districts that replaced their representative, receiving more tariff phaseouts does not correlate with an increased likelihood of ratification (Table 1.5).

Table 1.4 reports the main 2SLS results as specified in Equation 1.3. The sign flip in the 2SLS regressions (Models 3–7) confirms endogenous selection. By isolating variation in phaseouts associated with a legislator's pivotal position (their distance from the median), the 2SLS estimates reveal a strong positive association between targeted concessions and ratification. Rather than claiming a universal causal effect, this approach hones in on the specific subset of phaseouts allocated according to legislative importance. This demonstrates that when adjustment time is distributed strategically to pivotal members, it is highly correlated with a positive ratification vote.

Models 2 and 5 report reduced-form estimates in which legislators' distance from the trade median is strongly and significantly associated with a lower linear likelihood of voting for trade deals; that is, the closer a legislator is to the median, the higher the likelihood. Models 3 and 4 present the first and second stage estimates with no controls to compare to models with controls (Models 6 and 7); the 2SLS estimates remain positive and significant at a 99% confidence level both with and without controls. This suggests that

the systematic relationship between politically-targeted phaseouts and voting behavior is robust and not merely a byproduct of observed confounding variables.

The primary 2SLS estimate is reported in Model 7. The coefficient for Average Phaseout is positive and significant, indicating that the variation in concessions driven by a legislator's ideological proximity to the pivotal voter is a strong predictor of their final vote. In terms of magnitude, the log-linear specification implies a substantial elasticity: a 1% increase in the predicted average industry coverage of the tariff phaseout is associated with an approximate 1.42 percentage point increase in the likelihood of ratification. This result provides empirical support for the Ratification hypothesis [H2].

1.6.1 Mechanism Tests

The theory suggests that trade concessions are "quid pro quo" intended to secure specific legislators' support. As such, the underlying mechanism requires that the district experience no legislative turnover, as demonstrated in the previous section. If this relationship is driven by a bargaining mechanism, we should observe a "break" in the correlation if the recipient of the bargaining effort is no longer in office. Indeed, 2SLS models restricted to districts that experienced legislative turnover between the negotiation and ratification stages show that there is no statistically significant relationship in the second stage.

Table 1.5 displays these results. Surprisingly, legislator's distance are no longer statistically significantly correlated with concessions in the first stage. As a result, the inherited concessions do not statistically increase the likelihood of ratification votes for new representatives. This result suggests that trade concessions are contingent on a legislator's likelihood of staying in office. Additionally, the lack of a significant relationship between predicted concessions and voting in the second stage aligns with the intuition that new legislators are not bound by the implicit bargains of their predecessors, voting instead according to their own ideological leanings.

1.7 Concluding Remarks

This article has argued that trade agreements are strategically designed to build a majority coalition for domestic ratification. Specifically, by negotiating tariff phaseouts for industries represented by pivotal legislators, the president can sway critical votes in favor of trade liberalization. I find strong evidence of this vote-buying mechanism. A legislator's proximity to the median significantly predicts the allocation of tariff phaseouts, which, in turn, correlate with an increased likelihood that they will ratify the FTA. Critically, this

Table 1.5: Robustness Check: Different Legislators Between Negotiation and Ratification Stages

Dependent Variables:	Avg Phaseout	Ratification: Yes	Total Protection	Ratification: Yes
IV stages	First	Second	First	Second
Model:	(1)	(2)	(3)	(4)
Variables				
Avg Phaseout		1.44		
		(0.993)		
Total Protection				1.64
				(1.22)
Distance from Median (Issue IRT)	-0.270		-0.237	
	(0.164)		(0.156)	
Issue IRT Trade	0.021	0.412***	-0.011	0.461***
	(0.094)	(0.133)	(0.090)	(0.159)
District's Exposure to Import Threat	0.318***	-0.457	0.312***	-0.510
	(0.026)	(0.328)	(0.025)	(0.394)
District Election Competitiveness	-0.161	0.333	-0.046	0.176
	(0.295)	(0.489)	(0.281)	(0.514)
Net Export	-1.70***	2.97	-1.74***	3.37
	(0.651)	(2.02)	(0.654)	(2.44)
Unemployment %	3.89*	-4.83	3.56	-5.07
	(2.33)	(5.08)	(2.27)	(5.67)
Corp PAC (ln)	0.014	-0.013	0.010	-0.009
	(0.026)	(0.049)	(0.025)	(0.051)
House Ways & Means	-0.059	0.120	-0.059	0.131
	(0.071)	(0.137)	(0.067)	(0.146)
Seniority	0.006	-0.011	0.005	-0.011
	(0.007)	(0.013)	(0.007)	(0.014)
Legislative Effectiveness Score	-0.012	0.038	-0.012	0.040
	(0.018)	(0.037)	(0.017)	(0.039)
Pres. Election Competitiveness	-2.09***	2.99	-2.23***	3.64
	(0.691)	(2.33)	(0.651)	(2.95)
Electoral College Vote	-0.006**	0.010	-0.007***	0.012
	(0.002)	(0.008)	(0.002)	(0.010)
Union membership Pct	-0.343	-0.302	-0.073	-0.676
	(0.543)	(1.03)	(0.501)	(0.989)
Fixed-effects				
FTA	✓	✓	✓	✓
Fit statistics				
Observations	859	859	859	859
R^2	0.919	0.188	0.914	0.188
Within R^2	0.383	0.110	0.395	0.110
F-test (1st stage)	3.82		3.16	
F-test (1st stage), Avg Phaseout		3.82		
F-test (1st stage), Total Protection				3.16
Dependent variable mean	-10.7	0.668	-10.6	0.668

Clustered (legislator & District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 12 FTAs negotiated and ratified. US-Jordon FTA was ratified with a voice vote and TPP was never voted on. Standard errors are corrected for clustering at the district and legislator level.

result is detected only in districts that retained the same representative from the negotiation to the ratification stage, confirming that the transaction is personal to the incumbent rather than a structural feature of the district.

Two implications can be drawn. First, one may reasonably conclude that other provisions in which targeting cannot be observed are similarly targeted to pivotal voters. Interview evidence from former trade negotiators often emphasizes the importance of extracting specific concessions for specific influential legislators, such as beef provisions for Senator Baucus. Of course, when it comes to broader provisions such as labor, investment, and the environment, their vote-buying potential is diffused among all potential beneficiaries, making it difficult to identify the intended recipient. This paper provides evidence on one issue area that can proxy for the targeting of other provisions.

Second, the political logic developed and tested in this empirical context can shed light on both growing body of free trade agreements signed by the rest of the world *as well as* on the largely unchallenged protectionist policies implemented by the second Trump administration. At first glance, the flat-rate global tariff announced on April 2, 2025, defies conventional wisdom. Rather than varying rates based on the specific threat imports pose to domestic industries, the administration applied a uniform tariff calculated by the US trade deficit. This policy impose significant costs on consumers, highly globalized firms, and exporters. While setting high baseline tariffs could theoretically serve as a costly signal to gain bargaining leverage,[38] the domestic political puzzle remains: why has the Republican coalition remained intact despite these economic costs shouldered by their constituents — consumers and industries alike? Although three Republican senators formally disapproved of tariffs on Canadian goods,[39] no legislation has passed to reverse the policy despite public disapproval.[40]

What has, so far, prevented this fracture within the Republican party? While deserving further empirical research, a growing number of tariff lines have been excluded from the reciprocal tariffs. The findings from this paper would suggest that tariff exclusions are granted to requesting firms whose interests are filtered through pivotal legislators who are likely to defect from the Republican coalition.[41] Similar logic can be drawn for firms that object to tariff exclusion. Therefore, the lack of a Congressional response can be attributed to a behind-the-scenes cooptation of potential defectors, enough for a majority

[38] Because the legality of such tariffs is currently contested in the Supreme Court, it is unlikely that the global tariffs actually provide the hypothesized bargaining leverage.

[39] See reports from Politico.

[40] Public opinion on President Trump's tariff is report by Pew Research.

[41] Such as Senator Rand Paul, Lisa Murkowski, and Susan Collins are among the few who have been critical of President Trump's tariffs.

to maintain the status quo policy.

Chapter 2

Deferring Punishment from Liberalizing Trade: The Political Consequences of Tariff Phaseouts in NAFTA

Abstract

Can international trade agreements be designed to delay political fallout? I argue that phasing out tariffs can delay the economic and subsequent political consequences of trade liberalization. I test these hypotheses using the case of the North American Free Trade Agreement (NAFTA), the United States' first and most consequential regional trade pact. First, I establish that longer phaseouts led to longer delays in employment decline for import-sensitive industries. Second, I find that counties sensitive to imports with minimal tariff phaseout punished Democratic presidential candidates immediately. In contrast, areas with greater phaseout coverage reward incumbents and do not punish copartisan candidates later, once tariffs are fully phased out. Third, Democratic Representatives who supported NAFTA are at greater risk of being voted out of office; however, greater phaseout coverage for their district do not mitigate risk. This article presents systematic evidence of how trade agreements can be designed to strategically delay and mitigate electoral backlash.
Abstract word count: 148

Key Words: trade, congress, president, election, NAFTA, tariff phaseouts

2.1 Introduction

Can international trade agreements be designed to mitigate the political consequences of free trade? Existing literature primarily examines how "embedded liberalism" can minimize domestic backlash to trade by compensating the losers *ex-post* trade liberalization (Ritchie and You 2021; Kim, Naoi, and Sasaki 2025; Margalit 2011; Kim and Pelc 2021). Yet, not enough attention has been paid to *ex-ante* design choices that can quell domestic backlash to distributional consequences of trade.[1]

This paper examines the effectiveness of tariff staging in delaying employment and political consequences using the case of the North American Free Trade Agreement (NAFTA).[2] Ubiquitous in all FTAs, tariff staging is a micro-provision in the agreement's tariff schedule that phases out tariffs differentially by time. While US free trade agreements (FTAs) eliminate substantially all trade barriers among agreement members, not all products become duty-free on the day of implementation. In the case of NAFTA, approximately 29% of dutiable product tariffs were phased out, with an average, median, and maximum duration of 7.5, 6.6, and 15 years, respectively. Tariff phaseouts can ease factor adjustment to trade liberalization and assist in reallocating resources (Riker 2021; Mussa 1984; Leamer 1980), thereby mitigating employment consequences of trade shock from immediate tariff elimination. As a result of such economic easing, the political consequences should be either delayed or mitigated for incumbents associated with trade liberalization.

First, I demonstrate that tariff phaseouts can delay employment losses with a series of event studies. Controlling for the contemporaneous China shock that occurred during the NAFTA implementation period (1994-2008), to which I replicate Pierce and Schott (2016)'s findings, I find that industries that received a maximum phaseout of 5 and 10 years began experiencing persistent employment declines in 2004 and 2007, respectively. Industries with a 15-year phaseout experience a decline in employment between 2014 and 2016. Industries in which their tariffs are eliminated overnight saw no statistically significant difference in employment.

Next, I test the political consequence-moderating effect of tariff phaseouts for presidents and congressional members. First, I examine the changes in the Democratic presidential vote share after the implementation of NAFTA. I find that because the Clinton Administration took ownership of NAFTA, subsequent Democratic presidential candidates experienced long-term, persistent electoral punishment. That is, import-sensitive

[1] With the exception of Grossman and Helpman (1995), who argue that liberalization exclusion in trade agreements can diffuse domestic opposition to trade cooperation.

[2] I select NAFTA as a case to examine due to it being the first regional free trade agreement that left a consequential mark in the American economy and politics (Flaherty 2025*b*,*a*; Choi et al. 2024).

counties with minimal tariff phaseouts punished Democrats in the 1996, 2000, and 2016 presidential elections. The former two elections are consistent with the anti-incumbency effect of trade shocks (Margalit 2011; Rickard 2022), while Donald Trump reactivated the NAFTA pain in 2016, leading to a lower vote share for Hillary Clinton in NAFTA-sensitive counties. Tariff phaseouts boosted the Democratic incumbent's vote share in 1996 among high-import-sensitive counties, but depressed it in 2008 among moderately import-sensitive counties.

Second, I examine the survival likelihood of U.S. Representatives who voted to ratify NAFTA. First, I find that House incumbents who supported NAFTA were 52% more likely to retire or not run again than those who opposed NAFTA. While this may be endogenous to their political horizon, that is, they co-sign an unpopular policy knowing they will retire, I find evidence suggesting that the unpopularity of junior representatives' support for NAFTA disincentivized or barred them from seeking reelection. Next, I find that Democratic Representatives who voted to ratify NAFTA are 449% more at risk of being voted out compared to a 71% reduced risk of losing the general election for Republicans who supported NAFTA. Having a greater share of the district workforce being covered by tariff phaseouts do not mitigate such risk.

This paper contributes new insights to several areas of the trade literature. First, I contribute to the literature on trade and election by demonstrating that tariff phaseouts can delay and mitigate the immediate electoral backlash to trade for presidents, but not for legislators (Margalit 2011; Che et al. 2022; Autor et al. 2020; Flaherty 2025*a*,*b*; Jensen, Quinn, and Weymouth 2017; Rickard 2022; Ritchie and You 2021). While prior research has shown that redistributive programs, such as Trade Adjustment Assistance (Ritchie and You 2021; Margalit 2011), can moderate the anti-incumbency effects of layoffs and trade shocks, the allocation of these programs is eligibility-based (Kim, Naoi, and Sasaki 2025) and sometimes varies by the party of the administration (Kim 2024). My paper provides one of the first pieces of evidence that tariff phaseouts are tools the president can use to manipulate the timing of import competition and layoffs. Therefore, the executive can "rig" the game for himself and subsequent copartisan presidential candidates, but such political protection does not protect sensitive legislators from electoral consequences of their vote on trade.

Second, I demonstrate that supporting and taking ownership of a major free trade agreement, such as NAFTA, especially when it runs counter to the party's stance and coalition, can lead to a persistent negative effect in elections. NAFTA became the "scarlet letter" of the Democratic Party. On the one hand, subsequent Democratic presidential candidates faced backlash in counties sensitive to NAFTA, even if they played no role

in the trade agreement, a pattern that echoes Choi et al. (2024)'s findings. On the other hand, Congressional incumbents who supported NAFTA are punished and rewarded depending on whether they are Democrats or Republicans.

Third, I provide further evidence that speaks to the globalization backlash the US experienced starting in 2016. While scholars have demonstrated that China played a significant role in the globalization backlash (Autor et al. 2020; Ritchie and You 2021), a growing group of scholars has also shown the long-term impact of NAFTA, which has been neglected by scholarship until more recently (Flaherty 2025*b*; Choi et al. 2024). I present early evidence that political entrepreneurs can easily activate latent anti-NAFTA attitudes from import-sensitive counties without phaseout coverage. While deserving further investigation, especially at the individual level, the results suggest that anti-Democrat sentiments from NAFTA-sensitive counties subsided before being reactivated in 2016, when Donald Trump ran on an anti-trade platform (with a specific focus on NAFTA and China). This result is robust when controlling for counties exposed to Chinese imports, in which the Autor, Dorn, and Hanson (2013)'s instrumental variable is also correlated with anti-Democrat voting behaviors.

Finally, while evidence on the import-mitigation effect of tariff phaseouts are mixed at best,[3] I provide initial results that the delay in industry employment losses corresponds to the phaseout duration. In the context of studies that find no significant impact of tariff phaseouts on imports (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022), I argue that increases in imports may not necessarily correspond to a decline in employment until offshored production can meet the increased demand at lower tariff rates.

2.2 Consequences of Trade Liberalization

The effects international trade has on domestic politics is widely documented (Among many, see Gourevitch 1978; Autor et al. 2020; Kim and Gulotty 2024; Brutger, Chaudoin, and Kagan 2023; Autor et al. 2023; Rickard 2022; Che et al. 2022; Margalit 2011). Conventional wisdom holds that while trade liberalization benefits the aggregate (Ricardo 1817), it imposes significant distributional consequences (Stolper and Samuelson 1941). These consequences have been theorized to cut across factoral (Rogowski 1987), industrial (Hiscox 2001), or firm-level cleavages (Melitz 2003; Kim 2017; Kim and Osgood 2019). Con-

[3]See Baier and Bergstrand (2007) and Khan and Khederlarian (2021) for positive evidence of mitigation effect; Khan and Khederlarian (2021) provides evidence that goods imported from Mexico and Canada is dampened prior to the subsequent staged reduction, suggesting that importers are aware and anticipate tariff reduction, and make use of lower rates, however small they may be. See Besedes, Kohl, and Lake (2020) and Dong and Jestrab (2022) for negative evidence.

sequently, political preferences emerge based on an individual's position in the global economy, whether defined by class, sector, or the productivity of their employing firm. The open economy politics framework takes individual preferences, as derived from economic theories, and aggregates them through institutions to infer policy and political outcomes (Lake 2009).

Industries tend to agglomerate in specific regions to maximize efficiency and reduce costs.[4] And when a country liberalizes its trade with the rest of the world, it opens up competition for uncompetitive industries, leading to regionally-concentrated consequences (Broz, Frieden, and Weymouth 2021; Flaherty 2024; Autor, Dorn, and Hanson 2013). Regions with a high concentration of import-competing industries are likely to experience higher unemployment rates resulting from job offshoring or competition from foreign brands. On the other hand, regions with a high concentration of export-oriented industries are likely to experience employment growth due to greater market access abroad.

Given such agglomeration, the political economy of place is particularly influential in the study of trade and politics (Broz, Frieden, and Weymouth 2021; Autor et al. 2020; Flaherty 2024). Scholars have found electoral incentives to disproportionately allocate protection to swing states (Ma and McLaren 2018; Lowande, Jenkins, and Clarke 2018; Kriner and Reeves 2015*a*). Others have found how localized trade shocks can fundamentally reshape politics, such as increased (1) voter support for populist candidates (Flaherty 2025*b*, 2024; Ritchie and You 2021), (2) polarization (Autor et al. 2020), (3) authoritarian attitudes among voters (Ballard-Rosa et al. 2021), (4) support against the liberal international order (Colantone and Stanig 2018*a*), (5) right-ward shift in voter preferences (Colantone and Stanig 2018*b*), and (6) protectionist preferences of legislators (Feigenbaum and Hall 2015). Relatedly, scholars have found that regions adversely affected by trade often vote against the incumbent (Margalit 2011; Rickard 2022; Jensen, Quinn, and Weymouth 2017). Because of electoral accountability, politicians often respond ex-ante by aligning their political behavior to constituents' interests (Feigenbaum and Hall 2015; Stiller 2023; Murillo and Pinto 2022).

Moreover, in the United States, a growing body of research suggests that trade liberalization and trade shocks generally have hurt Democratic candidates (Baccini and Weymouth 2021; Choi et al. 2024; Autor et al. 2020), with an exception noted by Che et al. (2022). Whether it be through social identity mechanisms (Baccini and Weymouth 2021), polarization (Autor et al. 2020), or betrayal by the Democratic Party through the ratification of NAFTA (Choi et al. 2024), trade liberalization affects elections generally through

[4]See Krugman (1979, 1992); Ellison and Glaeser (1997, 1999); Ellison, Glaeser, and Kerr (2010); Shaver and Flyer (2000); Rosenthal and Strange (2001).

the employment consequences channel. This paper asks, what if the employment consequences are delayed? Will the political consequences also be delayed or, at best, be mitigated entirely?

2.3 The Consequences of Phasing out Tariffs

Despite the underlying opposition to free trade due to the distributional consequences, advanced industrialized countries like the United States were able to gradually reduce their trade barriers by a significant margin since 1945 (Lehr and Restrepo 2023; Chisik 2003; Staiger 1994).[5] These gradual reductions are done over the course of eight rounds of multilateral tariff liberalization through the General Agreement on Tariffs and Trade, concluding with the Uruguay Round that established the World Trade Organization (WTO). These gradual reductions, while done through successive negotiating rounds, were mostly implemented immediately. Only after the Kennedy Round did tariff cuts phase out uniformly over five years. The Tokyo tariff cuts were completed in 8 years, while Uruguay took 5 years (Kowalczyk and Davis 1998).

The economic and political consequences of such tariff phaseouts are not well understood,[6] especially when there is not enough variation within each GATT round. However, one may infer that the lack of domestic opposition to trade liberalization, despite its distributional consequences, can be attributed not only to selective tariff cuts (Goldstein and Gulotty 2014) but also to the tariff phaseout that allowed domestic industries to adjust to global trade.

The proliferation of preferential trade agreement present new opportunities to study the consequences of tariff phaseouts. Because of the deadlock in the WTO Doha Round, countries started signing bilateral and regional preferential trade agreements (PTAs) with one another. While a *de facto* replacement of the WTO in trade liberalization, countries largely still comply with the GATT Article XXIV rule that requires PTAs to eliminate substantially all trade barriers. In addition to international law being the source of such constraints, countries compete with one another on accessing markets; therefore, protection to help import-competing industries at home means that some exporters do not gain access abroad. Without access, exporters suffer opportunity costs as other countries' exporters gain market access for their exports and build up their market share.

Due to the constraints of international law and reciprocity, the lever of selective tar-

[5] While tariff barriers have significantly been reduced, it is undeniable that non-trade barriers and behind-the-border regulations are much more salient issue areas.

[6] With some exceptions, see Besedes, Kohl, and Lake (2020); Dong and Jestrab (2022)

iff cuts are no longer in the toolkit of leaders and their negotiators.[7] Countries are now incentivized to eliminate tariffs with their trade partners, which inevitable would mobilize industries that are sensitive to imports from the specific trade partners. To quell dissent and build domestic coalitions for ratification (Grossman and Helpman 1995; Thai 2025*a*, 2026), leaders selectively phase out tariffs to minimize import shock. Figure 2.1 graphs individual tariff lines across 30 trade partners in 14 negotiated and signed free trade agreements (NAFTA until TPP). Each line is colored according to the treatment it received, such as whether it was already duty free (dark blue), eliminated immediately (green), phased out (yellow) or excluded from liberalization (red). Liberalization exclusion, synonymous with protection, is rare. Only about 0.05% of tariff line benefit from maintaining the status quo rates. However, 16.1% of tariff lines are phased out (Thai 2025*a*), representing a sizeable chunk of dutiable tariff lines that are temporarily protected with adjustment time. The allocation of tariff phaseout vary significantly across agreements and even trade partners within the same trade agreements (See TPP (DESTA 899)). Among phased out tariff lines, the duration vary significantly, as shown in Figure B5. The variation in tariff phaseouts present an opportunity to examine the economic and political effect of tariff phaseout. This paper leverages such variation to examine whether tariff phaseouts delay the economic and political effects of NAFTA.

[7] While this is largely true, some trade agreements only selectively liberalize specific products (Dür, Baccini, and Elsig 2014).

[Figure 2.1 about here]

Figure 2.1: Distribution of Tariff Treatment from USA FTAs Across 8-digit Product Codes

Note: Each line represents one product code. "Other" indicates that the product's tariff reduction is governed by other means, such as the WTO commitment. Each line on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to the USITC on the title of HS chapters. Original data collected by the author with the procedure introduced in Van Lieshout (2021*b*). Created by Author 5/27/24.

What Figure 2.1 demonstrates is that trade liberalization is not always binary.[8] While policy changes on trade often serve as a treatment date for when countries commit to free trade, it is clear that 16.1% of US tariff lines across 14 FTAs were not eliminated overnight. This delayed liberalization can at least buy time and protect domestic employment through two channels. The first channel centers on firms' decision to offshore production, while the second channel focuses on new competitors from the free trade agreement partner.

[8]With the clear exception of granting countries permanent normal trading relations (PNTR) status, like with China in 2000 (Pierce and Schott 2016). Here, granting PNTR to China eliminates the uncertainty generated from the annual approval by Congress, which had disincentivized investment from American firms to offshore production to China (Handley and Limão 2015).

First, let us assume that firms offshore production when the combined cost of producing goods abroad, which accounts for labor, transportation, exchange rates, and tariff costs, is lower than the cost of domestic production. Holding all else equal, the annual tariff reduction would bring individual firms toward a "threshold" at which offshoring would be more cost-efficient. Such a threshold is heterogeneous across firms, varying by their cost calculation, existing supply chain integration, and product type. Furthermore, firms are aware of this threshold through the tariff-schedule commitment. Assuming the tariff-reduction commitment is honored (i.e., not delayed further down the road), firms should have a set date for completely phasing out their domestic production to maximize revenue. Therefore, while firms may make new greenfield investments or begin sourcing from existing suppliers in the FTA partner country, the longer the tariff is phased out in equal annual increments, the longer it would take for a firm to completely phase out its domestic production.

Second, let us assume that the FTA partner houses a direct competitor to a domestic firm; delaying market access through tariff phaseouts would help maintain the competitiveness of domestic firm workers. Therefore, even though imports have been found to enter the US market earlier in the phased reduction period (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022), it does not mean that domestic producers lose their competitiveness right away. The established branding and reputation of domestic companies can help prevent consumers from quickly switching to foreign brands in the initial stages. Additionally, phasing in pressure from import competition may help motivate and provide breathing room for firms to adjust. Indeed, economists have argued and provided small-scale empirical tests examining how tariff phaseouts can facilitate adjustments within industries and assist in reallocating resources (Riker 2021; Mussa 1984; Leamer 1980). Hence, I hypothesize that:

> **Hypothesis 1 (H1):** Industries with longer phaseouts should experience a delay in employment decline.

A delay in layoffs should naturally result in a delay of the political consequences for incumbents. The literature has established the anti-incumbency effect of layoffs, job offshoring, and import competition (Margalit 2011; Rickard 2022; Jensen, Quinn, and Weymouth 2017). Therefore, import-sensitive counties with minimal phaseout are expected to punish the incumbent president not just because they oversaw a poor economy (Wright 2012; Fair 1978; Tufte 1978), but because they were directly responsible for the loss in employment.

On the other hand, counties that are insulated by tariff phaseouts should have an eas-

ier time transitioning. Because tariff phaseouts can slowly reduce industry employment, unemployed workers are more likely to receive redistributive programs and transition to a different industry. Redistributive programs, like the Trade Adjustment Assistance (TAA), operate on a strict budget; as a result, only a limited number of workers can reasonably enjoy TAA benefits in a given fiscal year. By slowly phasing out employment, the likely TAA-applicant would be competing with a smaller pool of unemployed applicants than in an import-shock event that leads to a mass reduction in the domestic workforce. Therefore, on an annual basis, more newly unemployed workers would receive redistributive benefits under a system that slowly phases in imports, rather than one that allows an overnight shock (such as granting China permanent normal trade relations in 2000). Therefore, import-sensitive counties that are insulated by tariff phaseouts should not exhibit any anti-incumbency effects in the short run.

> **Hypothesis 2 (H2):** Areas more import-sensitive (but are insulated temporarily with tariff phaseouts) would (not) immediately punish the incumbent responsible for the trade agreement.

The question, then, is whether voters correctly attribute the party of the president responsible for their economic woes long after the incumbent has left the office. There is an agreement among several scholars that voters punish the party of the incumbent that were responsible for adverse economic effect of trade in both the short and long term (Rickard 2022; Flaherty 2025*b*; Choi et al. 2024);[9] This is unsurprising given how party identity and party ownership of certain issues serve as heuristic devices among low information voters (Campbell et al. 1976; Wright 2012). Given this shortcut, if voters suffer the consequences of a trade policy made by an incumbent, then, regardless of the timing of the negative trade effects, voters would be more likely to punish the party associated with the incumbent if they cannot punish the incumbent themselves.

> **Hypothesis 3 (H3):** Areas more import-sensitive (but are insulated temporarily with tariff phaseouts) would punish the party responsible for the trade agreement immediately (in the future).

Do the anti-incumbency and anti-Democrats effects of trade liberalization translate to Congressional elections? Evidence from a small body of research examining the impact of the China trade shock on congressional elections is varied.[10] On the one hand, Feigenbaum and Hall (2015) find no anti-incumbency effects; on the other hand, Che et al. (2022)

[9] Although Flaherty (2025*b*) specifically look at voters' turn toward populist candidates, such as Ross Perot and Donald Trump, one may interpret the result as a punishment of the Democratic party.

[10] The focus on the China trade shock is primarily due to the causal identification strategy developed by Autor, Dorn, and Hanson (2013) and Pierce and Schott (2016).

find that trade-shocked districts increased their support for Democrats, while Autor et al. (2020) find a rightward shift. The Democratic party has generally been known to represent the protectionist interests of union members and working-class voters; therefore, having a Democratic president pushing an agreement like NAFTA through with the support of 39% (49%) of the Democratic House (Senate) majority in the 103rd Congress was an act of "betrayal" (Choi et al. 2024). As a result, I expect that Democratic incumbents in Congress who voted to ratify NAFTA are at higher risk of being voted out. However, because tariff phaseouts are hypothesized to delay employment consequences, I expect that districts that are insulated by tariff phaseouts are less likely to vote out their Democratic incumbents even if they ratified NAFTA.

> **Hypothesis 4 (H4):** Democratic congressional incumbents are more likely to be voted out of office when they ratified NAFTA; however, this relationship is moderated when the district is insulated with tariff phaseouts.

2.4 The Case of NAFTA

I choose to analyze the employment and political consequences of NAFTA for three primary reasons. First, Mexico and Canada are the United States' two biggest trade partners, partly due to their close proximity for global value chain integration and the regional economic integration enabled by NAFTA. Additionally, NAFTA expanded the US-Canada trade agreement to include Mexico, making it the first major agreement the US signed with a developing country. Given that Mexico's labor costs are substantially lower than in the US, liberalizing trade poses a significant threat to low-skilled manufacturing and agricultural employment. Indeed, the academic literature has empirically demonstrated the political and economic consequences of NAFTA (Choi et al. 2024; Flaherty 2025*b*; Hakobyan and McLaren 2016). However, the literature does not account for the fact that 29% of dutiable product tariffs in NAFTA were phased out, with average, median, and maximum durations of 7.5, 6.6, and 15 years, respectively. The delay in the import exposure of NAFTA may consequently defer the economic woes attributable to the Democratic president and party that pushed it through.

Second, NAFTA entered into force in 1994, before the oft-studied China shock. The trade literature attributes many political consequences to the import shock from China (Autor et al. 2020; Che et al. 2022; Feigenbaum and Hall 2015; Colantone and Stanig 2018*b*,*a*; Ballard-Rosa et al. 2021). As a result, the effects of FTAs signed in the 2000s and 2010s would be confounded by exposure to Chinese imports. Given that NAFTA was implemented in 1994, it allows for the analysis of the electoral effect of trade in at

least two election cycles, free from contamination by China. Beyond 2000, my research design accounts for the China shock since it occurred during NAFTA's implementation period (1994-2008). Thankfully, import exposure from NAFTA trade partners overlaps little with import exposure from China. The correlation between the pre- and post-NAFTA tariff difference and **?**'s Normal Trading Relations (NTR) gap for China is 0.22 (Figure B8), which suggests that import-exposure from NAFTA does not majorly overlap with China.

Third, NAFTA is unique in that the entire agreement, including the tariff schedule (except for the labor and environment side letters), was negotiated by President Clinton's predecessor. This offers a unique test to examine whether a president (and the party) taking ownership of a trade agreement they did not negotiate would be detrimental to their and their copartisans' electoral prospects.

2.5 Employment

To examine whether industries with longer tariff phaseouts would experience a delay in employment reductions (H1), I employ an event study to establish that tariff phaseouts can moderate the impact on industry employment from higher import exposure. I follow the generalized difference-in-differences identification strategy proposed by Pierce and Schott (2016), which captures the employment effects of granting China permanent normal trade relations (PNTR) by comparing non-NTR and NTR rates. This NTR Gap measure captures the level of exposure by the degree to which tariffs are permanently lowered to the NTR rate, without the uncertainty of renewal every year. They find that industries with a larger NTR gap experienced a larger employment decline. Given that China entered the WTO during the NAFTA implementation period (1994-2008), I control for the contemporaneous shock using the NTR gap.

To mirror Pierce and Schott (2016)'s measurement, I calculate the difference between pre-NAFTA rates and post-NAFTA rates to measure the impact of free trade on employment. Since all tariff lines are staged to be eliminated by NAFTA, I use the applied base rate reported on the NAFTA tariff schedule and supplement any non-ad-valorem rates with ad-valorem equivalent rates from UNCTAD TRAINS tariff database. The correlation between *NAFTA gap* and *NTR gap* is 0.22, which suggests that there is a relatively small overlap in the kind of industries that are exposed to imports. Figure B8 plots the two gap measures with a 45-degree dashed line and a linear regression line fitted in red. As is evident, there is considerable variation between the two measures, providing an opportunity to analyze NAFTA's employment impact independently of China.

To examine the moderating effect of tariff phaseouts, I collected original data on U.S. tariff treatment for NAFTA using Van Lieshout (2021*b*)'s procedures. The PTARIFF database contains information on the treatment of each tariff line code at the eight-digit U.S. harmonized tariff system (HTS) level. The data collection process for NAFTA is as follows: First, I use the digitized US tariff schedule in NAFTA from Besedes, Kohl, and Lake (2020) and manually coded approximately 1100 products with more than one tariff treatment.[11][12] Second, I manually code each unique staging category by hand, referring to the NAFTA main text to make a determination on whether the item with the category is (1) reduced, (2) eliminated, and if so, whether it is (3) immediately eliminated. Next, I code the (4) duration of the phaseout in years. Fourth, I merge the schedule table with the coded categories.

At the industry level, I take the maximum phaseout duration for any given product, which yielded four groups: immediate elimination (187 industries), five-year (46), 10-year (120), and 15-year (14).[13] I take the maximum duration for each industry because often, the product industries that need protection are most likely final consumer goods, as opposed to inputs and parts, and are very particular and differentiated (Kim 2017). Additionally, many products within an industry serve as inputs for final production, which firms want to access as quickly and affordably as possible for domestic production. As such, if we consider taking the average phaseout duration industries received from NAFTA, it would not accurately capture the protection the industry received, given that inputs tend to be phased out immediately (Baccini, Dür, and Elsig 2018).[14] Figure 2.2 plots the share of 6-digit NAICS with the four phaseout groups across different subsectors.

[Figure 2.2 about here]

Put together, I estimate two models to illustrate the distinct employment effect of NAFTA when tariff phaseouts are factored in. First, Equation 2.1, specifies a generalized difference-in-difference estimation for *NAFTA Gap* while controlling for the contemporaneous China shock with *NTR Gap* and confounding effect of *ImportThreat*. This simple difference-in-difference should estimate the US employment effect of entering NAFTA, which one would expect to decline almost immediately after its implementation in 1994

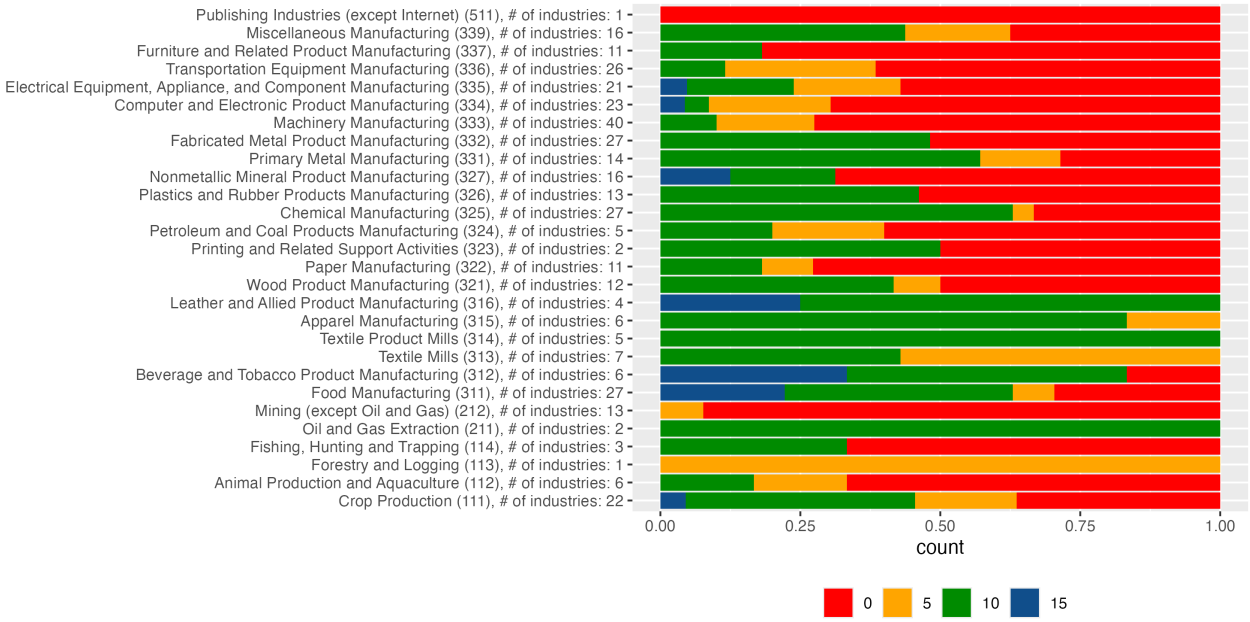
[11]The author thanks Besedes, Kohl, and Lake (2020) for providing the digitized NAFTA tariff schedule since the PDF version is not suited for optical character recognition (OCR) technology.

[12]See Figure B1 for an example of a tariff schedule.

[13]There are several industries with varying phaseout duration; however, the number of industries for each staging is so small (1 or 2) that it would not be estimated correctly with 2-, 3-, 4-, 7- and 9-years phaseout duration.

[14]See Figure B6 to compare the density for the industry average and maximum phaseout duration.

Figure 2.2: Count of Industries and Maximum Phaseout Granted in NAFTA



Note: Figure plots the share of industries (NAICS 6 digits) within subsectors (NAICS 3 digits) and their maximum phaseout duration granted in NAFTA. There are 187 unique NAICS 6 digits industries with maximum phaseout duration of zero years, 46 with five-year maximum phaseout, 120 with 10-years, and 14 with 15-years. Created by Author 9/24/25.

(Choi et al. 2024).

$$\begin{aligned}\ln(Emp_{it}+1) = \alpha_i + \lambda_t + &\sum_{t\neq 1993} \beta_t(\text{NAFTAGap}_i \times 1\{\text{Year}=t\}) + \\ &\sum_{t\neq 2000} \zeta_t(\text{NTRGap}_i \times 1\{\text{Year}=t\}) + \\ &\sum_{t\neq 1993} \eta_t(\text{ImportThreat}_i \times 1\{\text{Year}=t\}) + \epsilon_{it}\end{aligned} \tag{2.1}$$

Then, I estimate a triple difference-in-differences (DDD) model, now interacting the *NAFTAGap* and year dummy with the maximum phaseout duration an industry received for its products (Equation 2.2). When accounting for the tariff phaseout group, I can estimate the effects of having greater tariff reductions on industry employment over time, and whether such a decline is delayed by the maximum phaseout the industry received. The model is estimated as:

$$\begin{aligned}\ln(Emp_{it}+1) = \alpha_i + \lambda_t + &\sum_{g\in G}\sum_{t\neq 1993} \beta_{gt}(Phaseout_{ig} \times \text{NAFTAGap}_i \times 1\{\text{Year}=t\}) + \\ &\sum_{t\neq 2000} \zeta_t(\text{NTRGap}_i \times 1\{\text{Year}=t\}) + \\ &\sum_{t\neq 1993} \eta_t(\text{ImportThreat}_i \times 1\{\text{Year}=t\}) + \epsilon_{it},\end{aligned} \tag{2.2}$$

where $\ln(Emp_{it}+1)$ is logged industry employment at the NAICS 6-digit level. I add 1 to ensure that completely phased out industries (with zero employment) do not get dropped from the analysis. I use the Bureau of Labor Statistics' Quarterly Census of Employment and Wages for employment data, which provides comprehensive employment data for all industries, including certain agricultural industries like crops and animal production, which the County Business Pattern omit.[15] α_i and λ_t are industry and year fixed effects to control for unobserved confounders. β_{gt} captures the effect of *NAFTA Gap* for a specific phaseout group g in a specific year t. $Phaseout_{ig}$ is a dummy variable that equal to 1 if industry i belongs to phaseout group g, where $g \in \{0, 5, 10, 15\}$. NAFTAGap_i is the difference between pre- and post-agreement average industry tariff rate. Because all tar-

[15] BLS's industry coverage is more extensive than the conventional County Business Pattern (CBP) dataset. CBP excludes crops and animal production (NAICS 111 and 112). See their methodology page.

iffs are set to be eliminated in NAFTA, the difference is just the pre-treatment base rate. $1\{\text{Year} = t\}$ denotes a dummy variable for each year in the sample with 1993 as the reference year (the year NAFTA was ratified). I cluster the standard errors by industry and use pre-treatment employment levels in 1990 as weights.

$\sum_{t \neq 2000} \zeta_t(\text{NTRGap}_i \times 1\{\text{Year} = t\})$ controls for the contemporaneous import shock from China being granted permanent normal trading relations (PNTR) and joining the WTO in 2000. Controlling for the China Shock absorbs the variation of equally sensitive industries, giving us a clearer estimate of the employment effect from NAFTA.

Finally $\sum_{t \neq 1993} \eta_t(\text{ImportThreat}_i \times 1\{\text{Year} = t\})$ controls for the confounding effect of industry sensitivity to NAFTA imports on phaseout duration and the magnitude of employment loss. Thai (2026) demonstrates that negotiators prospectively negotiate longer phaseout durations for import-sensitive industries. Because the maximum phaseout duration an industry received is likely dictated by its most vulnerable product, I aggregate the pre-treatment product-level measure to the industry level by taking the maximum import threat.[16]

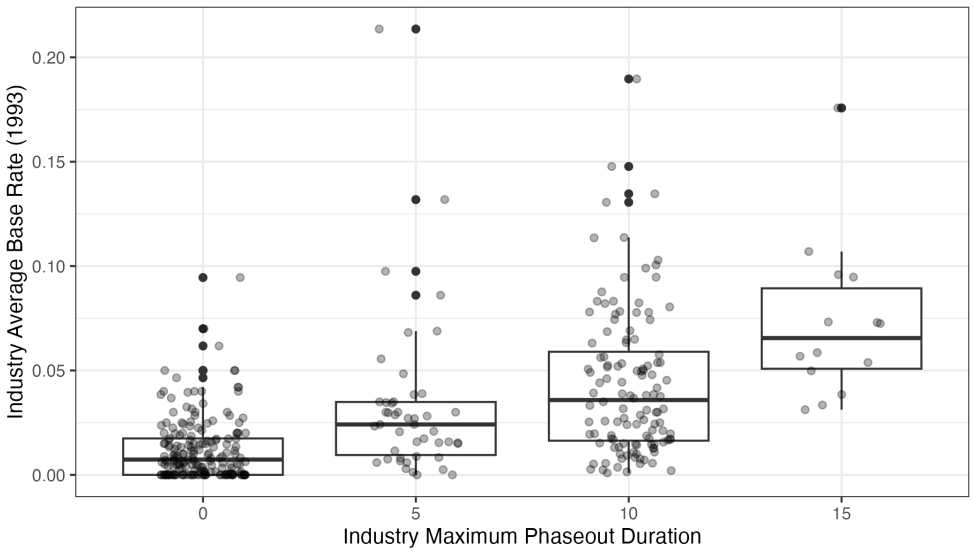
The Import Threat measure, as calculated in Thai (2026), uses pre-treatment export data from Mexico and Canada to capture anticipated import shocks based on changes in demand and the partners' pre-existing export capabilities. Because Import Threat is the primary driver of phaseout usage and duration, eclipsing other determinants (Thai 2026), controlling for Import Threat should effectively minimize the bias arising from endogenous assignment of phaseout duration. Additionally, controlling for import threat absorbs the varying magnitude of total employment loss due to free trade with Mexico and Canada, allowing the β_{gt} coefficients to isolate the independent effect of the tariff phaseout schedule, net of the industry's underlying baseline vulnerability to North American integration.

One methodological concern about interacting phaseout duration and base rate together is that they are correlated (Thai 2026). While higher tariffs frequently correlate with longer phaseouts, Figure 2.3 demonstrates sufficient common support between the two treatments. A lack of common support would imply that the groups, faceted by maximum phaseout duration, are so fundamentally divergent that comparisons would suffer from severe covariate imbalance. However, there is significant overlap in industries' average pre-NAFTA base rates across all phaseout durations, permitting robust estimation within the DDD framework.

[Figure 2.3 about here]

[16] See Section 2.6.2 for a further explanation on the construction of the Import Threat measure.

Figure 2.3: Distribution of 1993 Industry Average Base Rates by Industry Maximum Phaseout Duration from NAFTA



Note: Figure displays four boxplot split by the four main maximum phaseout duration an industry received. Created by Author 3/16/25.

2.5.1 Threats to Inference

This generalized difference-in-difference design provides causal estimates when the two identifying assumptions —– parallel trends and no anticipatory treatment effects —– are satisfied. First, the parallel trends assumption is satisfied by having statistically insignificant estimates in the period leading up to the treatment, as seen in Figures 2.4 and 2.5.

Second, and more difficult to justify, is the absence of an anticipatory treatment effect. Tariffs do not decline without warning, nor do they decline randomly. Central to this study is the fact that tariff reductions are "staged" in the agreement's schedule, providing interested actors and stakeholders with full information on the specific tariff rate at any point in the implementation period. In a study conducted by Khan and Khederlarian (2021), they find that imports slowed down in the months preceding the subsequent staged reduction in tariffs on goods from Mexico and Canada. This suggests that firms plan ahead in anticipation of the staged reduction, providing credence to the idea that they strategically maximize profits. As a result, rational economic actors may adjust their behavior at home in anticipation of reduced tariffs. While this is a reasonable expectation, one must examine the kind of anticipatory behavior economic actors may engage in and why it may not necessarily affect employment prior to the treatment date.

In anticipation of reduced tariffs, firms may make investments to shift production

abroad. However, building the plant, hiring and training workers and managers, and creating supply chain infrastructure all take time. Additionally, firms may not start importing goods and laying off their domestic workforce unless the foreign plant can meet existing demand without creating a supply gap. Given that economic actors know the precise tariff rate at which importing foreign goods would be more profitable than maintaining domestic production, we should not expect anticipatory changes in employment before the optimal rate is reached. In other words, firms may invest abroad in anticipation of reduced tariffs, but they may not lay off workers until existing tariffs reach a level that makes importing more profitable than domestic production.

While the anticipatory behavior of firms is accounted for, we must also consider workers' anticipatory behavior. Workers may be aware that they are at a comparative disadvantage vis-à-vis foreign competitors; as a result, they may preemptively reallocate within or across industries in anticipation of layoffs. While one may reasonably expect firms to behave rationally when given complete information on the tariff reduction schedule, it is not reasonable to expect that every day workers know *when* they would be laid off based on the profit-maximizing responses of firms to specific optimal tariff rates. Tariffs, and especially tariff phaseouts, are highly specialized issues that may not be easily understood by regular Americans. While I argue that workers may be aware of their relative position vis-à-vis Mexico and Canada, I posit that they do not know when they will be laid off, which relieves us of the problem of anticipatory behavior and thereby satisfies the last assumption.

2.5.2 Results

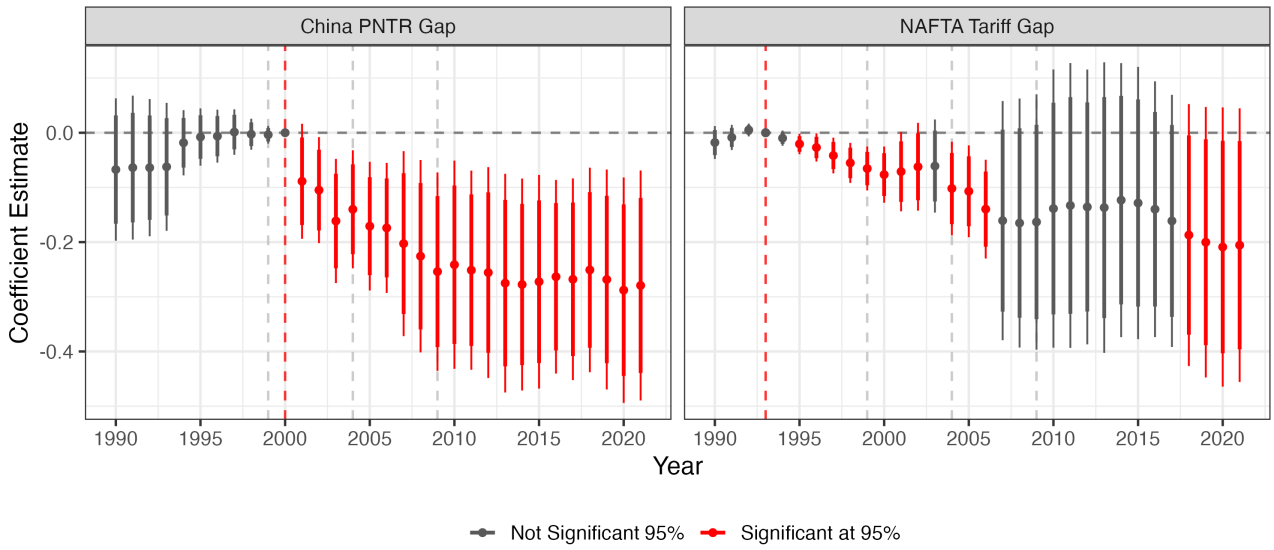
Figure 2.4 presents a side-by-side event-study plot comparing the employment effect from entering NAFTA and granting China permanent normal trading relation (PNTR). The pre-1993 and pre-2000 coefficients hover around zero and are statistically insignificant, providing visual evidence of the parallel trend assumption. By controlling for the contemporaneous effect of the China shock, I am able to isolate the effect NAFTA had on sensitive industries. Because I standardized the NAFTA Tariff Gap to be comparable to PNTR Gap from Pierce and Schott (2016), the coefficients represent the log-point change in employment associated with one standard deviation increase in NAFTA Tariff Gap, relative to the 1993 baseline.[17] At first glance, these results are nothing surprising. The immediate and persistent negative employment effect of granting China PNTR and entering NAFTA replicates findings from Pierce and Schott (2016) and Choi et al. (2024),

[17]The formula to calculate the substantive effect is $\%\Delta = (exp(\beta) - 1) \times 100$

respectively.

[Figure 2.4 about here]

Figure 2.4: NAFTA Tariff Gap on Industry Employment, Faceted by Phaseout Duration



Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated difference-in-differences (DD) model from Equation 2.1 that interacts year dummies with the NAFTA tariff gap. See Figure B9 for results using County Business Pattern employment data. Created by Author 3/18/26.

Substantively, giving China PNTR led to deeper employment losses more quickly than entering NAFTA. Within the first year, industry employment is estimated to have declined by 8.5% due to China PNTR, compared with 2.08% from NAFTA in 1995. For NAFTA, the steady downward trajectory post-1994 may capture how tariffs are gradually phased out over time. By the fifth year (1999), a one-standard-deviation increase in the NAFTA Tariff Gap led to a 6.29% reduction in employment. By 2004, i.e., 10th year, industries more exposed to NAFTA experienced a 9.69% reduction in the workforce. The negative employment effects from NAFTA became statistically insignificant from 2007 to 2017, driven by a large increase in the confidence interval. This increased variance may be due to the 2008 Great Recession and subsequent recovery, which could have introduced extreme noise into the employment data.

The side-by-side comparison between trade liberalization implemented overnight (China PNTR) and phased in over time (NAFTA) provides suggestive evidence on the effectiveness of tariff phaseout. Although the magnitude difference is large, employment seems to decline more slowly and less abruptly with NAFTA. One may argue that because the US

extended NTR rates to China, albeit subject to annual renewal, US businesses were able to establish supply chain partnerships before the PNTR, enabling a swift, sharp transition after the PNTR. However, the trade policy uncertainty arising from the annual Congressional renewal acted as a major deterrent to investment (Handley and Limão 2017). The threat of going back to Smoot-Hawley rates would have prevented the possibility of any long-term supply chain commitment by Chinese exporters and US importers because doing so requires high sunk cost investments (Chisik 2003); therefore, eliminating the uncertainty allowed US businesses to more confidently make investments and reorganize their supply chain (Pierce and Schott 2016).

Next, Figure 2.5 plots four event study graphs with the *NAFTA Tariff Gap* estimates, as interacted with the industry's maximum phaseout duration of zero, five, ten, and 15 years. A quick glance indicates that the employment effect of entering NAFTA is substantially moderated and delayed by respective phaseout durations. The immediate, gradual decline in employment after the US entry into NAFTA disappears. Now, employment decline is statistically significant at a later date, depending on the maximum phaseout duration an industry received. First, industries with all tariffs eliminated overnight do not experience any significant employment decline. On the contrary, employment in these industries appears to have increased, although the coefficients are statistically insignificant. Industries with at least one product receiving a five-year phaseout experienced a persistent employment decline starting in *year 10*. Those receiving a 10-year phaseout saw employment decline starting in *year 13*. Finally, industries that received the longest phaseout duration for at least one product saw a short-term significant employment decline in 2014-2016, about 20-22 years after NAFTA's entry into force. The evidence here is clear-cut, supporting the first hypothesis, which predicts that industries with longer phaseouts will experience a delay in employment decline.

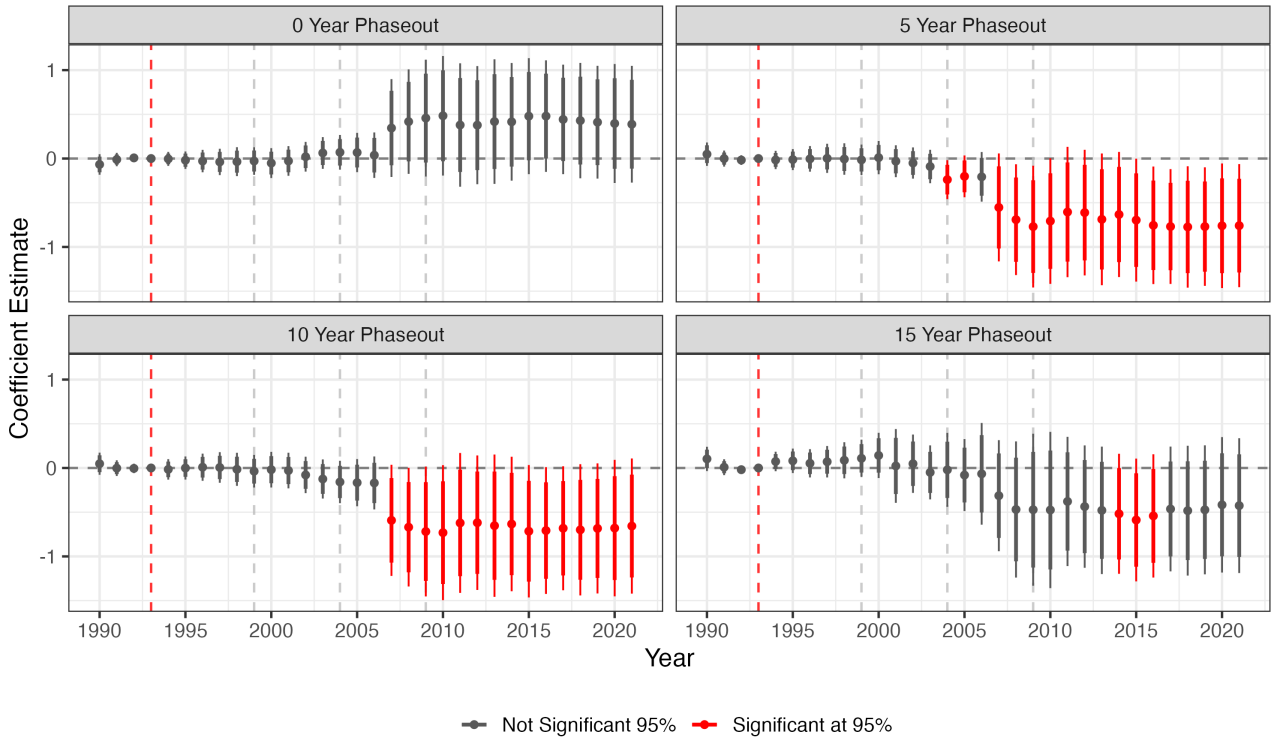
[Figure 2.5 about here]

2.6 Presidential Elections

To examine the immediate and delayed political consequences of NAFTA when taking into account tariff phaseouts (hypotheses 2 and 3), I run a series of cross-sectional OLS models regressing one-election-cycle changes in Democratic vote share on an interaction between NAFTA import sensitivity and the phaseout coverage the county received under the NAFTA tariff schedule.

For the outcome variable, I use the one-election difference in Democratic two-party

Figure 2.5: NAFTA Tariff Gap on Industry Employment, Faceted by Phaseout Duration



Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated triple difference-in-differences (DDD) model from Equation 2.2 that interacts year dummies with the NAFTA tariff gap and four groups of phaseout duration. See Figure B11 for results using County Business Pattern employment data. Created by Author 3/4/25.

vote share across the 1996-2020 presidential elections. Election returns data are primarily from Data and Lab (2018), supplemented by the CQ Library Voting and Elections Collection for the 1988, 1992, and 1996 elections.

2.6.1 Average Industry Phaseout Coverage

Although the raw PTARIFF data provide highly granular information on tariff schedules, I employ a binary measure indicating whether a dutiable product's tariff is subject to a phaseout. Given that the unit of analysis is the county, I aggregate these product-level indicators to calculate the extent of tariff phaseout coverage within the county's workforce. Using an averaging function, the aggregated measure captures the average industry workforce that is covered by the tariff phaseout. The measure is calculated as follows:

$$\text{AvgPhaseout}_{cj} = \frac{1}{K_c} \sum_{k \in \mathcal{K}c} \left(\frac{E_{ckt}}{E_{ct}} \times \frac{\sum_{p \in \mathcal{P}k} PO_{pj}}{|\mathcal{P}_k|} \right), \tag{2.3}$$

where PO_{pj} is a binary indicator of whether a dutiable product p is phased out (1) or not (0) in agreement j. This inner term represents the share of products subject to phaseouts within industry k. The denominator $|\mathcal{P}_k|$ denotes the total number of dutiable product codes in the industry, excluding those that were duty-free prior to the agreement. This ensures the proportion accurately reflects protection on relevant trade lines.[18] This industry-specific exposure is then weighted by the industry's labor share in the county, $\frac{E_{ckt}}{E_{ct}}$, where E_{ckt} is employment in industry k and county c, and E_{ct} is the total county workforce at time t (averaged over the 5 years prior to the agreement).[19] Finally, to arrive at the county-level measure, I sum these weighted exposures and divide by K_c, the number of active industries in county c.

Individually, the product of the inner two terms should give an estimate of the proportion of industry k workers as a share of the total employed workforce in county c that is "covered" by tariff phaseouts. After averaging across industries within a given county, the resulting county-level measure captures the *Average Industry Phaseout Coverage*. Figure 2.6 illustrates the NAFTA average industry phaseout coverage weighted by 1992 county population, grouped into quartiles. As one may expect, workers in the Sun Belt are the primary beneficiaries of tariff phaseouts. Rust-belt states also experienced high levels of

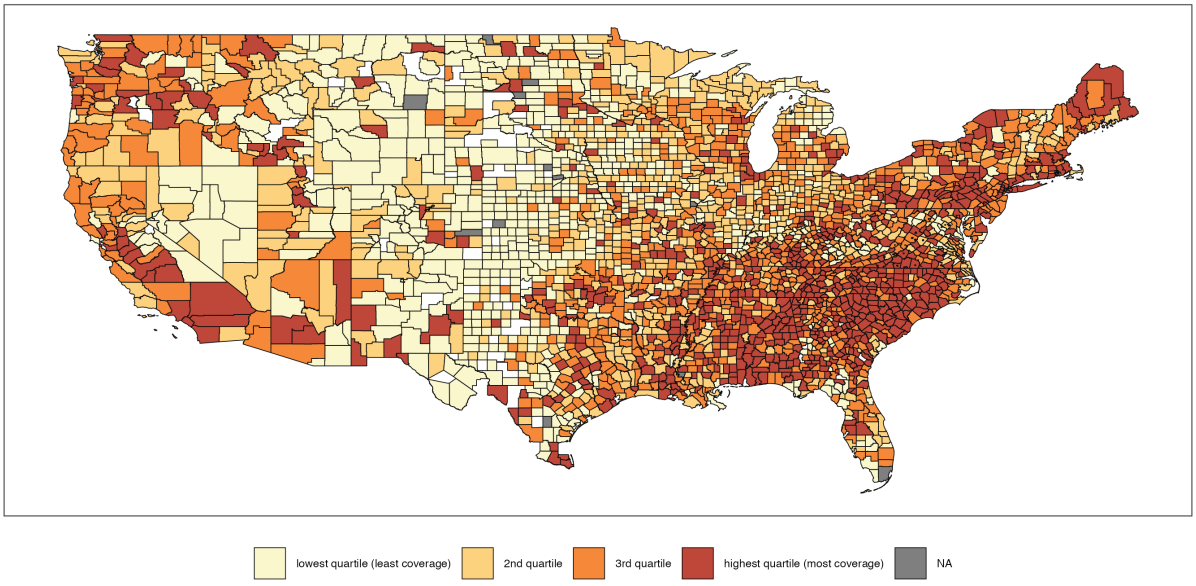
[18] I concord different HS revisions across agreements to HS rev. 2002, linking it with industry-level variables at NAICS rev. 2012. I used Liao et al.'s 2020 `Concordance` package to translate 6-digit HS codes (2002 revision) to 6-digit NAICS (2012 revision).

[19] Industry employment data is from Eckert et al.'s 2020 version of the County Business Pattern data, harmonized to the 2012 NAICS revision.

phaseouts, but high-phaseout-density areas are more spread out than in sun-belt states.

[Figure 2.6 about here]

Figure 2.6: Map of NAFTA's Average Industry Phaseout Coverage Overlaid on 1990 County Boundaries



Note: Average industry phaseout coverage, weighted by 1992 county population, is grouped into quartiles. Created by Author 3/13/26.

2.6.2 Import Threat

I measure the degree to which the NAFTA presents an import threat to a county by aggregating product-level *Import Threat* measure, described in Equation 2.4, to the county level. Contrary to traditional import penetration measures, which use pre-existing aggregated import data, Thai (2026) argues that such measures may be biased or attenuated toward zero due to existing tariffs that may bar certain imports from entering. A clear example is the 25% tariff on light trucks that the U.S. imposes on the rest of the world, which is so astronomically high that firms abroad have little reason to produce light trucks for export to the U.S. Instead, Thai (2026) proposes that a partner poses a more significant threat when they can fulfill the changes in import demand after tariffs are eliminated.

Equation 2.4 outlines how *Import Threat* is constructed as a function of demand change when the tariff for product p at time t is eliminated in country i, i.e., the U.S., $(1-(1+BaseRate_{ipt})^{-\sigma_{ip}})$ and the FTA partner's j total export value of product p to the rest of the world $Export_{jip\tau,i\neq USA}$. I specify the partner's export number to exclude their exports to

the United States, thereby avoiding endogeneity due to existing barriers that disincentivize trade. Here, τ indicates that the export numbers are rolling averages of the three years preceding the agreement's signing in 1992. Export data is aggregated to the 4-digit level to minimize missing data at the 6-digit level from 16% to 5%.

$$ImportThreat_{jpt} = log(Export_{jip\tau,i\neq USA} \times (1 - (1 + BaseRate_{ipt})^{-\sigma_{ip}})) \tag{2.4}$$

The demand change is characterized as the inverse of the demand level when prices are higher due to tariffs. First, $(1 + BaseRate_{ipt})$ specifies the percentage change in price for imports when there are tariffs. For example, a 25% tariff on light trucks would increase the price of said goods by 1.25 times. σ_{ip} is the import demand elasticity. Put together $(1 + BaseRate_{ipt})^{-\sigma_{ip}}$ computes the demand level when there's a tariff in place; hence, with high import demand elasticity, a large price change (i.e., reduction in price when tariffs are eliminated) would lead to greater changes in demand levels.

For example, the demand for imported light trucks with a 25% tariff would be 41% with an elasticity of 4 (high) versus 80% with an elasticity of 1 (low), compared to the baseline of 100% when there's no tariff.[20] If demand for light trucks is highly elastic, the elimination of tariffs would increase demand by 59%, as captured by the difference with 1, or 100%.

MFN base rates are taken from the trade agreement and are supplemented by UNCTAD TRAINS data where there are missing values or non-ad valorem rates. Data on import demand elasticity is from Broda and Weinstein (2006), accessed from Liao et al. (2020)'s `concordance` package. Because the 6-digit estimates of import demand elasticity have extreme outliers, I take the median value of 6-digit HS products and aggregate it to the 2-digit HS.

I then aggregate the product-level *Import Threat* measure to the county level using the aggregation outlined in Equation 3.8 by replacing the phaseout component with *Import Threat*.

2.6.3 Model Specification

The series of cross-sectional regressions can be specified as:

[20] In which case, regardless of elasticity, the resulting demand level would be 100%. For example $1^{-4} = 1^{-1}$.

$$\begin{aligned}\Delta VoteShare_{ct-t_{-4}} = \delta_s + \beta_1 NAFTAImportThreat_c + \beta_2 NAFTAPhaseoutCoverage_c + \\ \beta_3(NAFTAImportThreat_c \times NAFTAPhaseoutCoverage_c) + \\ \beta_4 \mathbf{X}_{ct-t_{-4}} + \beta_5 \mathbf{X}_{ct} + \beta_6 ChinaShock_c + \\ \beta_7 \Delta VoteShare_{ct_{-4}-t_{-8}} + \beta_8 VoteShare_{ct_{-4}} + \varepsilon_c \\ t = 1996, 2000, 2004, 2008, 2012, 2016, 2020,\end{aligned} \tag{2.5}$$

where $\Delta VoteShare_{ct-t_{-4}}$ is the change in Democratic vote share in the presidential election in year t from the last election four years ago t_{-4}. The first covariate of interest is $\beta_1 NAFTAImportThreat_c$, which, conditional on not having much $NAFTAPhaseoutCoverage_c$, should correlate with a reduced Democratic vote share in elections immediately after NAFTA's implementation in 1994. The second covariate of interest is the interaction term $\beta_3(NAFTAImportThreat_c \times NAFTAPhaseoutCoverage_c)$, where import-sensitive areas with tariff phaseout coverage should punish Democratic candidates later. The average, median, and maximum durations are 7.5, 6.6, and 15 years, respectively. Hence, we should see a significant electoral effect for the interaction term ranging from 2000 to 2009.

I control for a host of factors. $\mathbf{X}_{ct-t_{-4}}$ is a vector of controls that consists of changes in labor force (%Δ), income per capita (%Δ), population (%Δ), and unemployment rate (Δ) between the current and previous elections. $\mathbf{X}_{ct}$ is a vector that consists of election-year variables, such as county demographics (% white, % black, % male, and % with at least a bachelor's degree). $ChinaShock_c$ is a county-level vector that consists of two instruments to measure Chinese import penetration. The first is the Chinese import growth from 2000 to 2007, instrumented by Chinese import growth in other industrialized countries in the 1990s. This data was taken from Autor, Dorn, and Hanson (2013). The second measure is county exposure to Chinese imports, measured by the gap between non-Normal Trading Relations (non-NTR) and NTR rates (Che et al. 2022; Pierce and Schott 2016). I take data on Non-NTR and NTR rates from Pierce and Schott (2016). I also control for the lagged percentage point change in Democratic vote share ($\Delta VoteShare_{ct_{-4}-t_{-8}}$) and the Democratic vote share in the previous election ($VoteShare_{ct_{-4}}$). Finally, I include state fixed effects δ_s to account for unobserved variation across states. All covariates are standardized to ease interpretation. The model is weighted by county population reported in the election year.[21]

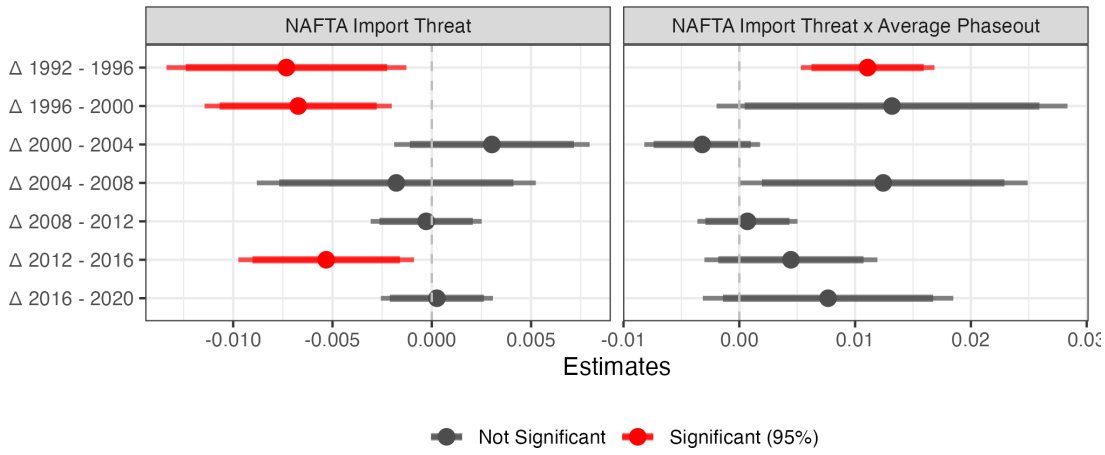
[21] 2020 election uses 2019 population count due to data availability, but also due to the COVID-19 pandemic.

2.6.4 Results

Figure 2.7 displays the coefficients of the two main standardized covariates (*NAFTA Import Threat* and *NAFTA Import Threat x Average Phaseout*) on democratic vote share from 1996 to 2020. To evaluate H2, which examines the vote share changes for the incumbent immediately responsible for NAFTA, I analyze the change in the Democratic vote share for the 1996 and 2000 presidential elections. On the other hand, H3 examines the democratic vote share for all subsequent presidential elections. The left panel displays the marginal effect of *NAFTA Import Threat* on the change in democratic vote share for counties with an average level of PO Coverage (which is 0.02% of an average industry workforce). The right panel shows the coefficient for the interaction term, *NAFTA Import Threat x PO Coverage*, which indicates how the effect of the import threat changes as PO Coverage increases by one standard deviation. This interaction estimate should demonstrate the moderating effects of tariff phaseouts. Each line on the y-axis is a separate model to visualize the changes in vote share across elections. Red lines indicate a statistical significant effect at the 95% confidence level.

[Figure 2.7 about here]

Figure 2.7: Changes in Democratic Two-Party Vote Share in Percentage Points



Note: See Table B2 for the regression table. See Figure B14 for the coefficient plot for all covariates. Created by Author 8/25/25.

NAFTA Import Threat, when conditional on the *NAFTA Average Phaseout Coverage* being held at 0, or at the mean, is negative and statistically significant for the 1996, 2000, and 2016 elections. This means that counties sensitive to imports, but with about 0.04% of the average industry workforce covered by the tariff phaseout, punished Democrats in

elections immediately after NAFTA's implementation. Substantively, Bill Clinton and Al Gore lost about 0.75 percentage points, on average, respectively, compared to the previous election for every standard deviation increase in *NAFTA Import Threat*. In counties that experienced three-standard-deviation above the mean in import threat — i.e., the maximum — with the average phaseout coverage, Bill Clinton is predicted to have lost at most 2.25 percentage points. In 2016, Hillary Clinton lost about 0.5 percentage points, on average, compared to the vote share Barack Obama garnered in 2012 for every standard deviation increase in *NAFTA Import Threat*.

The result of the 2016 election suggests a revival of NAFTA as a salient issue in the consciousness of voters in areas most impacted but not well insulated by tariff phaseouts. Prior to 2016, the anti-Democratic party effect of *NAFTA Import Threat* was *not* significant since 2004, which suggests a declining salience of NAFTA and its ties to the Democratic party. However, because Donald Trump ran on an anti-trade populist platform,[22] the increased salience of NAFTA brought forth anti-Democratic party sentiment to the fore, suggesting that the party identity of the president who took ownership of a trade policy is extremely *sticky* in the consciousness of those hurt by it. As such, the latent attitude of trade-affected voters matters heavily, as all it needed was a catalyst to activate.

This first set of results contributes two new insights. First, given that the 2000 and 2016 elections were close races, these are substantively *large* estimates of NAFTA import-sensitivity on Democratic vote shares. This highlights the unfortunate, long-term, and persistent electoral consequences of taking ownership of a significant trade agreement, especially when it is seen as a betrayal of the party base. Second, while the heuristic function of party identity may benefit candidates among low-information voters, I identify one of the few contexts in which it can backfire.

Import-sensitive counties with higher phaseout coverage did not punish Democratic candidates later on, falsifying the third hypothesis. Rather, we see a positive interaction effect for 1996, suggesting that tariff phaseouts can have an immediate positive effect on incumbent vote share. To better visualize the conditional effects, Figure 2.8 plots the marginal effect of phaseout coverage on the changes in democratic vote share, conditional on NAFTA import threat. A positive marginal effect indicates that a county with greater phaseout coverage increased its support for the Democratic presidential candidate compared to the last election. We see the strongest interaction effect for the 1996 election immediately after NAFTA's entry into force. For counties expected to face at least 2.5 standard deviations above the mean in import exposure, having more workers insulated

[22]The anti-Democratic candidate effect is also present for *Chinese Import Exposure* in 2016, echoing findings from Autor et al. (2020); Flaherty (2025*b*). See Figure B14.

by tariff phaseouts is associated with a larger vote share for Bill Clinton in 1996 than in 1992.

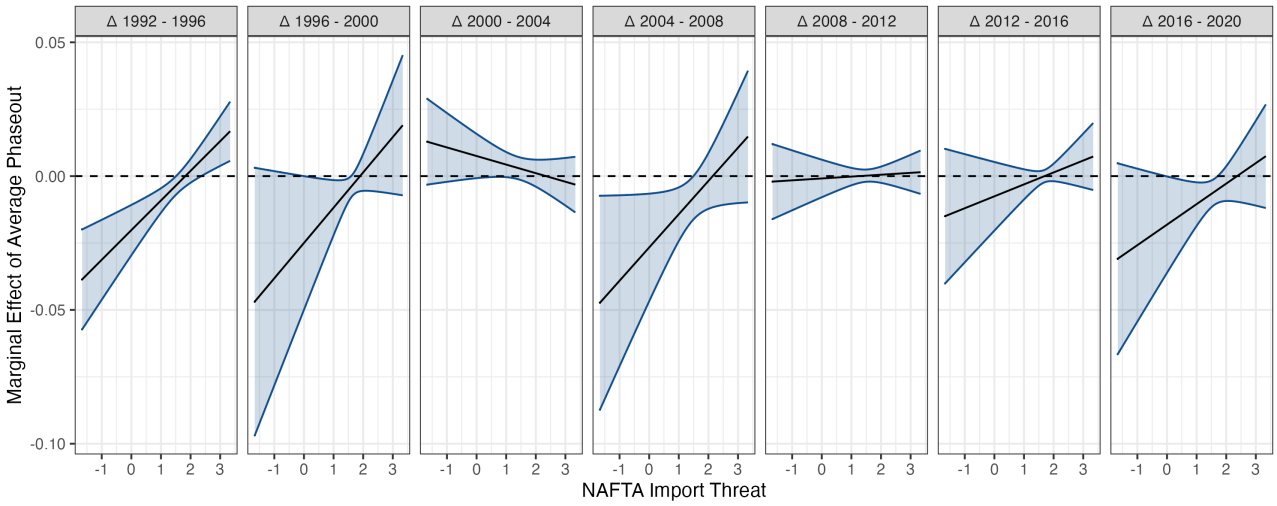
This result supports the second hypothesis, which predicts import sensitive area with more tariff phaseouts would not immediately punish the incumbent responsible for the trade agreement; moreover, the evidence suggests that the incumbent who pushed NAFTA through is rewarded for insulating the county with more tariff phaseouts, even though Bill Clinton did not negotiate the design of the tariff schedule. This result suggests that rather than responding to whoever took political responsibility for NAFTA, voters reward the incumbent when the employment consequences are not immediately felt in highly sensitive areas. This result goes beyond the narrative that Democratic presidential candidates are punished by NAFTA, as suggested by Choi et al. (2024), or that incumbents are always punished by import-sensitive areas (Margalit 2011; Rickard 2022; Jensen, Quinn, and Weymouth 2017). Rather, what I demonstrate here is that depending on the institutional design meant to slow the import shock, as we can see with the five, ten, and 15-year phaseouts in the Employment analysis (Figure **??**2.52.5cumbent directly responsible for trade liberalization can be insulated from electoral punishment in areas expected to face the highest levels in import exposure.

However, the electoral punishment for areas facing moderate levels in import exposure is puzzling. Counties with one standard deviation increase in tariff phaseout coverage for their industries *punishes* the incumbent presidential candidate if their district is at most 1.5 standard deviations above the mean for import threat. This relationship is present for the 1996 and 2008 elections. The results point to tariff phaseouts backfiring on the incumbent and the Democratic party when the underlying threat to county employment is moderate at most. This backfire effect may be explained by the consternation effect introduced in Kim and Gulotty (2024). That is, receiving tariff phaseouts, or TAA benefits, in Kim and Gulotty (2024)'s context, may exaggerate the potential loss in local employment, leading to a negative electoral effect even though one might otherwise predict a positive effect. The marginal effect of the tariff phaseout is otherwise not significant in any of the other elections.

[Figure 2.8 about here]

This section provides evidence to support the second hypothesis, falsify the third hypothesis, and contribute new insights into the extent to which international trade affects elections and the persistence of this effect. In short, the incumbent party that took ownership of NAFTA was penalized in import-sensitive areas with relatively minimal phase-out coverage; however, import-sensitive counties with greater phaseout coverage rewarded

Figure 2.8: Marginal Effect of NAFTA Phaseout Coverage on Democratic Vote Share, Conditional on Import Threat



Note: See Table B2 for the regression table. Created by Author 8/25/25.

the incumbent for the seeming targeted insulation from import competition. Furthermore, I demonstrate not only how tariff phaseouts can minimize the electoral backlash, but also how sticky the association between NAFTA and the Democratic Party is in the minds of voters who were negatively affected by NAFTA. This opens up new avenues of research, such as how party linkage to foreign policy can be made salient far beyond the immediate aftermath.

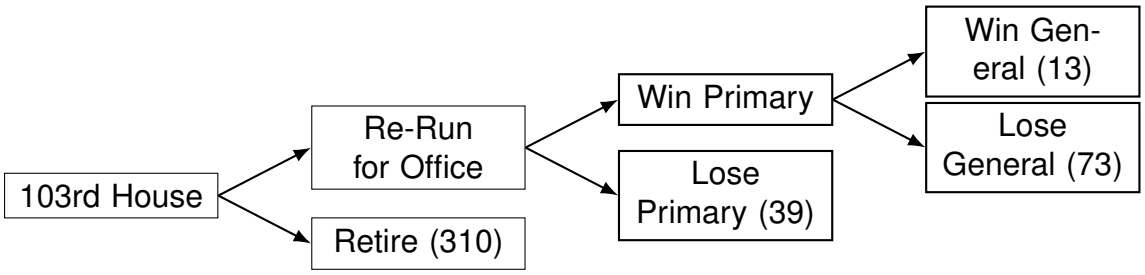
2.7 Congressional Elections

This section examines the risk of Representatives exiting office after voting on NAFTA. Legislators can leave office through several means. First, they can retire or decide not to run for reelection, which comprises the vast majority of incumbents from the 103rd Congress. Second, they may exit office by being voted out in the primary or general election. Figure 2.9 summarizes the political destinations of 103rd incumbents in the House.

Since the objective here is to examine the risk of leaving office, the outcome variable is characterized as the spell of time until the incumbent either retires or is voted out of office, measured in election periods. I employ an event history analysis,[23] using the Cox proportional hazard model, to examine the relationship between risk or hazard of retiring or being voted out and various covariates.

[23] Also known as duration or survival analysis.

Figure 2.9: Political Fate of 103rd House Incumbents



Note: This flow chart summarizes the various ways in which 103rd House Representatives leave office across the following 15 subsequent elections (up until 2022 for general and 2018 for primary). Not all incumbents retire after 103rd Congress. See Figure B15 on instances and how the incumbents left office. Created by Author 8/26/25.

I code the spell of elections until *retirement* by identifying the first election in which an incumbent legislator is not running for office. Similarly, spell until being voted out of office is coded by the first election since 1993 in which the incumbent re-ran for office and lost either in the primary or general election. I combine all three codes into a general "exited" variable that codes when the incumbent exits the office, regardless of the means. Data on primary election results is from Pettigrew, Owen, and Wanless (2020) and Miller and Camberg (2021). Data on general election results is from MIT Election Data and Science Lab (2017*a*).

I employ five covariates to explain variation in survival duration. First, I use the VoteView database to identify who voted to ratify NAFTA, as well as their party (Lewis et al. 2023). Second, I use legislator data from the Center for Effective Lawmaking (Volden and Wiseman 2014) to measure House member seniority as the number of terms served. Next, I control for *NAFTA Average Phaseout* and *NAFTA Import Threat* as described above. However, I aggregate these two measures to the district level using the Missouri Census Data Center's county-district crosswalk files to map employment from the county to the district level.

2.7.1 The Political Fate of 103rd House Representatives

Table 2.1 presents a series of models with different modes in which Representatives may exit political office. Models 1 - 3 present the risk of simply exiting office; models 4 - 7 focus on retirement; models 8 - 10 and 11 - 13 examine the risks of being voted out in the primary and general election, respectively. All coefficients are hazard ratios with robust standard errors in parentheses, in which a higher ratio corresponds to shorter durations until the event.

The control variables provide unique insights for each exit type, thereby validating the models. For example, seniority is associated with a higher risk of retiring (Model 4) but a lower risk of losing the general election (Model 11). Legislators representing districts with a higher level of import exposure from NAFTA are consistently more at risk of exiting (Model 1), retiring (Model 5), and losing the primary (Model 8) and general elections (Model 11). Representatives of districts that received higher phaseout coverage from NAFTA consistently correlate with a lower risk of exiting office across all types.

Table 2.1: Cox Proportional Hazards Models of 103rd House Incumbent Survival [a] [b] [c]

	(1) Exited	(2) Exited	(3) Exited	(4) Retired	(5) Retired	(6) Retired	(7) Retired	(8) VO (PRI)	(9) VO (PRI)	(10) VO (PRI)	(11) VO (GEN)	(12) VO (GEN)	(13) VO (GEN)
NAFTA: YES	1.528***	1.147	1.045	1.813***	1.709**	1.545*	1.448+	0.967	1.691	1.262	0.976	0.369*	0.273*
	(0.167)	(0.211)	(0.195)	(0.232)	(0.347)	(0.335)	(0.316)	(0.350)	(1.114)	(0.890)	(0.255)	(0.168)	(0.140)
Democrat	1.303*	0.992	0.948	1.251+	1.243	1.066	1.021	1.058	1.778	1.661	1.405	0.674	0.610
	(0.152)	(0.181)	(0.173)	(0.167)	(0.167)	(0.235)	(0.225)	(0.401)	(1.149)	(1.089)	(0.419)	(0.256)	(0.234)
NAFTA Phaseout Coverage	0.893+	0.866*	0.696*	0.859+	0.858+	0.845+	0.678+	0.721	0.768	0.679	0.943	0.865	0.606
	(0.063)	(0.063)	(0.117)	(0.073)	(0.073)	(0.074)	(0.138)	(0.186)	(0.199)	(0.401)	(0.141)	(0.137)	(0.216)
NAFTA Import Threat	1.138+	1.178*	1.215**	1.139+	1.140+	1.160+	1.175*	1.466+	1.367	1.603+	1.306+	1.452*	1.584**
	(0.079)	(0.085)	(0.091)	(0.093)	(0.093)	(0.098)	(0.104)	(0.340)	(0.324)	(0.406)	(0.216)	(0.251)	(0.286)
Seniority	1.022	1.021	1.021	1.068***	1.061**	1.067***	1.067***	0.981	0.985	0.982	0.921+	0.919+	0.917+
	(0.015)	(0.015)	(0.015)	(0.018)	(0.025)	(0.018)	(0.018)	(0.052)	(0.053)	(0.053)	(0.036)	(0.035)	(0.036)
Legislative Effectiveness Score	0.984	0.988	0.985	0.915+	0.919	0.918+	0.915+	0.921	0.910	0.911	1.263***	1.263***	1.270***
	(0.039)	(0.039)	(0.039)	(0.043)	(0.045)	(0.044)	(0.044)	(0.154)	(0.155)	(0.153)	(0.085)	(0.083)	(0.085)
YES x Seniority					1.011								
					(0.029)								
YES x Democrats		1.536*	1.714**			1.272	1.382		0.399	0.555		3.934*	5.491**
		(0.352)	(0.400)			(0.343)	(0.375)		(0.336)	(0.492)		(2.144)	(3.311)
YES x Phaseout			0.900				1.028			0.384			0.491
			(0.194)				(0.251)			(0.315)			(0.348)
Phaseout x Democrats			1.273				1.253			1.233			1.513
			(0.226)				(0.274)			(0.744)			(0.554)
YES x Phaseout x Democrats			1.216				1.116			2.493			1.943
			(0.292)				(0.309)			(2.264)			(1.428)
Num.Obs.	433	433	433	433	433	433	433	433	433	433	433	433	433
AIC	4343.9	4342.5	4338.9	3146.8	3148.7	3148.0	3148.7	405.1	405.8	407.6	784.3	780.2	781.0
BIC	4368.3	4371.0	4379.6	3171.2	3177.2	3176.5	3189.4	429.6	434.3	448.3	808.7	808.7	821.7
RMSE	1.00	1.00	0.99	0.84	0.84	0.85	0.84	0.29	0.29	0.29	0.40	0.40	0.40

[a] Hazard Ratios are displayed. Robust standard errors in parentheses.

[b] *Signif. Codes: ***: $p < 0.001$, **: $p < 0.01$, *: $p < 0.05$, +: $p < 0.1$*

[c] "VO" = "Voted Out." "PRI" refers to 103rd Congress House incumbent being voted out during in subsequent primary elections, while "GEN" refers to being voted out in subsequent general election.

First, I examine whether legislators' risk of exiting office is correlated with their support for NAFTA. Representatives who voted to ratify NAFTA have a 52.8% higher risk of exiting political office; that is, they have a shorter duration until exit than those who opposed NAFTA. Model 2 examines whether the partisan identity of the representative accounts for the variation in exit risk. I find that Democrats who supported NAFTA had an 53.6% increased risk of exiting office, while Republicans who supported NAFTA are not at a higher risk of exit. This relationship becomes a bit stronger when tariff phaseouts are interacted with the partisan identity of the representative who voted in favor of NAFTA ratification. Now, holding the tariff phaseout coverage at the average, which is 0.02% of the average industry employee, Pro-NAFTA Democratic representatives have a 71.4% higher risk of exiting office. When we decompose the "exit office" outcome into its constituent parts (retirement, losing the primary or general elections), we can identify that

the conditional effect on political exit is accounted entirely by pro-NAFTA Democratic Representatives losing the general election rather than losing the primary or retiring (See Models 6, 7, 9, 10, 12, and 13).

Voting to ratify NAFTA is highly correlated with a greater risk of retirement, about 81.3% higher. This relationship may be endogenous, in that representatives who plan to retire may face weaker protectionist constraints; that is, if they were to suffer electoral consequences for supporting NAFTA, it would not have mattered much given their impending retirement. Alternatively, these legislators may have become so unpopular among their constituents due to their position on NAFTA that they decide not to run for reelection.

To distinguish between the two mechanisms, I interact representatives' support for NAFTA with their seniority in Model 5. Seniority, on its own, is correlated with a higher risk of retirement, whereas it is insignificant in all other models. The interaction term is not significant, meaning that more senior representatives who voted "yes" are not at a higher risk of retiring. Rather, the evidence points toward *junior* representatives who voted to ratify NAFTA are more at risk of "retiring." This provides strong evidence for the speculation that junior representatives became quite unpopular among their constituents, making it infeasible to run for reelection. The largely null results for NAFTA support and the hazard of being voted out in the primary election in Models 8-10 support the conclusion that the incumbent *selects* to run for reelection if there is sufficient support in the primary race. I ran the double and triple interactions with retirement outcomes (Models 6 and 7), and the result does not replicate Model 3, suggesting that Democrats who support NAFTA are not at higher risk of retiring. However, the results do indicate that Republicans who voted in favor of NAFTA ratification are more likely to retire. On the other hand, Republican representatives who decide to run for re-election are less likely to lose the general election (Model 12 and 13). This implies that Republicans self-select into running again only if they have a reasonable chance, and that those who supported NAFTA are significantly more popular among their constituencies than those who opposed it, helping them win re-election rather than retire.

Models 12 demonstrate that Democratic representatives who voted to ratify NAFTA are at 293.4% higher risk of losing the general election. Combine with the results in the previous paragraph, these results support the conventional view that Democrats are generally more protectionist than Republicans; hence, representatives who deviated from the anti-trade position by voting to support free trade are punished by their constituents. This result might be surprising given that pro-NAFTA Democratic Representatives passed through the retirement and primary election filters before competing in the general elec-

tion. Once through to the general, Democratic Representatives experienced increased scrutiny for their NAFTA stance, and were punished then, rather than during the primary. This may hint at the incumbent's advantage during the primary but not during the general election.

Does having higher phaseout coverage help insulate Democratic representatives who supported NAFTA from electoral consequences? The short answer is no. The lack of statistical significance in the triple interaction term in Model 13 suggests that the electoral punishment for pro-NAFTA Democrats is not moderated the more tariff phaseouts their district received. While Democrats who voted to ratify NAFTA with minimal average industry phaseout coverage (standardized to be at the mean) are now 449.1% more likely to be voted out of office, those who ratified NAFTA with higher phaseout coverage experience no difference in such risks.

All in all, these results partially support the fourth hypothesis (H4). While pro-NAFTA Democratic representatives were more at risk to exit office by losing the general election, tariff phaseouts play no role in mitigating their risk. This suggests that tariff phaseouts are not effective at insulating incumbent legislators who vote on consequential trade agreements. These results present one of the first pieces of evidence of the electoral fate of legislators contingent on their vote on a consequential trade agreement, NAFTA. Most scholarship on congressional voting examines roll-call votes as outcomes, but rarely the political consequences of such choices. I demonstrate here that there is a clear partisan divide over who is rewarded and punished by their constituents for supporting NAFTA ratification.

2.8 Concluding Remarks

This paper provides one of the first systematic empirical studies of the effect of tariff phaseouts on delaying employment decline. As a result of such a delay in the economic consequences of free trade, I find that the electoral consequences are similarly delayed and sometimes mitigated entirely for incumbents. The evidence contributes a substantial new insight into the trade and election literature (Jensen, Quinn, and Weymouth 2017; Margalit 2011; Baccini and Weymouth 2021), which has ignored how trade agreements are specifically designed to mitigate and soften employment losses (Thai 2026).

My findings have broader implications for the politics of trade. In testing my hypotheses, I find that counties most impacted by NAFTA correctly attribute the blame to Democrats in the short and long run; surprisingly, I also find that party ownership over

NAFTA is extremely sticky in the consciousness of those hurt by it. While party identification and party ownership of issues have been shown to help parties among low-information voters (Campbell et al. 1976; Wright 2012), this paper shows that taking ownership of a major trade agreement as a Democrat can backfire. [24] This party-based punishment is due to the betrayal of values by a traditionally anti-trade, pro-worker party. As such, the Congressional analysis reveals that Democratic representatives who supported NAFTA were punished at the polls.

A policy implication from this study is that tariff phaseouts can be used strategically to insulate oneself (but not legislative copartisans) from immediate electoral consequences. Specifically, presidential incumbents were rewarded in high import sensitive counties when they receive greater tariff phaseout coverage; however, Democratic representatives saw no real significant difference in their baseline risk for losing the general election due to their support for NAFTA. While presidents may insulate themselves from immediate electoral consequences, the long term consequences befall subsequent copartisan presidential candidates long after the implementation of the agreement.

[24] Similarly, allocating tariff phaseouts in moderately import-sensitive counties can backfire as well due to the consternation effect Kim and Gulotty (2024).

Chapter 3

Prospective Threats: How US Trade Policymakers Design and Vote on Trade Agreements

Abstract

To what extent do policymakers account for anticipated threats of import competition when designing and ratifying preferential trade agreements (PTAs)? Existing literature fails to account for bespoke policy design, largely assuming that traditionally protected industries would continue to receive protection; however, PTA trade partners pose different threats based on their specific comparative advantage. I argue that policymakers are prospective in designing and voting on trade agreements to account for the anticipated import competition from specific trade partners. I introduce a novel partner- and product-specific Import Threat measure that accounts for both the expected increase in import demand and the partner's pre-existing export capabilities. I find that partner's expected import threat outperforms traditional *Import Penetration* and *Revealed Comparative Advantage* measurements of import sensitivity in explaining allocation of adjustment time and protection. Furthermore, legislators are less likely to vote in favor of ratification and defect from pro-trade party-line voting when the trade partner poses a threat to their industries.

Key Words: tariff phaseouts, US trade agreements, ratification, treaty design, congress

3.1 Introduction

The proliferation of bilateral and regional preferential trade agreements (PTAs) since the end of the WTO Uruguay Round has allowed states to continue to liberalize trade beyond the gridlocked multilateral trading regime. While the WTO core principle is non-discrimination (Bagwell and Staiger 1999), which PTAs surely violate, GATT Article XXIV allows for such free trade areas, as long as they eliminate substantially all trade barriers among member states.[1] A major debate over the past decade, with the surge in protectionist sentiment among US voters and politicians, has been whether trade policymakers paid attention to sensitive industries. At first glance, the entry of 13 FTAs, ratified with largely bipartisan support, seems to suggest that policymakers are openly biased in favor of big, multinational corporations that benefit from trade liberalization (Baccini 2019; Blanga-Gubbay, Conconi, and Parenti 2023). Yet, this contradicts empirical research that suggests incumbent legislators are responsive to their import-shocked district, voting against further liberalization (Feigenbaum and Hall 2015). Given that each partner state poses specific threats based on its production profile, to what extent do policymakers take into account the anticipated import competition each trade partner poses when designing and ratifying PTAs?

Existing research widely acknowledges the influence of import-competing sectors on trade policies (Rosendorff and Milner 2001; Baccini, Dür, and Elsig 2018; Van Lieshout 2021*a*; Grossman and Helpman 1994; Deardorff and Sharma 2021; Broz and Werfel 2014*a*) and on legislators' ratification choices in major trade agreements (Baldwin and Magee 2000; Im and Sung 2011). It is also widely assumed that there is a constant set of industries that are at a competitive disadvantage in the global economy and thus require protection to survive. However, while such an assumption is true under the context of multilateral trade liberalization, where most-favored-nation rates are applied on all imports,[2] preferential trade agreements are often between a country and a few trade partners. Given that each trade partner pose specific threat given their unique comparative advantage, it would make little sense for the set of import-sensitive industries to constantly receive protection when doing so is costly, as the trade partner is empowered to reciprocate with their own set of protection, harming exporters. Protection in the bilateral and plurilateral context of trade agreements should be bespoke, or specifically allocated to minimize import shock.

[1] Despite this rule, a substantial number of PTAs are not entirely "free" trade agreements. Many are limited scope agreements that liberalize specific industries (Dür, Baccini, and Elsig 2014). Trade negotiators have suggested that these limited-scope agreements are still compliant with the WTO rules as long as they are "phase 1" of future trade liberalization efforts.

[2] Leading to a "common" shock from the influx of goods from the world economy.

I argue that trade policymakers design and ratify trade agreements *prospectively*. That is, they take into account the potential import shock caused by ratifying a free trade agreement with specific trade partners. I argue that protectionist interests aggregate through a formal consultation mechanism established by the Fast Track Authority, which allows trade negotiators to identify a known list of products to protect. However, due to the constraint imposed by reciprocity, where protection begets protection, trade negotiators are forced to be selective in allocating protection and adjustment time to products that the trade partner is expected to be the biggest threat. In other words, I develop a supply-and-demand argument about how interests are aggregated and filtered by the executive branch to explain FTA design. Additionally, I argue that legislators are responsive to constituent interests, voting against trade agreement ratification when the partner is expected to pose the greatest threat to constituent industries.

To test my argument of prospective design and voting behaviors of the executive and legislature, I develop a novel measure designed to capture the potential threat posed by liberalizing trade with a specific trade partner. Tariffs may change, and demand may shift significantly, but an industry would not be threatened if the partner is unable to meet the increased demand for imports. Therefore, I operationalize *Import Threat* as the ability of the trade partner to meet increased import demand once tariffs are eliminated.

I compare the strength of *Import Threat* with the traditional *Import Penetration* and more recent *Revealed Comparative Advantage (RCA)* measurements of capturing import sensitivity. Across product-level and district-level analyses, I find that *Import Threat* is consistently significant and stronger in explaining variation in protection, adjustment time, and ratification votes. Some legislators even go so far as to rebel against their pro-trade party if their constituency is expected to be negatively affected. Overall, negotiators and legislators behave prospectively, designing tariff schedules to account for potential import exposure faced by industries and voting in ways that minimize their political exposure to import shocks from the trade partner.

This paper makes two distinct contributions to the political economy of international trade. First, I theorize and systematically demonstrate that trade policymakers behave *prospectively* — designing and voting on trade agreements based on the specific threat the trade partner *would* pose if trade were to liberalize.[3] Rather than providing costly protection to industries that are constant losers to the world economy, I show that trade negotiators grant protection based on trade partners' specific threats. In designing tariff schedules, scholars typically argue that industry lobbying and PAC donations correlate

[3]Van Lieshout (2021*a*); Stiller (2023); Murillo and Pinto (2022) are among the few exceptions that explicitly theorize and measure partner-specific threats.

with higher tariffs or non-tariff barriers, per the Protection for Sale framework (Grossman and Helpman 1994; Gawande and Bandyopadhyay 2000; Mitra, Thomakos, and Ulubasoglu 2002; McCalman 2004). Such findings tend to be relegated to MFN rate-setting in multilateral trade negotiations; little to no work from the Protection for Sale framework has been applied to the PTA context, perhaps due to the partner-specificity.

On legislative voting, scholars tend to emphasize that legislators *retrospectively* form preferences and behave in roll call votes based off of their constituents' exposure to prior trade shocks (Campello and Urdinez 2021; Feigenbaum and Hall 2015), and other generalized constituent interests, such as generalized offshoreability (Owen 2017), generalized industry competitiveness (Dür, Huber, and Stiller 2024), corporate and labor PAC donation (Owen 2017; Choi 2015; Im and Sung 2011; Magee 2010; Baldwin and Magee 2000), union density (Choi 2015; Im and Sung 2011; Magee 2010; Baldwin and Magee 2000), sectoral differences (Owen 2017; Choi 2015; Conconi, Facchini, and Zanardi 2012; Magee 2010; Baldwin and Magee 2000; Dür, Huber, and Stiller 2024), and general trade sensitive sectors (Im and Sung 2011). Others have found that legislator-specific characteristics correlate with trade votes, such as party membership (Conconi, Facchini, and Zanardi 2012; Im and Sung 2011; Baldwin and Magee 2000) and trade-related committee membership (Magee 2010; Baldwin and Magee 2000). This paper presents one of the few empirical pieces of evidence that legislators *prospectively* form preferences and behave in roll-call votes that are consistent with the anticipated effect that trade liberalization would have on their district (Stiller 2023; Murillo and Pinto 2022).

Second, I introduce a novel partner- and product-specific measurement of import threat. This measurement takes into account changes in import demand, based on the import demand elasticity and changes in rates, as well as the partner's pre-existing capabilities for exporting the product. This measure outperforms traditional import penetration and RCA measures of import sensitivities in explaining variation in protection and roll-call voting behavior (Rodrik 1995; Trefler 1993; Broz and Werfel 2014*b*; Choi et al. 2024; Van Lieshout 2021*a*). Furthermore, this measurement is more appropriate when trade liberalization in the 21st century is primarily achieved through bilateral and plurilateral trade agreements rather than through multilateral MFN reductions. As such, while the findings are specific to the US, they may be replicated in other contexts.

3.2 The Political Economy of Trade Policy

Scholars have long sought to explain trade policy outcomes. The first strand of the literature is rooted in the Protection for Sale framework (Grossman and Helpman 1994),

which posits that organized industries translate economic resources into political influence through campaign contributions. The resulting tariff schedule reflects this bargaining between the government and interest groups. There is broad empirical support for this model across a range of trade barrier instruments and countries (Gawande and Bandyopadhyay 2000; Mitra, Thomakos, and Ulubasoglu 2002; McCalman 2004). The main insight from this literature is that protection is endogenous. Prior protection enables future protection through the accumulation of rent and political clout; therefore, protection is historically path-dependent. However, recent literature on lobbying and trade policy arrives at a different conclusion. Exporters are generally empowered by reciprocity and delegation (Gilligan 1997; Bailey, Goldstein, and Weingast 1997), and a large majority of US free trade agreement lobbying is carried out by pro-trade exporting firms (Blanga-Gubbay, Conconi, and Parenti 2023).

The second strand emphasizes political geography, demonstrating that the spatial distribution of industries and voters across districts and states systematically determines whose preferences are amplified in the trade policymaking process (Chase 2015; Rickard 2012; Fredriksson, Matschke, and Minier 2011; Busch and Reinhardt 2005, 2000, 1999; Rogowski and Kayser 2002; Lowande, Jenkins, and Clarke 2018; Ma and McLaren 2018; Bown et al. 2024; Kriner and Reeves 2015*a*). The swing-state hypothesis has gained traction in recent years, emphasizing the geographic concentration of specific protection rather than interest group lobbying (Lowande, Jenkins, and Clarke 2018; Bown et al. 2024; Kriner and Reeves 2015*a*).

The last strand focuses on legislator characteristics, finding that the personal attributes, electoral incentives, and partisan affiliations of individual lawmakers shape the protection extended to constituent industries (McGillivray 2004; Hansen and Prusa 1997; Hansen 1990; Dür, Huber, and Stiller 2024; Choi et al. 2023; Amodio et al. 2022; Lee and Osgood 2019; Baldwin and Magee 2000; Thai 2025*a*). Thai (2025*a*) argue that legislators' ratification leverage, driven by their pivotal positioning in the chamber, influences how trade negotiators allocate adjustment time in the US free trade agreements to industries. The resulting trade agreements yield oversized concessions given to industries represented by pivotal legislators, which correlates with an increased likelihood of voting for ratification.

Running beneath all three strands is a common premise: protection is endogenous to the political process. How interests are formed, how preferences aggregate, and how much influence any given group commands are all functions of the political institutions that empower or suppress that group's access to policymakers. Trade policy is predictable if one understands relevant actors' preferences, which can be derived from economic theories (Lake 2009). Generally, actors' positions in the world economy, such as factor

endowments, industry exposure, and relative competitiveness, inform their trade preferences. They then shape the structure of institutions that aggregate such interests, either through pressuring policymakers directly or influencing rules and regulations on money in politics. Given all of this, however, I argue that literature largely failed to account for how trade policymakers prospectively design trade agreements and cast their votes in anticipation of the import shock generated by a specific trade partner.

In other words, the element of the trade partner has largely been ignored by the literature. This omission is not accidental; it is, in large part, an artifact of the empirical context in which most of the foundational work was conducted. The bulk of the empirical literature on trade policy was developed against the backdrop of multilateral, most-favored-nation (MFN) tariff reduction under successive GATT rounds. In that context, partner specificity is irrelevant by design: a tariff reduction applies to all imports from all trading partners simultaneously. Industries that are uncompetitive relative to the world economy as a whole bear the adjustment burden, and the political coalitions arrayed for and against liberalization reflect this aggregate exposure. There is no analytical need to ask which partner is generating the threat, because the answer is, in effect, all of them equally.

This context changed fundamentally after the Uruguay Round. In the decades since, the architecture of global trade liberalization has shifted decisively toward bilateral and plurilateral free trade agreements, each creating a partner-specific free trade area (Dür, Baccini, and Elsig 2014). The GATT Article XXIV requires that preferential arrangements eliminate substantially all trade barriers within a reasonable period, effectively forcing states to create free trade areas.[4] Given that each trade partner possesses a distinct comparative advantage in producing specific goods, each presents qualitatively different import threats to domestic industries. Sectors that face competitive pressure from South Korea look quite different from those threatened by Peru or Morocco. Trade liberalization is no longer a single, undifferentiated shock to the economy; it is a series of targeted, partner-specific shocks, each with its own distributional consequences.

3.3 Prospective Trade Policymaking

To understand contemporary trade policy, existing insights from the literature are insufficient to capture the full variation driven, in part, by the specific threat the trade partner poses to domestic industries. Figure 3.1 illustrates how US trade policy design varies

[4]Despite this institutional rule, countries still conclude limited scope agreements.

across trade partners. The Figure displays the treatment of individual tariff lines across trade partners and agreements. Dark blue represents tariff lines that are already duty-free prior to the agreement, while green indicates an immediate tariff elimination. Beyond this, yellow indicates tariff lines to be phased out over time, while red indicates liberalization exclusions (i.e., pure protection). Tariff phaseouts are adjustment periods given to industries. They are often linearly reduced across a set number of years, which provides domestic industries with time to adjust (Thai 2025*a*,*b*). On the other hand, exclusions from liberalization are quite rare — only about 0.05% of tariff lines are excluded. As clearly visible, tariff phaseouts are differentially allocated to different products across trade agreements and across trade partners within the same agreement (See TPP (DESTA 899)). Textile and apparel sector (HS Chapter 50 - 64) tends to have the majority of goods phased out, but there are some agreements that do not phase out those products, such as CAFTA-DR, US-Singapore, US-Chile, US-Colombia, US-Peru, and US-Panama. This showcases that trade policy does not simply respond to industry groups' political clout, which textile and apparel sector seemingly has plenty. But rather, it is also a function of the import threat presented by the partner.

[Figure 3.1 about here]

The partner-specific treatment with adjustment time indicates an underlying mechanism that constrains the concessions trade negotiators can extract. Reciprocity — the principle that concessions must be balanced between parties — functions as a budget constraint on negotiators. Meaning that for any exclusion or tariff phase-out implemented to protect domestic industries, equal concessions are given to the trade partner, negatively affecting US exporters' market access. Because the volume of concessions that can be extracted from any given partner is limited, it becomes strategically inefficient to extend protection to the same industries across every agreement, particularly when the relevant partner does not even produce the goods in question. Take the textile and apparel sector as an example. If one were to take the conventional wisdom and predict that the sensitive industry would receive protection across all US trade agreements, they would predict only about 50% of the variance. Negotiators need to balance the interests of the import competing and exporting sectors; extracting concessions to protect the textile and apparel sector against a partner that does not present a threat would waste precious concessions, unnecessarily accumulating costs on exporters who cannot access the partner's market as quickly or at all.

How do trade negotiators know the specific threat presented by trade partners? The simple answer is through private sector consultation. As required by the Fast Track Authority (codified in the Trade Act of 1974) or the Trade Promotion Authority (Trade Act

Figure 3.1: Distribution of Tariff Phaseout Duration from USA FTAs Across 8-digit Product Codes

Note: Each line represents one product code, and product codes that were already duty-free or treated with immediate elimination or exemption are grouped as "Other" to improve visibility. Each line on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to the USITC on the title of HS chapters. Original data collected by the author with the procedure introduced in Van Lieshout (2021*b*). Created by Author 5/27/24.

of 2002), the executive branch negotiating trade deals must consult with relevant stakeholders. The Trade Act of 1974 set up a three-tiered system of private-sector consultation, which advises trade negotiators on specific issues, such as labor, environment, and agriculture, among others (Bowen and Broz 2022). The Office of the US Trade Representative also seeks public comments from industry representatives and stakeholders through the Federal Register. Before the commencement of trade negotiations, USTR would solicit views from private actors through Register notices and hearings, which serve as forums for interest groups that expect to be negatively affected by liberalizing trade with a specific partner to lobby for protection or a reprieve from anticipated import competition.

Knowing which industry is most at risk for each trade partner, negotiators design the

tariff schedule *prospectively*, targeting adjustment time and protection to tariff lines that would experience the greatest import shock if left alone. Doing so helps build domestic coalitions for treaty ratification by minimizing potential domestic objections (Grossman and Helpman 1995; Van Lieshout 2021*a*). For example, five years of adjustment time for automotive products was enough for the UAW to endorse the KORUS agreement in 2011. As a result, the use and duration of tariff phaseout — as well as protection — should correlate with the degree of import threat a partner poses to a specific product.

> **Hypothesis 1 (H1):** *Allocation:* The greater the potential import shock a trade partner presents for a product, the more likely the product is to receive protection and adjustment time.

The same prospective logic extends to the legislative arena. Legislators vote on trade agreements with their constituents' economic interests and futures in mind because they can be held accountable (McKeown 1989; Conybeare 1991; Stiller 2023; Murillo and Pinto 2022; Owen 2017; Malcolm 2017; Feigenbaum and Hall 2015; Campello and Urdinez 2021; Choi 2015). Specifically, legislators are wary of the employment consequences that is attributable to their support of a trade agreement. Voters have been shown to attribute the negative consequences of trade to incumbent (Margalit 2011; Kim and Gulotty 2024; Rickard 2022), although there is suggestive evidence that voters can either be ill-informed or unable to attribute blame correctly (Guisinger 2009; Campello and Zucco Jr 2016). However, Thai (2025*b*) demonstrates that US Democratic voters in import-sensitive regions correctly attribute blame to incumbents who betrayed the Democratic party's stance on trade, such as Bill Clinton's push for NAFTA's ratification and Democratic representatives who voted to ratify NAFTA.

Furthermore, workers in import-competing industries are politically salient. Layoffs and offshoring have demonstrably strong political effects (Baccini and Weymouth 2021; Jensen, Quinn, and Weymouth 2017; Rickard 2022; Autor et al. 2020) not just among affected voters but among the local economy as a whole because of the rise in unemployment having spillover effects to other local sectors (Autor, Dorn, and Hanson 2013). Layoffs are visible and attributable to specific trade policy. While there is no existing research on voter awareness of the destination to which their jobs were offshored, one may reasonably assume that unions would be the source of such information (Kim and Margalit 2017; Ahlquist, Clayton, and Levi 2014). Additionally, TAA applications sometimes require information on where workers' jobs were offshored to, especially when the TAA Extension Act expires in which workers can only qualify for TAA if they lost job to an

FTA partner.[5] Furthermore, losers from trade often mobilize better because of the concentrated loss in income relative to the diffused benefits among consumers (Alt and Gilligan 1994).[6] Therefore, Legislators whose districts have a high concentration of employment in import-sensitive industries will be more likely to oppose the trade agreement, regardless of their ideological or partisan disposition toward free trade or the kind of concessions negotiated by USTR to cushion the pain. Leading to the second hypothesis:

> **Hypothesis 2 (H2):** *Ratification:* The greater the potential import shock a trade partner presents for constituent industries of a district, the more likely the representative would vote against ratifying the trade agreement.

Crucially, this logic also explains patterns of defection from party-line voting. In the American context, Republican legislators have historically been reliable supporters of trade liberalization. But partisan reputation is not an unlimited resource, and it does not immunize legislators from electoral accountability when constituents bear concentrated costs. For agreements expected to generate the most severe partner-specific import shocks, I expect Republican defections to be most pronounced: precisely because their pro-trade reputation makes their opposition more politically credible and more costly to their leadership, the threshold for defection is higher, but the underlying incentive to protect constituents from import-related job losses does not disappear. The anticipated partner-specific economic harm, I argue, is the mechanism that explains when and why legislators whose party affiliation would otherwise predict support choose instead to vote against their party on trade. This leads to the final hypothesis:

> **Hypothesis 3 (H3):** *Defection:* The greater the potential import shock a trade partner presents for constituent industries of a district, the more likely a Republican representative would vote against the party position by voting against ratifying the trade agreement.

3.4 Measurement

Import sensitivity has long been measured as either import penetration (Rodrik 1995; Trefler 1993; Broz and Werfel 2014*b*) or a trade partner's comparative advantage and pre-existing tariff levels (Choi et al. 2024). However, these two existing measures suffer from

[5] See USITC Executive Briefing on the Reversion 2014 provision and Congress.gov for the Reversion 2021 provision.

[6] One may also argue that winners from trade, particularly exporters, have been able to politically organize and have been continuously empowered by gradual trade liberalization (Gilligan 1997; Blanga-Gubbay, Conconi, and Parenti 2023).

distinct issues.

First, import penetration is traditionally measured as a country's total imports for product p divided by domestic consumption for product p. However, due to a lack of granular data on total domestic production at the product level, I calculate domestic consumption at the industry level, where the numerator remains at the product level (Equation 3.1). On its own, this is the import market share of p in industry k; however, if we aggregate these numbers across products within each industry, we obtain the industry-level import penetration measure. This decomposed measure should sufficiently capture import penetration under data constraints on domestic production (i.e., total shipment). Import and export data are from UNCTAD, while total shipments are from NBER CES.

$$ImportPenetration_p = \frac{import_p}{totalshipment_k + import_k - export_k} \tag{3.1}$$

While import penetration has a strong theoretical background in its relationship with protection (Grossman and Helpman 1994), its empirical patterns have been largely mixed (Rodrik 1995; Trefler 1993). Theoretically, a low import penetration ratio should yield more protection (Grossman and Helpman 1994), but empirical evidence has demonstrated the opposite (Irwin and Soderbery 2021), and others find that *increases* in import penetration would simulate demand for protection (Trefler 1993). Because the expected coefficient sign is mixed, we should expect the coefficient to present as either positive or negative.

Import penetration suffers from a lack of partner specificity. It is perfectly fine if the goal is to capture an industry's import exposure to the global market, which is necessary for analyses that focus on MFN tariff reduction from GATT and WTO rounds. However, in the era of bilateral and regional preferential trade agreements, an industry is not always sensitive to imports from every trade partner; therefore, such an industry would not receive protection or adjustment time for every trade agreement. As illustrated in Figure 3.1, phaseout duration is not constant across FTAs. Furthermore, given that protection and adjustment periods are scarce political resources, negotiators strategically grant (Thai 2025*a*), an industry that may be sensitive to the world's import but not to a specific trade partner may not receive concessions.

Additionally, import penetration suffers from the built-in bias of existing tariffs, which distort trade. Take light truck tariffs, for example. The rate for light truck import is 25%. At that high a rate, very few foreign producers would export into the United States. As such, existing rates distort imports, biasing the resulting import penetration measure.

Second, the revealed comparative advantage (RCA) of a country is defined as its relative export strength compared to the world's average (Balassa 1965). Less formally, RCA captures how competitive a country is in making a particular product. Equation 3.2 outlines how RCA is calculated, taking as the ratio of a partner country's share of export with the world's share of export for product p:

$$RCA_{pj} = \frac{x_{jp}/X_j}{x_{wp}/X_w} \tag{3.2}$$

where on the numerator, x_{jp} is a partner country j's export of product p and X_j is country j's total export. x_{wp} is the world w's export of product p and X_w is world i's total export. Export data is from CEPII BACI.[7]

RCA has not been frequently used to capture a country's import sensitivity relative to another, with a few exceptions (Choi et al. 2024; Van Lieshout 2021*a*).[8] While RCA solves the partner-specific issue raised above with import penetration, using it on its own carry some risks. First, scholars that uses RCA by itself assume that the trade partner present a threat if they have a comparative advantage.[9] However, high RCA does not always mean that the country poses an import threat. The country may have a high RCA for a product p, but if the base tariffs set for elimination are relatively low, then the industry may not need protection or adjustment time to ease into competition. Choi et al. (2024) account for this by weighing Mexico's RCA for each product with the base rates, capturing the degree of exposure by existing protection level. However, some tariff lines with low ad valorem rates are consequential, such as the 2.5% rate on automobiles. While others are of little consequence due to relatively low prices. For this analysis, I follow Choi et al. (2024)'s approach and weight RCA by the tariff line's base rate. In the next section, I present a new measure that resolves existing issues.

3.4.1 Prospective Threat

Unlike assuming that import sensitivity is constant across trade partners, or that a partner's comparative advantage scales with tariffs, I propose that a partner poses a greater import threat when they can theoretically fulfill the increased import demand when tariffs are eliminated.

[7] I used the HS1 version of the database, available for the year 1996 onward. Next, I convert the HS1 code to HS2, and fill in data from 1992-1995 for NAFTA.

[8] Dür, Huber, and Stiller (2024) uses RCA to capture constituents' export interests, rather than the trade partner's specific threat.

[9] See Van Lieshout (2021*a*).

Equation 1 outlines how *Import Threat* is constructed as a function of demand change when the tariff for product p at time t is eliminated in country i, i.e., the U.S., $(1-(1+BaseRate_{ipt})^{-\sigma_{ip}})$ and the FTA partner's j total export value of product p to the rest of the world $Export_{jip\tau,i\neq USA}$. I specify the partner's export number to exclude their exports to the United States, to avoid endogeneity arising from existing barriers that disincentivize trade with the US. Here, τ indicates that the export numbers are rolling averages over the 3 years prior to the agreement's signing. Export data is aggregated to the 4-digit level to minimize missing data at the 6-digit level from 16% to 5%.

$$ImportThreat_{jpt} = log(Export_{jip\tau,i\neq USA} \times (1-(1+BaseRate_{ipt})^{-\sigma_{ip}})) \tag{3.3}$$

The demand change is characterized as the inverse of the demand level when prices are higher due to tariffs. First, $(1+BaseRate_{ipt})$ specifies the percentage change in price for imports when there are tariffs. For example, a 25% tariff on light trucks would increase the price of said goods by 1.25 times. σ_{ip} is the import demand elasticity. Put together $(1+BaseRate_{ipt})^{-\sigma_{ip}}$ computes the demand level when there is a tariff in place; hence, with high import demand elasticity, a large price change (i.e., reduction in price when tariffs are eliminated) would lead to greater changes in demand levels.

For example, the demand for imported light trucks with a 25% tariff would be 41% with an elasticity of 4 (high) versus 80% with an elasticity of 1 (low), compared to the baseline of 100% when there is no tariff.[10] If demand for light trucks is highly elastic, the elimination of tariffs would increase demand by 59%, as captured by the difference with 1, or 100%.

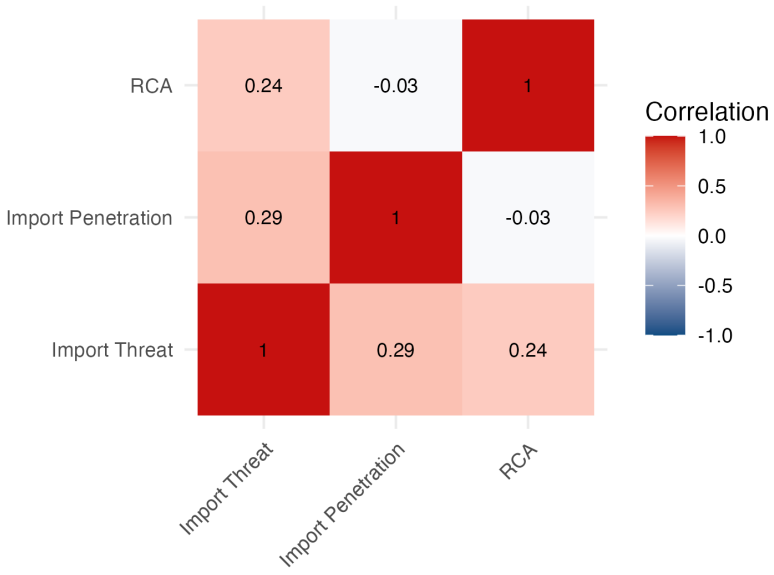
MFN base rates are taken from UNCTAD, and data on import demand elasticity is from Broda and Weinstein (2006), accessed from Liao et al. (2020)'s `concordance` package. Because the 6-digit estimates of import demand elasticity have extreme outliers, I take the median value of 6-digit HS products and aggregate it to the 2-digit HS.

Figure 3.2 visualizes the three *Import Sensitivity* measures to provide a sense of convergence validity, which gauges how well the three measures align given that they measure the same underlying construct. While positive, the three do not correlate highly with one another, suggesting that each captures distinct dimensions.

[Figure 3.2 about here]

[10] In which case, regardless of elasticity, the resulting demand level would be 100%. For example $1^{-4} = 1^{-1}$.

Figure 3.2: Convergence Validity (Product): Pearson Correlation

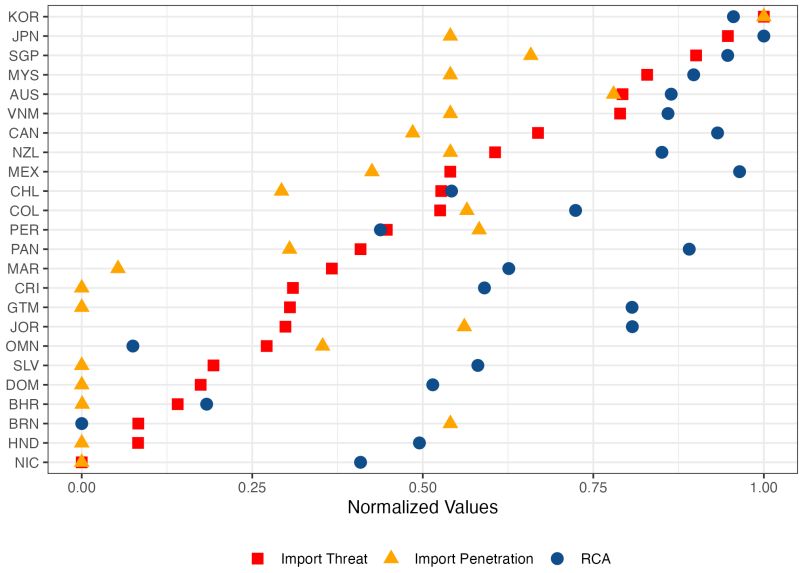


Note: See Figure C3 plots the correlates between district-level variable. Created by Author 3/10/26.

Figure 3.3 averages each import sensitivity measure for each trade partner, and ranks them by *Import Threat*. As shown, no two trade partners have the same *Import Threat* and *RCA*, but *Import Penetration* tends to have two or more observations with the same value. That is because *Import Penetration* does not vary across partners, only across industry and time.

[Figure 3.3 about here]

Figure 3.3: Import Sensitivity Aggregated to Partner Country Level



Note: Created by Author 3/10/26.

3.5 Protection

3.5.1 Model Specification

To examine whether trade negotiators look ahead when designing FTAs and grant protection to the partner that would pose the greatest threat, I run a within-product regression to examine the level of protection granted to the same product across trade agreements. Protection in trade agreements, as argued, can be measured as a simple exclusion provision, phaseout usage, or phaseout duration. I collect original data on the tariff treatment of 8-digit tariff lines under 14 US FTAs using procedures described in Van Lieshout (2021*b*). I examine variation in phaseout duration with a Poisson regression, and phaseout usage and whether a product is excluded from liberalization with a logistic model. Equation 3.4 outlines the Poisson model specification.

$$log(\lambda_{pj}) = \gamma_p + \beta_1 ImportSensitivity_{pj} + \beta_2 \mathbf{Z}_{pj} + \beta_3 \mathbf{Z}_{kj}, \tag{3.4}$$

where α_s is product fixed-effect. I use 6-digit HS revision 2002 to harmonize different codes across time. While the unit of analysis is 8-digits, there are some within 6-digit HS product variation. HS02 is the lowest possible grouping for fixed effect while retaining the ability to compare across FTA. λ_{pj} is the count of years a product p is scheduled to be

phased out. I control for product-level and industry-level characteristics, denoted by $\mathbf{Z}_{pj}$ and $\mathbf{Z}_{kj}$.

Equation 3.6 outline the logistic regression:

$$\ln\left(\frac{P(Y_{pj})}{1-P(Y_{pj})}\right) = \gamma_p + \beta_1 ImportSensitivity_{pj} + \beta_2 \mathbf{Z}_{pj} + \beta_3 \mathbf{Z}_{kj}, \tag{3.5}$$

where Y_{pj} is the probability that a product p in agreement j is phased out or excluded.

3.5.2 Controls

Product-level Controls

I employ a mix of product- and industry-level characteristics to control for confounders; however, many time-invariant controls are absorbed by the product fixed effects. First, I hold the *Base Rate* constant to control for the documented relationship in which products with higher base rates receive longer tariff phaseouts (Baccini, Dür, and Elsig 2018; Anderer, Dür, and Lechner 2020; Kowalczyk and Davis 1998). I use ad-valorem rates from the FTA tariff schedule at the 8-digit and supplemented any non-ad-valorem rates, such as tariff rate quotas, with ad-valorem-equivalent rates calculated by the UNCTAD TRAINS database.[11]

Second, I control for a variety of product characteristics, such as whether the product is intermediate, capital, consumer, or agricultural and the degree to which the product is upstream and differentiated. I use Liao et al.'s (2020) `concordance` package to classify each 6-digit product as intermediate or final goods. Agricultural, capital, and consumer goods are binary variables derived from the USITC Concordance Wizard database.[12] The database provides a binary coding for agricultural products as well as end-use cases in which I use the one-digit code to classify whether a product is capital goods or consumer goods.[13] Product differentiation and upstreamness are all drawn from Liao et al.'s (2020) `concordance` R package. Product differentiation is drawn from Rauch (1999)'s classifi-

[11] To learn more about how UNCTAD converts tariff rate quotas to ad-valorem equivalent rates, see https://wits.worldbank.org/wits/wits/witshelp/content/data_retrieval/p/intro/c2.ad_valorem_equivalents.htm.

[12] Data accessible here https://dataweb.usitc.gov/classification/commodity-translation. Last accessed 10/26/24.

[13] End use classification codebook is accessible here https://www.census.gov/foreign-trade/reference/codes/enduse/imeumstr.txt. Last accessed 10/26/24.

cation, and data on upstreamness is from Antràs and Chor (2018); Antràs et al. (2012). I used HS revision 2002 to derive these product-level controls, and I standardized all non-binary variables. I also code whether a product is sugar, steel, auto, or textile to control for traditionally high-protection products.

Industry-level Controls

Industry Size is simply the natural log of the employment number for industry k. The industry employment numbers are drawn from Eckert et al. (2020)'s NAICS-harmonized version of the County Business Patterns.[14]

Next, *Capital Mobility* is measured using Liquidation Recovery Rate for property, plant, and equipment (PPE) from Kermani and Ma (2023)'s database of Asset Specificity.[15] The data is time-invariant and originally was coded using 2-digit BEC codes; I converted this to NAICS 6-digit. If a firm resides within an industry with a relatively high asset specificity, i.e., higher asset immobility, it may lobby for longer tariff phaseouts to allow for its investments to depreciate. If an industry can take advantage of the labor market abroad and its liquid recovery rate for PPE is relatively high, it may lobby for a faster tariff phaseout so it may offshore production and import final goods from abroad. Having a high liquidation rate, or asset mobility, allows producers to benefit from moving their investment abroad to low-cost labor countries where returns are higher.

I also account for intra-industry trade (IIT), in which I use the Grubel–Lloyd index $(1 - \frac{|import_{ij} - export_{ij}|}{import_{ij} + export_{ij}}$ (Grubel and Lloyd 1971). A low value indicates little intra-industry trade, while a high value indicates that the two countries simultaneously exchange the same good. Controlling for IIT speaks directly to Kowalczyk and Davis (1998) and Baccini, Dür, and Elsig (2018), who find that higher intra-industry trade may induce shorter phaseout. The bilateral trade data at 6-digit HS is from the UNComTrade.

Table C1 provides a summary of the statistics of the variables discussed thus far. Figure C1 shows a simple correlation matrix heatmap of the covariates.

3.5.3 Result

Table 3.1 displays the results of three different *Import Sensitivity* measurements across three dependent variables. All covariates are standardized for comparability. *Import Threat* is the only statistically significant variable that explains all three measures of pro-

[14]The data is accessible at http://www.fpeckert.me/cbp/.
[15]Data accessible through https://assetspecificity.com/. Last accessed 8/6/24

tection. A one standard deviation increase in *Import Threat* is associated with (1) a 77% increase in the duration of tariff phaseout (Model 1); (2) 144% increase in the odds of phaseout usage (Model 4); and (3) 83% increase in the odds of being excluded from liberalization (Model 7). Only *RCA*, not *Import Penetration*, is significantly correlated with phaseout usage, but in an opposite direction than expected. A one standard deviation increase in RCA is associated with 5% decrease in a product's likelihood of being phased out.

[Table 3.1 about here]

Table 3.1: Allocation of Protection (Product-level)

Dependent Variables:	Phaseout Duration			Phaseout Usage			Excluded		
Model:	(1) Poisson	(2) Poisson	(3) Poisson	(4) Logit	(5) Logit	(6) Logit	(7) Logit	(8) Logit	(9) Logit
Variables									
Import Threat	0.570***			0.892***			0.606***		
	(0.044)			(0.038)			(0.227)		
Import Penetration		0.014			0.165			-0.340***	
		(0.082)			(0.115)			(0.094)	
RCA			-0.007			-0.050**			0.369***
			(0.005)			(0.023)			(0.030)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fixed-effects									
Product 6d	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	131,020	136,818	138,981	130,721	136,615	138,801	20,179	20,296	20,296
Squared Correlation	0.197	0.185	0.183	0.177	0.136	0.134	0.033	0.034	0.041
Pseudo R^2	0.260	0.231	0.231	0.174	0.133	0.132	0.072	0.059	0.085
BIC	632,548.2	671,549.0	680,995.0	135,551.3	143,997.2	146,397.5	10,771.2	10,977.9	10,687.3
AIC	610,154.7	649,056.3	658,053.0	113,818.3	122,097.5	123,999.8	10,446.8	10,653.2	10,362.6
Dependent variable mean	1.58	1.52	1.51	0.204	0.197	0.197	0.079	0.079	0.079

Clustered (Product 6d) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: All covariates are standardized for comparability. Unit of observation is 8-digit HS product code for each trade partner in all 14 negotiated free trade agreements. TPP members that have concluded previous bilateral FTAs with the US are excluded (Australia, Canada, Chile, Mexico, Peru, and Singapore). KORUS 2011 is excluded from the sample. Standard errors are corrected for clustering at the NAICS 6 digit industry level. Sample is restricted to manufacturing sector (NAICS 31-33). See Table C3 for full result.

Import Penetration and *RCA* are significant predictors for exclusion. A one standard deviation increase in *Import Penetration* is associated with a 29% decrease in the odds of a product being excluded from liberalization. While this may be counterintuitive, it aligns with the prediction from Grossman and Helpman (1994)'s Protection for Sale framework. This result suggests that products with low global import market share would receive the most protection among 6-digit product codes where exclusion is granted in at least one agreement. One the other hand, a one unit increase in the partner's *RCA* for a product is associated with a 45% increase in odds of being excluded.

These two results suggest that traditional measures of import sensitivities are only

helpful in predicting protection rather than adjustment time, and that the latter is a distinct concept best captured by a prospective threat measurement.

3.6 Ratification

3.6.1 Model Specification

I expect *Import Threat*, when aggregated to the district level, should explain ratification votes in a predictable way. Open Economy Politics predicts that a highly import-sensitive district would push its representatives to vote against ratifying the trade deal. Therefore, I examine the variation in ratification vote with a *within*-legislator model. By holding individual legislators constant, I examine whether their ratification vote is responsive to their district's import sensitivity toward the FTA partner using logistic regression. The model can be specified as:

$$\ln\left(\frac{P(Y_{idjc})}{1-P(Y_{idjc})}\right) = \gamma_i + \beta_1 ImportSensitivity_{dj} + \beta_2 \mathbf{X}_{ic} + \beta_3 \mathbf{X}_{dc} + \beta_4 \mathbf{X}_{sc} + \varepsilon_{idjc}, \quad (3.6)$$

where $P(Y_{idjc})$ is the probability that a legislator i in district d vote yes on agreement j in congress c. γ_i denotes the legislator fixed effect. The main coefficient of interest is $\beta_1 ImportSensitivity_{dj}$, while $\mathbf{X}_{ic}$ control for legislator characteristics, $\mathbf{X}_{dc}$ district characteristic, and $\mathbf{X}_{sc}$ state characteristic. The Import sensitivity measures are aggregated from the product to the district level as specified in Equation 3.7:

$$ImportSensitivity_{dj} = \sum_{k \in \mathcal{K}d} \left(\frac{E_{dkt}}{E_{dt}} \times \frac{\sum_{p \in \mathcal{P}k} ImportSensitivity_{pj}}{|\mathcal{P}_k|} \right), \quad (3.7)$$

where I first take the average industry-level import sensitivity $\frac{\sum_{p \in \mathcal{P}k} ImportSensitivity_{pj}}{|\mathcal{P}_k|}$ and weigh it with industry employment share of the district $\frac{E_{dkt}}{E_{dt}}$. Then, I take the summation across all industries within a district.

3.6.2 Controls

District-Level Controls

First, I control for the average share of the industry workforce that is covered by either exclusion or tariff phaseout. Equation 3.8 outline its construction.

$$\text{AvgProtection}_{dj} = \frac{1}{K_d} \sum_{k \in \mathcal{K}d} \left(\frac{E_{dkt}}{E_{dt}} \times \left(\frac{\sum_{p \in \mathcal{P}k} PO_{pj}}{|\mathcal{P}_k|} + \frac{\sum_{p \in \mathcal{P}k} Exclud_{pj}}{|\mathcal{P}_k|} \right) \right), \tag{3.8}$$

where PO_{pj} is a binary indicator of whether a dutiable product p is phased out (1) or not (0) in agreement j and $Exclud_{pj}$ indicates whether the product is excluded from liberalization (1) or not (0). The sum of these two inner terms represents the share of products subject to protection within industry k. The denominator $|\mathcal{P}_k|$ denotes the total number of dutiable product codes in the industry, excluding those that were duty-free prior to the agreement. This ensures the proportion accurately reflects protection on relevant trade lines.[16] This industry-specific exposure is then weighted by the industry's labor share, $\frac{E_{dkt}}{E_{dt}}$, where E_{dkt} is employment in industry k and district d, and E_{dt} is the total district workforce at time t (averaged over the 5 years prior to the agreement).[17] Finally, to arrive at the district-level measure, I sum these weighted exposures and divide by K_d, the number of active industries in district d.

Individually, the product of the inner two terms should give an estimate of the proportion of industry k workers as a share of the total employed workforce in district d that is "covered" by protection. After averaging across industries within a given district, the resulting district-level measure captures the *Average Industry Total Protection*.

Next, I control for *District Election Competitiveness*, which proxies for electoral vulnerability. It is measured as the inverse distance of the top two candidates' average vote share to 50% over three previous cycles (MIT Election Data and Science Lab 2017*a*). Third, I control for local labor market conditions using the *Unemployment Rate*, sourced from the Bureau of Labor Statistics. Finally, *District Net Exports* measures the district's trade orientation. I calculate this by taking the difference between logged exports and logged

[16] I concord different HS revisions across agreements to HS rev. 2002, linking it with industry-level variables at NAICS rev. 2012. I used Liao et al.'s 2020 `Concordance` package to translate 6-digit HS codes (2002 revision) to 6-digit NAICS (2012 revision).

[17] Industry employment data is from Eckert et al.'s 2020 version of the County Business Pattern data, harmonized to the 2012 NAICS revision. I used the Missouri Census Data Center's county-district crosswalk files to map employment from the county to the district level.

imports at the industry level (using UN Comtrade data) and aggregating to the district level.[18]

Legislator-Level Controls

At the legislator's level, I control for trade ideology, corporate interests, and legislative factors. First, I use Shin (2025)'s ISSUEIRT dataset to control for legislators' trade ideology. Next, *Corp PAC (ln)* measures logged corporate donations to the incumbent, averaged over three previous cycles (Bonica 2023). Third, *House Ways & Means* identifies committee members using data from Stewart III and Woon (2024), supplemented by original coding for the 102nd Congress. Finally, I control for *Seniority* and *Legislative Effectiveness Scores* (LES), sourced from the Center for Effective Lawmaking (Volden and Wiseman 2014).

State-Level Controls

At the state level, I control for electoral competitiveness and labor interests. *Presidential Election Competitiveness* is measured as the inverse average *two-party* vote share distance to 50% over three previous presidential elections (MIT Election Data And Science Lab 2017*b*). I also include the states' *Electoral College Votes* to account for their electoral weight. Finally, *Union Membership Rate* captures labor strength using data from Hirsch, MacPherson, and Even (2024).

Table C2 provides the summary statistics of all variables discussed so far. Figure C2 provides a simple correlation matrix heatmap, displaying the correlation among the covariates.

3.6.3 Results

Table 3.2 presents 9 models, where the first three test the strength of our three import sensitivity measurements against one another on ratification vote, while the last six examine whether legislators deviate from the party line vote. Republicans generally support FTAs, while Democrats generally oppose; hence, whether a Republican legislator deviates to vote against ratification should be contingent on their district's import sensitivity. On the other hand, a Democratic legislator should be less likely to deviate from the anti-trade party line if their district faces high import competition. All covariates are standardized for comparability.

[Table 3.2 about here]

[18] I use a summation function to aggregate district-specific industry net-export values to the district level.

Table 3.2: Ratification and Deviation From Party-line Voting

Dependent Variables:	Ratification: Yes			Deviated					
	All			Republicans			Democrats		
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables									
District's Exposure to Import Threat	-0.817***			1.24***			-0.824***		
	(0.214)			(0.373)			(0.252)		
District's Import Penetration		0.348*			0.347			0.181	
		(0.185)			(0.607)			(0.163)	
District's Exposure to Partner's RCA			-0.447***			0.333**			-0.498***
			(0.123)			(0.169)			(0.140)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fixed-effects									
legislator	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	2,131	2,131	2,131	597	597	597	1,212	1,212	1,212
Squared Correlation	0.337	0.328	0.337	0.258	0.232	0.241	0.343	0.332	0.344
Pseudo R^2	0.275	0.267	0.276	0.215	0.194	0.203	0.294	0.284	0.292
BIC	4,064.3	4,088.2	4,062.9	1,122.3	1,137.3	1,131.0	2,469.1	2,485.3	2,472.8
Dependent variable mean	0.551	0.551	0.551	0.285	0.285	0.285	0.342	0.342	0.342

Clustered (legislator) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Covariates are standardized for comparability. Unit of observation is House of Representative district-FTA for all 12 FTAs negotiated and ratified. US-Jordon FTA was ratified with a voice vote and TPP was never voted on. Standard errors are corrected for clustering at the legislator level. Models 9, 10, 11, and 12 omit US-Bahrain, US-Australia, and US-Peru where a majority of Democrats were supportive of ratification. See Table C4 for the full regression table.

Among the first three models, both *District's Exposure to Import Threat* and *District Exposure to Partner's RCA* are negative and highly significant at the 0.01 level. In terms of magnitude, the coefficient for prospective import threat is almost twice that of revealed comparative advantage. A one standard deviation increase in a district's exposure to *Import Threat* is associated with a 56% decrease in the odds of voting to ratify the agreement, while it is 36% for *RCA*. Conversely, *District's Import Penetration* is positive and not significant at the 0.05 level. The direction of the coefficient suggests that legislators representing districts with lower levels of import penetration are more likely to vote against FTA ratification. That is, a one-standard-deviation increase is associated with a 41% increase in the odds of voting yes. This follows the "Protection for Sale" logic of Grossman and Helpman (1994), which predicts that protection is granted to industries with low import penetration. This result manifested in the product-level analysis (Table 3.1) and seemingly bled into the ratification stage. All in all, legislators are much more responsive to prospective threats the partner poses than to the partner's comparative advantage when deciding whether to ratify.

Models 4-6 explore the likelihood that Republican legislators will deviate from party-line voting. The sample size is significantly reduced due to a low number of Republican representatives who ever deviated from their party on FTA voting. I find that Republican

legislators are likely to deviate and vote against FTA ratification when their district faces prospective import competition and when the trade partner has a high comparative advantage. A one standard deviation increase for *Import Threat* and *RCA* for districts with a Republican representative is associated with a 246% and 39% increase in the representative's likelihood of deviating from party-line voting (i.e., voting no), respectively. This result suggests that even representatives from a pro-trade party are responsive to constituent interests. Finally, Models 7 - 9 examine the likelihood of a Democratic legislator deviating from party-line to support FTA ratification. For both *District's Exposure to Import Threat* and *District Exposure to Partner's RCA*, the coefficients are negative and highly significant, associated with a 56% and 39% lower odds of deviating, respectively. This means that legislators with low prospective threats from the trade partner are likely to deviate and support the FTA, suggesting legislative responsiveness to the district's economic interests.

Across all 18 models, *Import Threat* boasts a higher magnitude, sometimes almost doubling that of *RCA*. This shows that, across both sets of analyses, prospective threat consistently explains ratification better and, at times, serves as a singular predictor of protection in FTAs.

3.7 Conclusion

Has the US government paid attention to import-sensitive industries? Despite the sizable impact of granting China permanent normal trade relations (Pierce and Schott 2016), the US government has been careful in its pursuit of free trade, opting for a slow transition despite slowing exporters' market access in return. This paper provides strong evidence for prospective, bespoke trade policymaking, in which the design of a trade agreement's tariff schedule is tailored to the threat a trade partner poses to domestic industries. Legislators, in the same vein, vote according to the anticipated threat the trade partner poses to their districts, sometimes rebelling against their party.

Beyond theoretical, this paper also introduces a new measure that outperforms *Import Penetration* and *Revealed Comparative Advantage* in measuring import sensitivity. The innovation lies not in focusing on the trade partner's specific capabilities, but rather in weighing the capabilities against the potential change in demand for imports after the tariff is eliminated. This measure takes into account that tariff reductions vary in impact depending on the product's import demand elasticity. In effect, two products with the same tariff rates, which would be eliminated by FTAs, would pose a different degree of threat depending on (1) import demand elasticity and (2) the trade partner's existing

capabilities of producing such goods.

A primary implication of this paper is that negotiators make informed decisions about which product to protect and which to phase out. Thanks to the consultation mechanism, industries that anticipate experiencing import competition communicate their preferences to the USTR. In efforts to build ratification coalitions, trade negotiators target highly specific tariff concessions on products to minimize domestic objections (Grossman and Helpman 1995). Given that these choices impose costs on exporters through reciprocal exchanges, negotiators do not always allocate protection and adjustment time to the same product. Only when the trade partner is anticipated to cause immediate, sharp pain to domestic industries do negotiators allocate the scarce resource. Therefore, negotiators prospectively design treaties to preempt the anticipated threat.

Additionally, legislators vote in line with their districts' economic interests, consistent with expectations from the OEP literature. However, how they know the anticipated impact the trade partner has on their district's industries may be a function of firms' informational lobbying. Office-seeking legislators want to minimize electoral backlash from voting on trade agreements, so they seek information from local industries on the potential impact of the trade deal to vote in accordance of their district's interests.

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Chapter 4

Appendix

A.1 Chapter 1 Appendix

A.1.1 Tariff Phaseouts

[Figure B1 about here]

Figure A1: Tariff Schedule Example from US-Australia FTA

HTSUS (2004)	DESCRIPTION	BASE RATE	STAGING CATEGORY
0711.20	-Olives:		
	--Not pitted:		
	---Green in color, in a saline solution, in containers each holding more than 8 kg, drained weight, certified by the importer to be used for repacking or sale as green olives:		
0711.20.18	----Described in additional U.S. note 5 to this chapter and entered pursuant to its provisions	3.7 cents/kg on drained weight	A
0711.20.28	----Other	5.9 cents/kg on drained weight	A
0711.20.38	---Other	5.9 cents/kg on drained weight	A
0711.20.40	--Pitted or stuffed	8.6 cents/kg on drained weight	A
0711.30.00	-Capers	8%	B
0711.40.00	-Cucumbers including gherkins	7.7%	B
	-Mushrooms and truffles:		
0711.51.00	--Mushrooms of the genus Agaricus	5.7 cents/kg on drained weight + 8%	D
0711.59	--Other:		
0711.59.10	---Mushrooms	5.7 cents/kg on drained weight + 8%	D
0711.59.90	---Other	7.7%	B
0711.90	-Other vegetables; mixtures of vegetables:		
0711.90.20	--Leguminous vegetables	Free	E
0711.90.50	--Onions	5.1%	B
0711.90.65	--Other vegetables; mixtures of vegetables	7.7%	B
0712	Dried vegetables, whole, cut, sliced, broken or in powder, but not further prepared:		
0712.20	-Onions:		
0712.20.20	--Powder or flour	29.8%	F
0712.20.40	--Other	21.3%	F
	-Mushrooms, wood ears (Auricularia spp.), jelly fungi (Tremella spp.) and truffles:		
0712.31	--Mushrooms of the genus Agaricus:		
0712.31.10	---Air dried or sun dried	1.3 cents/kg + 1.8%	A
0712.31.20	---Other	1.9 cents/kg + 2.6%	A

Note: Screenshot is taken from the US-Autralia Free Trade Agreement's Tariff Schedule Annex.

[Figure B2 about here]

Figure A2: Description of Staging Categories from US-Australia FTA

ANNEX 2-B
TARIFF ELIMINATION

1. Base Rates of Customs Duty. Except as otherwise indicated, the base rates of customs duty set forth in this schedule reflect the HTSUS Column 1 General rates of duty in effect January 1, 2004, for the United States and the general rates of duty in Schedule 3 to the Australian Customs Tariff Act 1995, in effect January 1, 2004, for Australia.

2. Staging. Except as otherwise provided in a Party's Schedule attached to this Annex, the following staging categories apply to the elimination of duties by each Party pursuant to Article 2.3:

(a) duties on goods provided for in the items in staging category A shall be eliminated entirely and such goods shall be duty-free on the date this Agreement enters into force;

(b) duties on goods provided for in the items in staging category B shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year four;

(c) duties on goods provided for in the items in staging category C shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year eight;

(d) duties on goods provided for in the items in staging category D shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year ten; and

(e) goods provided for in staging category E shall continue to receive duty-free treatment.

Note: Screenshot is taken from the US-Autralia Free Trade Agreement's Market Access chapter.

[Figure B3 about here]

Figure A3: Description of US-Specific Staging Categories from the Head Note of US-Australia FTA

4. Staging. The following staging categories apply to the elimination of customs duties by the United States pursuant to Article 2.3 (Elimination of Duties):

(a) Duties on goods provided for in subheadings 2918.90.20, 8111.00.47 and 8111.00.49 shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty free, effective January 1, 2010;

(b) Duties on goods provided for in the items in staging category F shall be removed in eighteen equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year eighteen.

(c) Duties on goods provided for in the items in staging category G shall remain at base rates during years one through six. Duties on these goods shall be reduced by 5.6 percent of the base rate on January 1 of year seven and by an additional 5.6 percent of the base rate on January 1 of each year thereafter through year twelve. Beginning January 1 of year thirteen, duties on these goods shall be reduced by an additional 11.1 percent of the base rate annually through year eighteen and shall be duty-free effective January 1 of year eighteen.

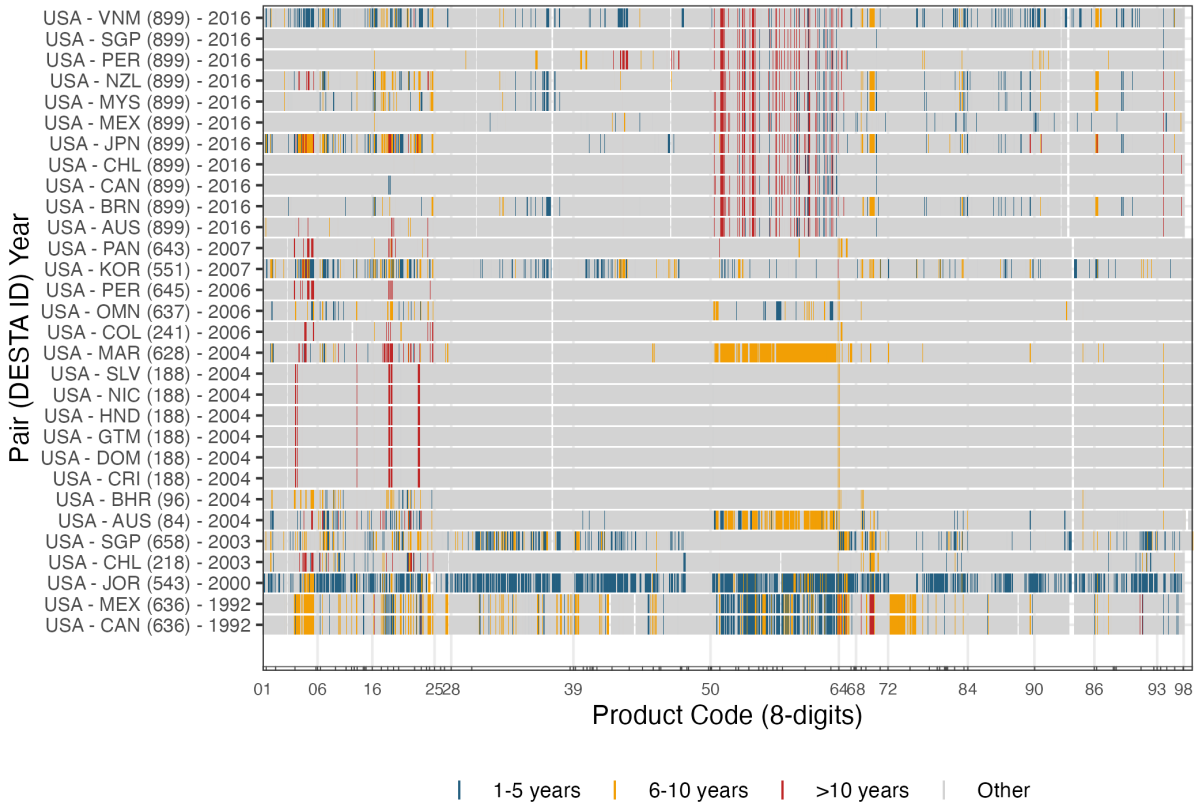
(d) Duties on goods provided for in the items in staging category H shall remain at base rates during years one through eight. Duties on these goods shall be reduced by 6.7 percent of the base rate on January 1 of year nine and by an

Annex 2B-US-Notes-1

Note: Screenshot is taken from the US-Autralia Free Trade Agreement's Head Note section of the Tariff Schedule.

[Figure A4 about here]

Figure A4: Distribution of Tariff Phaseout Duration from USA FTAs Across 8-digit Product Codes



Note: Each line represents one product code, and product codes that were already duty-free or treated with immediate elimination or exemption are grouped as "Other" to improve visibility. Each line on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to the USITC on the title of HS chapters. Original data collected by Author with procedure introduced in Van Lieshout (2021*b*). Created by Author 5/27/24.

[Figure A5 about here]

Figure A5: UAW Statement

UAW backs Korea trade agreement

The full text of the op-ed by UAW President Bob King is printed below. The piece, published today, can be read online here.

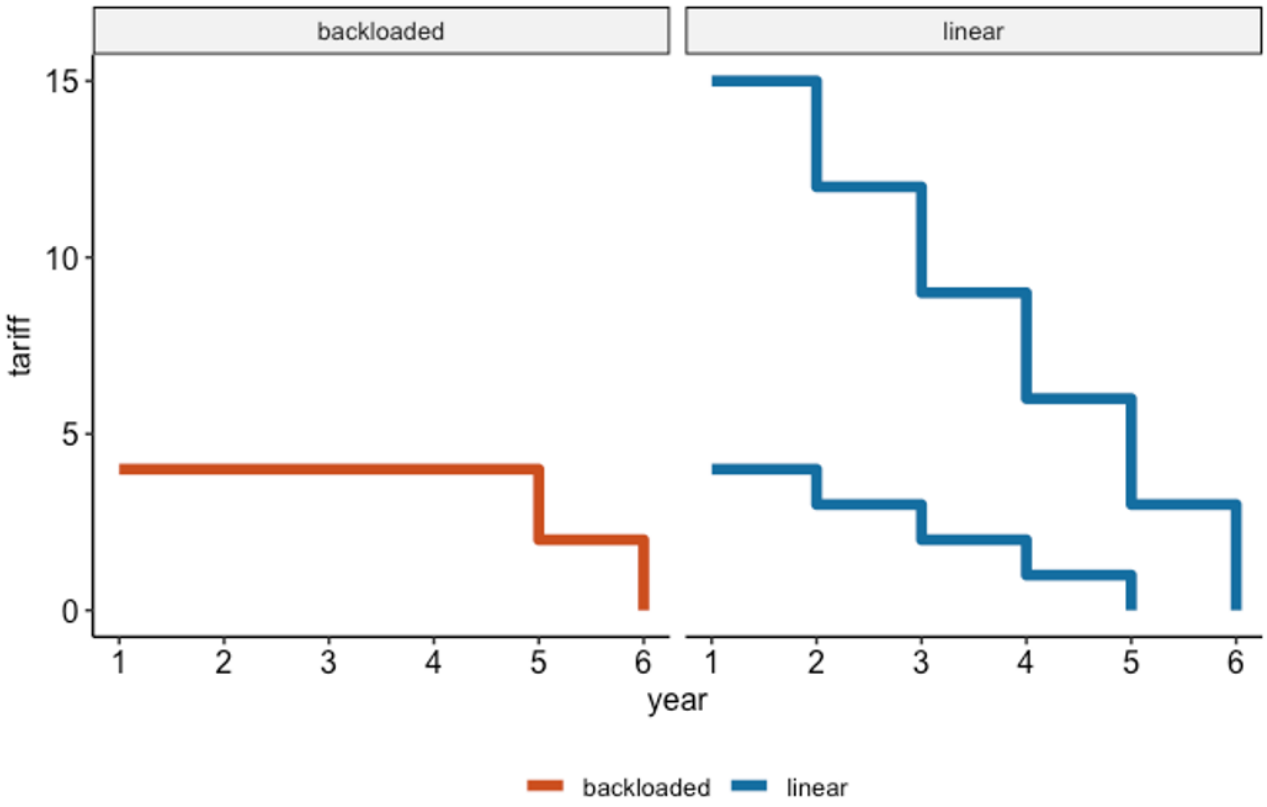
UAW backs Korea trade agreement
By Bob King

> President Barack Obama and U.S. Rep. Sander Levin, a Royal Oak Democrat, should be commended for their effective efforts to substantially revise the U.S.-Korea Free Trade Agreement, which Congress overwhelmingly approved Wednesday night. The UAW fully supports this trade agreement because the automotive provisions, which are very different from those negotiated by President George W. Bush in 2007, will create significantly greater market access for American auto exports and include strong, auto-specific safeguards to protect our domestic markets from potentially harmful surges of Korean automotive imports.
>
> Unlike the 2007 negotiations with South Korea, the labor movement, and particularly the UAW, had an opportunity to be part of the 2010 discussions on strengthening the trade deal. Working with U.S. Trade Representative Ron Kirk and other members of the Obama administration, then-Ways and Means Committee Chairman Levin and top management from the auto companies, the UAW believes the new agreement will help protect current American auto jobs, contains meaningful trade law enforcement and makes stronger labor and environmental commitments.
>
> Under the 2007 proposed agreement, almost 90% of Korea's auto exports to the U.S. would have received immediate duty-free access. Under the agreement passed this week, the 2.5% U.S. tariff on automobiles will stay in place until the fifth year after implementation of the agreement, and the 25% tariff on light trucks remains until the eighth year, when it starts to be phased out. Moreover, South Korea will immediately reduce its electric car tariffs from 8% to 4%, and will phase out the tariff by the fifth year of the agreement. The delay in tariff reductions will allow the domestic automakers time to strengthen their global competitive positions in both traditional and advanced energy efficient auto markets.

Note: Full statement can be accessed here: https://ustr.gov/about-us/policy-offices/press-office/blog/2011/october/uaw-backs-korea-trade-agreement

[Figure B4 about here]

Figure A6: Example of Linear and Backloaded Phaseout "Shape"

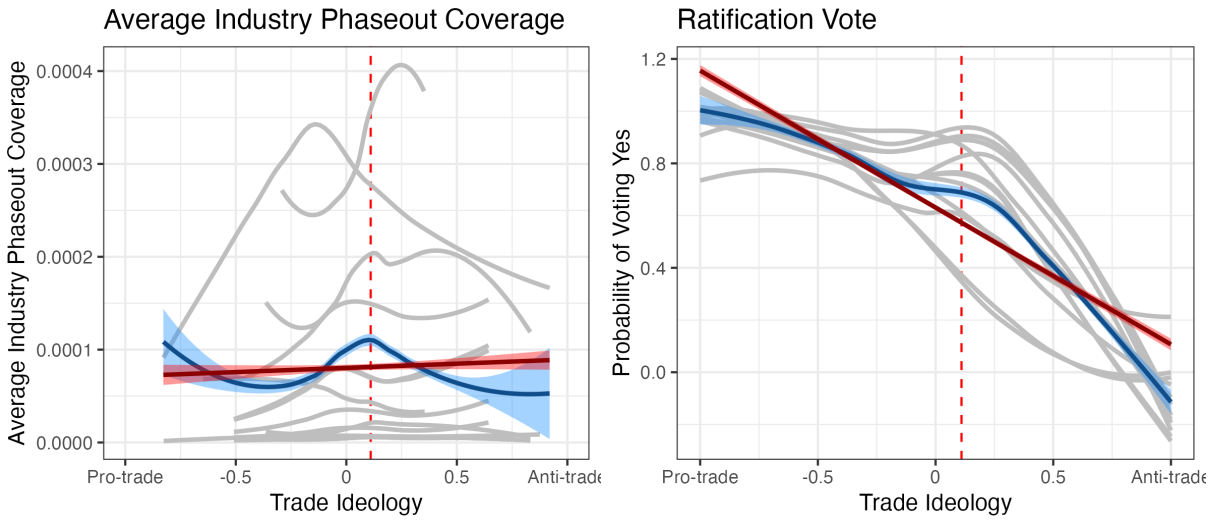


Note:

A.1.2 Descriptive Statistics

[Figure A7 about here]

Figure A7: Relationship with Trade Ideology



Note: Both plots are fitted by individual FTA LOESS lines (grey), aggregated LOESS lines (blue), and linear regression lines (red). The red dashed vertical line indicates the global median Trade Ideology score. Created by Author 12/24/25.

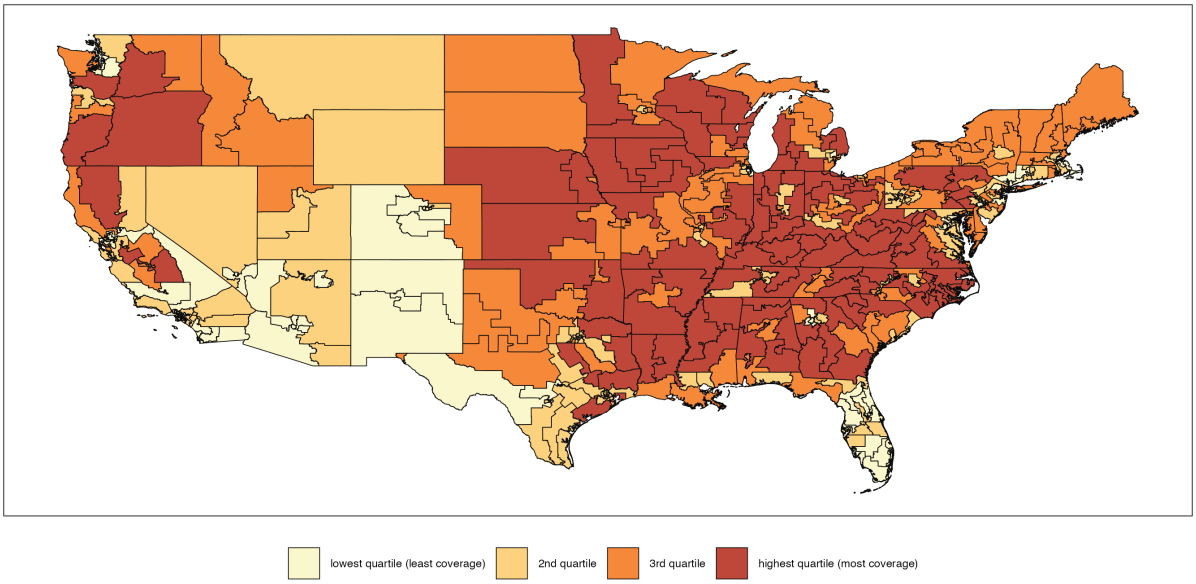
[Figure A8 about here]

[Figure A9 about here]

Table A1: Summary Statistics

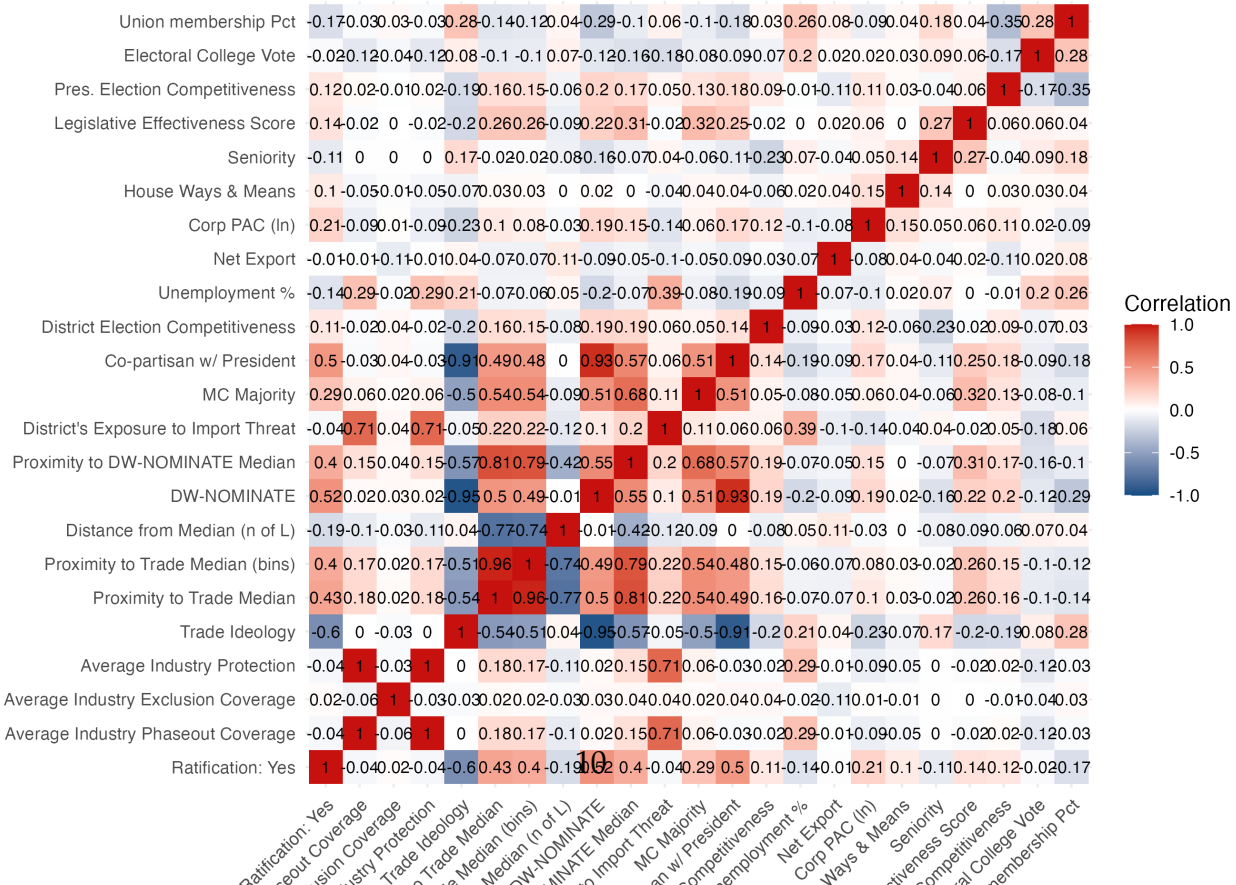
Statistic	N	Mean	St. Dev.	Min	Max
Ratification: Yes	5,097	0.646	0.478	0	1
Average Industry Phaseout Coverage	6,086	0.0001	0.0001	0.00000	0.001
Average Industry Exclusion Coverage	6,086	0.00000	0.00000	0.000	0.00005
Average Industry Total Protection	6,086	0.0001	0.0001	0.00000	0.001
Trade Ideology	5,814	−0.022	0.553	−1.000	1.000
Proximity to Trade Median	5,814	0.499	0.282	−0.239	1.000
Proximity to Trade Median (bins)	6,088	3.144	1.313	1.000	5.000
Distance from Median (n of L)	6,088	109.087	63.233	0.000	223.000
DW-NOMINATE	6,088	0.034	0.421	−0.766	0.863
Proximity to DW-NOMINATE Median	6,088	0.613	0.234	−0.014	1.000
District's Exposure to Import Threat	6,086	1.791	1.194	0.105	10.216
District Election Competitiveness	6,408	0.295	0.108	0.000	0.500
Unemployment Net Export	6,086	−0.043	0.051	−0.440	0.516
Corp PAC (ln)	6,018	12.117	1.164	0.000	15.936
House Ways and Means	6,282	0.091	0.287	0	1
Seniority	6,088	5.706	4.017	1	27
Legislative Effectiveness Score	6,088	1.005	1.516	0.000	18.686
Pres. Election Competitiveness	6,478	0.441	0.041	0.265	0.499
Electoral College Vote	6,478	20.824	14.897	3	55
Union membership Pct	6,478	0.128	0.063	0.016	0.287

Figure A8: Map of KORUS (2011 version) Phaseout Coverage Overlaid on 112nd Congressional Districts Boundaries



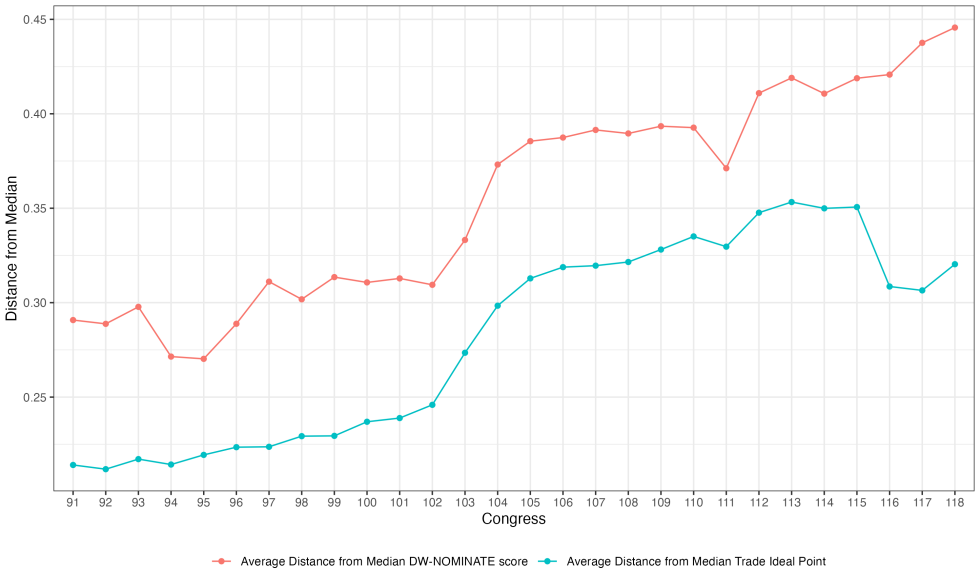
Note: Phaseout coverage is grouped into quartiles. Congressional District boundaries are drawn from Lewis et al. (2013). Created by Author 9/4/25.

Figure A9: Correlation Heatmap



[Figure A10 about here]

Figure A10: Average Distance from the Median Across Time



Note: Created by Author 5/18/25.

Table A2: Count of Districts with Ideology Score Across 14 US Free Trade Agreements

DESTA ID	Year	Partner	Trade Ideology Score	DW-NOMINATE Score
899	2016	TPP	194	435
551	2011	KOR	303	435
551	2007	KOR	432	435
643	2007	PAN	415	435
241	2006	COL	432	435
637	2006	OMN	432	435
645	2006	PER	432	435
188	2004	CAFTA-DR	435	435
628	2004	MAR	435	435
84	2004	AUS	435	435
96	2004	BHR	435	435
218	2003	CHL	435	435
658	2003	SGP	435	435
543	2000	JOR	433	434
636	1992	NAFTA	434	434

A.1.3 Import Threat

Each FTA trade partner poses a different degree of threat to specific industries, and such threat is more painful to districts housing various import-competitive industries. Contrary to traditional import penetration measure, which uses pre-existing aggregated import data, I argue that such measures may be biased or attenuated toward zero due to existing tariffs that may bar certain imports from entering. A clear example is the 25% tariff on light trucks that the U.S. imposes on the rest of the world, which is so astronomically high that firms abroad have little reason to produce light trucks to be exported into the U.S. Instead, I propose that a partner poses more of an import threat when they can fulfill the changes in import demand when tariffs are eliminated.

Equation 1 outlines how *Import Threat* is constructed as a function of demand change when the tariff for product p at time t is eliminated in country i, i.e., the U.S., $(1-(1+BaseRate_{ipt})^{-\sigma_{ip}})$ and the FTA partner's j total export value of product p to the rest of the world $Export_{jip\tau,i\neq USA}$. I specify the partner's export number to exclude their export into the United States to avoid any endogeneity because of the existing barriers that disincentivize trade. Here, τ specifies that the export numbers are rolling averages of three years prior to the agreement's signing. Export data is aggregated to the 4-digit level to minimize missing data at the 6-digit level from 16% to 5%.

$$ImportThreat_{jpt} = log(Export_{jip\tau,i\neq USA} \times (1-(1+BaseRate_{ipt})^{-\sigma_{ip}})) \quad (1)$$

The demand change is characterized as the inverse of the demand level when prices are higher due to tariffs. First, $(1 + BaseRate_{ipt})$ specifies the percentage change in price for imports when there are tariffs. For example, a 25% tariff on light trucks would increase the price of said goods by 1.25 times. σ_{ip} is the import demand elasticity. Put together $(1 + BaseRate_{ipt})^{-\sigma_{ip}}$ computes the demand level when there is a tariff in place; hence, with high import demand elasticity, a large price change (i.e., reduction in price when tariffs are eliminated) would lead to greater changes in demand levels.

For example, the demand for imported light trucks with a 25% tariff would be 41% with an elasticity of 4 (high) versus 80% with an elasticity of 1 (low), compared to the baseline of 100% when there is no tariff.[1] If demand for light trucks is highly elastic, the elimination of tariffs would increase demand by 59%, as captured by the difference with 1, or 100%.

MFN base rates are taken from UNCTAD, and data on import demand elasticity is from Broda and Weinstein (2006), accessed from Liao et al. (2020)'s `concordance` package. Because the 6-digit estimates of import demand elasticity have extreme outliers, I take the median value of 6-digit HS products and aggregate it to the 2-digit HS.

I then aggregate the product-level *Import Threat* measure to the district level in Equation 2:

$$\text{District's Exposure to Import Threat}_{dj} = \sum_{k \in \mathcal{K}d} \left(\frac{E_{dkt}}{E_{dt}} \times \frac{\sum_{p \in \mathcal{P}k} ImpthreatThreat_{pj}}{|\mathcal{P}_k|} \right), \quad (2)$$

where I first take the average industry-level import threat $\frac{\sum_{p \in \mathcal{P}k} ImpthreatThreat_{pj}}{|\mathcal{P}_k|}$ and weigh it with industry employment share of the district $\frac{E_{dkt}}{E_{dt}}$. Then, I take the summation across all industries within a district.

[1] In which case, regardless of elasticity, the resulting demand level would be 100%. For example $1^{-4} = 1^{-1}$.

A.1.4 Results

[Table **??** about here]

Table A3: Legislators' Distance from the Median and District's Exposure to Import Threat on Tariff Phaseout Coverage (Full Model)

Dependent Variables:	Avg Phaseout			Avg Exclusion	Total Protection
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
Distance from Trade Median	-0.126***	-0.039**		-0.026	-0.041**
	(0.024)	(0.019)		(0.031)	(0.019)
Issue IRT Trade		0.030		-0.019	0.024
		(0.019)		(0.030)	(0.019)
District's Exposure to Import Threat		0.507***	0.505***	0.662***	0.511***
		(0.055)	(0.055)	(0.123)	(0.054)
District Election Competitiveness		-0.011	-0.012	0.045	-0.008
		(0.017)	(0.017)	(0.033)	(0.017)
Net Export		-0.060***	-0.059***	0.030	-0.057***
		(0.020)	(0.020)	(0.051)	(0.019)
Unemployment %		0.063***	0.062***	-0.042	0.059***
		(0.022)	(0.022)	(0.073)	(0.022)
Manufacturing %		0.023	0.025	-0.177	0.013
		(0.059)	(0.060)	(0.131)	(0.058)
Corp PAC (ln)		-0.005	-0.004	-0.012	-0.005
		(0.016)	(0.015)	(0.029)	(0.016)
House Ways & Means		-0.007	-0.008	0.005	-0.007
		(0.016)	(0.016)	(0.029)	(0.016)
Seniority		-0.026	-0.023	-0.052	-0.027
		(0.018)	(0.018)	(0.035)	(0.018)
Legislative Effectiveness Score		-0.007	-0.019	-0.002	-0.007
		(0.012)	(0.014)	(0.029)	(0.013)
Pres. Election Competitiveness		-0.062***	-0.063***	-0.031	-0.059***
		(0.018)	(0.017)	(0.037)	(0.018)
Electoral College Vote		-0.047**	-0.044**	-0.053	-0.048**
		(0.021)	(0.021)	(0.035)	(0.021)
Union membership Pct		-0.091***	-0.100***	0.175***	-0.076***
		(0.023)	(0.023)	(0.039)	(0.022)
Distance from DW-NOMINATE Median			-0.071***		
			(0.018)		
DW-NOMINATE			-0.014		
			(0.022)		
Fixed-effects					
FTA	✓	✓	✓	✓	✓
Fit statistics					
Observations	6,520	6,257	6,258	2,500	6,257
R^2	0.824	0.897	0.897	0.474	0.889
Within R^2	0.021	0.428	0.431	0.172	0.426
Dependent variable mean	-10.5	-10.5	-10.5	-13.5	-10.4

Clustered (District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 14 FTAs negotiated. Standard errors are corrected for clustering at the district level. All covariates are standardized.

[Table A4 about here]

Table A4: Testing Alternative Explanations (Exclusion)

Dependent Variable:	Avg Exclusion							
			Bivariate			Multivariate	IssueIRT	DW-NOMINATE
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
Distance from Trade Median							-0.023	
							(0.038)	
Issue IRT Trade							0.006	
							(0.048)	
Distance from DW-NOMINATE Median								-0.061
								(0.063)
DW-NOMINATE								-0.017
								(0.038)
Pres. Election Competitiveness	-0.043					-0.063*	-0.032	-0.034
	(0.038)					(0.038)	(0.038)	(0.038)
District Election Competitiveness		0.102***				0.108***	0.046	0.044
		(0.034)				(0.034)	(0.033)	(0.034)
Co-partisan			-0.032			-0.060	-0.061	-0.032
			(0.065)			(0.058)	(0.087)	(0.053)
Majority				0.075		0.106***	0.014	-0.062
				(0.048)		(0.035)	(0.061)	(0.114)
House Ways & Means					0.0002	-0.004	0.004	0.004
					(0.032)	(0.032)	(0.030)	(0.029)
Controls	No	No	No	No	No	No	Yes	Yes
Fixed-effects								
FTA	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics								
Observations	2,607	2,577	2,563	2,563	2,607	2,533	2,459	2,459
R^2	0.362	0.370	0.360	0.361	0.360	0.374	0.473	0.474
Within R^2	0.002	0.013	0.0003	0.002	7.72×10^{-8}	0.021	0.171	0.172
Dependent variable mean	-13.5	-13.5	-13.5	-13.5	-13.5	-13.5	-13.5	-13.5

Clustered (District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 14 FTAs negotiated. Standard errors are corrected for clustering at the district level. All covariates are standardized.

[Table A5 about here]

Table A5: Ratification: Main Results (Full)

Dependent Variables:	Ratification: Yes		Avg Phaseout	Ratification: Yes		Avg Phaseout	Ratification: Yes
	Naive	Reduced	IV 1st	IV 2nd	Reduced	IV 1st	IV 2nd
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables							
Avg Phaseout	-0.031*			0.933***			1.42**
	(0.016)			(0.225)			(0.721)
Distance from Median (Issue IRT)	-0.445***	-0.776***	-0.832***		-0.435***	-0.306**	
	(0.074)	(0.104)	(0.161)		(0.075)	(0.141)	
Issue IRT Trade	0.770***				0.765***	0.141*	0.564***
	(0.034)				(0.034)	(0.083)	(0.164)
District's Exposure to Import Threat	-0.034**				-0.047***	0.438***	-0.671**
	(0.016)				(0.015)	(0.030)	(0.322)
District Election Competitiveness	-0.060				-0.054	-0.187	0.212
	(0.122)				(0.121)	(0.188)	(0.319)
Net Export	-0.007				0.027	-1.10**	1.59
	(0.267)				(0.268)	(0.497)	(1.17)
Unemployment %	-2.55**				-2.74***	6.08**	-11.4**
	(1.00)				(0.992)	(2.58)	(5.18)
Corp PAC (ln)	0.031**				0.032**	-0.013	0.050*
	(0.014)				(0.014)	(0.017)	(0.029)
House Ways & Means	0.190***				0.192***	-0.036	0.244**
	(0.031)				(0.032)	(0.078)	(0.122)
Seniority	-0.009***				-0.009***	-0.009	0.004
	(0.003)				(0.003)	(0.006)	(0.011)
Legislative Effectiveness Score	0.021***				0.021***	-0.005	0.029*
	(0.006)				(0.006)	(0.011)	(0.016)
Pres. Election Competitiveness	0.185				0.244	-1.91***	2.97*
	(0.306)				(0.304)	(0.554)	(1.53)
Electoral College Vote	0.002**				0.002**	-0.003	0.005
	(0.0008)				(0.0008)	(0.002)	(0.003)
Union membership Pct	0.105				0.167	-2.00***	3.02*
	(0.242)				(0.241)	(0.463)	(1.58)
Controls	✓	×	×	×	✓	✓	✓
Fixed-effects							
FTA	✓	✓	✓	✓	✓	✓	✓
Fit statistics							
Observations	4,046	4,189	4,189	4,189	4,046	4,046	4,046
R^2	0.387	0.094	0.778	0.094	0.386	0.862	0.386
Within R^2	0.363	0.059	0.026	0.059	0.361	0.389	0.361
F-test (1st stage)			110.3			19.1	
F-test (1st stage), Avg Phaseout				110.3			19.1
Dependent variable mean	0.644	0.642	-10.9	0.642	0.644	-10.9	0.644

Clustered (legislator & District) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is House of Representative district-FTA for all 12 FTAs negotiated and ratified. US-Jordon FTA was ratified with a voice vote and TPP was never voted on. Standard errors are corrected for clustering at the district and legislator level.

A.1.5 Trade Negotiator Interviews

Four IRB-approved interviews were conducted (Protocol 810482) between August 9, 2024 and June 26, 2025. Table A6 summarizes the date, title of the subject, and the citation code used when interview materials are referenced. I interviewed two unique subjects once in 2024, and conducted a follow-up interview in 2025.

Table A6: IRB Approved Interviews

Date	Subject	Citation Code
August 9, 2024	Former USTR Negotiator	TN01-01
November 26, 2024	Former USTR Negotiator	TN02-01
June 24, 2025	Former USTR Negotiator	TN01-02
June 26, 2025	Former USTR Negotiator	TN02-01

B.1 Chapter 2 Appendix

B.1.1 Data

Figure B1: Tariff Schedule Example from US-Australia FTA

HTSUS (2004)	DESCRIPTION	BASE RATE	STAGING CATEGORY
0711.20	-Olives:		
	--Not pitted:		
	---Green in color, in a saline solution, in containers each holding more than 8 kg, drained weight, certified by the importer to be used for repacking or sale as green olives:		
0711.20.18	----Described in additional U.S. note 5 to this chapter and entered pursuant to its provisions	3.7 cents/kg on drained weight	A
0711.20.28	----Other	5.9 cents/kg on drained weight	A
0711.20.38	---Other	5.9 cents/kg on drained weight	A
0711.20.40	--Pitted or stuffed	8.6 cents/kg on drained weight	A
0711.30.00	-Capers	8%	B
0711.40.00	-Cucumbers including gherkins	7.7%	B
	-Mushrooms and truffles:		
0711.51.00	--Mushrooms of the genus Agaricus	5.7 cents/kg on drained weight + 8%	D
0711.59	--Other:		
0711.59.10	---Mushrooms	5.7 cents/kg on drained weight + 8%	D
0711.59.90	---Other	7.7%	B
0711.90	-Other vegetables; mixtures of vegetables:		
0711.90.20	--Leguminous vegetables	Free	E
0711.90.50	--Onions	5.1%	B
0711.90.65	--Other vegetables; mixtures of vegetables	7.7%	B
0712	Dried vegetables, whole, cut, sliced, broken or in powder, but not further prepared:		
0712.20	-Onions:		
0712.20.20	--Powder or flour	29.8%	F
0712.20.40	--Other	21.3%	F
	-Mushrooms, wood ears (Auricularia spp.), jelly fungi (Tremella spp.) and truffles:		
0712.31	--Mushrooms of the genus Agaricus:		
0712.31.10	---Air dried or sun dried	1.3 cents/kg + 1.8%	A
0712.31.20	---Other	1.9 cents/kg + 2.6%	A

Note:

Figure B2: Description of Staging Categories from US-Australia FTA

ANNEX 2-B
TARIFF ELIMINATION

1. Base Rates of Customs Duty. Except as otherwise indicated, the base rates of customs duty set forth in this schedule reflect the HTSUS Column 1 General rates of duty in effect January 1, 2004, for the United States and the general rates of duty in Schedule 3 to the Australian Customs Tariff Act 1995, in effect January 1, 2004, for Australia.

2. Staging. Except as otherwise provided in a Party's Schedule attached to this Annex, the following staging categories apply to the elimination of duties by each Party pursuant to Article 2.3:

(a) duties on goods provided for in the items in staging category A shall be eliminated entirely and such goods shall be duty-free on the date this Agreement enters into force;

(b) duties on goods provided for in the items in staging category B shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year four;

(c) duties on goods provided for in the items in staging category C shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year eight;

(d) duties on goods provided for in the items in staging category D shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year ten; and

(e) goods provided for in staging category E shall continue to receive duty-free treatment.

Note:

[Figure B5 about here]

B.1.2 Misc.

[Figure B6 about here]

[Figure B7 about here]

[Figure B8 about here]

Figure B3: Description of US-Specific Staging Categories from the Head Note of US-Australia FTA

4. Staging. The following staging categories apply to the elimination of customs duties by the United States pursuant to Article 2.3 (Elimination of Duties):

(a) Duties on goods provided for in subheadings 2918.90.20, 8111.00.47 and 8111.00.49 shall be removed in equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty free, effective January 1, 2010;

(b) Duties on goods provided for in the items in staging category F shall be removed in eighteen equal annual stages beginning on the date this Agreement enters into force, and such goods shall be duty-free, effective January 1 of year eighteen.

(c) Duties on goods provided for in the items in staging category G shall remain at base rates during years one through six. Duties on these goods shall be reduced by 5.6 percent of the base rate on January 1 of year seven and by an additional 5.6 percent of the base rate on January 1 of each year thereafter through year twelve. Beginning January 1 of year thirteen, duties on these goods shall be reduced by an additional 11.1 percent of the base rate annually through year eighteen and shall be duty-free effective January 1 of year eighteen.

(d) Duties on goods provided for in the items in staging category H shall remain at base rates during years one through eight. Duties on these goods shall be reduced by 6.7 percent of the base rate on January 1 of year nine and by an

Annex 2B-US-Notes-1

Note:

B.1.3 Employment Results

[Figure B9 about here]

[Figure B10 about here]

[Figure B11 about here]

[Figure B12 about here]

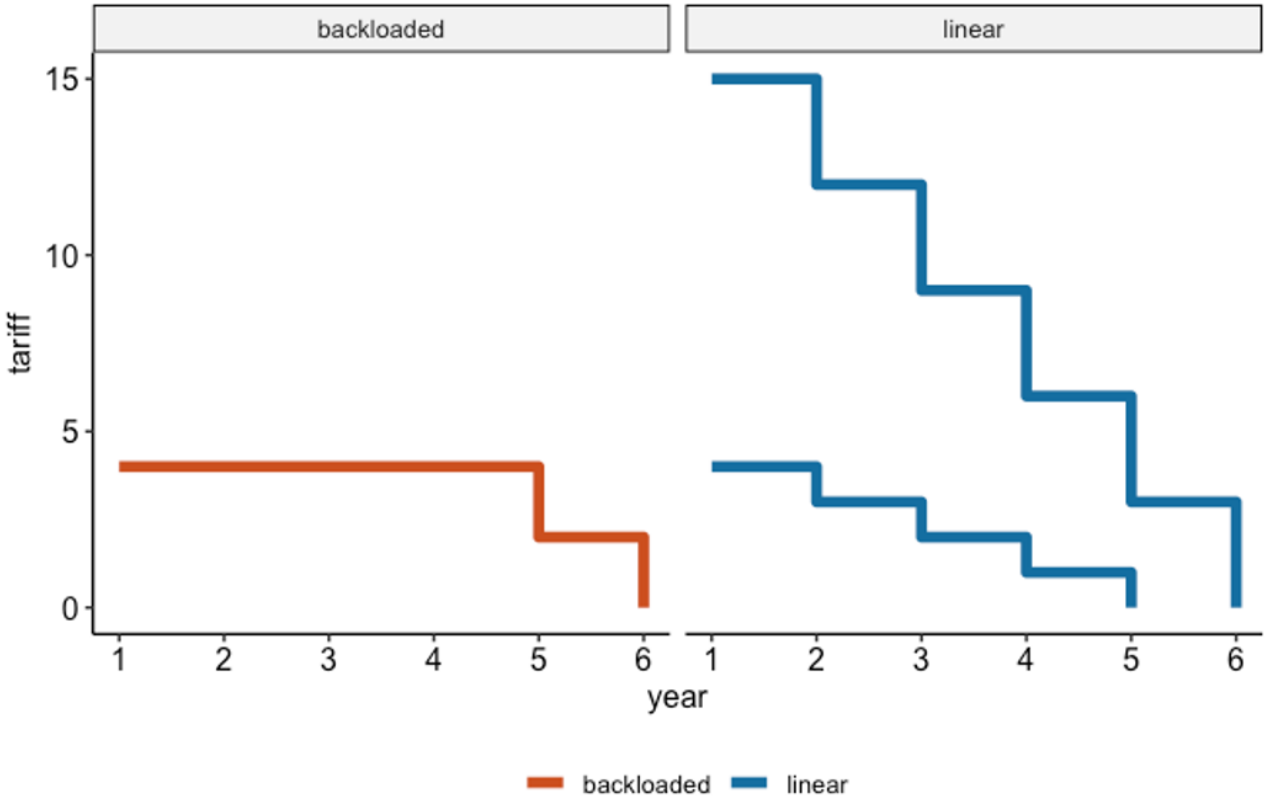
Table B1: Changes in Incumbent Vote Share in Percentage Points

Dependent Variables:	Δ 1992-1996	Δ 1996-2000
Model:	(1)	(2)
Variables		
NAFTA Import Threat	-0.010**	-0.009***
	(0.004)	(0.003)
NAFTA Phaseout Coverage	0.002	-0.001
	(0.004)	(0.002)
NAFTA Import Threat × NAFTA Phaseout Coverage	-0.002	-0.0004
	(0.002)	(0.001)
NTR Gap	0.006*	0.006**
	(0.004)	(0.003)
Chinese Import Exposure (2SLS)	0.003	0.001
	(0.002)	(0.002)
Incumbent Vote Share (t-1)	0.079***	-0.046***
	(0.028)	(0.017)
Δ Unemployment Rate	-0.004**	-0.0007
	(0.002)	(0.002)
Δ Labor Force	-0.002	0.0010
	(0.001)	(0.002)
Δ Income per capita	-0.003**	0.0008
	(0.001)	(0.002)
Prop. Black *t*	-0.005	0.008*
	(0.007)	(0.004)
Prop. White *t*	-0.020***	-0.009*
	(0.007)	(0.005)
Prop. Male *t*	-0.002	-0.008***
	(0.002)	(0.001)
Prop. College w/ Bachelor *t*	-0.001	0.012***
	(0.001)	(0.001)
Δ 1992-1996		0.120***
		(0.040)
Fixed-effects		
State	✓	✓
Fit statistics		
Observations	2,976	2,968
R^2	1.00	1.00
Within R^2	1.00	1.00

Clustered (State) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is county. Standard errors are corrected for clustering at the state level.

Figure B4: Example of Linear and Backloaded Phaseout "Shape"



Note:

B.1.4 Presidential Elections

[Figure B13 about here]

[Figure B14 about here]

B.1.5 Congressional Elections

[Figure B15 about here]

[Figure B16 about here]

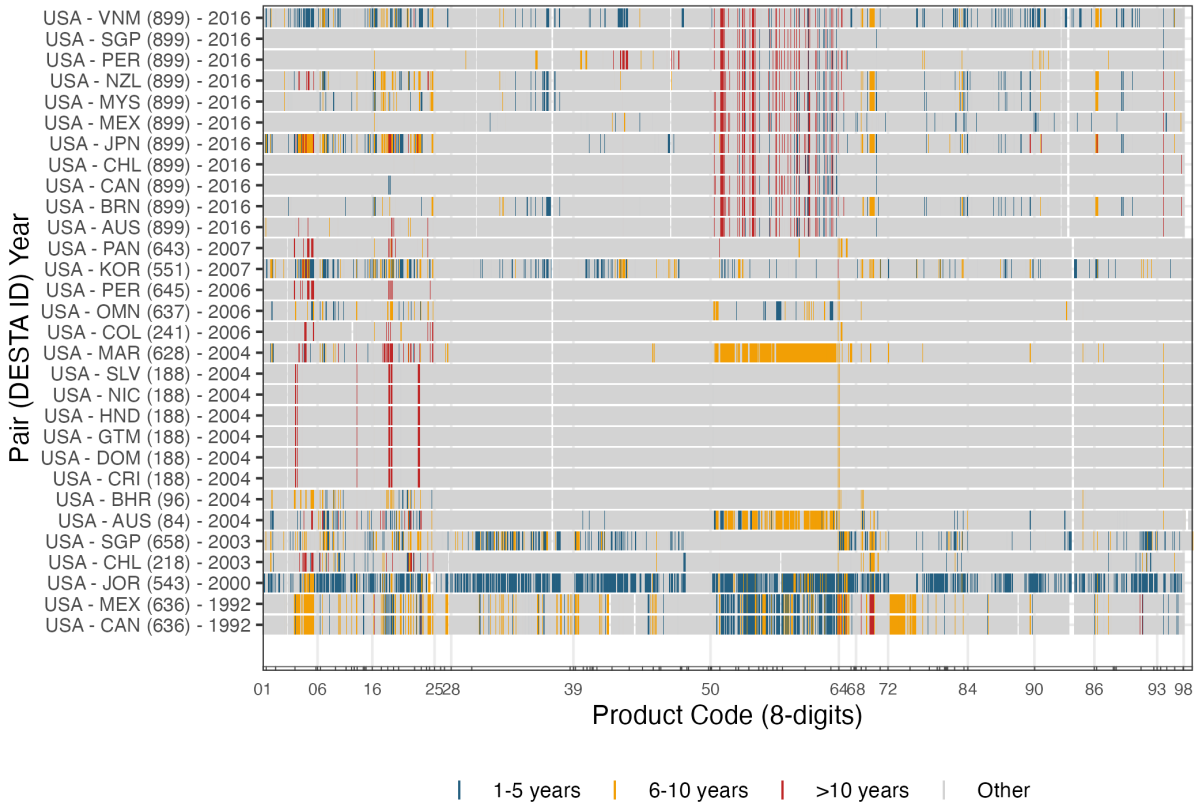
Table B2: Changes in Democratic Two-Party Vote Share in Percentage Points

Dependent Variables:	Δ 1992-1996	Δ 1996-2000	Δ 2000-2004	Δ 2004-2008	Δ 2008-2012	Δ 2012-2016	Δ 2016-2020
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables							
NAFTA Import Threat	-0.007**	-0.007***	0.003	-0.002	-0.0003	-0.005**	0.0003
	(0.003)	(0.002)	(0.003)	(0.004)	(0.001)	(0.002)	(0.001)
NAFTA Avg Phaseout	-0.020***	-0.025*	0.008*	-0.027**	-0.0009	-0.008	-0.018*
	(0.005)	(0.013)	(0.004)	(0.010)	(0.004)	(0.007)	(0.009)
NAFTA Import Threat × NAFTA Avg Phaseout	0.011***	0.013*	-0.003	0.012*	0.0007	0.004	0.008
	(0.003)	(0.008)	(0.003)	(0.006)	(0.002)	(0.004)	(0.006)
NTR Gap	0.007*	0.006**	-0.006*	-0.001	0.0005	0.006**	-0.003
	(0.003)	(0.002)	(0.003)	(0.003)	(0.001)	(0.003)	(0.002)
Chinese Import Exposure (2SLS)	0.003	0.001	0.005	0.0005	0.0004	-0.005***	0.002
	(0.002)	(0.002)	(0.004)	(0.002)	(0.001)	(0.002)	(0.002)
Dem Vote Share (t-1)	-0.077***	-0.041**	-0.039**	-0.064	0.032	-0.033	-0.153***
	(0.028)	(0.018)	(0.015)	(0.057)	(0.019)	(0.038)	(0.021)
Δ Unemployment Rate	-0.004*	-0.0007	0.005***	0.004	0.001	-0.0004	-0.004**
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)
Δ Labor Force	-0.004*	-0.003	-0.003*	0.001	0.003**	0.005**	0.001
	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Δ Population	0.003	0.004***	-0.001	0.006**	0.001*	0.004*	0.005***
	(0.002)	(0.001)	(0.002)	(0.003)	(0.0008)	(0.002)	(0.002)
Δ Income per capita	-0.003*	0.001	0.002	-0.010**	-0.002	-0.004	-0.003**
	(0.001)	(0.002)	(0.001)	(0.004)	(0.001)	(0.003)	(0.002)
Prop. Black *t*	-0.005	0.008**	0.013***	0.017***	-0.003	0.019**	0.019***
	(0.007)	(0.004)	(0.003)	(0.005)	(0.003)	(0.008)	(0.004)
Prop. White *t*	-0.020***	-0.009*	0.005	0.002	-0.011***	0.005	0.007
	(0.007)	(0.005)	(0.004)	(0.007)	(0.002)	(0.008)	(0.005)
Prop. Male *t*	-0.002	-0.007***	0.002	-0.003	-0.002	-0.003*	-0.002*
	(0.002)	(0.001)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)
Prop. College w/ Bachelor *t*	-0.002	0.011***	0.014***	0.002	-0.004**	0.030***	0.013***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Δ 1992-1996		0.100**					
		(0.038)					
Δ 1996-2000			-0.018				
			(0.042)				
Δ 2000-2004				0.262***			
				(0.082)			
Δ 2004-2008					0.055		
					(0.049)		
Δ 2008-2012						0.214	
						(0.140)	
Δ 2012-2016							0.116***
							(0.038)
Fixed-effects							
State	✓	✓	✓	✓	✓	✓	✓
Fit statistics							
Observations	2,965	2,957	2,957	2,968	2,968	2,968	2,968
R^2	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Within R^2	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Clustered (State) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Unit of observation is county. Standard errors are corrected for clustering at the state level.

Figure B5: Distribution of Tariff Phaseout Duration from USA FTAs Across 8-digit Product Codes



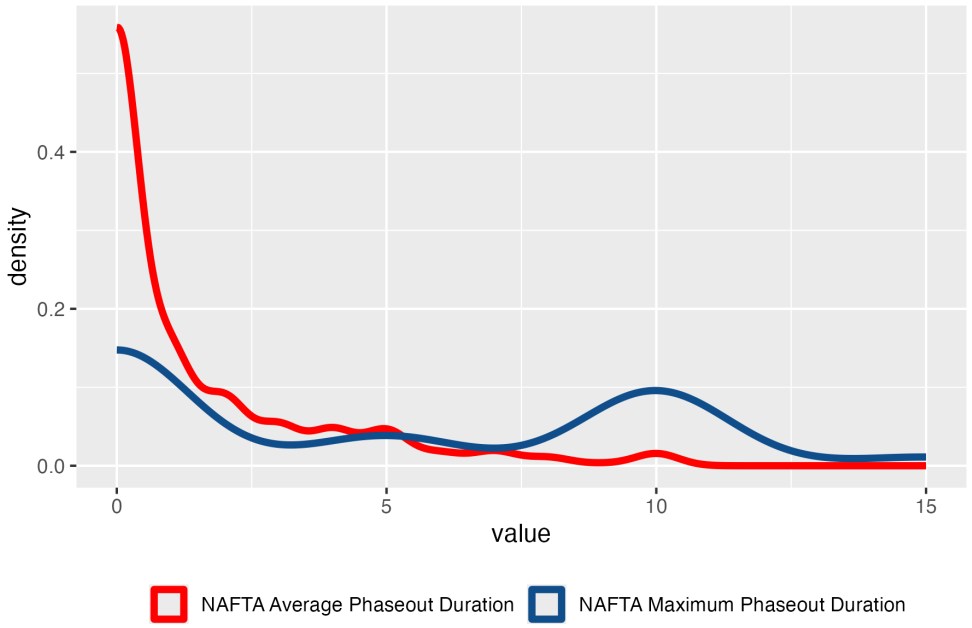
Note: Each line represents one product code, and product codes that were already duty-free or treated with immediate elimination or exemption are grouped as "Other" to improve visibility. Each line on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to the USITC on the title of HS chapters. Original data collected by Author with procedure introduced in Van Lieshout (2021*b*). Created by Author 5/27/24.

C.1 Chapter 3 Appendix

C.1.1 Descriptive Statistics

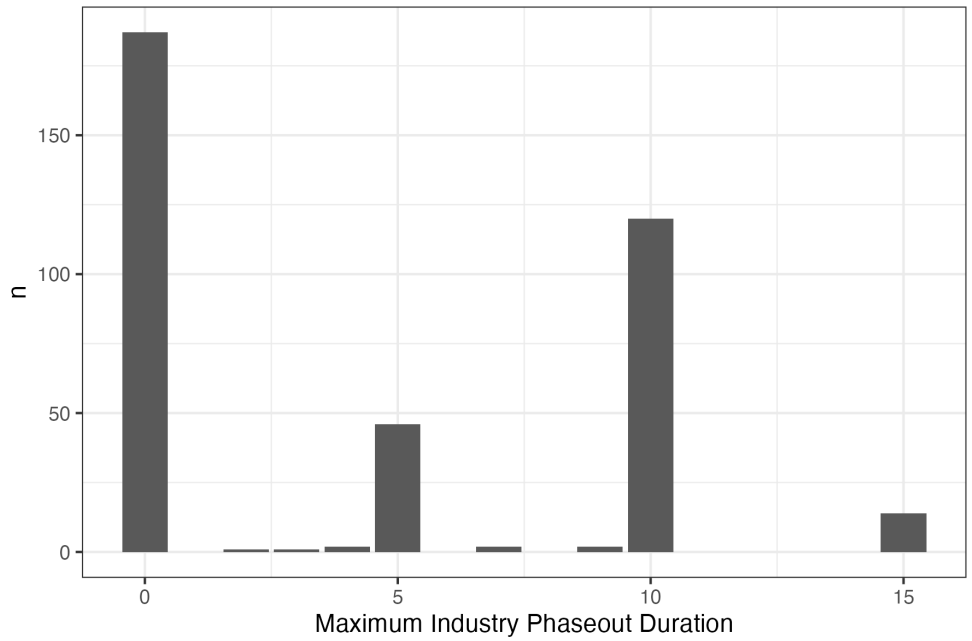
[Figure C1 about here]

Figure B6: Density Plot of Average and Maximum Industry Phaseout Duration From NAFTA



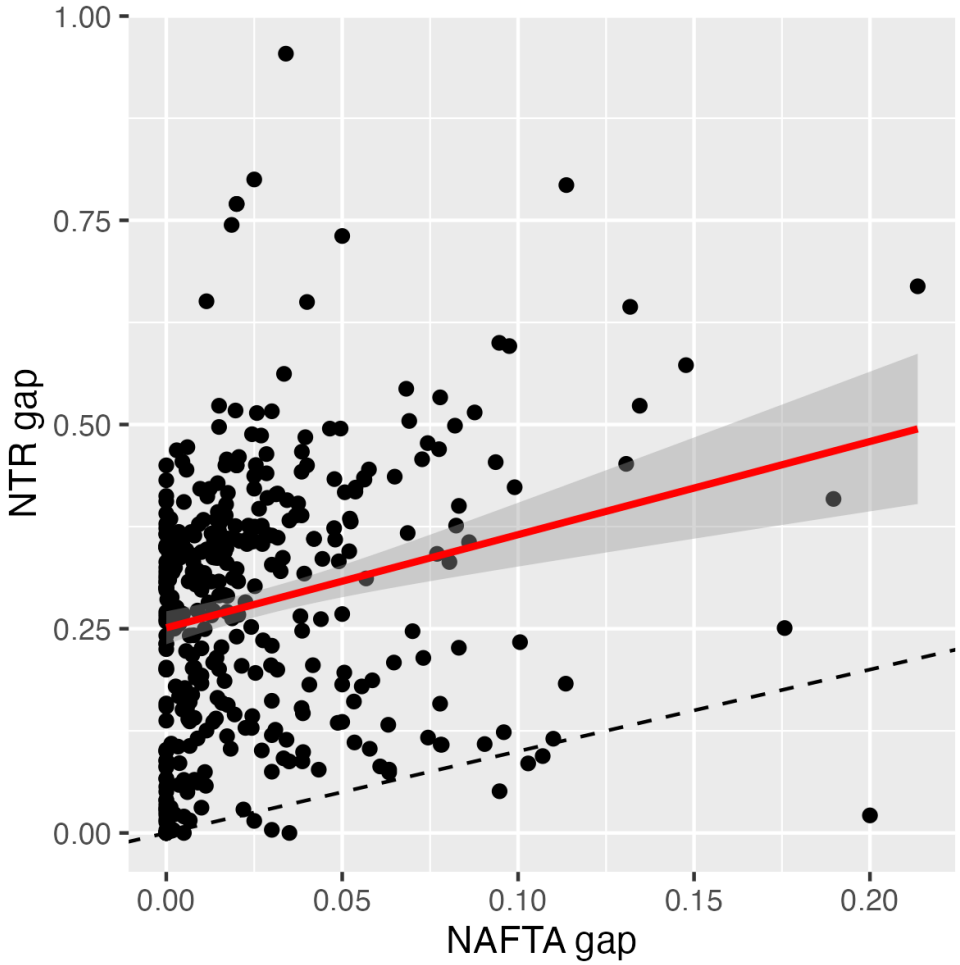
Note: Created by Author 9/23/25.

Figure B7: Histogram of Maximum Industry Phaseout Duration From NAFTA



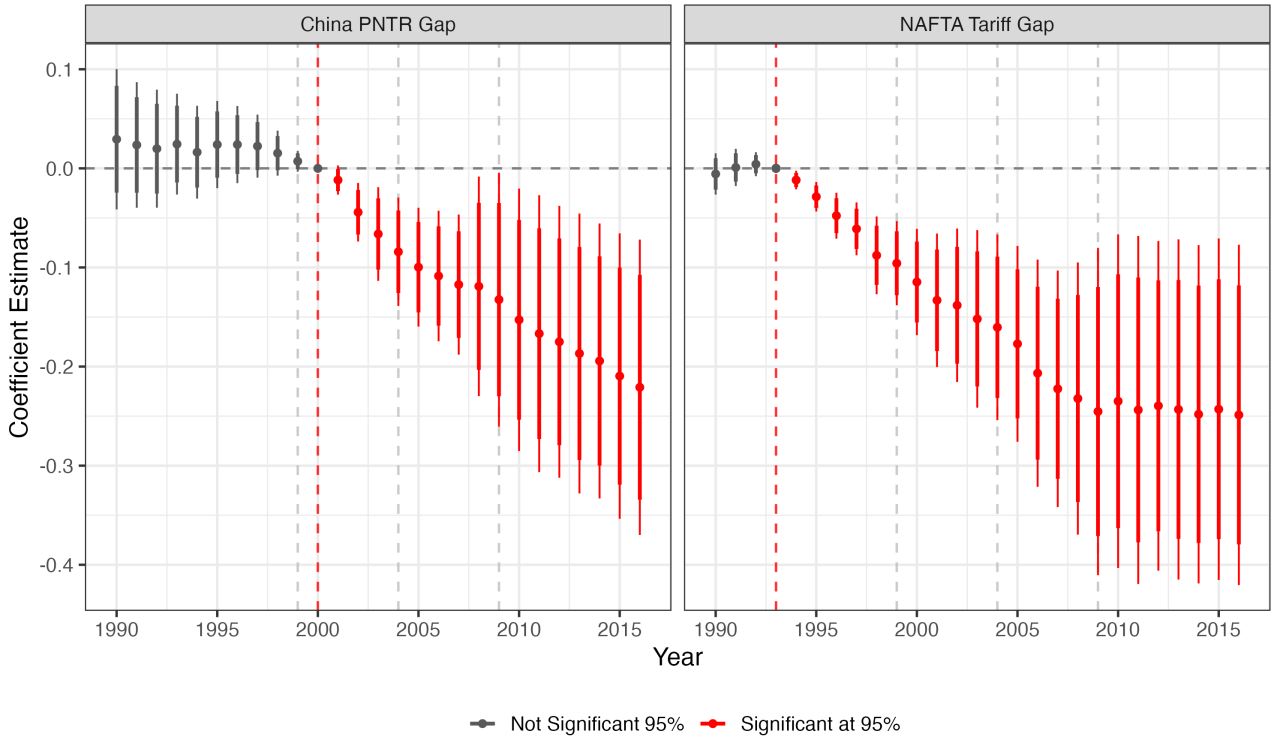
Note: Created by Author 9/23/25.

Figure B8: Correlation between NAFTA gap and NTR gap



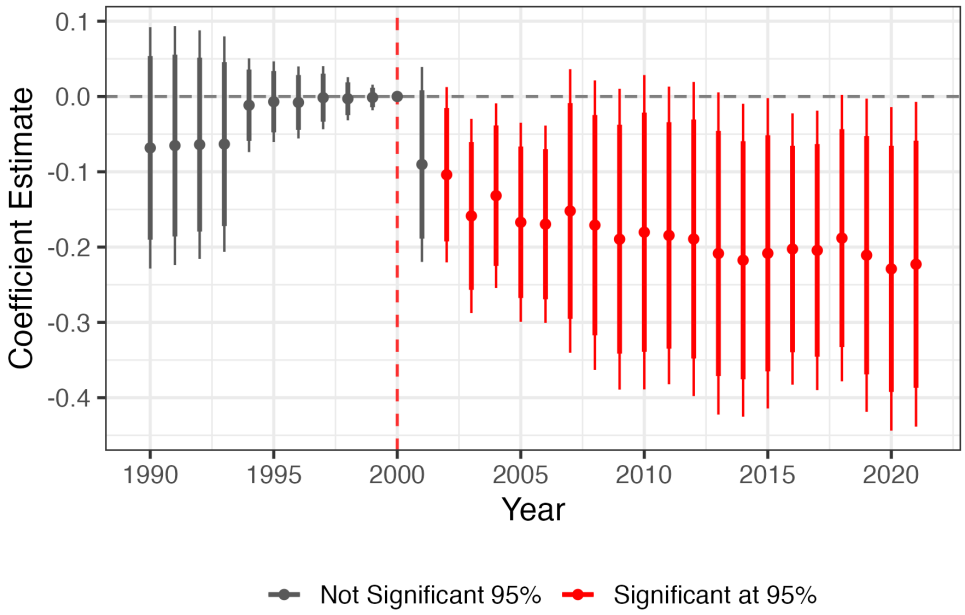
Note: The correlation coefficient between the two measures is 0.22. Created by Author 9/23/25.

Figure B9: NAFTA Tariff Gap on Industry Employment, Faceted by Phaseout Duration



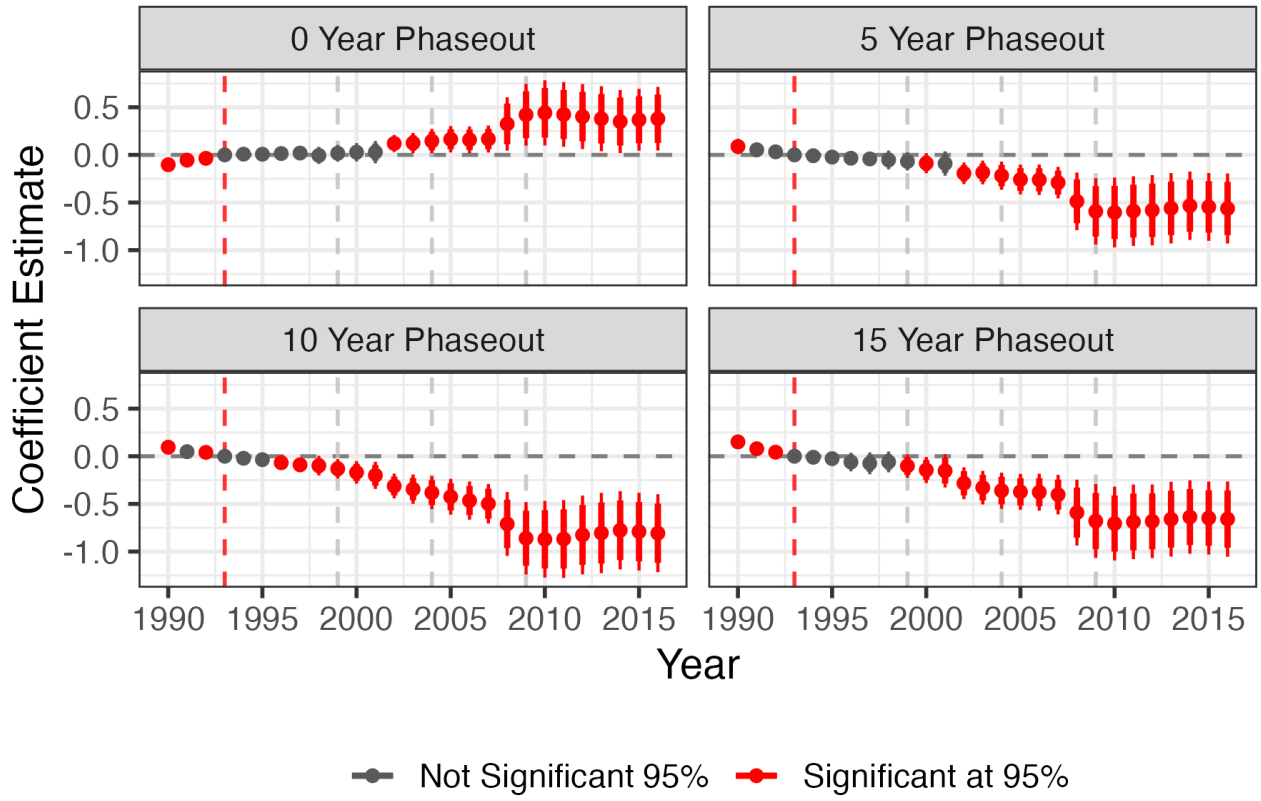
Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated difference-in-differences (DD) model from Equation 2.1 that interacts year dummies with the NAFTA tariff gap. Created by Author 3/17/26.

Figure B10: NTR Gap on Industry Employment



Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated triple difference-in-differences (DDD) from equation **??**. The estimates capture the impact of granting PNTR status to China in 2000. See Figure B12 for results using County Business Pattern employment data. Created by Author 3/17/26.

Figure B11: NAFTA Tariff Gap on Industry Employment (CBP), Faceted by Phaseout Duration

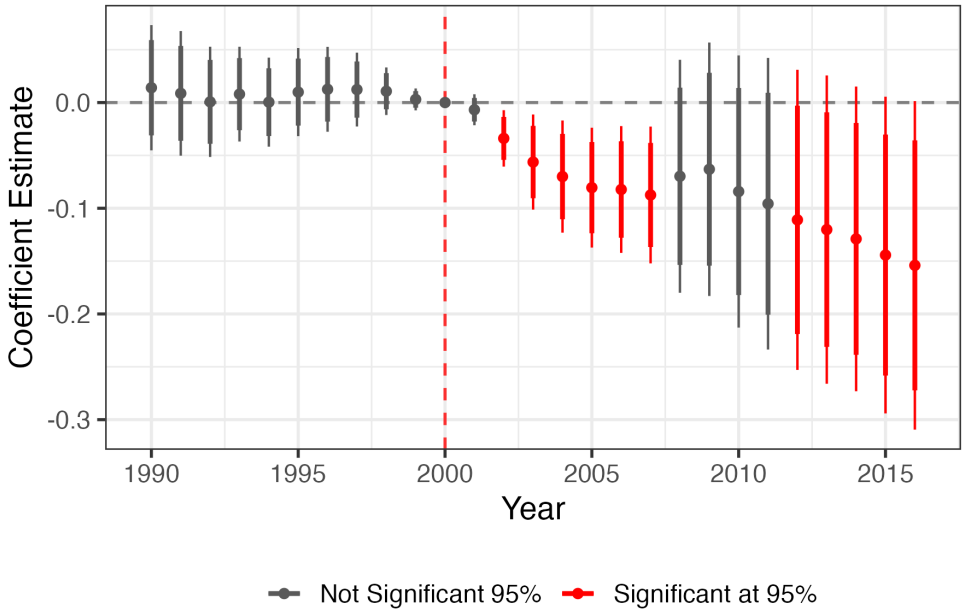


Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated triple difference-in-differences (DDD) from equation **??** that interacts year dummies with the NAFTA tariff gap and four groups of phaseout duration from equation **??**. Created by Author 3/4/26.

Table C1: Summary Statistics

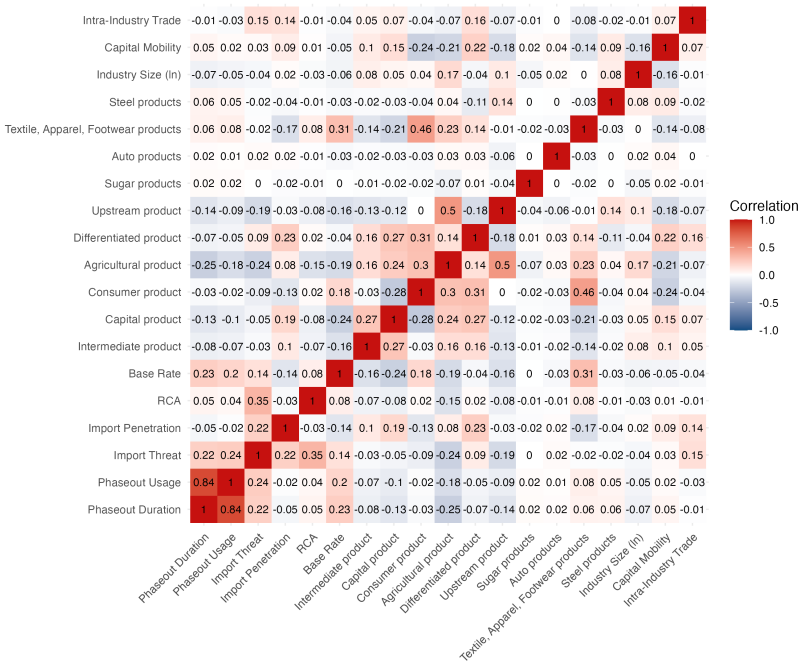
Statistic	N	Mean	St. Dev.	Min	Max
Phaseout Duration	332,657	1.198	3.192	0.000	30.000
Phaseout Usage	332,657	0.163	0.369	0	1
Excluded	348,972	0.007	0.086	0	1
Import Threat	306,855	0.000	1.000	−4.408	2.645
Import Penetration	325,521	0.101	0.207	0.000	3.850
RCA	344,030	2.428	8.836	0.000	1,082.227
Base Rate	348,450	0.000	1.000	−0.608	31.677
Intermediate product	348,507	0.097	0.296	0	1
Capital product	348,687	0.153	0.360	0	1
Consumer product	348,687	0.248	0.432	0	1
Agricultural product	348,687	0.800	0.400	0	1
Differentiated product	334,689	0.662	0.473	0	1
Upstream product	346,951	0.000	1.000	−2.078	1.907
Sugar products	348,972	0.005	0.068	0	1
Auto products	348,972	0.002	0.049	0	1
Tetile, Apparel, Footwear products	348,972	0.185	0.389	0	1
Steel products	348,972	0.011	0.103	0	1
Industry Size (ln)	330,434	−0.000	1.000	−6.886	3.006
Capital Mobility	323,445	0.000	1.000	−1.792	2.840
Intra-Industry Trade	184,021	0.084	0.208	0.000	1.000

Figure B12: NTR Gap on Industry Employment (CBP)



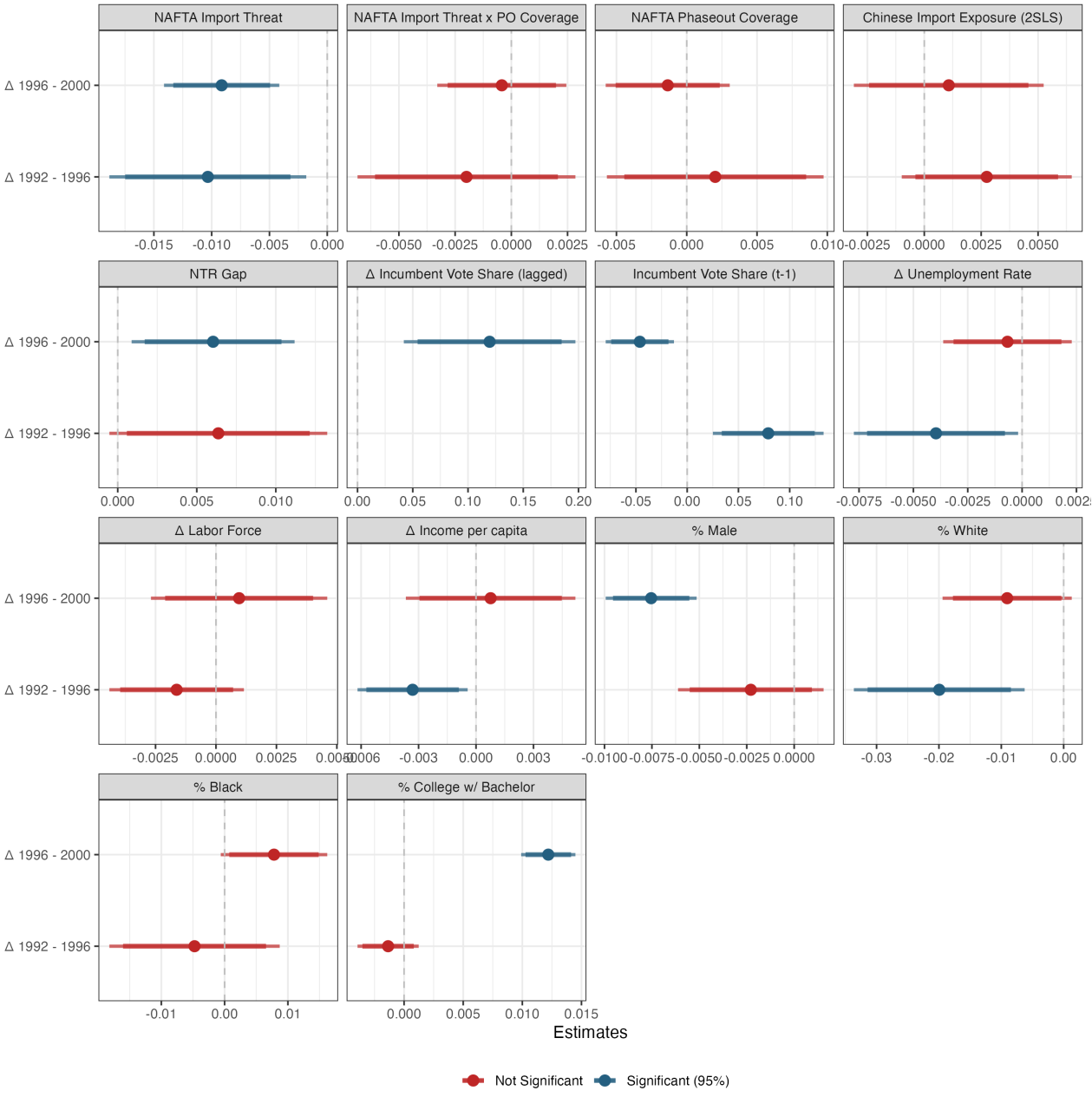
Note: Figure displays the coefficients and 99% and 95% confidence intervals (CI) from the estimated triple difference-in-differences (DDD) from equation **??**. The estimates capture the impact of granting PNTR status to China in 2000. Created by Author 3/4/25.

Figure C1: Correlation Heatmap Among Variables (Product Analysis)



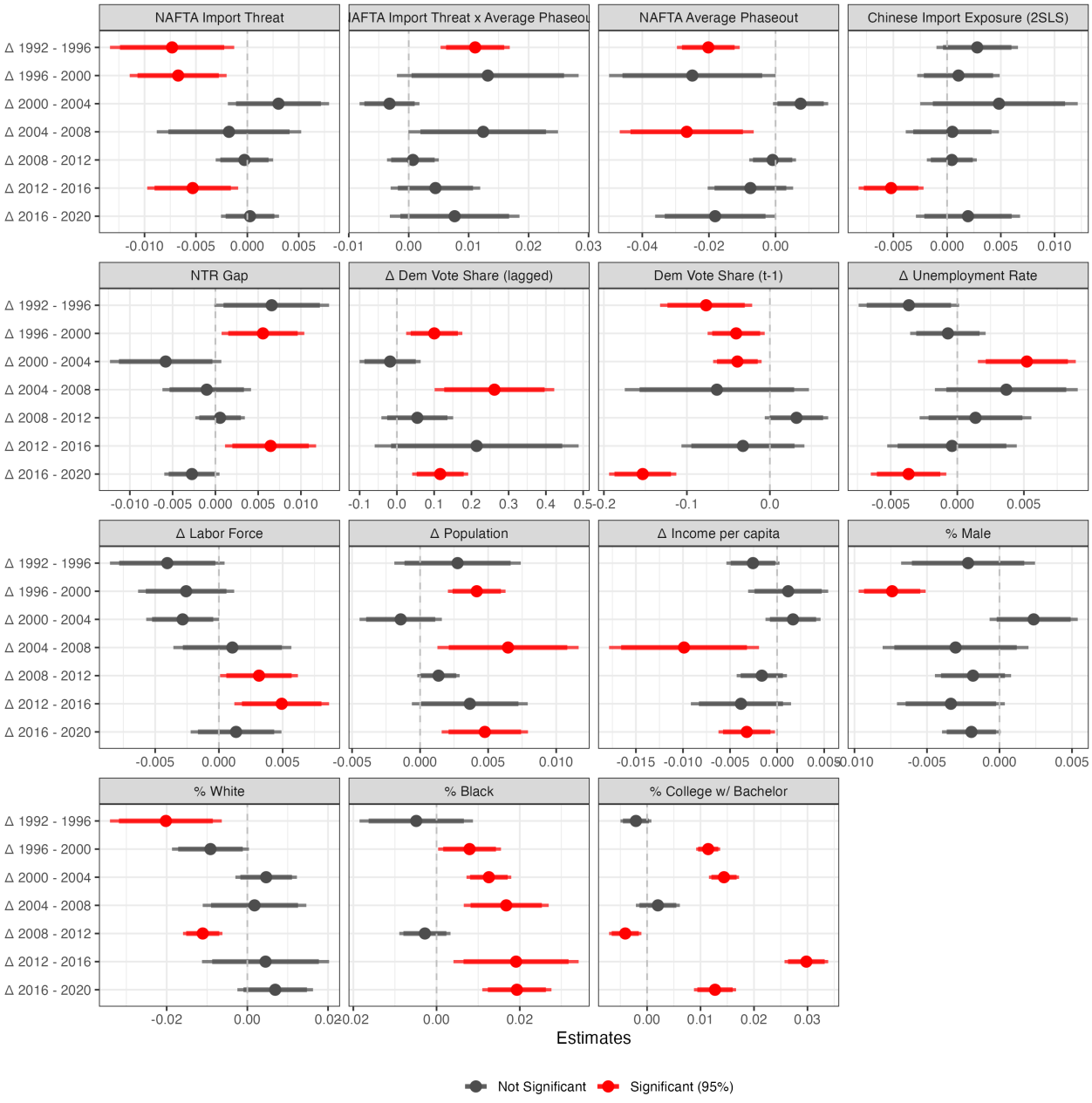
Note: Created by Author 3/10/25.

Figure B13: Changes in Incumbent Party Vote Share in Percentage Points



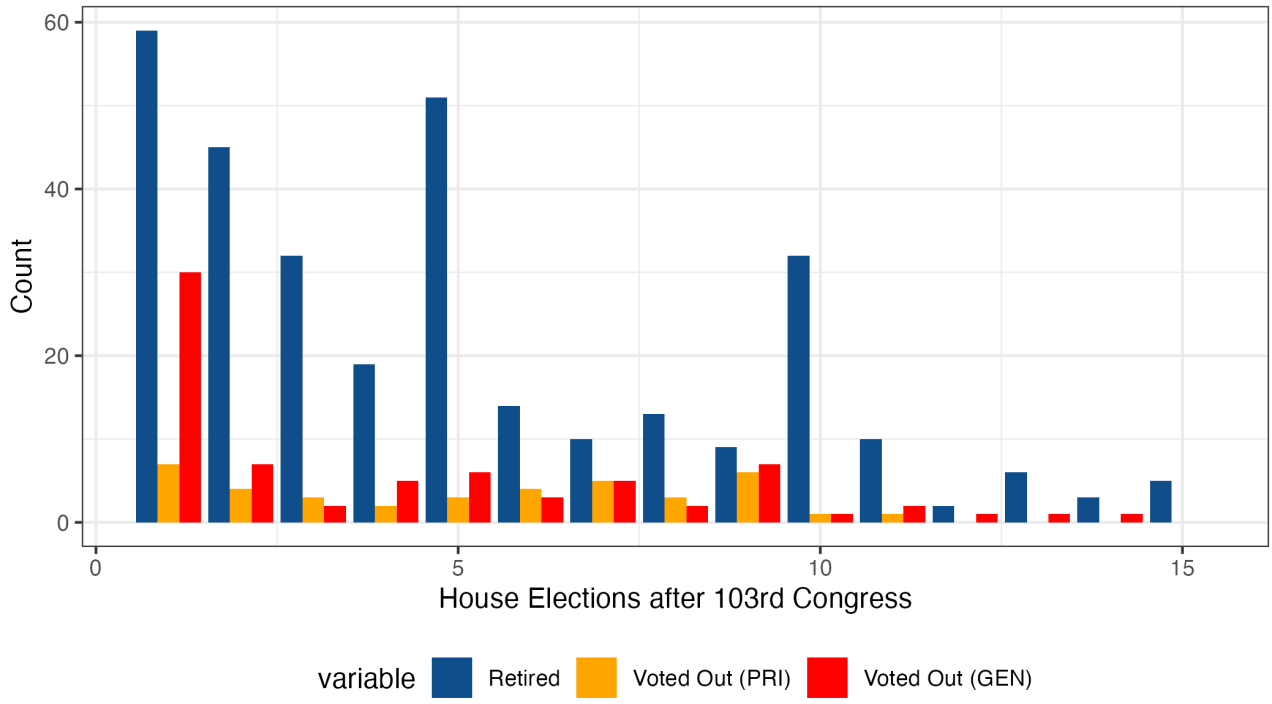
Note: See Table B1 for the regression table. Created by Author 9/26/25.

Figure B14: Changes in Democratic Two-Party Vote Share in Percentage Points



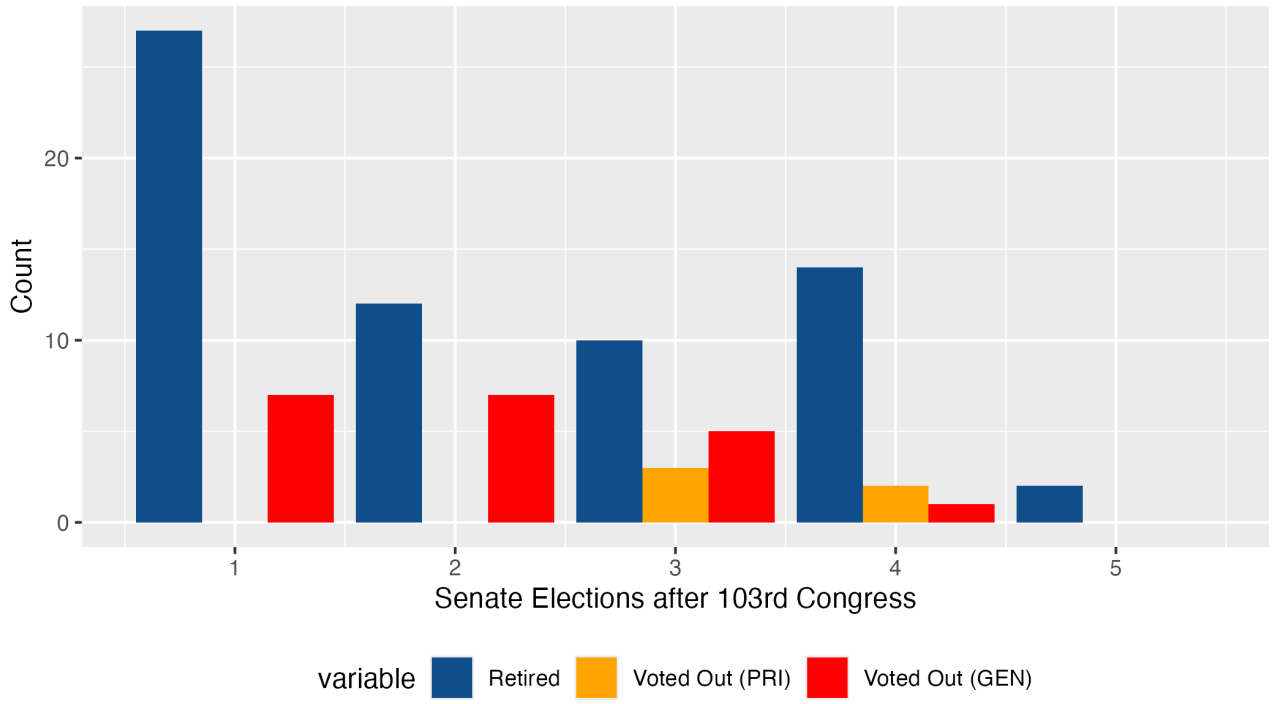
Note: See Table B2 for the regression table. Created by Author 8/25/25.

Figure B15: How House Incumbents Exited Office After NAFTA



Note: Created by Author 8/26/25.

Figure B16: How Senate Incumbents Exited Office After NAFTA



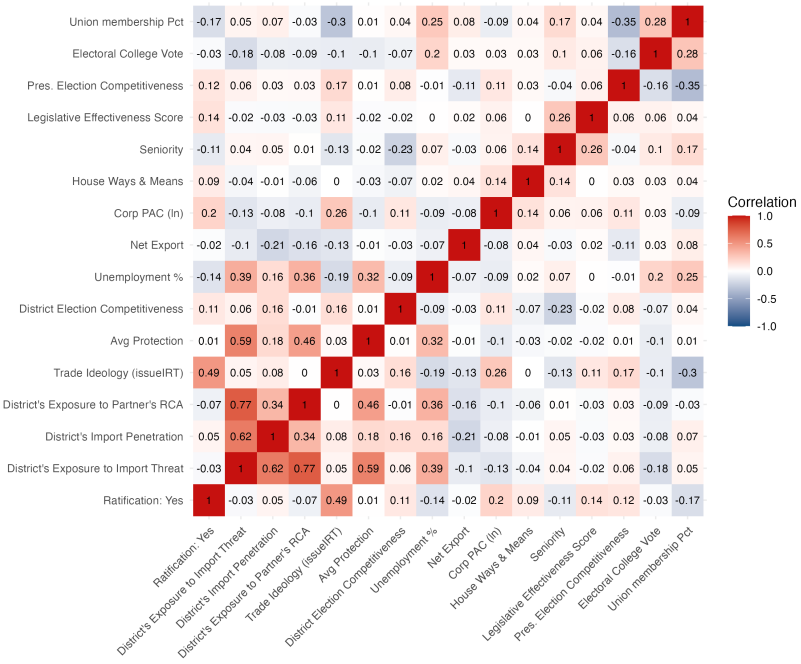
Note: Created by Author 9/24/25.

Table C2: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Ratification: Yes	5,097	0.646	0.478	0	1
District's Exposure to Import Threat	6,086	1.791	1.194	0.105	10.216
District's Exposure to Import Penetration	6,086	0.018	0.012	0.001	0.152
District's Exposure to Partner's RCA	6,086	0.135	0.132	0.003	1.403
Average Protection	6,086	−10.538	1.618	−15.217	−6.662
Issue IRT (Trade)	6,088	0.074	0.291	−0.828	0.920
Distance from Median (Issue IRT)	6,088	0.235	0.174	0.000	1.064
District Election Competitiveness	6,408	0.295	0.108	0.000	0.500
Unemployment Net Export	6,086	−0.043	0.051	−0.440	0.516
Corp PAC (ln)	6,018	12.117	1.164	0.000	15.936
House Ways and Means	6,282	0.091	0.287	0	1
Seniority	6,088	5.706	4.017	1	27
Legislative Effectiveness Score	6,088	1.005	1.516	0.000	18.686
Pres. Election Competitiveness	6,478	0.441	0.041	0.265	0.499
Electoral College Vote	6,478	20.824	14.897	3	55
Union membership Pct	6,478	0.128	0.063	0.016	0.287

[Figure C2 about here]

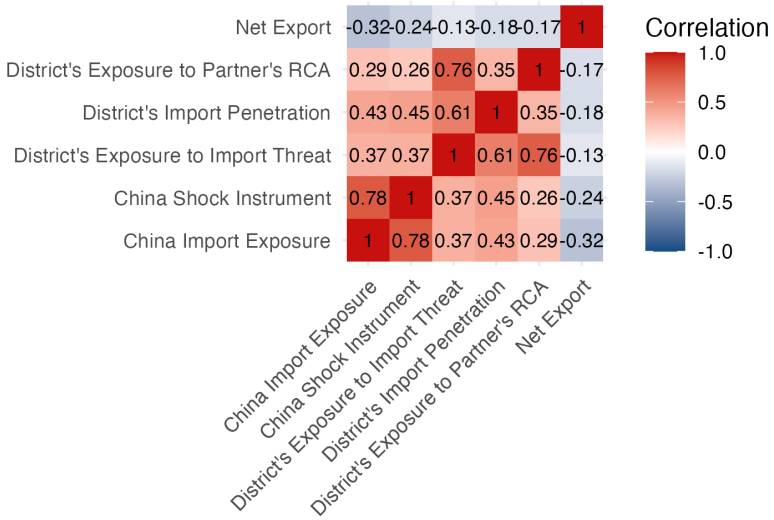
Figure C2: Correlation Heatmap Among Variables (Ratification Analysis)



Note: Created by Author 3/10/25.

[Figure C3 about here]

Figure C3: Convergence Validity (District): Pearson Correlation



Note: Created by Author 3/10/25.

C.1.2 Results

Table C3: Allocation of Protection (Product-level)

Dependent Variables:	Phaseout Duration			Phaseout Usage			Excluded		
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Poisson	Poisson	Poisson	Logit	Logit	Logit	Logit	Logit	Logit
Variables									
Import Threat	0.570***			0.892***			0.606***		
	(0.044)			(0.038)			(0.227)		
Import Penetration		0.014			0.165			-0.340***	
		(0.082)			(0.115)			(0.094)	
Base Rate	0.191***	0.237***	0.245***	0.493***	0.581***	0.615***	-0.515***	-0.326**	-0.878***
	(0.063)	(0.069)	(0.070)	(0.069)	(0.073)	(0.074)	(0.176)	(0.139)	(0.082)
Industry Size (ln)	-0.063***	-0.080***	-0.081***	-0.079***	-0.125***	-0.124***	-0.036*	-0.027*	-0.039**
	(0.014)	(0.015)	(0.015)	(0.023)	(0.024)	(0.024)	(0.019)	(0.015)	(0.017)
Capital Mobility	-0.038**	-0.050***	-0.050***	-0.034*	-0.054**	-0.054**	-0.045**	-0.033*	-0.048**
	(0.016)	(0.019)	(0.019)	(0.018)	(0.026)	(0.025)	(0.022)	(0.018)	(0.020)
Intra-Industry Trade	-0.061***	-0.055***	-0.054***	-0.124***	-0.098***	-0.103***	-0.116***	-0.136***	-0.132***
	(0.017)	(0.018)	(0.019)	(0.031)	(0.029)	(0.032)	(0.028)	(0.045)	(0.038)
RCA			-0.007			-0.050**			0.369***
			(0.005)			(0.023)			(0.030)
Fixed-effects									
Product 6d	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	131,020	136,818	138,981	130,721	136,615	138,801	20,179	20,296	20,296
Squared Correlation	0.197	0.185	0.183	0.177	0.136	0.134	0.033	0.034	0.041
Pseudo R^2	0.260	0.231	0.231	0.174	0.133	0.132	0.072	0.059	0.085
BIC	632,548.2	671,549.0	680,995.0	135,551.3	143,997.2	146,397.5	10,771.2	10,977.9	10,687.3
Dependent variable mean	1.58	1.52	1.51	0.204	0.197	0.197	0.079	0.079	0.079
AIC	610,154.7	649,056.3	658,053.0	113,818.3	122,097.5	123,999.8	10,446.8	10,653.2	10,362.6

Clustered (Product 6d) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: All covariates are standardized for comparability. Unit of observation is 8-digit HS product code for each trade partner in all 14 negotiated free trade agreements. TPP members that have concluded previous bilateral FTAs with the US are excluded (Australia, Canada, Chile, Mexico, Peru, and Singapore). KORUS 2011 is excluded from the sample. Standard errors are corrected for clustering at the NAICS 6 digit industry level. Sample is restricted to manufacturing sector (NAICS 31-33).

Table C4: Ratification and Deviation From Party-line Voting (Full)

Dependent Variables:	Ratification: Yes			Deviated					
		All		Republicans			Democrats		
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables									
District's Exposure to Import Threat	-0.817***			1.24***			-0.824***		
	(0.214)			(0.373)			(0.252)		
District's Import Penetration		0.348*			0.347			0.181	
		(0.185)			(0.607)			(0.163)	
District's Exposure to Partner's RCA			-0.447***			0.333**			-0.498***
			(0.123)			(0.169)			(0.140)
Trade Ideology (issueIRT)	-0.082	-0.048	-0.121	-0.857	-0.859*	-1.06**	-1.30***	-1.25***	-1.43***
	(0.146)	(0.139)	(0.148)	(0.521)	(0.509)	(0.531)	(0.177)	(0.170)	(0.178)
Total Protection	0.370***	0.208***	0.221***	0.059	0.334**	0.327**	0.928***	0.760***	0.764***
	(0.093)	(0.079)	(0.084)	(0.186)	(0.155)	(0.163)	(0.129)	(0.107)	(0.111)
District Election Competitiveness	-0.025	0.044	-0.003	-0.439	-0.349	-0.346	-0.597**	-0.405	-0.591**
	(0.200)	(0.195)	(0.196)	(0.484)	(0.442)	(0.455)	(0.271)	(0.275)	(0.280)
Net Export	-0.299*	-0.373**	-0.431**	-0.062	0.007	0.127	-0.102	-0.098	-0.197
	(0.178)	(0.169)	(0.176)	(0.354)	(0.340)	(0.341)	(0.237)	(0.215)	(0.247)
Unemployment %	0.166	-0.016	0.118	0.138	0.353	0.301	-0.068	-0.208	-0.124
	(0.155)	(0.141)	(0.151)	(0.362)	(0.332)	(0.338)	(0.176)	(0.170)	(0.178)
Corp PAC (ln)	-0.042	-0.028	-0.039	0.307	0.167	0.202	-0.347	-0.202	-0.299
	(0.158)	(0.147)	(0.149)	(0.326)	(0.332)	(0.330)	(0.220)	(0.154)	(0.189)
House Ways & Means	0.902*	0.966*	0.897*				0.985**	0.911*	0.901*
	(0.515)	(0.499)	(0.517)				(0.474)	(0.484)	(0.482)
Seniority	-0.231	-0.093	-0.168	0.496	0.170	0.231	-0.247	-0.048	-0.223
	(0.241)	(0.223)	(0.236)	(0.606)	(0.522)	(0.542)	(0.394)	(0.378)	(0.399)
Legislative Effectiveness Score	0.252	0.253*	0.261*	-0.237	-0.358	-0.347	0.085	0.022	0.059
	(0.164)	(0.144)	(0.157)	(0.262)	(0.242)	(0.233)	(0.127)	(0.124)	(0.128)
Pres. Election Competitiveness	-0.140	-0.101	-0.112	-0.242	-0.184	-0.199	-0.305	-0.237	-0.318
	(0.219)	(0.203)	(0.201)	(0.348)	(0.327)	(0.337)	(0.219)	(0.197)	(0.204)
Electoral College Vote	0.174	-0.316	0.576	-5.38	-5.06	-5.65	-9.46***	-9.88***	-9.09***
	(2.10)	(2.06)	(2.11)	(4.07)	(4.06)	(4.18)	(3.07)	(3.12)	(2.95)
Union membership Pct	-0.271	-1.52***	-0.641	-0.862	0.776	0.257	0.103	-1.42	-0.582
	(0.690)	(0.578)	(0.616)	(1.72)	(1.39)	(1.51)	(1.00)	(0.953)	(0.922)
Fixed-effects									
legislator	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fit statistics									
Observations	2,131	2,131	2,131	597	597	597	1,212	1,212	1,212
Squared Correlation	0.337	0.328	0.337	0.258	0.232	0.241	0.343	0.332	0.344
Pseudo R^2	0.275	0.267	0.276	0.215	0.194	0.203	0.294	0.284	0.292
BIC	4,064.3	4,088.2	4,062.9	1,122.3	1,137.3	1,131.0	2,469.1	2,485.3	2,472.8
Dependent variable mean	0.551	0.551	0.551	0.285	0.285	0.285	0.342	0.342	0.342

Clustered (legislator) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Note: Covariates are standardized for comparability. Unit of observation is House of Representative district-FTA for all 12 FTAs negotiated and ratified. US-Jordon FTA was ratified with a voice vote and TPP was never voted on. Standard errors are corrected for clustering at the legislator level. Models 9, 10, 11, and 12 omit US-Bahrain, US-Australia, and US-Peru where a majority of Democrats were supportive of ratification. See Table C4 for the full regression table.