The Strategic Use of Tariff Phaseouts in US Free Trade Agreements

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Abstract

Rules regarding the duration of tariff elimination are ubiquitous in modern free trade agreements (FTAs). Yet, phaseout durations are allocated differentially and selectively as extensive usage incurs opportunity costs for more exporters. How does the executive determine which products are politically sensitive? Beyond mitigating import competition, I argue that the sources of political sensitivities stem from the executive's interests in either electorally insulating themselves or facilitating FTA ratification. I test my argument using a novel dataset on tariff treatment at the tariff line level for all 13 FTAs ratified by the United States. I find that, on average, longer tariff phaseouts are allocated to products in industries concentrated in more electorally competitive states, especially for highly import-sensitive products. While the political motivation differs by agreement, the executive cannot address both at once. These findings demonstrate that the executives' particularistic preferences partly influence the structure of FTA tariff schedules. (148 words)

Key words: tariffs, trade agreements, US politics

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1 Introduction

Rules on eliminating tariffs, i.e., tariff staging or phaseouts, are ubiquitous in free-trade agreements (FTAs), yet little is understood about their political economy. Even when committing themselves to free trade, importing countries retain significant flexibility on when specific products become duty-free. About 26% of imported goods from the United States FTA partners are phased out instead of eliminated overnight, and the duration varies across products and trade partners. Even while product liberalization exclusion is the preferred method of protecting domestic industries, the principle of reciprocity disincentivizes exclusion and necessitates tariff phaseouts to balance the interests of import-competing and exporting producers.[2] Furthermore, reciprocity moderates the use and duration because a reciprocal exchange of phaseout would introduce opportunity costs for exporters, thereby necessitating the prioritization of lengthy stagings to placate import-competing producers. What determines such priority? How do countries, specifically the United States, design FTA tariff schedules to serve underlying political interests?

While the politics of tariff negotiation and reduction within the context of the GATT/WTO have widely been studied (See for example: Betz 2017; McKibben 2020; Gilligan 1997*a*;

[2]The focus on reciprocity does not negate the institutional constraints from GATT/WTO Article XXIV that mandate that any preferential arrangement eliminate substantially all trade. Rather, reciprocity directly constrains the strategic incentives for states to use exclusion.

Bailey, Goldstein, and Weingast 1997; Chisik 2003; Staiger 1994), multilateral trade liberalization has essentially been replaced by bilateral and regional free trade agreements (FTAs) in the 21st century (Baccini et al. 2019). Even while FTAs are primarily known for their behind-the-border regulations (Rodrik 2018; Horn, Mavroidis, and Sapir 2010; Ethier 1998; Baccini and Urpelainen 2014; Hafner-Burton 2005; Dür, Baccini, and Elsig 2014), their primary purpose is to eliminate "substantially all trade barrier" as mandated by the GATT Article XXIV (Van Lieshout 2021*a*).[3] The politics of tariff phaseouts has been understudied as most have focused on economic determinants (Baccini, Dür, and Elsig 2018; Anderer, Dür, and Lechner 2020; Kowalczyk and Davis 1998; Chase 2003) or interest group explanations (Van Lieshout 2021*a*,*b*). This paper offers a new robust explanation for the variation in phaseout duration by incorporating the executive's political interests in negotiation.

This paper argues that the executive and, by extension, negotiators strategically allocate longer phaseout duration to *politically sensitive* products. The sources of such sensitivity are the focus of this paper. I argue that the executives juggle between two potentially competing political interests: electoral insulation and ratification promotion. First, I hypothesize that products made by industries concentrating in electorally competitive states are phased out for longer. Because of the high vote-electoral college vote elasticity in the US, a majoritarian electoral system (Rogowski and Kayser 2002), Presidents are interested in maintaining or improving their (party's) vote margins in competitive states as small changes in vote counts can majorly affect the outcome of Presidential Elections. Alternatively, industries may become politically sensitive from their historical concentration in swing states, elevating their perceived importance; therefore, the targeting of phaseouts may be nothing more than path-dependent policymaking.

Second, executives may care about ratifying major trade policies like FTAs to shore up economic and strategic trade partners. Constrained by the reciprocal trade-off of tariff phaseouts and the opportunity costs imposed on exporters, negotiators may narrowly target phaseout duration to products made by industries that concentrate in the districts of key ratification voters in Congress. In doing so, negotiators must minimize the costs to exporters by targeting phaseouts where there is a relatively high marginal return in flipping votes. That is, Congress members who are the target of such targeting must be highly credible in their ratification promise and threat, which requires that they are neither staunchly pro- nor anti-trade, as the underlying interests of their districts shape either camp of legislators' trade policy preferences. The median legislator, then, is conceived to

[3]Van Lieshout (2021*a*) provides a fantastic historical account on the origin of tariff phaseouts as a flexibility mechanism under institutional constraints of GATT XXIV.

be more credible in promising to ratify the agreement if their domestic industries' tariffs are phased out for longer.

I test my argument using a highly disaggregated tariff line dataset on tariff treatment for all 13 ratified US FTAs. Products with longer phaseout duration are associated with industries concentrating in electorally competitive states, aligning more with the electoral insulation hypothesis. The incentive to insulate oneself electorally heightens as the partner poses a more significant import threat for particular products. When disaggregating the estimates by trade partners, the executive's electoral concern was highly salient for NAFTA, while ratification was salient for KORUS even though the threat of import is equally salient for both trade agreements. Broadly, I find evidence to suggest that there is a displacement effect; that is when one source of political sensitivity is addressed, it leaves the other unaddressed.

This paper makes several contributions. First, I theorize and test the extent to which electoral insulation or ratification promotion permeates into trade policymaking, which, to my knowledge, has not been closely examined nor possible due to the lack of highly disaggregated data. I find that despite the bureaucrats being tasked with negotiating FTAs, the political preferences of the executive shape negotiation priority and the resulting agreement. Such preferences, either electoral or ratification, vary by trade agreements. However, on average, the structure of FTA tariff schedules generally reflects the executive's interest in insulating himself from political backlash in electorally competitive states rather than promoting ratification as predicted by Putnam (1988)'s two-level game framework. My empirical results build upon a growing literature on the particularistic president and trade policies (Lowande, Jenkins, and Clarke 2018; Kriner and Reeves 2015*b*,*a*; Ma and McLaren 2018).[4]

Second, this article speaks to the growing literature on tariff phaseouts. In contrast to prior studies that focused on economic explanations (Baccini, Dür, and Elsig 2018; Anderer, Dür, and Lechner 2020; Kowalczyk and Davis 1998; Chase 2003), I demonstrate that the design of trade agreements' tariff schedules is *also* politically motivated as phasing out tariffs is a more disaggregated form of flexibility provision that can be targeted to politically salient and sensitive industries. Additionally, this article contributes to the established literature on flexibility and escape clauses in promoting cooperation (Rosendorff and Milner 2001; Kucik and Reinhardt 2008). As opposed to agreement-wide provisions, such as safeguards and other escape clauses, tariff staging opens up new opportunities for scholars to study how various domestic interests shape the design of agreements and

[4]Prior research on particularistic presidents and trade policy tend to focus on most-favored-nation rates and unilateral tariff hikes, not on the design of free-trade agreements.

how the final design shapes domestic preferences on trade agreements.

Third, this paper underscores the significance of the temporal dimension of tariff phaseouts in potentially mitigating both the economic and subsequent political consequences of committing to free trade. At the bare minimum, however, the electorally motivated targeting of phaseouts highlights the broad beliefs surrounding their supposed functions.[5] Given that the electoral consequences from trade are mainly due to its adverse outcomes, notably unemployment and offshoring (Jensen, Quinn, and Weymouth 2017; Margalit 2011; Autor et al. 2017, 2020), and considering that the length of tariff phaseouts can theoretically slow down industry adjustment, it follows that tariff phaseouts can delay the electoral consequences, although further research is needed.

Finally, this paper speaks to the growing *differentiated integration* literature (Schneider 2008; Schimmelfennig, Leuffen, and Rittberger 2015; Schimmelfennig 2016; Schimmelfennig, Leuffen, and De Vries 2023), which has broadly focused on the EU's enlargement and the phasing in of the benefits and freedoms for EU acceding countries. Similar to the argument initially made by Schneider (2008), the differentiated phasing out of products is responsive to political sensitivities and is an institutional tool to boost cooperation on trade and, in the EU's case — cooperation on enlargement. The more distinct and obvious difference in this article would be the granularity of the differentiated object of investigation.

I organize the article in the following manner: First, I provide a brief background on tariff phaseouts, demonstrate their variation across products and partners, and theorize their economic functions. Second, I formulate a model of trade negotiation to set up how prioritization of products is central to understanding how negotiators make cross-product trade-offs. I argue that reciprocity, a constant force in trade negotiation, forecloses states' incentive to exclude products from liberalization, thereby necessitating and moderating the use and duration of tariff phaseout to promote trade cooperation. Third, I theorize on the origins of political sensitivities in shaping negotiation priorities and, thus, the resulting tariff schedule. I then develop my empirical strategy and present my results.

[5] I am careful about making such a claim despite finding evidence, both quantitative and qualitative, to suggest that there is a broad range of demand for tariff phaseouts. This is because despite phaseouts being relatively common in US tariff schedules, some economic research has found little to no evidence of phaseouts' ability to differentially affect import growth in a predictable manner (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022).

2 Background on Tariff Phaseouts

Tariff phaseouts, otherwise known as tariff staging, prescribe *when* products are duty-free and *how* they are to be eliminated. In many free-trade agreements (FTAs), negotiators allocate "staging categories" to every product in the tariff schedule. These staging categories are then explained in a separate Annex chapter, specifying the duration and mode of reduction. Figure A3 displays a page of the US tariff schedule on Australian imports with staging categories "A", "B", "D", and "E". To understand the treatment of specific tariffs, Annex 2-B of the FTA describes the reduction timeline for each staging category, as shown in Figure A1. For example, goods with staging category A "shall be eliminated entirely ... and be duty-free on the date this Agreement enters into force." Category A indicates an *immediate elimination* of tariffs, contrary to the variety of stagings that phases out tariffs; for example, products with category B "shall be removed in equal annual stages ... and shall be duty-free, effective January 1 of year four" while category D "shall be duty-free ... year ten." Otherwise, products that are already duty-free are given category "E" which specifies such goods "shall continue to receive duty-free treatment."

Most agreements contain an Annex 2-B that defines staging categories used by all member states; however, each country may reserve special stagings for specific products, which are often defined in the "general note" section before the tariff schedule. For example, category "F" is not specified in Annex 2-B because Australia does not use it on imports from the US; instead, category "F" is specific to the United States, and Figure A2 specifies that products with staging category "F" "shall be removed in eighteen equal annual stages."

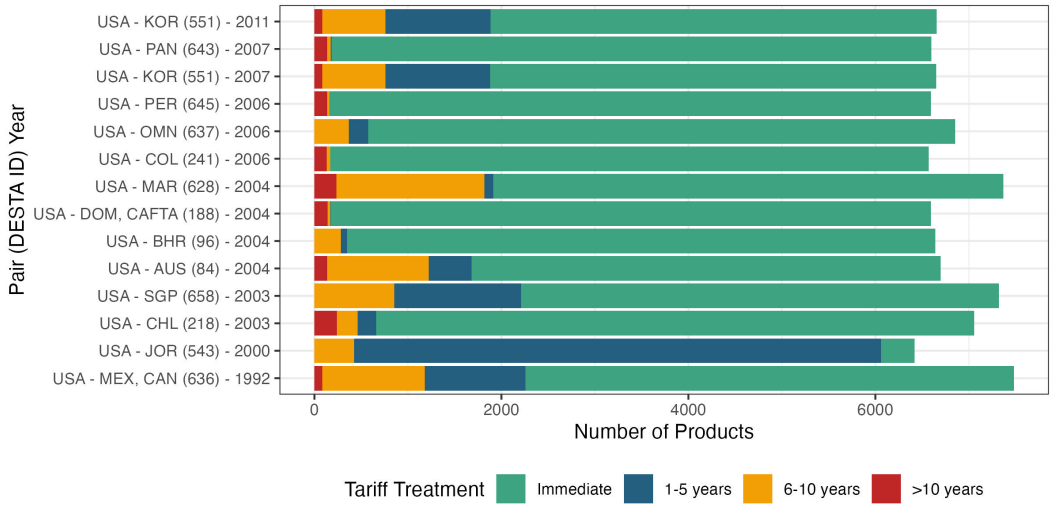
So far, the staging categories described above only specify a "linear phaseout," a simple removal in "equal annual stages." However, in rare cases, categories can be modulated with a "pause" before the phaseout — these are called "backloaded phaseout." Figure A4 illustrates the two types of tariff phaseout. Despite its rarity, backloaded phaseout may have economic implications, such as delaying investment to produce goods for export. A case example is the stalled production of light trucks in South Korea due to the prolonged backloaded phaseout treatment from the United States. While a worthy subject of investigation as backloaded phaseouts are arguably more protectionist, this paper focuses on the political determinants of the staging *duration*.

The duration of tariff phaseouts the US places on imports tends to be less or equal to 10 years, while some exceptional cases can receive up to 20 years. Paragraph 5(c) of GATT XXIV specifies that agreements to establish a free trade area must eliminate barriers on "substantially all trade" between member states, and the schedule must implement the

free-trade area within a "reasonable length of time." A reasonable length of time was later clarified not to exceed 10 years unless for "exceptional cases."[6] Van Lieshout (2021*a*) provides an exceptional account on the development of GATT XXIV and the promotion of trade agreement through the use of tariff phaseout. Figure 1 plots the number of products and their associated phaseout duration on imports from trade partners. While most products are eliminated overnight, about 26.5% of tariffs are phased out (Figure 2a).

[Figure 1 about here]

Figure 1: Number of Products and Phaseout Duration



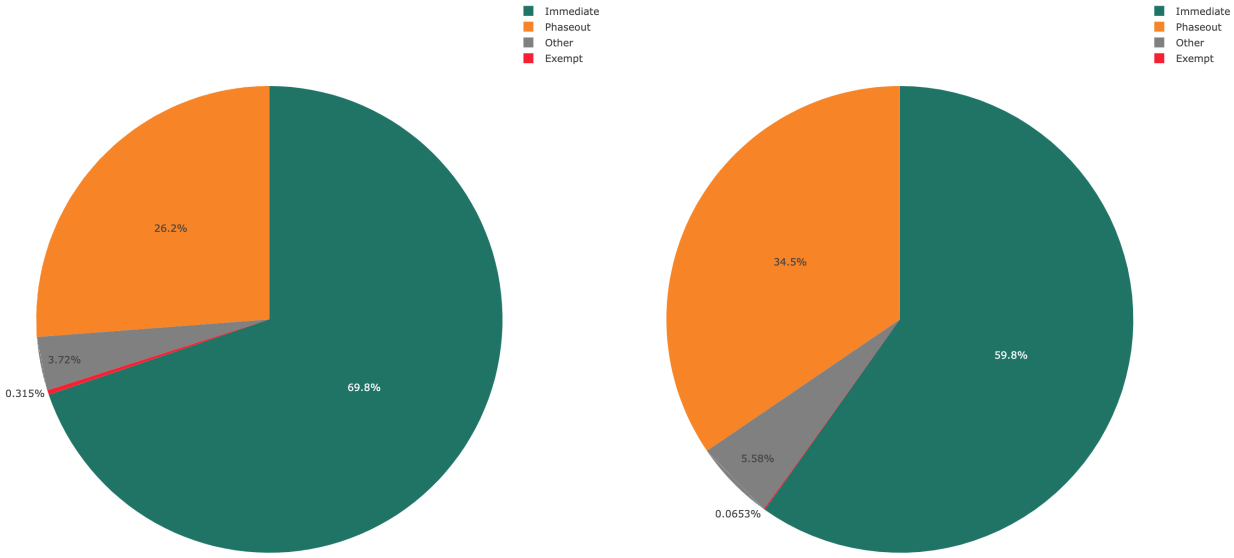
Note: Country pair is formatted as home-partner, where the home country (USA) sets tariff treatment toward the partner country. Created by Author 11/3/24.

Tariff phaseouts are not new and exclusive to FTAs, as they have long been an institution of compromise in domestic trade agreements and previous WTO rounds. The earliest example is the Compromise Tariff Act of 1833 in the United States that phased out products with tariff rates above 20% over nine years (Irwin 2020); this compromise was meant to diffuse objections from the South who demanded a reduction of import tariffs by threatening not to enforce tariffs and secede from the Union (See review in Irwin 2020). Other examples can be seen from previous GATT rounds, such as the Kennedy, Tokyo, and Uruguay rounds. In all three rounds of liberalization, all product bound rates were phased out over five or eight years (Kowalczyk and Davis 1998; Winham 1986; Stewart 1999).

[Figure 2 about here]

[6]GATT Article XXIV. Text can be accessed here: https://www.wto.org/english/tratop_e/region_e/region_art24_e.htm.

Figure 2: Proportion of Tariff Treatment in USA Trade Agreements After Omitting Already Duty-Free Category



(a) Product Codes

(b) Import Values

Note: Proportions are calculated by aggregating all product code lines (and 5-year rolling average import values before the agreement's signature date) across all USA free trade agreements. "Other" indicates that the product's tariff reduction is governed by other means, such as the WTO commitment. Created by Author on 11/8/24.

The main difference with FTAs is that the allocation and duration of phaseouts are seemingly *bespoke*. The use and duration of phaseouts are catered to specific sectors and sometimes specific products. Phaseouts are much more selective than umbrella coverage like the GATT/WTO Rounds and diverse in length of duration. Among the 26.2% of existing tariffs being phased out (Figure 2a), there are incredible variations in the duration among products within the same sector and across partners within the same industry.

Figure 3 shows the distribution of various categories of phaseout duration from the United States toward its trade partners to provide an idea of which products are phased out and for how long. Each tick represents a product code that is phased out over (1) 1-5 years, (2) 6-10 years, or (3) over 10 years. The concentration of phaseout allocation (the presence and cluster of ticks) differs across trade partners for obvious reasons, such as each partner having a different comparative advantage and thus posing different import threats. For example, Moroccan textile products (product codes between Chapters 50 and

63) and Mexican and Canadian iron and steel (Chapter 72) are phased out between 6-10 years to mitigate import shock.[7] While the same cluster of products may be phased out for two or more separate trade partners, their duration varies across partners. For example, the US phases out imports of animal products (Chapters 1-5) differentially across trade partners. Some receive relatively long duration (>10 years), such as Panama, Peru, and Colombia, while others are between 6-10 years, such as Mexico, Canada, Jordan, and Singapore. Among the product tariffs negotiated in the 13 US FTAs, while the phaseout of tariffs is only assigned to 26.2% of existing product tariffs, the associated import value of the phased-out products amounts to 34.5% of all import value (Figure 2b).[8]

The decision to phase out tariffs and modulate the duration is of economic and political importance. Negotiators often spend the majority of their bargaining on the staging of sensitive products. A former trade negotiator estimates they spent about 60% of the market access chapter negotiation on the tariff schedule (Interview 2, 4:48). Another former trade negotiator attests to the political implication of protracting the negotiation of the staging of highly sensitive products until the end of negotiation in order to signal their commitment to providing as much adjustment time to certain domestic producers (Interview 1, 26:38). Hence, while the structure of tariff schedules can be explained by purely economic sources (Baccini, Dür, and Elsig 2018; Anderer, Dür, and Lechner 2020; Chase 2003; Kowalczyk and Davis 1998), it is clear that tariff negotiations are deeply political due to the economic weight of a free-trade commitment.

[Figure 3 about here]

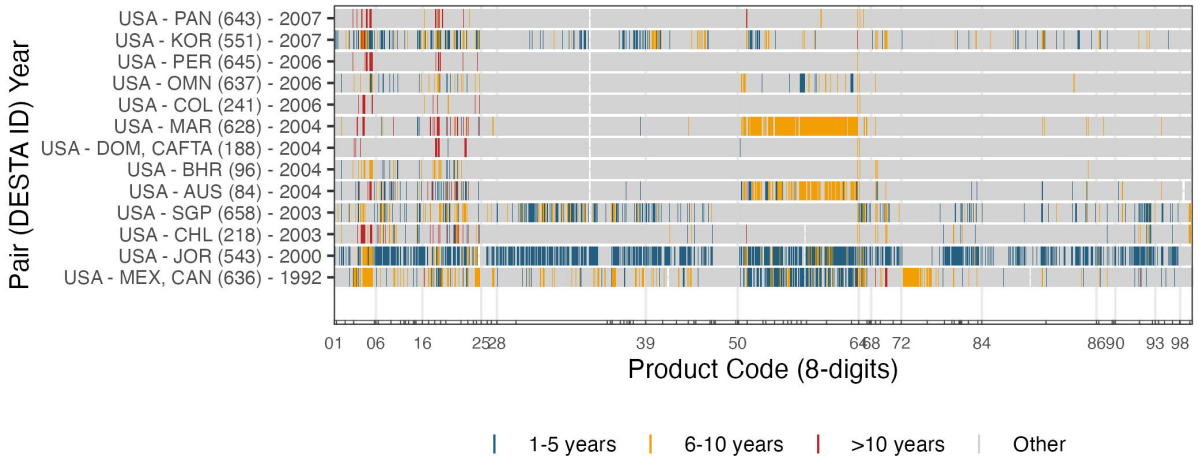
2.1 Economic Functions of Tariff Phaseouts

Tariff phaseout's bespoke nature suggests the existence of demand and supply, which implies that, at minimum, there is a belief in its effectiveness. While sectors may prefer liberalization exclusion (Interview 1, 32:28), experience with prior FTAs may lead them to ask for the longest possible staging (Interview 2, 16:39). Although producers demanding extended staging may believe in its effectiveness, economic research suggests that phaseouts do not differentially slow down the growth of imports (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022); that is, the growth of import of products with a three-year scheduled reduction follow similar trends with products treated with a ten-year phase-

[7] Figure A7 displays the four tariff treatment across US FTAs.

[8] It is important to note that the import value may be attenuated toward zero due to existing tariffs that disincentivize trade. Suppose countries are less likely to export into the US due to high existing tariffs. In that case, it is reasonable to conclude that such import value for phased-out products would be significantly higher than pre-existing trade.

Figure 3: Distribution of Tariff Phaseout Duration from USA FTAs Across 8-digit Product Codes



Note: Each tick 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 tick on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to https://hts.usitc.gov/ on the title of HS chapters. Created by Author 10/25/24.

out. If more extended staging does not delay the growth of imports, then what benefits do phasing out tariffs confer on domestic producers?

I argue that tariff phaseouts have three economic functions with implications on employment. I use employment as a benchmark due to its salience in regard to trade and politics (Margalit 2011; Autor et al. 2017, 2020; Ritchie and You 2021). First, phasing out tariffs maintains the relatively high price of imported goods compared to domestically made goods. While imported goods may enter the US market early in the staged reduction process (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022), it does not necessarily mean that domestic producers are immediately less competitive. Branding and reputation of existing domestic companies may mitigate consumer flocking to imported foreign brands, at least earlier on. Therefore, the longer the price of imported goods is maintained relatively higher than domestic-made goods, the better it is for domestic producers. This temporary "protection" can thus delay industry adjustments and resource reallocation, i.e., delaying the increase in industry unemployment.

Second, the maintenance of some level of tariffs early in the phase-out period can dampen firms' incentives to offshore jobs to the trade partners. The intuition is simple. Firms only offshore if the cost of producing abroad is lower than the cost of domestic production; labor and transportation costs, as well as tariffs, contribute to the firm's cost

calculation for offshoring. One may intuitively conclude that the longer it takes for tariffs to be reduced to a critical threshold, one that would make offshoring profitable relative to domestic production, the longer the delay on firms' decision to offshore.

Finally, the declining price of foreign goods and the certainty of when tariffs are reduced and fully eliminated can help motivate domestic producers who cannot simply offshore to innovate and differentiate their products. Where consumers prefer variety (Krugman 1980), domestic producers can adjust and remain viable if they have enough time to distinguish their offerings from foreign competitors.

To what extent do tariff phaseouts matter to producers? Using monthly trade data, Khan and Khederlarian (2021) find that importers slowed down imports in anticipation of a staged reduction in tariffs from NAFTA, followed by a liberalization bump after the tariff has been reduced. This study suggests that tariff phaseout rules provide certainty for producers and that they are aware of the annual reduction from the tariff schedule and react accordingly to take advantage of lower rates, despite the reported low-utilization rate of FTA preferential tariffs (Zeng and Li 2021).

Another example to exemplify the belief in tariff phaseouts' effectiveness is the renegotiated US-Korea (KORUS) FTA in 2011. In the 2007 version of KORUS, ten auto products were given immediate phaseout because the US received significant non-tariff measure concessions from South Korea in 2007 on autos (Interview 2, 34:43). However, the renegotiated version changed the phaseout duration and mode of reduction of the ten automobile products and won the endorsement of the United Auto Workers (UAW).[9] The UAW's endorsement deviated from the position of other large unions such as the AFL-CIO,[10] United Steel Workers,[11] and the Communications Workers of America[12] that opposed on labor, investment, and environmental grounds. The UAW statement (Figure A5) cited the slow phasing out of tariffs on automobile imports as one of the main reasons for its endorsement.[13] This case demonstrates the extent to which phasing out just ten automobile product tariffs can win political support from important interest groups, like the UAW, which has been shown to shape the trade attitudes of UAW union members (Kim and

[9]See the 2011 KORUS Side Letter that details the new staging rules for automobile products here https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/2011_Side_Letter.pdf

[10]https://apw-aba.org/content/afl-cio-and-other-union-statements-us-korea-free-trade-deal. Last accessed 9/19/23.

[11]https://www.usw.org/news/media-center/releases/2010/usw-opposes-passage-of-revised-us-korea-trade-agreemer Last accessed 9/19/23.

[12]https://cwa-union.org/news/entry/statement_by_the_communications_workers_of_america_on_the_proposed_korea-u. Last accessed on 9/19/23.

[13]https://ustr.gov/about-us/policy-offices/press-office/blog/2011/october/uaw-backs-korea-trade-agreement. Last accessed on 9/19/23.

Margalit 2017).

The KORUS example hints at the economic and political functions of tariff phaseouts. Despite imports exhibiting similar growth patterns across different tariff phaseout durations (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022), the fact tariff phaseouts are employed in a targeted manner and are endorsed by interest groups demonstrates that there is a belief of or theoretical justification for their usefulness.

Nevertheless, it is still puzzling as to why phaseouts are used at all. Why are sensitive products like corn and sugar phased out over 15 years in NAFTA rather than being excluded from liberalization? What explains the rarity of exclusion? (See Figure 2a) Why do interest groups, like the UAW, find tariff phaseouts acceptable when tariffs are bound to be eliminated in the end? What makes certain products and industries "sensitive?"

In the next sections, I build a simplified model of trade negotiation. I then argue that domestic producers typically demand liberalization exclusion for their products, and the importance of such industries — such as presence in electorally competitive states and districts of key Congressional members — shapes their "sensitiveness" and, thus, priority during bargaining. However, due to the reciprocal nature of negotiation, exclusion for one's import-competing producers begets exclusion that harms one's exporting producers. With the latter being institutionally empowered (Gilligan 1997*a*) with significant lobbying capabilities (Blanga-Gubbay, Conconi, and Parenti 2023), negotiators — playing a two-level game (Putnam 1988) — opt for tariff phaseouts to secure full trade liberalization for exporters with a temporary protection period for import-competing producers. Tariff phaseouts are, thus, an institution of compromise, allowing for a free-trade agreement not to be opposed by a critical threshold of the domestic audience that would otherwise spell its failure in ratification.

3 Model of Trade Negotiation

Let us assume two countries are bargaining over the design of each others' tariff schedules. Each side has two lists of products to *protect* at home and to *promote* liberalization abroad. The former refers to products made by import-competing producers, while the latter refers to products made by exporters. The ideal policy outcome for import-competing producers (and associated actors, such as unions and workers) is to exclude products from liberalization, i.e., maintaining the status quo. Conversely, exporters' ideal policy outcome would be to have free and quick access to the partner's market.

The lists are not necessarily physical but somewhat more akin to a mental list anal-

ogous to negotiators knowing the reservation points before entering the bargaining table. How negotiators know which industry is politically or economically sensitive is often black-boxed based on interviews, which is analytically unsatisfying. This informal theoretical exercise aims to establish pathways for how negotiators prioritize certain products in negotiations and why such lists are crucial for analyzing cross-product trade-offs in bargaining. For the sake of simplicity, this model focuses solely on cross-product trade-offs on tariff concessions; however, the logic may also apply more broadly to cross-issue trade-offs, such as tariff concessions for behind-the-border regulations (Interview 2, 34:43).

Without further details on how the lists are generated and rank-ordered, a point which I will return to in Section 4, having a list is crucial for understanding how negotiators make cross-product trade-offs and, therefore, the resulting pattern in tariff schedules. Let us first assume that the principle governing trade negotiation is reciprocity and that this principle is constant for all FTAs[14] This principle is instrumental for the liberalization of the global economy since the end of WWII — it is what allowed countries to liberalize their existing trade barriers in exchange for getting exporters greater access to foreign markets (Gilligan 1997*a*; Bailey, Goldstein, and Weingast 1997). Unlike the GATT and WTO, in which countries negotiate over bound rates, free-trade agreement shifts the bargaining focus onto the staging of tariff reduction (Interview 1 1:12).

I conceive the negotiation process to be sequential, with each side demanding a concession after the other.[15] A country may demand the ideal policy outcome for its import-competing producers — i.e., liberalization exclusion for a handful of products; however, its counterpart is then empowered to demand exclusion for its import-competing producers, preventing any further market access for exporters of the original country, and thereby generating opportunity costs for exporters. One may conceive that the counterpart would even strategically demand exclusion on products made by the most important exporter, forcing the original country to rethink whether they want to exclude products to begin with. Regardless of the strategy used by the trade partner in negotiation, if left unfettered, both countries would exclude their most important products from liberalization while generating opportunity costs for exporters as tariffs on their exports will not be reduced. In other words, *exclusion begets exclusion.*

[14]The assumption that reciprocity is constant, therefore driving a constant incentive to not use exclusion, is well founded based on interview evidence. For example, a former trade negotiator stated that the "principle [in negotiation] was no exclusion" because it begets exclusions. Furthermore, they added that "the things that our partners wanted to exclude were things that mattered to us" (Interview 2 7:37, 7:56).

[15]While this abstracts away from unique and often contextually-dependent negotiation strategies based on informant interviews, former negotiators confirm that such a model is appropriate (Interview 2, 37:21).

The resulting agreement would liberalize products that are neither important to the importer nor exporter, generate minimal gains for consumers and exporters, maintain producers' surpluses for sensitive sectors, and is non-compliant with the WTO as it is not technically an agreement that eliminates substantially all trade barriers. As a result, domestic support for the agreement's ratification would be weak. Knowing that about 95%-99% of FTA lobbying in the United States are from pro-trade interests and multinational corporations (Blanga-Gubbay, Conconi, and Parenti 2023), the resulting agreement in this scenario would secure minimal push for ratification from pro-trade interests. The extent to which an agreement can be ratified without exporting interests' support is uncertain and deserves further investigation. Even if the agreement is ratified, it would further maintain the status quo, begging the question of the purpose of negotiating a trade agreement that does not increase the aggregate welfare or benefit exporters. In sum, the unfettered use of exclusion would generate a suboptimal agreement with a relatively low likelihood of ratification.

This section demonstrates the counter-productive nature of liberalization exclusion. It answers the question posed in the previous section — why are certain products phased out rather than excluded from liberalization, and what explains the rarity of exclusion? I argue that while exclusion is a first-order priority instrument to protect import-competing producers, the principle of reciprocity effectively forestalls such demands and its implementation as it would lead to a suboptimal trade agreement that is nothing but a continuation of the status quo. The focus on reciprocity does not negate the potential institutional constraints from GATT/WTO Article XXIV. Rather, reciprocity directly constrains the strategic incentives for states to use exclusion. This reflects the reality of the USTR's negotiation principle of not utilizing exclusion to advance the interests of exporters in gaining market access (Interview 2, 7:37 - 7:56). Therefore, The principle of reciprocity disincentivizes the use of exclusion to expand exporters' interests. As argued in the following section, reciprocity effectively encourages the use of tariff phaseout on sensitive products to promote trade cooperation.

3.1 The Political Functions of Tariff Phaseout

How do negotiators minimize objection to FTAs from both exporters and import-competing producers when placating one means alienating the other with liberalization exclusion? I argue that tariff phaseouts allow states to commit to free trade while temporarily protecting import-competing producers. While these producers prefer and demand for product exclusion, reciprocity and GATT XXIV narrow negotiators' choice set to only committing to free trade. Negotiators may commit to free trade for specific products on day one (im-

mediate elimination) or commit to free trade with the condition that the reduction takes place over a negotiated duration. With these constraints, import-competing producers would rather receive a lengthy phaseout than have tariffs eliminated overnight. Recall that tariff phaseouts are theorized to maintain relatively higher prices on imports, delay firms' offshore incentives, and provide domestic producers time to innovate or adjust. Even though exchanging tariff phaseouts may generate *diminishing* opportunity costs for exporters as their access to the partner's market is delayed, it is better than exclusion, which would materialize the *full* opportunity costs for exporters.

Phasing out tariffs, therefore, provides an optimal trade-off for the import-competing sector and exporters under international and ratification constraints.[16] Essentially, phasing out tariffs allows negotiators to craft an agreement that not only liberalizes substantially all trade but also maximizes ratification chances by minimizing objections from stakeholders. The resulting agreement made possible by tariff phaseouts would (1) generate welfare gains for consumers, (2) increase surplus for domestic exporters slowly over time, and (3) minimize the immediate surplus losses for import-competing producers. As a result, (1) the eventual *losers* of the agreement may not oppose as strongly as they would under immediate tariff elimination and be able to adjust accordingly without future push to renege on the free-trade commitment. (2) The eventual *winners* would continue to lobby, thereby increasing the chances for ratification and ensuring the interest in keeping compliant with the agreement to achieve the eventual free trade. In short, tariff phaseouts promote cooperation both at the negotiation and enforcement level (Fearon 1998; Keohane 1984).

4 Whom to Target?

While reciprocity necessitates tariff phaseouts for states to commit to free trade, it also begets moderation on its usage and duration. Phasing out tariffs is inherently redistributive. The longer the staging is used on more product codes to benefit the domestic import-competing producers, the longer it would take for more domestic exporters to have full access to trade partners' markets. Essentially, their usage redistributes the upfront adjustment costs for the import-competing sector into opportunity costs for exporters. Limiting the use of phaseouts on imports means that the trade partners would similarly minimize their use of tariff phaseouts, benefiting domestic exporters and improving aggregate welfare at a quicker pace. Hence, reciprocity requires the allocation of tariff phaseout dura-

[16]The international constraint comes from GATT XXIV, and the ratification constraint materializes through the principle of reciprocity and the preferences of empowered exporters (Gilligan 1997*a*).

tion to be strategic as an over-use can harm exporters' interests.

Strategically allocating phaseout duration requires that the list be rank-ordered. While previous sections assumed this by arguing that negotiators "go down the list" in exchanging concessions, the source of such priority has not been theorized.

What shapes the priority of certain industries over others? The following section theorizes that while the creation of the list is predicated on formal consultation between negotiators and stakeholders, the priority is shaped by either electoral or ratification concerns of the executive. In short, I argue that products with longer phaseout durations result from the industry residing in electorally competitive states, districts of the median legislators in Congress, or districts of trade-related Congressional committee members.

4.1 Trade Promotion Authority and Consultation

The Trade Promotion Authority (TPA) or Fast Track Authority has been the cornerstone piece of legislation for trade liberalization since the introduction of the Reciprocal Trade Agreement Act (RTAA) (Bailey, Goldstein, and Weingast 1997). TPA essentially delegates negotiating power over to the executive under tight conditions. These conditions require that negotiators meet US negotiating objectives and fulfill notification and consultation requirements to qualify for an expedited procedure (Casey and Cimino-Isaacs 2024). The expedited procedure allows for FTA implementation bills to be automatically introduced and discharged from committees and approved with a simple majority in both chambers, as opposed to a two-thirds majority in the Senate.

Under TPA, negotiators are institutionally mandated to consult with stakeholders (i.e., business groups and unions). These consultations take place before and during negotiations. Three months before negotiation starts, the US Trade Representatives (USTR) places a request for comments in the Federal Register, where any stakeholder can submit comments, setting their preferences and expectations (Interview 2, 14:44). Theoretically, comments from stakeholders would be translated into an unordered list of products. Consultation also occurs during negotiation through "cleared advisors" (Interview 2, 15:47; Interview 1, 27:37). Cleared advisors provide a secured informational channel between negotiators and stakeholders as well as members of Congress (Interview 2, 15:25; Interview 1, 27:37).

Negotiators then rank-order the products based on the political importance of the products, which shapes their negotiation priority. In the context of exchanging phaseout duration, negotiators would request the most extended phaseout duration for high-

priority products, waning in duration as products become less important to lower the opportunity costs faced by exporters.

What is deemed politically important is often nebulous and muddled. In the context of FTAs, I theorize that the executive may be concerned with the FTA's electoral consequences or its ratification prospects. Here, I assume that there is perfect delegation between the executive (principal) and USTR negotiators (agents).[17] Hence, I propose three possible sources for how certain industries and, thus, products become politically important or "politically sensitive." They are (1) electorally competitive states, (2) districts of the median Congressional member, and (3) districts of trade-related Congressional committee members. Because the executive and legislative branches are held accountable by voters, one may conceive that industry employment concentration in one or all of the political geographies may help prioritize which products are allocated with tariff phaseout duration.[18]

4.2 Electoral Insulation

In contrast to the parochialism of Congress in setting trade policies (Lohmann and O'Halloran 1994), Presidents have been conventionally thought of as more universalistic (Lowande, Jenkins, and Clarke 2018; Kriner and Reeves 2015*b*,*a*; Nzelibe 2006). However, tariff structure has been found to be heavily biased in favor of industries located in swing states (Ma and McLaren 2018) and similarly for the allocation of trade protection (Lowande, Jenkins, and Clarke 2018; Kriner and Reeves 2015*a*). So, while a universalist president can negotiate a reciprocal trade agreement that benefits the aggregate welfare and exporters (Gilligan 1997*a*), the existence of tariff phaseouts provides opportunities for a particularistic president to shape negotiation priority in favor of import-competing industries concentrated in swing states.

While the electoral incentive for targeting longer phaseouts to industries located in swing states is cut-and-dry, one may ponder whether allocating lengthy phaseouts is due to electoral concerns or due to the salience of industries based on their perceived electoral importance. On the one hand, Presidents may want to minimize domestic backlash from signing FTAs, especially in swing states. In a majoritarian system such as the United

[17] The analysis of the principal-agent problem between the executive and negotiators is not the focus of this paper, although it is a fruitful research agenda.

[18] Industry employment is arguably conceptually appropriate because the distributional consequences of trade affect not only the immediate industry but also the local economy (Autor, Dorn, and Hanson 2013; Choi et al. 2024). With mounting evidence of trade's effect on voting patterns and political attitudes (Margalit 2011; Jensen, Quinn, and Weymouth 2017; Autor et al. 2020; Choi et al. 2024), a strategic approach to designing FTA tariff schedules would be to mitigate such harm to politically important industries.

States, where the winner takes all, the vote-seat, or the vote-electoral college vote elasticity, is rather high compared to a proportional representation system (Rogowski and Kayser 2002). Therefore, the adverse employment consequences from trade agreements, while potentially small, can lead to big changes in the electoral college vote counts in more competitive states. Import competition not only hurts the workers in affected industries directly but also spills over to the local economy (Autor, Dorn, and Hanson 2013). Furthermore, trade has been documented to directly affect elections (Margalit 2011; Che et al. 2016; Blanchard, Bown, and Chor 2019; Autor et al. 2020; Kim and Cha 2022; Lake and Nie 2022). If tariff phaseouts can delay the adverse employment consequences of trade, as explained above, then one may conclude that a particularistic president may *intentionally* phase out tariffs for industries that concentrate in more competitive states in order to insulate himself (and his party) from domestic backlash at the polls.

On the other hand, industries may receive longer phaseouts by virtue of their political salience as a function of being historically located in highly electorally competitive states. In contrast with the particularistic president argument, which implies an intention to target industries in swing states with longer phaseouts for political ends, this opposing view suggests that any correlation is primarily due to the industry's inherent political salience. Indeed, an interview with a former negotiator reveals that swing states are not part of the consideration when phasing out products (Interview 2, 31:26). However, this does not negate the sources of an industry's political salience being derived from the electoral competitiveness of the state they concentrate in.

For example, the steel industry has been salient in the American consciousness. This salience is reinforced by various protection by previous Presidents (Kriner and Reeves 2015*a*, p.51 and 56), as well as the concentration of integrated mills in Indiana, Michigan, Ohio, and Pennsylvania (Watson 2022). According to reported beliefs from George W. Bush's presidential campaign, Bill Clinton's failure to protect the domestic steel industry was crucial to the success of Bush's campaign (Kriner and Reeves 2015*a*, p.38). Consequently, the importance of the steel industry is primarily due to its presence in key swing states.

Hence, industries' salience can be derived from their political geographies, and it can shape negotiation priorities due to path-dependent policymaking. That is, if salient industries are not protected in trade negotiations, there would be substantial backlash as it is in opposition to prior, more favorable treatments. However, such backlash is essentially what the President prefers to insulate himself from. In the end, the consequences of not phasing out salient industries' products are the same regardless of the reasons and intentions behind doing so. Because the reasons why industries concentrating in swing

states may be targeted with longer phaseouts are so intertwined, it renders any causal claim untestable. Nevertheless, there are at least two reasons why we may see industries that concentrate in electorally competitive states receiving longer tariff phaseouts. Hence, the first hypothesis:

> **Hypothesis 1 (H1):** *On average, products belonging to industries concentrated in more electorally competitive states are phased out for a longer period.*

4.3 Ratification Promotion

Recall the aforementioned consultation mechanism, which mandates that negotiators consult with stakeholders and members of Congress before and during negotiation. While consultation is a legal requirement for the FTA to benefit from the expedited procedure, it is within the negotiators' interests to engage in it as it reveals domestic preferences. In order to design an agreement that appeals to the majority of congressional members for ratification, negotiators must have near-complete information on industry preferences and the preferences of members of Congress.

Let us assume that industries' preferences communicated through the Federal Register help negotiators compile an unordered list of products to protect. Because negotiators are constrained by time, resources, and concessions to exchange, they may rely on Members of Congress to set the priority of products. Members of Congress may condition their ratification vote on the protection or promotion of certain industries.

However, not every member of Congress is equal in their ratification threats and promises. Furthermore, in order for negotiators to maximize aggregate welfare and surpluses for exporters and maintain the margins for ratification, they must strategically target phaseout to industries of legislators that would provide a greater marginal return. Such return is the degree to which her ratification vote can be swayed.

I argue that the most credible members of Congress in their threat is the degree to which they are a median legislator on trade. Staunchly anti- or pro-trade legislators' threats are not as credible because of the inherent interest group undergirding their preferences on trade. That is, a legislator's stance on trade is directly shaped by support from local interest groups. For example, a labor-union-endorsed and supported legislator cannot credibly promise to ratify an agreement that would hurt her constituents, and neither can a pro-trade legislator whose constituency primarily is in the export sector threaten not to ratify an FTA. Therefore, the priority of certain products, and consequently the degree to which the tariffs are phased out, is thus informed by the industry's concentration

in the median legislator's districts. Hence, the second hypothesis:

> **Hypothesis 2 (H2):** *On average, products belonging to industries concentrated in districts of median legislators are phased out for a longer period.*

Even though trade agreement implementation bills cannot be politically held up by committees, such as House Ways and Means and Senate Finance, it is imperative to negotiators that the committee votes favorably prior to entering the floor votes (Interview 2, 48:49). Therefore, a final source of political sensitivities of products may be from industries concentrated in the districts of trade-related committee members. Hence, the final hypothesis:

> **Hypothesis 3 (H3):** *On average, products belonging to industries concentrated in districts of legislators in trade-related committees are phased out for a longer period.*

4.4 Intensity of Import Competition

The current discussion thus far assumes that lobbying for product protection in FTAs is constant. This assumption is reasonable because lobbying for protection via Comments on USTR Public Notices is virtually costless compared to buying access to legislators.[19] With a relatively low barrier to lobbying USTR on the Public Register, producers do not face problems of collective action often characterized by the lobbying literature (Kim 2017; Gilligan 1997*b*), as they tend to assume differential costs to lobbying. As such, anyone can submit comments and requests for carve-outs in trade negotiations.

If anyone can submit comments, we may expect that producers with the most to lose would be more incentivized to lobby negotiators. On phasing out tariffs on imports, producers of highly import-sensitive products should be much more likely to lobby. Coupled with the aforementioned political sensitivities of certain industries, such sensitivities' effect on phaseout duration would be heightened with a higher level of import threat posed by the trade partner.

Hence, I argue that the potential intensity in competition posed by the trade partner would yield not only an independent effect on tariff phaseout duration but also an interactive effect on industry employment concentration in (1) swing states, (2) districts of the median legislators and of (3) districts of trade-related Congressional committee legislators. Hence, the final two hypotheses.

[19] While there were prior works demonstrating a link between PAC donation and phaseout duration (Hakobyan, Kohl, and Lake 2020), which is controlled for by Union PAC donation in the main results, the link between actual lobbying from industries with legislators and the resulting tariff schedule is muddy and opaque at best as such interactions are often unobservable.

Hypothesis 4 (H4): *On average, products that would exert intense import competition are phased out for a longer period.*

Hypothesis 5 (H5): *The magnitude of H1, H2, and H3 should increase as the potential intensity of import competition increases.*

5 Data and Empirical Strategy

5.1 Tariff Phaseout Duration

To test my argument, I make use of FTARIFF, a novel dataset on FTA tariff treatment at a highly disaggregated product level on all 13 ratified US free trade agreements. FTARIFF is a broader data project in collaboration with Elizabeth Van Lieshout[20] that includes tariff treatment for the observable universe of bilateral FTAs.[21]

FTARIFF contains information on the tariff treatment from the United States toward imports from trade partners and also from the trade partner toward the United States exports. For this paper, I will be using the United States phaseout duration toward imports from its trade partners as the main dependent variable at the original 8-digit product code. I use the original 8-digit reported in US tariff schedules to conserve the sample size and the specific treatment for each product.[22] Either goal would not be achieved if I aggregate the product codes to the internationally harmonized 6-digit HS codes.[23] The phaseout duration is a continuous variable that ranges from 0 (immediate elimination) to 20 years.[24] Figure 1 plots the count of products for the associated phaseout duration category on imports from trade partners.

[20] Stanford Political Science Ph.D., currently a trade policy analyst at the OECD.

[21] By "observable universe of FTAs" I mean FTAs that are accessible. Some FTAs are recorded in DESTA (Dür, Baccini, and Elsig 2014), but cannot be found online in PDF format to be digitized into useable data-format.

[22] Digitized NAFTA tariff data is taken from Besedes, Kohl, and Lake (2020)'s replication data.

[23] In order to concord between product and industries, I use Liao et al.'s 2020 `Concordance` package to translate 6-digits HS codes (2002 revision) to 6-digits NAICS (2012 revision). My independent variables are constructed using Eckert et al.'s 2020 County Business Pattern data, where they harmonized industry codes to the 2012 revision of the NAICS.

[24] While the duration is usually whole numbers in years (e.g., 1, 2, 3), there are special cases where product codes have more than one tariff treatment, in which the average duration is taken, creating rational numbers (e.g., 2.34, 5.21).

5.2 Industry's Concentration in Electorally Competitive States

To test H1, I operationalize the degree to which an industry is concentrated in electorally competitive states by weighing the share of industry employment in each state by its electoral competitiveness. The foundation of this measurement is established in Equation 1, where $\frac{E_{sk\tau}}{E_{k\tau}}$ captures the five-year average (τ) of an industry k employment in state s relative to five-year average total industry employment. I use Eckert et al.'s (2020) NAICS-harmonized version of the County Business Pattern for employment numbers. The index s denotes states, k denotes industries, and τ refers to the year t in which the employment values are smoothed over the preceding five years.

$$\Psi_{kt} = \sum_{s=1}^{S} \left(\frac{E_{sk\tau}}{E_{k\tau}} \times \psi_{st} \right) \tag{1}$$

ψ_{st} represents the electoral competitiveness of state s in year t. The electoral competitiveness is measured to be how close to 50% the President's party received for state s in the past three elections. Equation 2 outlines how $\psi_{st}^{CompetitiveMargins}$ is constructed. Here, V_{st} represents the three-election average of the two-party vote share of the sitting president in state s during term t. Using a three-election average helps smooth out short-term fluctuations. The competitiveness measure is calculated by first finding the absolute difference from 50%. A state with a close election would have a smaller number. I then flip the direction by subtracting the absolute difference from 50% so that more competitive states have higher values, closer to 50%.

$$\psi_{st}^{CompetitiveMargins} = 0.50 - (|V_{st} - 0.50|) \tag{2}$$

5.3 Industry's Concentration in Districts of Median Legislators

To test H2, I operationalize the industry's concentration in districts of median legislators (Γ_{kt}) as a function of industry k employment share in district d weighted by median legislator's district dummy γ_{dt}. Essentially, I'm honing in on the industry employment share in districts of median legislators.

$$\Gamma_{kt} = \sum_{d=1}^{D} \left(\frac{E_{dk\tau}}{E_{k\tau}} \times \gamma_{dt} \right) \tag{3}$$

To construct the binary γ_{dt}, I rely on the average rate at which a legislator votes yes on extending the Trade Promotion Authority (TPA) or Fast Track Authority. Voting in favor

of TPA should proxy a legislator's propensity toward voting in favor of free-trade agreements, as the bill essentially delegates or continues to delegate trade-making authority to the executive. Furthermore, TPA votes are "the hardest vote there is" (Interview 2, 44:18), according to a former trade negotiator. This is because voting for TPA signals a legislator's position on free trade, which is sensitive information to publicly declare because scholarship has emphasized the political significance and consequence of pro-trade votes (See for example Feigenbaum and Hall 2015). While there may still be a gap between the anti-TPA vote and the eventual pro-FTA ratification vote, voting in favor of TPA should roughly approximate the legislator's pro-trade attitude in principle.

I hand coded which trade-related roll-call votes were about TPA and created the average pro-TPA rate for each legislator.[25] Due to the nature of TPA being renewed every couple of years, the coverage of this variable is imperfect as some legislators may never have the opportunity to vote to extend TPA. Furthermore, while some legislators may vote once for TPA, some have a more extensive voting history. While this may pose a challenge, I argue that it is reflective of negotiators' perception of each representative's propensity for free trade, thus gauging who the median voter is in ratification. Based on my interviews with negotiators, their gauge relies on previous voting history (Interview 1, 15:49); therefore, negotiators are more uncertain of junior representatives' stance on trade as they have fewer opportunities to reveal their preferences through roll call votes. In total, I have the "revealed" preferences of about 58% of Representatives and 75% of Senators through their TPA votes. The remaining legislators without TPA vote records are automatically considered to be the "median" to align closer to the idea of uncertainty on their ratification vote; this means that the middle one-third of legislators with revealed preferences are coded as median (i.e., 1) and the remaining legislators without voting record on TPA are also coded as median.

This measure is consistent with the theory. I argued that the median legislator, those with a potentially higher rate of vote conversion, is neither staunchly anti- nor pro-trade. Therefore, taking the median one-third of legislators should capture the subgroup of legislators whose votes on ratification are malleable.

Section A.2.6 demonstrates the robustness in my main results with alternative coding of median legislators using DW-NOMINATE ideal point estimates.

[25] Using roll call data from VoteView, I can only identify trade-related bills using the "tariff" issue code up until October 2013.

5.4 Industry's Importance to Districts of Trade Committee Members

To test H3, I follow the previous section's operationalization. Instead of the median legislator dummy to subset the share of industry employment concentrated in key ratifying voters, I subset them based on whether their Representative or Senator is in the Ways and Means or Finance Committee, respectively. Data on whether a district or state is represented by a Representative or Senator in either committee comes from Stewart III and Woon (2024).[26]

5.5 Import Threat

To test H4 and H5, the degree to which the import of specific products from an FTA partner is viewed as "threatening" depends on two components. First, if the product tariff were to be eliminated, what would be the increase in demand for such a product? Even if import demand elasticity is high, it doesn't necessarily imply that the partner would be able to fulfill increased demands. Hence, a trade partner would pose an import threat for a particular product if the demand change from eliminating tariff is high and if the partner has already been exporting said product to a high degree.

Equation 4 outlines how *Import Threat* is constructed as a function of demand change when the tariff is eliminated $(1 - (1 + BaseRate^{HS6d})^{-\sigma^{HS2d}})$ and partner's capability of exporting product to the world except for the United States in the three years leading up to the agreement $Export_{ji\tau}^{i \neq USA}$. I specify the partner's export number to exclude their export into the United States to avoid any endogeneity because existing barriers disincentivize trade. Here, τ specifies that the export numbers are rolling averages of three years prior to the agreement's signing.[27] Export data is aggregated to the 4-digits to minimize missing data at the 6-digits from 16% to 5%.

$$ImportThreat_{jpt}^{HS6d} = log(Export_{ji\tau, i \neq USA}^{HS4d} \times (1 - (1 + BaseRate^{HS6d})^{-\sigma^{HS2d}})) \quad (4)$$

The demand change is characterized as the inverse of the demand level when prices are higher due to tariffs. First, $(1 + BaseRate^{HS6d})$ specifies the percentage change in price for imports. For example, a 25% tariff on light trucks would increase the price

[26] I hand-coded the committee membership of legislator for the 102nd Congress (for NAFTA) due to missing data from Stewart III and Woon (2024).

[27] There are some inconsistencies in the number of years used as rolling averages in this paper. Three years is used due to differing product codes available from UNComTrade for earlier agreements. For example, the export data from Mexico and Canada prior to 1992 at the 6-digit HS rev.0 only go back to 1990.

of said goods by 1.25 times. σ^{HS2d} is the import demand elasticity. Put together $(1 + BaseRate^{HS6d})^{-\sigma^{HS2d}}$ computes the demand level when there's a tariff in place; hence, price change with high import demand elasticity would lead to a greater reduction in demand levels.

For example, the demand for imported light trucks with 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.[28] If demand for light trucks is highly elastic, the elimination of tariffs would increase demand by 59%, as captured by the difference with 1.

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.

5.6 Controls

I employ a mix of product and industry-level characteristics to control for any confounders. First, I hold the *Base Rate* constant to control for the documented relationship where products with higher base rates receive longer tariff phaseout (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 UNCTAD TRAINS database.[29]

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.[30] 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.[31] Product differentiation and upstreamness are all drawn from Liao et al.'s (2020)

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

[29] To learn more about how UNCTAD convert 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.

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

[31] End use classification codebook is accessible here https://www.census.gov/foreign-trade/reference/

`concordance` R package. Product differentiation is drawn from Rauch (1999)'s classification, 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.

Industry Size is simply the natural log of employment number for industry k. Industry employment number is drawn from Eckert et al. (2020)'s NAICS-harmonized version of the County Business Pattern.[32]

Fourth, *Capital Mobility* is measured using Liquidation Recovery Rate for property, plant, and equipment (PPE) from Kermani and Ma (2023)'s database of Asset Specificity.[33] 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 that there is little intra-industry trade, while a high value would indicate 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. I group CAFTA and Dominican Republic together as a trade bloc, as well as Mexico and Canada when dealing with plurilateral agreement.[34]

Finally, I account for unions' ability to leverage their "vote" and "money" in extracting concessions in trade agreements via legislators. As demonstrated by UAW's endorsement of KORUS, unions may lobby Congressional members and Senators to push for more extensive phaseout duration for relevant industries that concentrate in local districts and states. Hence, we should see that industry concentration in districts and states with greater union power, measured through PAC donations or union membership, is associated with longer phaseouts for relevant products. Following Equation 3, I weigh in-

codes/enduse/imeumstr.txt. Last accessed 10/26/24.

[32]The data is accessible at http://www.fpeckert.me/cbp/.

[33]Data accessible through https://assetspecificity.com/. Last accessed 8/6/24

[34]Unlike other continuous control variables, I do not standardize IIT as it is bound between 0 and 1.

dustry employment in each district or state by the logged union PAC donation averaged over three election cycles or union membership by population ratio. Data on Union PAC donation comes from the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica 2023).[35] Union membership data at the state level is from Hirsch, MacPherson, and Even (2024)'s *Unionstats*, while district-level union membership is taken from Becher, Stegmueller, and Käppner (2018).

Table 1 displays the summary statistics for all variables discussed above. Additionally, *Phaseout Usage* and *Excluded* are binary variables created for robustness checks in Table A2 and A3, respectively. Other variables not discussed in this section will be touched upon in the empirical results section.

5.7 Research Design

I test the extent to which a longer phaseout duration is allocated to products that are responsive to economic and political sensitivities with a cross-industry estimation for each FTA. As suggested by the theory, the allocation of tariff phaseouts is expected to be strategic and targeted to serve the executive's ratification and/or electoral interests. Hence, we should see that industries with higher employment shares in competitive states or districts of key voters in Congress receive longer tariff phaseouts compared to industries with lower employment shares within each of the FTA contexts.

Equation 5 essentially runs a cross-industry regression within each FTA, per the FTA fixed effects γ_j, and reports the estimates capturing the average effect of each variable across FTAs. I also use sector fixed effects as defined by HTS's "sections," denoted by $\delta_k^{HTSSector}$.[36] P_{pj}^{HS8d} denotes the phaseout duration at the original 8-digit product code, or "tariff line" level. $\beta_1 X_{kt}^{NAICS6d}$ denotes the coefficient on the main industry concentration measures, which are constructed at the 6-digit NAICS, similar to the set of industry-level controls in $\beta_2 X_{kt}^{NAICS6d}$. Finally, $\beta_3 X_{pt}^{HS6d}$ denotes the set of product-level control variables at the 6-digit HS. Finally, I cluster my standard errors by 6-digit NAICS to account for any correlation in the errors among products made by the industry.

Due to missing data for *Capital Mobility* that essentially provide no variation for the agricultural, forestry, fishing and hunting (NAICS 11) and mining, quarrying, and oil and gas extraction (NAICS 21) industries, the estimates are only informative of manufacturing industries (NAICS 31-33).

[35] While it may also be reasonable to control for Corporate PAC donations, it is highly collinear with Union PAC donation.

[36] See https://hts.usitc.gov/ on sector grouping of two-digit chapters.

Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Phaseout Duration	139,496	1.348	3.121	0.000	20.000
Phaseout Usage	139,496	0.213	0.409	0	1
Excluded	148,059	0.007	0.081	0	1
Competitive Margins	139,482	0.000	1.000	−9.322	3.938
Import Threat	128,043	−0.000	1.000	−4.398	2.870
Median TPA (HoR)	139,482	−0.000	1.000	−4.849	4.036
Union PAC (HoR)	139,482	−0.000	1.000	−12.309	5.027
Ways and Means Committee (HoR)	139,482	0.000	1.000	−2.355	18.453
Median TPA (Senate)	139,482	0.000	1.000	−1.595	3.992
Union PAC (Senate)	139,482	0.000	1.000	−3.781	2.872
Finance Committee (Senate)	139,482	−0.000	1.000	−2.613	6.408
Rust Belt$_s$	139,482	−0.000	1.000	−2.127	4.354
Sun Belt$_s$	139,482	−0.000	1.000	−2.543	3.214
MFN Base Rate	147,473	−0.000	1.000	−0.595	31.811
Intermediate Products	147,440	0.099	0.299	0	1
Industry Size (ln)	139,482	−0.000	1.000	−7.091	2.912
Capital Mobility	136,646	0.000	1.000	−1.804	2.830
Agricultural Products	147,561	0.798	0.401	0	1
Capital Products	147,561	0.149	0.356	0	1
Consumer Products	147,561	0.239	0.427	0	1
Upstreamness	146,734	0.000	1.000	−2.077	1.889
Differentiated Goods	141,447	0.648	0.478	0	1
Union Membership Rate (CD)	130,077	−0.000	1.000	−2.370	6.100
Union Membership Rate (State)	139,482	0.000	1.000	−2.957	3.459
Intra-Industry Trade	91,532	0.150	0.269	0.000	1.000
Sugar Products	148,059	0.005	0.069	0	1
Auto Products	148,059	0.002	0.041	0	1
Textile, Apparel, and Footwear Products	148,059	0.176	0.380	0	1
Steel	148,059	0.014	0.117	0	1

$$P_{pj}^{HS8d} = \gamma_j + \delta_k^{HTSSector} + \beta_1 X_{kt}^{NAICS6d} + \beta_2 X_{kt}^{NAICS6d} + \beta_3 X_{pt}^{HS6d} + \varepsilon_{pt} \quad (5)$$

6 Results

I theorize that the design of trade agreements' tariff schedules is politically motivated. Unlike prior studies that focused on economic determinants, such as the type of goods (Baccini, Dür, and Elsig 2018), intra-industry trade (Baccini, Dür, and Elsig 2018; Kowalczyk and Davis 1998), and the degree to which the partner's imports pose a threat to domestic producers (Van Lieshout 2021*a*), I contribute a new political explanation for the duration of tariff phaseouts, as well as providing insights on whether an executive is more concern about the agreement's electoral consequences or its ratification prospects.

Controlling for said economic covariates, I find that across various models and robustness checks that the executive's electoral concerns trump his ratification concerns. I consistently find a strong and positive association between industry employment concentration in electorally competitive states and phaseout duration. Even when accounting for Rust and Sun Belt states, which have been suggested to be a source of political sensitivities by a former trade negotiator (Interview 2, 31:58), the main finding remains robust. The main effect of industry concentration in competitive states is not monotonous across all products. In particular, I find that the targeting of phaseout duration based on electoral concerns is significantly magnified as products are more import-sensitive. Similarly, while, on average, ratification variables are statistically insignificant, they are heavily moderated by the degree of import threat. When analyzing estimates across trade partners, import competition from both KORUS and NAFTA is equally significant. However, tariff staging responds more to electoral concerns for NAFTA and to ratification concerns for KORUS. Finally, I find that targeting based on either electoral insulation or ratification promotion is displacive.

These results are robust when I regress phaseout duration using a Poisson Regression in Table A1 and when I regress phaseout usage with a logistic regression in Table A2.

6.1 Regression Results

Table 2 presents five models starting with the baseline regression that includes only the main explanatory variables. The baseline model suggests that both *Competitive Margins* and *Import Threat* are highly correlated with longer phaseout duration, and such association is robust across various specifications, supporting H1 and H4. A one standard

deviation increase in industry employment share in competitive states is associated with 1.86 additional months in phaseout duration for products within the industry. On the other hand, one standard deviation increase in *Import Threat* is associated with 8.36 additional months in phaseout duration. Variables that characterize ratification concerns, such as *Median TPA* and *Committees*, are statistically insignificant, and some exhibit negative signs throughout all models, which fails to support H2 and H3.

[Table 2 about here]

Model 2 includes all of the control variables discussed in the previous sections. Here, median legislators in the Senate and Congressional House members in Ways and Means exhibit negative coefficients but at the 90% confidence level. This suggests that, on average, industries that concentrate more in districts of such legislators are associated with shorter phaseout durations for their products.

Most control variables exhibit expected signs. *MFN Base Rate* is positive and highly statistically significant, corroborating findings from Baccini, Dür, and Elsig (2018); Anderer, Dür, and Lechner (2020); Kowalczyk and Davis (1998). *Intermediate goods*, as well as *Upstreamness of product*, are negative and statistically significant, echoing the findings from Baccini, Dür, and Elsig (2018) and Anderer, Dür, and Lechner (2020).

Agricultural products are strongly correlated with shorter phaseout duration, running contrary to the conventional wisdom that agricultural products are generally highly protected (Deardorff and Sharma 2021). This negative association is present even in explaining the likelihood for exclusion (See Table A3). When asked about why agricultural products are correlated with shorter phaseouts, a former trade negotiator suggested that the agricultural sector is more export-oriented; as such, negotiators would request reciprocal immediate duty-free treatment on agricultural products (Interview 2, 50:00). The estimate on agricultural products is relatively large; on average, agricultural products' phaseout duration is 1.39 years shorter than non-agricultural products. This may contradict prior notions of protectionism in the American agricultural sector, at least on sugar. However, as seen in Model 3, sugar products are significantly correlated with 8.19 *additional* months in phaseout duration — reinforcing the conventional understanding of sugar protectionism, while agricultural products' coefficient increased to 1.56 fewer years in phaseout duration.

Capital goods are interestingly negatively and significantly correlated with 4.84 months fewer in phaseout duration. Consumer goods are associated with shorter phaseout duration; while insignificant in Model 2, it becomes significant in Models 4 and 5. This result suggests that the executive can be both producer and consumer-minded, challenging the

Table 2: Main Results

Dependent Variable:	Phaseout Duration				
Model:	Baseline (1)	+ Controls (2)	+ Protected Sectors (3)	HTS Sector FE (4)	+ IIT and Union Membership (5)
Variables					
Competitive Margins$_s$	0.155**	0.167***	0.173***	0.167***	0.201***
	(0.067)	(0.059)	(0.065)	(0.059)	(0.071)
Median TPA (HoR)$_d$	-0.143	0.028	-0.034	-0.045	0.072
	(0.090)	(0.079)	(0.079)	(0.079)	(0.078)
Median TPA (Senate)$_s$	0.062	-0.160*	-0.182*	-0.113	0.066
	(0.131)	(0.086)	(0.095)	(0.102)	(0.111)
Ways and Means Committee$_d$	-0.118	-0.072*	-0.013	0.006	-0.009
	(0.079)	(0.039)	(0.036)	(0.031)	(0.037)
Finance Committee$_s$	-0.043	-0.010	0.038	0.052	-0.007
	(0.077)	(0.050)	(0.046)	(0.040)	(0.046)
Import Threat	0.697***	0.426***	0.431***	0.415***	0.349***
	(0.087)	(0.047)	(0.047)	(0.049)	(0.050)
Union PAC (HoR)$_d$		0.156	0.138	0.144	0.163**
		(0.099)	(0.098)	(0.093)	(0.079)
Union PAC (Senate)$_d$		-0.051	-0.074	-0.080	-0.083
		(0.088)	(0.084)	(0.084)	(0.082)
Base Rate		0.756***	0.692***	0.624***	0.595***
		(0.218)	(0.193)	(0.175)	(0.129)
Industry Size (ln)		-0.017	-0.018	-0.024	-0.066
		(0.046)	(0.044)	(0.046)	(0.048)
Capital Mobility		0.076	0.065	0.095*	0.064
		(0.049)	(0.042)	(0.049)	(0.070)
Intermediate product		-0.374***	-0.233***	-0.074*	-0.043
		(0.088)	(0.068)	(0.045)	(0.036)
Agricultural product		-1.39***	-1.56***	-0.808***	-0.476*
		(0.241)	(0.242)	(0.311)	(0.256)
Capital product		-0.404***	-0.291***	-0.237***	-0.144*
		(0.125)	(0.105)	(0.088)	(0.087)
Consumer product		0.016	-0.145	-0.156**	-0.165**
		(0.122)	(0.109)	(0.075)	(0.080)
Upstream product		-0.080**	-0.058*	-0.100	-0.067
		(0.039)	(0.033)	(0.066)	(0.069)
Differentiated product		-0.114	-0.175	-0.004	-0.050
		(0.157)	(0.159)	(0.080)	(0.079)
Sugar products			0.683***		
			(0.222)		
Auto products			-0.892***		
			(0.163)		
Textile, Apparel, Footwear products			0.750***		
			(0.138)		
Steel products			0.519**		
			(0.231)		
Intra-Industry Trade					-0.228**
					(0.106)
Union Membershp Rate$_d$					0.113
					(0.124)
Union Membership Rate$_s$					0.014
					(0.119)
Fixed-effects					
FTA	Yes	Yes	Yes	Yes	Yes
HTS Sector	No	No	No	Yes	Yes
Fit statistics					
Observations	109,559	102,834	102,834	102,834	69,690
R^2	0.14	0.22	0.22	0.23	0.21
Within R^2	0.04	0.13	0.14	0.15	0.16

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

assumption from the *Protection for Sale* literature that the executive is either one or the other (Grossman and Helpman 1994; Gawande, Krishna, and Olarreaga 2009).

Model 3 includes indicators for four industries traditionally considered protected: sugar, automotive, textile, and steel. Products are classified as sugar if they fall under the 4-digit HS headings 1701, 1702, or 1703. Automobiles are categorized under the 8703 heading, which are all final consumer goods. Textile, apparel, and footwear products encompass all items between HS chapters 50 and 64. Steel products correspond to products under Chapter 72. All except for auto are positively correlated with longer phaseout.

While auto products being associated with shorter phaseouts may be surprising, it is reasonable if we expect negotiators to negotiate quick access for auto exports to reciprocate in kind for the trade partner. For most trade partners, competition on auto is not too intense, which allows negotiators to reserve using phaseouts on other politically salient products. However, even when negotiating with South Korea, a major competitor in autos, the 2007 negotiated agreement phases out auto tariffs immediately. This is because USTR was able to extract favorable concessions on Korean standards imposed on imported US cars, which were auto exporters' primary demands, thereby enabling USTR to reciprocate concessions by giving Korean automakers immediate access to the US market (Interview 2, 34:43). This concession, of course, was controversial and was revised in the 2011 renegotiation where phaseouts on autos were lengthened.[37] Table 3 replicates Model 3 from Table 2 but splits it into the two KORUS versions. As expected, the coefficient for auto products is positive and statistically *insignificant* in 2007 but *significant* and positive for the 2011 version. In the 2011 version, auto products received about 1.28 years longer in phaseouts compared to non-auto products.

[Table 3 about here]

Model 4 adds in the sector fixed effects to control for any unobserved differences across sectors, as formulated by the US Harmonized Tariff Schedule. Here, most results previously discussed are robust. Finally, model 5 adds in *Intra-Industry Trade* and *Union Membership Rate* at both the congressional district and state level. These are added last because of limited data availability, which reduces the sample to 69,690 observations. Union membership rate at the district level, estimated by Becher, Stegmueller, and Käppner (2018), uses LM forms as source data that goes back to 2000. Therefore, Model 5 omits NAFTA entirely. Even without NAFTA, the main finding for *Competitive Margins* is robust with increased magnitude. The intra-industry trade coefficient is negatively as-

[37] See the 2011 side letter here https://ustr.gov/sites/default/files/uploads/agreements/fta/korus/2011_Side_Letter.pdf

Table 3: Auto Phaseouts KORUS 2007 vs KORUS 2011

Dependent Variable:	Phaseout Duration	
partner_year	KOR (2007)	KOR (2011)
Model:	(1)	(2)
Variables		
Auto products	0.652	1.28***
	(0.800)	(0.423)
Control	Yes	Yes
Fixed-effects		
FTA	Yes	Yes
Fit statistics		
Observations	8,581	8,599
R^2	0.30	0.27
Within R^2	0.30	0.27

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

sociated with phaseout duration, echoing Baccini, Dür, and Elsig (2018) and Kowalczyk and Davis (1998)'s findings. Union membership at both the district and state levels does not significantly correlate with a longer phaseout duration.

Industry concentration in electorally competitive states can be conflated with Rust or Sun-belt states. While industry concentration in Rust and Sun belt states are not strongly correlated with industry employment concentration in competitive states (See Figure A9), it may provide useful information on whether preferences of industries in said states would permeate into the design of trade agreements. Table 4 includes both Rust and Sun Belt variables, constructed by following Equation 1 but using binary indicators for the states.[38] Essentially, the variable captures the proportion of the industry employment that resides in either Rust or Sun Belt states.

Model 1 in Table 4 provides a truncated model to just the main explanatory variables, replicating Model 4 from Table 2. Models 2 and 3 include employment concentration in *Rust Belt* and *Sun Belt* states, respectively, since they are highly correlated with each other. Industry employment concentration in more electorally competitive states remains to be

[38]Rust belt states include Illinois, Indiana, Michigan, Missouri, New York, Ohio, Pennsylvania, West Virginia, and Wisconsin. Sun belt states include: Alabama, Arizona, Florida, Georgia, Louisiana, Mississippi, New Mexico, South Carolina, Texas, California, Arkansas, North Carolina, Nevada, Oklahoma, Tennessee, and Utah

correlated with longer phaseout duration when controlling for industry concentration in the Sun or Rust Belt states. Rust Belt industries are correlated with longer phaseout duration, about 2.22 additional months in phaseout duration. On the other hand, Sun Belt industries are correlated with shorter phaseout duration, about 1.5 months fewer.

[Table 4 about here]

6.2 Marginal Effects of Political Covariates Conditional on Import Sensitivities

To test H5, I estimate the marginal effect of various political sensitivities conditional on import sensitivities.[39] The controls and fixed effects are specified in Equation 5, as can be seen in Model 4 in Table 2. The only difference here is I generate a marginal effect plot for each pair of interactions (e.g., $CompetitiveMargins \times ImportThreat$, $MedianTPA(HoR) \times ImportThreat$). The theoretical expectation is that the magnitude of political sensitivities should be amplified for more import-sensitive products as producers are more likely to lobby through the Federal Register for protection when they have more to lose.

Figure 4 plots the marginal effect for industry concentrated in (A) electorally competitive states, (B) Rust Belt states, and (C) Sun Belt states. Figure 4.A shows that the marginal effect for *Competitive Margins* on phaseout duration for a given product is positive and increasing in magnitude as the partner poses a greater import threat. The marginal effect for a typically high value in import threat is statistically distinguishable from the marginal effect with a typically low value in import threat. Since the typically medium value leads to a higher marginal coefficient, it suggests that such an interaction effect is not linear. In fact, the effects of many interactions between import threats and political sensitivities are not linear.

[Figure 4 about here]

Figure 4.B demonstrates a similar marginal effect for Rust Belt states where the marginal effect, when conditional on the high value of import threat, is positive and statistically distinguishable from a low value of import threat. Figure 4.C examines the marginal effect of industries concentrating in Sun Belt states, suggesting that the coefficient is negative, non-linear, and statistically distinguishable between typically low and high import-threat values. This means that industries concentrating in sun states do not lobby for longer phaseouts as the partner poses a greater threat. However, some sun state industries that face the average import threat (at 0) do receive marginally longer phaseouts.

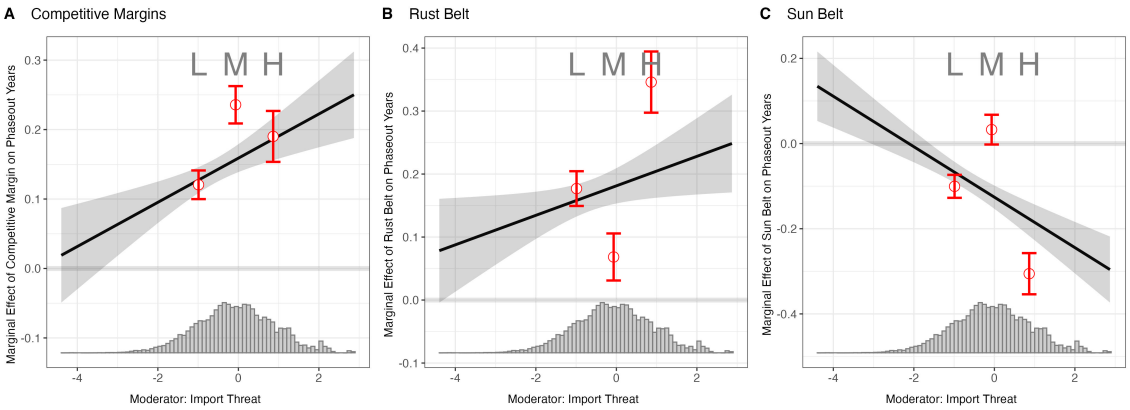
[39] I use the R package `Interflex` from Hainmueller, Mummolo, and Xu (2019).

Table 4: Secondary Result: Employment Concentration in Rust and Sun Belt States

Dependent Variable:	Phaseout Duration		
Model:	(1)	(2)	(3)
Variables			
Competitive Margins$_s$	0.167***	0.138**	0.183***
	(0.059)	(0.057)	(0.060)
Median TPA (HoR)$_d$	-0.045	-0.039	-0.025
	(0.079)	(0.074)	(0.077)
Median TPA (Senate)$_s$	-0.113	-0.007	-0.096
	(0.102)	(0.115)	(0.103)
Ways and Means Committee$_d$	0.006	0.008	0.004
	(0.031)	(0.031)	(0.030)
Finance Committee$_s$	0.052	0.070*	0.049
	(0.040)	(0.042)	(0.040)
Import Threat	0.415***	0.422***	0.415***
	(0.049)	(0.047)	(0.048)
Union PAC (HoR)$_d$	0.144	0.114	0.131
	(0.093)	(0.087)	(0.093)
Union PAC (Senate)$_d$	-0.080	-0.063	-0.075
	(0.084)	(0.084)	(0.084)
Rust Belt$_s$		0.185***	
		(0.070)	
Sun Belt$_s$			-0.126**
			(0.053)
Control	Yes	Yes	Yes
Fixed-effects			
HTS Sector	Yes	Yes	Yes
FTA	Yes	Yes	Yes
Fit statistics			
Observations	102,834	102,834	102,834
R^2	0.23	0.23	0.23
Within R^2	0.04	0.04	0.04

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

Figure 4: Marginal Effects for Electoral Variables



Note:

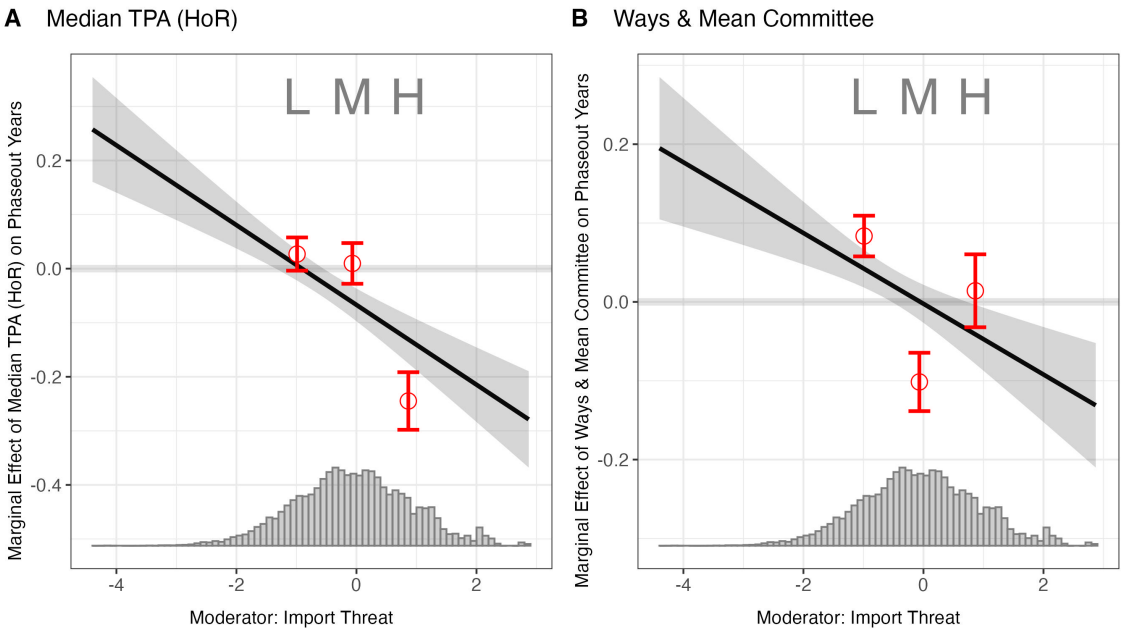
Figures 5 and 6 plot the marginal effect for HoR and Senate variables (*Median TPA* and *Committee*) conditional on the intensity of import threat. A clear trend prevails. Variables that characterize ratification concerns at the House of Representatives (Senate) level suggest a seemingly downward (upward) marginal effect as import sensitivity increases. This means that industries concentrating in the districts of median legislators in the House of Representatives (Senate) get shorter (longer) phaseout duration when the import threat is high. Similarly, industries concentrating in the district of House Members in the Ways and Means Committee are associated with longer phaseouts as the import threat is low but shorter phaseouts as the import threat increases. On the other hand, industries concentrating in the district of Senators in the Finance Committee receive shorter phaseouts when faced with a median intensity of import threat but receive significantly longer phaseouts when faced with a high import threat.

These results suggest that key members in the House have greater influence in getting longer phaseouts to industries in their districts, even if the partner does not pose a great import threat. However, it is quite puzzling as to why more import-sensitive products would be correlated with shorter phaseouts for key House members. On the other hand, key members in the Senate can levy influence in getting their most sensitive industries' tariffs phased out for longer, as expected by H5.

[Figure 5 about here]

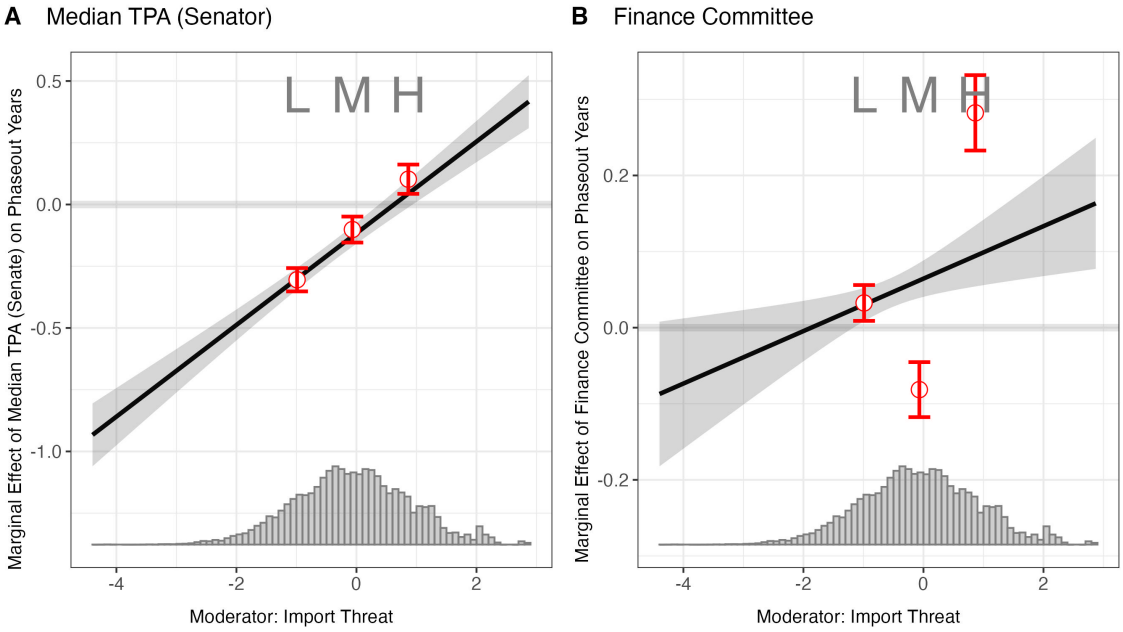
[Figure 6 about here]

Figure 5: Marginal Effects for Ratification Variables (House of Representative)



Note:

Figure 6: Marginal Effects for Ratification Variables (Senate)



Note:

6.3 Heterogeneous Effect By FTA

When are electoral or ratification concerns more salient? Can both concerns be addressed simultaneously? Figure 7 showcases the heterogeneous effect of four variables across FTAs in the sample.[40]

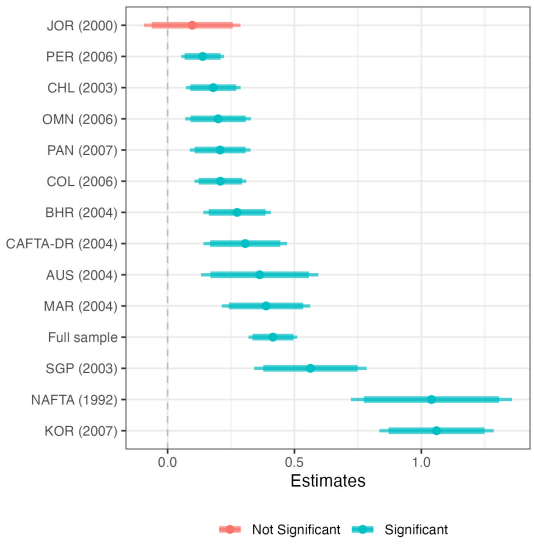
Figure 7a demonstrates that imports from the trade partner that would present a greater threat to domestic producers are generally always correlated with longer phaseout. The magnitude of the estimates aligns with the conventional understanding that NAFTA and KORUS were more economically consequential than Latin American and Middle Eastern trade partners. NAFTA and KORUS's *Import Threat* estimates are essentially the same, indicating that products from either Mexico, Canada or South Korea that pose an import threat would receive similar phaseout duration treatment. A one standard deviation increase in *Import Threat* is associated with about one additional year in phaseout on imports for both agreements. This suggests that domestic producers were concerned about the import competition posed by liberalizing trade with either set of trade partners.

When examining the effect of political sensitivities by FTA, a pattern starts to emerge. Specifically, when one concern is addressed, it leaves the other unaddressed — indicating that electoral insulation and ratification promotion are displacive. For example, the coefficient for industry concentration in competitive states is positive with a relatively large magnitude for NAFTA; however, when examining the estimates for *Median TPA (HoR)* and *Median TPA (Senate)*, both coefficients are negative, significant for the former (Figure 7c). For KORUS, industries that concentrate in the district of median senators receive significantly longer phaseout, about six additional months, but such targeting was not present for industries that concentrate in competitive districts or median representatives, both with a zero (0) coefficient.

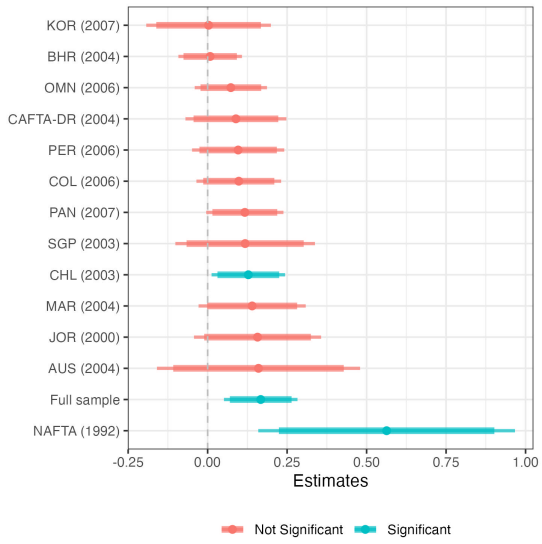
What may explain why electoral insulation shapes negotiation priority for NAFTA but not for KORUS despite both having similar levels of economic sensitivities? A rough examination would lead one to conclude that it is about the electoral horizon of the incumbent executive. NAFTA was negotiated under George H. W. Bush's first term, which suggests that perhaps phaseout was strategically allocated to insulate the executive from backlash in key battleground states. However, KORUS was negotiated during the second term of George W. Bush. Given the lack of a political horizon and that KORUS was a politically salient trade agreement, it seems to suggest that the political motivation to maximize ratification prospects takes the helm in importance, although median Senators rather than Representatives were targeted.

[40] I rerun Model 4 from Table 2 for each FTA. Figure A10 plots the estimates for all variables.

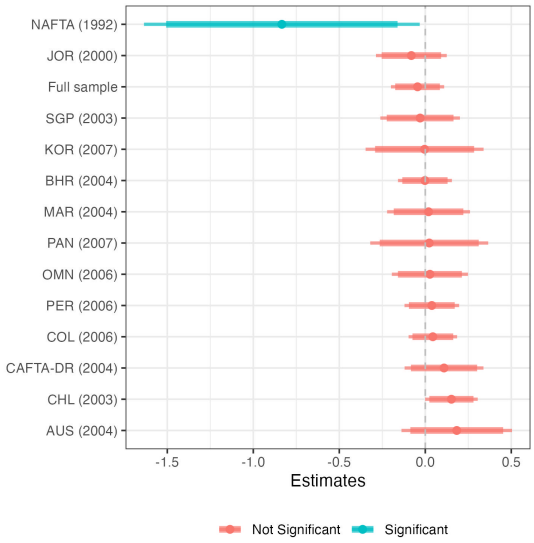
Figure 7: Estimates by FTA Partner



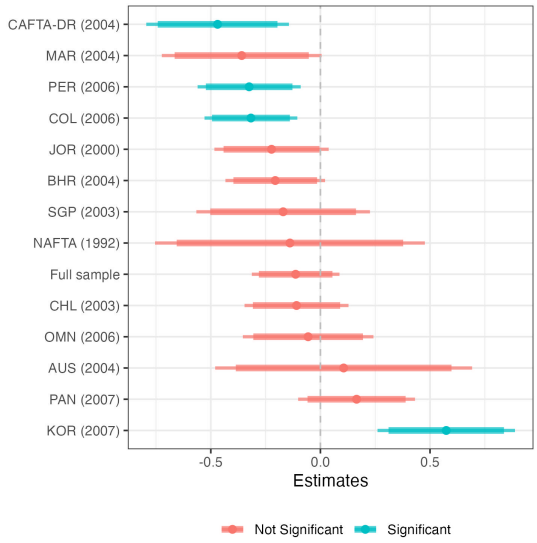
(a) Import Threat



(b) Competitive Margins



(c) Median TPA (HoR)



(d) Median TPA (Senate)

Note: This figure presents the estimates for selected variables. Figure A10 presents estimates by FTA for all variables according to Model 4 in Table 2.

7 Conclusion

Tariff staging, or the rules that dictate when tariffs are completely phased out, can theoretically facilitate cooperation as a more disaggregated form of flexibility and allow domes-

tic producers to adjust. This article reasons that reciprocity forecloses the incentive to use exclusion, necessitating, while at the same time, moderating the use of tariff phaseouts as they are redistributive. I argue that lengthy phaseouts are prioritized for politically sensitive products, and the executive's interests in insulating themselves electorally and promoting ratification shape which products are salient in negotiation. I find that, on average, electoral insulation trumps ratification promotion. Specifically, products made by industries concentrated in electorally competitive states are associated with longer phaseout duration, the magnitude of which is amplified when the partner poses a greater import threat. When disaggregating the estimates by trade agreements, I find that the executive cannot address both sources of political sensitivities simultaneously.

A broader implication of this work is that at least on the tariff schedule, the US executive rarely plays a two-level game as described by Putnam (1988) to promote ratification. Rather, tariff phaseouts are allocated on a particularistic pattern that favors industries concentrating in more electorally competitive, i.e., "swing" states. While I do not make a causal argument nor design the test to be causal, it is important to acknowledge the underlying causal mechanisms for such an association. First, executives with electoral horizons, like George H. W. Bush with NAFTA, may be interested in securing and maintaining favorable margins in competitive states due to the high vote-electoral college vote elasticity in a majoritarian electoral system. This insight might be generalizable to other Presidential systems with a majoritarian electoral rule in informing how the executive's preferences may permeate into the design of FTA tariff schedules. Second, executives may be more likely to prioritize industries in competitive states simply due to their historic location which has shaped previous trade policymaking decisions; therefore, the protection given yesterday is also given today as a form of policy path dependency. Regardless of the underlying mechanism, there is a clear incentive for any executive to target such industries with carve-outs on tariffs as they would expect political consequences otherwise.

This article focuses on the political incentive to phase out tariffs toward electorally important industries, yet more work needs to be done to understand the political economy of tariff phaseouts fully. One fruitful research agenda would be to examine the causal mechanism between tariff phaseouts, employment, and political consequences more closely. The results of this paper seemingly suggest that there is an electoral incentive to phase out tariffs. What is missing is a close examination of whether longer staging is effective at slowing down employment decline and the subsequent political consequences of trade. As mentioned throughout this paper, economists suggest that longer stagings do not necessarily delay the growth of import (Besedes, Kohl, and Lake 2020; Dong and Jestrab 2022); however, the link between import growth and employment

decline has not been empirically tested. Even if future research demonstrates how phasing out tariffs may not marginally make a difference in employment decline, it will show how tariff phaseouts are simply an "empty-husk" political tool to facilitate free-trade commitment, in which the belief of its effectiveness motivates its particularistic targeting.

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A.1 Appendix

A.1.1 Example of Tariff Phaseout Rules in FTAs

Figure A1: 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 A2: 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:

A.1.2 UAW Endorsement Statement

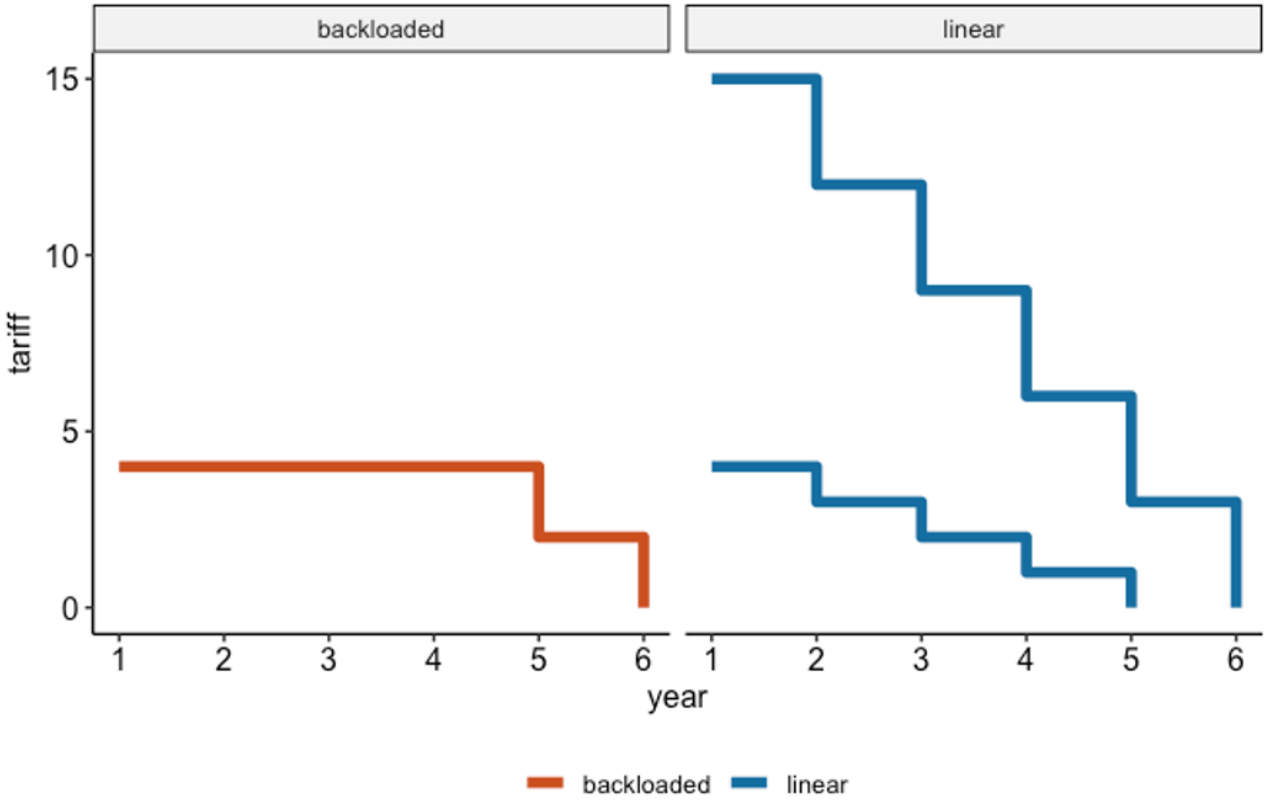
Figure A3: Tariff Schedule Example from US-Australia FTA

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:

A.1.3 FTARIFF Descriptive Statistics

Figure A4: Example of Linear and Backloaded Phaseout "Shape"



Note:

A.2 Empirical Analysis Appendix

A.2.1 Cross Industry Differences within FTAs (All Variables)

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

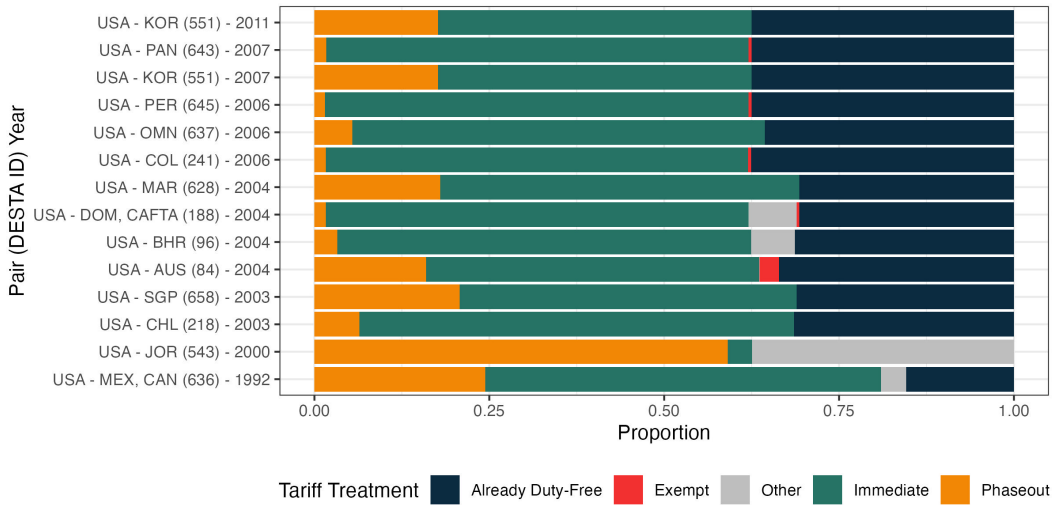
A.2.2 Robustness Checks: Poisson Regression on Phaseout Duration

Table A1: Poisson Regression for Phaseout Duration

Dependent Variable:	Phaseout Duration				
Model:	Baseline (1)	+ Controls (2)	+ Protected Sectors (3)	HTS Sector FE (4)	+ IIT and Union Membership (5)
Variables					
Competitive Margins$_s$	0.156***	0.156***	0.171***	0.163***	0.244***
	(0.060)	(0.045)	(0.050)	(0.044)	(0.063)
Median TPA (HoR)$_d$	-0.094	0.061	0.012	-0.011	0.060
	(0.073)	(0.059)	(0.053)	(0.052)	(0.052)
Median TPA (Senate)$_s$	0.050	-0.079	-0.068	-0.023	0.075
	(0.093)	(0.052)	(0.054)	(0.058)	(0.061)
Ways and Means Committee$_d$	-0.105*	-0.060**	-0.022	-0.017	-0.033
	(0.055)	(0.025)	(0.026)	(0.027)	(0.034)
Finance Committee$_s$	-0.024	0.001	0.036	0.049	0.020
	(0.052)	(0.041)	(0.032)	(0.035)	(0.036)
Import Threat	0.576***	0.435***	0.452***	0.443***	0.501***
	(0.044)	(0.046)	(0.048)	(0.052)	(0.064)
Union PAC (HoR)$_d$		0.141*	0.140*	0.150**	0.133**
		(0.079)	(0.074)	(0.072)	(0.060)
Union PAC (Senate)$_d$		-0.003	-0.024	-0.025	-0.034
		(0.056)	(0.048)	(0.048)	(0.049)
Base Rate		0.111***	0.113***	0.099***	0.096***
		(0.021)	(0.020)	(0.018)	(0.022)
Industry Size (ln)		0.017	0.023	0.031	-0.002
		(0.029)	(0.029)	(0.031)	(0.038)
Capital Mobility		0.078	0.047	0.077*	0.051
		(0.048)	(0.032)	(0.041)	(0.053)
Intermediate product		-0.706***	-0.433***	-0.215**	-0.156
		(0.149)	(0.122)	(0.094)	(0.098)
Agricultural product		-0.711***	-1.02***	-0.494***	-0.360*
		(0.123)	(0.104)	(0.130)	(0.207)
Capital product		-0.851***	-0.603***	-0.492***	-0.440**
		(0.153)	(0.130)	(0.149)	(0.201)
Consumer product		0.209**	0.011	-0.040	-0.156
		(0.106)	(0.085)	(0.069)	(0.108)
Upstream product		-0.084**	-0.023	-0.064	-0.096
		(0.038)	(0.036)	(0.086)	(0.127)
Differentiated product		-0.165**	-0.229***	-0.069	-0.149**
		(0.081)	(0.082)	(0.070)	(0.073)
Sugar products			0.355**		
			(0.139)		
Auto products			-1.28***		
			(0.128)		
Textile, Apparel, Footwear products			0.779***		
			(0.078)		
Steel products			0.420**		
			(0.181)		
Intra-Industry Trade					-0.574***
					(0.170)
Union Membershp Rate$_d$					0.093
					(0.067)
Union Membership Rate$_s$					0.068
					(0.064)
Fixed-effects					
FTA	Yes	Yes	Yes	Yes	Yes
HTS Sector	No	No	No	Yes	Yes
Fit statistics					
Observations	109,559	102,834	102,834	102,834	67,094
Squared Correlation	0.13	0.15	0.18	0.18	0.16
Pseudo R^2	0.19	0.27	0.28	0.29	0.30
BIC	481,257.1	413,440.0	404,821.2	400,156.5	250,025.8

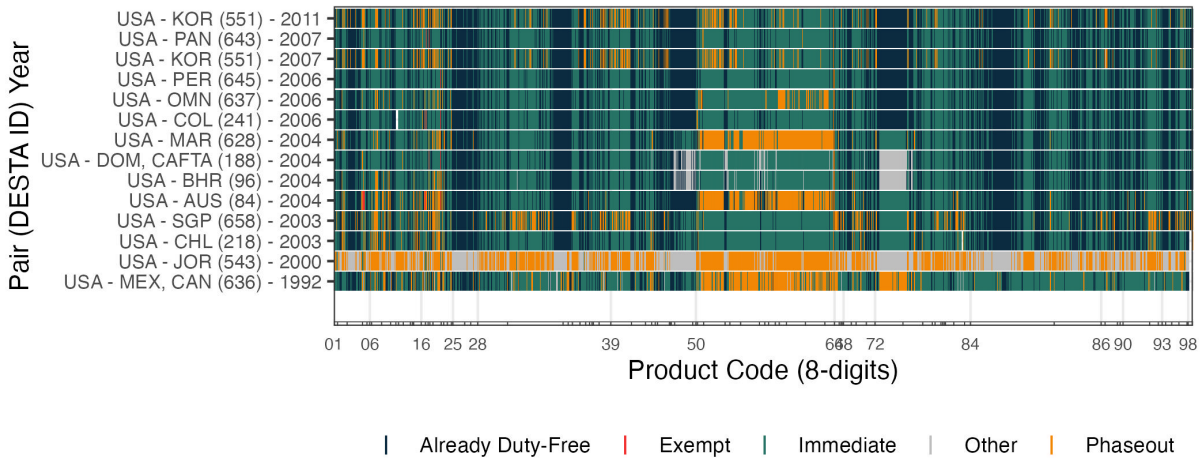
Clustered (NAICS 6d) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Figure A6: Proportion of Each USA Tariff Treatment Category Toward Imports From Trade Partners



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. Created by Author 10/24/24.

Figure A7: Distribution of Tariff Treatment from USA FTAs Across 8-digit Product Codes



Note: Each tick represents one product code. "Other" indicates that the product's tariff reduction is governed by other means, such as the WTO commitment. Each tick on the x-axis demarcates a 2-digit chapter. Important 2-digit chapters are displayed. Refer to https://hts.usitc.gov/ on the title of HS chapters. Created by Author 10/24/24.

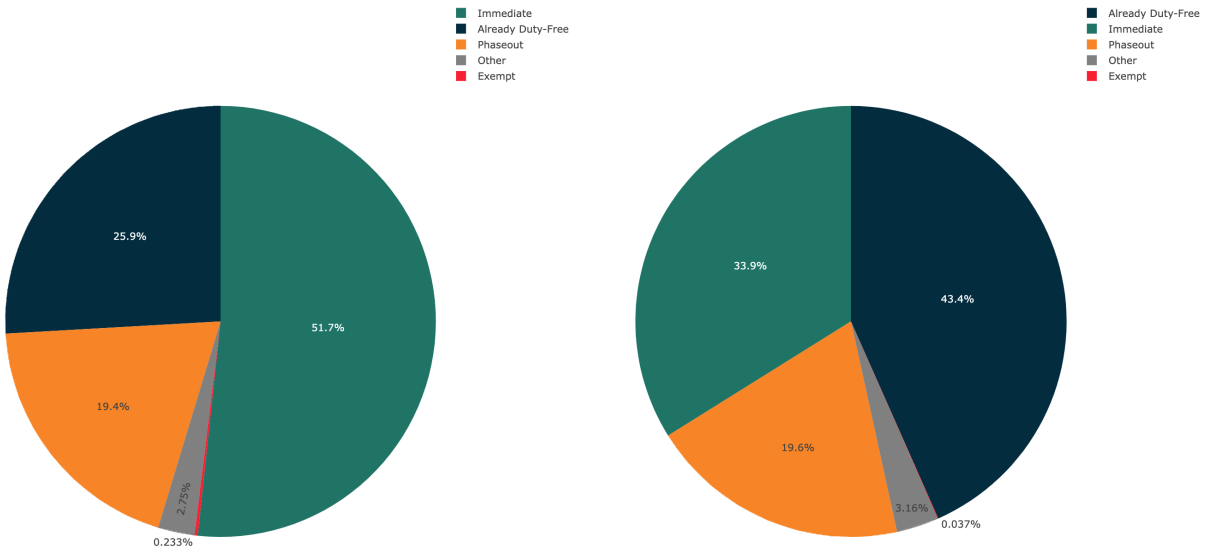
A.2.3 Robustness Checks: Logistic Regression on Phaseout Usage

Table A2: Logistic Regression for Phaseout Usage

Dependent Variable:	Phaseout Usage				
	Baseline	+ Controls	+ Protected Sectors	HTS Sector FE	+ IIT and Union Membership
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
Competitive Margins$_s$	0.163**	0.165***	0.175**	0.190***	0.217***
	(0.071)	(0.058)	(0.069)	(0.065)	(0.082)
Median TPA (HoR)$_d$	-0.085	0.056	-0.007	-0.038	0.108
	(0.088)	(0.080)	(0.082)	(0.079)	(0.082)
Median TPA (Senate)$_s$	0.148	0.069	0.017	0.042	0.198*
	(0.110)	(0.101)	(0.105)	(0.113)	(0.105)
Ways and Means Committee$_d$	-0.140**	-0.086**	-0.035	-0.031	-0.037
	(0.063)	(0.039)	(0.036)	(0.034)	(0.050)
Finance Committee$_s$	-0.076	-0.087	-0.009	0.005	-0.032
	(0.076)	(0.054)	(0.044)	(0.043)	(0.053)
Import Threat	0.682***	0.590***	0.629***	0.656***	0.647***
	(0.064)	(0.086)	(0.089)	(0.096)	(0.089)
Union PAC (HoR)$_d$		0.168**	0.159**	0.191***	0.201***
		(0.079)	(0.075)	(0.073)	(0.073)
Union PAC (Senate)$_d$		0.074	0.047	0.030	0.007
		(0.093)	(0.087)	(0.086)	(0.075)
Base Rate		0.688***	0.539***	0.470***	0.504***
		(0.182)	(0.149)	(0.139)	(0.136)
Industry Size (ln)		-0.036	-0.027	0.004	-0.014
		(0.050)	(0.040)	(0.041)	(0.052)
Capital Mobility		0.007	-0.004	0.082	0.028
		(0.050)	(0.045)	(0.058)	(0.071)
Intermediate product		-0.664***	-0.457***	-0.241**	-0.198*
		(0.152)	(0.137)	(0.104)	(0.103)
Agricultural product		-0.789***	-1.11***	-0.424	0.044
		(0.136)	(0.141)	(0.285)	(0.285)
Capital product		-0.638***	-0.454***	-0.413**	-0.229
		(0.162)	(0.150)	(0.187)	(0.219)
Consumer product		0.119	-0.088	-0.108	-0.132
		(0.128)	(0.112)	(0.097)	(0.123)
Upstream product		0.014	0.064	-0.004	0.017
		(0.050)	(0.049)	(0.110)	(0.133)
Differentiated product		-0.138	-0.236**	-0.075	-0.087
		(0.095)	(0.095)	(0.084)	(0.109)
Sugar products			0.299		
			(0.256)		
Auto products			-0.910***		
			(0.212)		
Textile, Apparel, Footwear products			0.945***		
			(0.131)		
Steel products			0.284		
			(0.241)		
Intra-Industry Trade					-1.20***
					(0.246)
Union Membershp Rate$_d$					0.024
					(0.123)
Union Membership Rate$_s$					0.101
					(0.099)
Fixed-effects					
FTA	Yes	Yes	Yes	Yes	Yes
HTS Sector	No	No	No	Yes	Yes
Fit statistics					
Observations	109,559	102,834	102,834	102,834	67,094
Squared Correlation	0.39	0.44	0.45	0.45	0.38
Pseudo R^2	0.36	0.41	0.41	0.42	0.37
BIC	73,501.2	64,616.1	63,824.1	63,312.3	40,001.0

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

Figure A8: Proportion of Tariff Treatment in USA Trade Agreements



(a) Product Codes

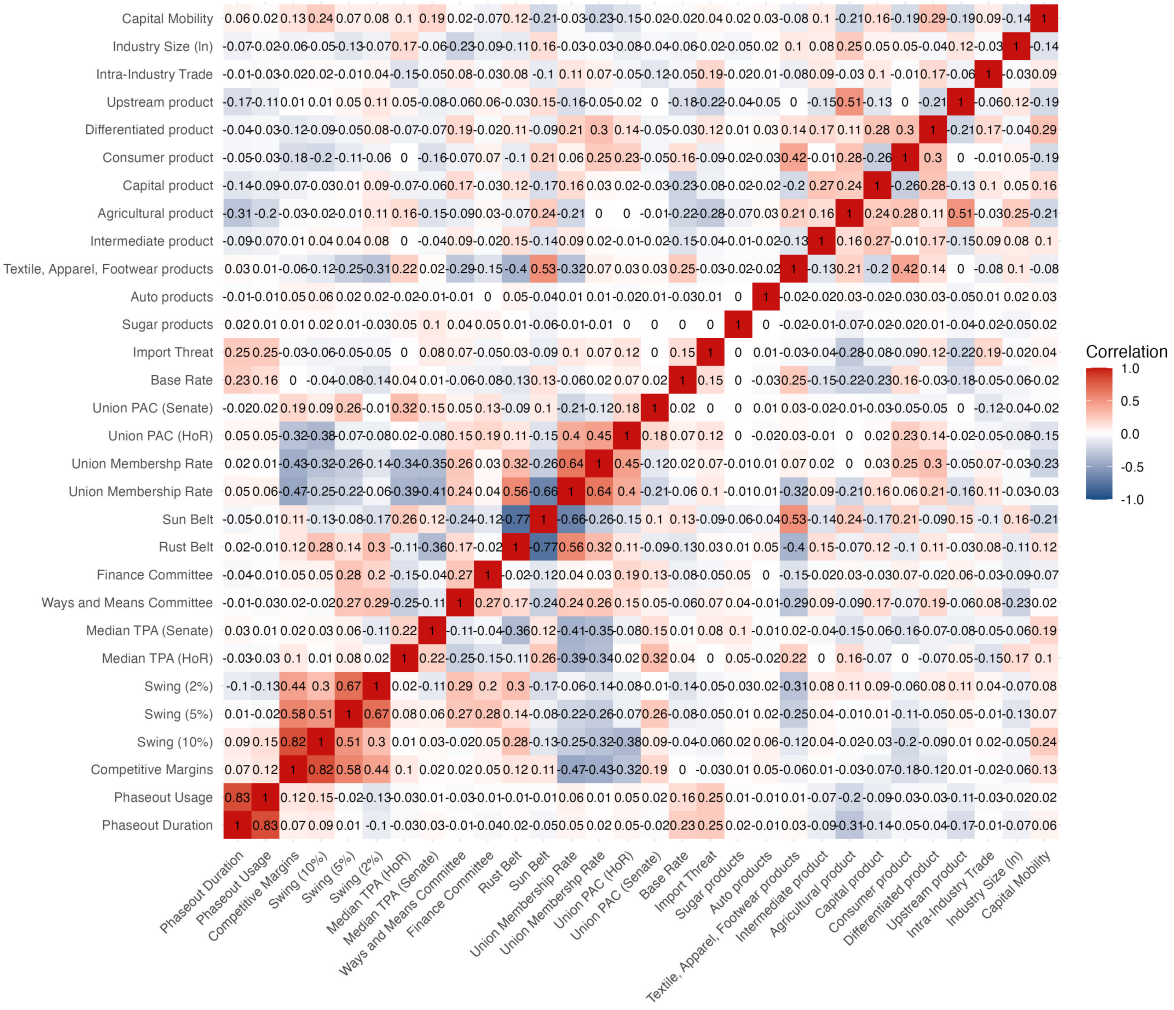
(b) Import Values

Note: Proportions are calculated by aggregating all product code lines (and 5-year rolling average import values before the agreement's signature date) across all USA free trade agreements. "Other" indicates that the product's tariff reduction is governed by other means, such as the WTO commitment. Created by Author on 10/24/24.

A.2.4 Robustness Checks: Logistic Regression on Exclusion

Are tariff phaseouts the same as protectionism? While tariff phaseouts are seen and used as an alternative to exclusion (i.e., protectionism in FTAs), do the political patterns that explain phaseout duration apply to exclusion? Tariff phaseouts are conceptually distinct from protectionism as the maintenance of MFN base rates is not indefinite. To test this argument, I regress the decision to exclude products from liberalization with existing covariates with a logistic regression. I find that variables that measure ratification and electoral concerns do not correlate with a higher likelihood of product exclusion. Some exceptions, such as industries concentrating in the districts of House members of *Ways and Mean Committee* experience a lower likelihood of having their products excluded from liberalization. Other variables, such as *import threat*, *Union PAC (HoR)*, *Sugar products*, and *Differentiated products* are more likely to be excluded. Other product characteristics, such as intermediate, agricultural, capital, upstream, auto, textile, apparel and footwear, and steel, are significantly less likely to be excluded. Interestingly, employment concentration

Figure A9: Correlation of Variable Heat Map



Note: Created by Author 10/26/24

in districts with higher union membership rates shows a higher likelihood for their products to be excluded. The negative coefficient for capital and intermediate goods echoes findings from Deardorff and Sharma (2021), but the negative estimates on agriculture and positive on differentiated products directly contradict their findings.

Table A3: Logistic Regression for Product Liberalization Exclusion

Dependent Variable:	Excluded				
	Baseline	+ Controls	+ Protected Sectors	HTS Sector FE	+ IIT and Union Membership
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
Competitive Margins$_s$	0.243*	0.137	0.072	-0.124	-0.045
	(0.127)	(0.176)	(0.169)	(0.179)	(0.174)
Median TPA (HoR)$_d$	-0.863**	-0.132	-0.350*	0.003	-0.047
	(0.407)	(0.306)	(0.212)	(0.311)	(0.235)
Median TPA (Senate)$_s$	-0.060	-0.024	-0.234	0.084	0.293
	(0.366)	(0.259)	(0.149)	(0.214)	(0.226)
Ways and Means Committee$_d$	0.010	-0.206***	-0.203***	-0.237***	-0.036
	(0.124)	(0.075)	(0.074)	(0.073)	(0.090)
Finance Committee$_s$	-0.175	0.139	0.085	0.247*	0.049
	(0.179)	(0.107)	(0.098)	(0.128)	(0.125)
Import Threat	2.40***	1.24***	1.32***	1.03***	0.991***
	(0.333)	(0.333)	(0.339)	(0.343)	(0.367)
Union PAC (HoR)$_d$		0.330**	0.326***	0.301***	-0.089
		(0.134)	(0.123)	(0.105)	(0.103)
Union PAC (Senate)$_d$		-0.187	-0.142	-0.130	-0.135
		(0.118)	(0.099)	(0.118)	(0.104)
Base Rate		-0.012	-0.006	-0.070	-0.149
		(0.106)	(0.109)	(0.090)	(0.110)
Industry Size (ln)		-0.401**	-0.291*	-0.672***	-0.436**
		(0.182)	(0.163)	(0.200)	(0.180)
Capital Mobility		-0.277	-0.130	-0.583**	-0.639**
		(0.254)	(0.208)	(0.238)	(0.253)
Intermediate product		-13.6***	-13.7***	-15.3***	-15.7***
		(0.437)	(0.516)	(0.549)	(0.548)
Agricultural product		-5.12***	-4.56***	-2.59*	-1.98
		(1.28)	(1.29)	(1.43)	(1.42)
Capital product		-11.8***	-12.3***	4.35***	-2.68***
		(1.30)	(1.28)	(1.44)	(0.202)
Consumer product		-0.856	-0.063	2.75	-12.6***
		(0.832)	(0.732)	(1.71)	(1.43)
Upstream product		-1.61***	-1.66***	-7.76***	-8.99***
		(0.339)	(0.294)	(0.682)	(0.620)
Differentiated product		0.568**	0.580**	0.919	0.570
		(0.280)	(0.283)	(0.811)	(0.705)
Sugar products			3.11***		
			(0.921)		
Auto products			-14.4***		
			(1.27)		
Textile, Apparel, Footwear products			-13.1***		
			(1.05)		
Steel products			-8.01***		
			(1.93)		
Intra-Industry Trade					-0.556
					(0.517)
Union Membershp Rate$_d$					0.493***
					(0.089)
Union Membership Rate$_s$					-0.056
					(0.223)
Fixed-effects					
FTA	Yes	Yes	Yes	Yes	Yes
HTS Sector	No	No	No	Yes	Yes
Fit statistics					
Observations	44,773	42,098	42,098	42,098	34,257
Squared Correlation	0.20	0.28	0.28	0.29	0.28
Pseudo R^2	0.38	0.52	0.52	0.53	0.51
BIC	5,633.6	4,509.8	4,496.0	4,598.7	4,318.2

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

Figure A10: Cross-Industry Estimates of Main Variables Across FTA Partners (Equation 5)

Note:

A.2.5 Robusness Checks: Alternative Measures of Electoral Competitiveness

An alternative approach to measuring industry concentration in electorally competitive states is to measure the share of industry employment in "swing" states defined at various electoral margin ranges. A state is coded as swing if the three-election average of the two-party vote share of the sitting president in state s during term t is between 45% and 55%, following the coding rule from Kriner and Reeves (2015*b*). I also narrow in on the 10% margin by coding swing states with 5% and 2% margins for robustness check.

$$\psi_{st}^{Swing} = \begin{cases} 1 & \text{if } 45\% < V_{st} < 55\% \\ 0 & \text{otherwise} \end{cases} \tag{6}$$

Table A4 showcases the coefficients

for the three variants of industry concentration in swing states. The coefficients are positive and decrease in magnitude as the margin used to code the swing indicator decreases.

Table A4: Robustness Check: Alternative Coding of Competitive Margins

Dependent Variable:	Phaseout Duration		
Model:	(1)	(2)	(3)
Variables			
Swing$_s$ (10%)	0.297***		
	(0.088)		
Swing$_s$ (5%)		0.180***	
		(0.067)	
Swing$_s$ (2%)			-0.044
			(0.059)
Median TPA (HoR)$_d$	-0.051	-0.044	-0.009
	(0.072)	(0.075)	(0.089)
Median TPA (Senate)$_s$	-0.130	-0.125	-0.132
	(0.099)	(0.100)	(0.113)
Ways and Means Committee$_d$	0.012	-0.015	0.026
	(0.029)	(0.032)	(0.037)
Finance Committee$_s$	0.040	0.021	0.070
	(0.039)	(0.049)	(0.048)
Import Threat	0.422***	0.419***	0.403***
	(0.047)	(0.051)	(0.051)
Union PAC (HoR)$_d$	0.182**	0.129	0.089
	(0.088)	(0.088)	(0.089)
Union PAC (Senate)$_d$	-0.103	-0.080	-0.038
	(0.072)	(0.079)	(0.084)
Base Rate	0.620***	0.637***	0.636***
	(0.179)	(0.174)	(0.173)
Industry Size (ln)	-0.013	-0.023	-0.047
	(0.042)	(0.050)	(0.051)
Capital Mobility	0.064	0.096*	0.095*
	(0.044)	(0.053)	(0.054)
Intermediate product	-0.070	-0.085*	-0.075
	(0.044)	(0.045)	(0.048)
Agricultural product	-0.787**	-0.808**	-0.859**
	(0.307)	(0.312)	(0.333)
Capital product	-0.226***	-0.278***	-0.277***
	(0.086)	(0.090)	(0.090)
Consumer product	-0.138*	-0.212**	-0.182**
	(0.071)	(0.086)	(0.083)
Upstream product	-0.078	-0.108*	-0.116*
	(0.067)	(0.064)	(0.065)
Differentiated product	-0.017	-0.043	-0.033
	(0.077)	(0.077)	(0.079)
Fixed-effects			
HTS Sector	Yes	Yes	Yes
FTA	Yes	Yes	Yes
Fit statistics			
Observations	102,834	102,834	102,834
R^2	0.24	0.23	0.23
Within R^2	0.04	0.04	0.04

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

A.2.6 Robustness Check: Account for Post-Treatment Bias and Alternative Coding for *Median TPA*

The main analysis includes *Median TPA* coded using the legislator's rate of voting in favor of TPA for their entire career. Because this includes post-treatment TPA decisions, I reran the analysis with a version of *Median TPA* created using the pre-existing pro-TPA rate of a legislator for each Congressional session. Put simply, I compute the proportion of pro-TPA votes a legislator has demonstrated in their career by the end of each Congressional session to account for potential post-treatment bias. Even when accounting for post-treatment bias, the two variants' correlation is extremely high at 0.91.

I also include alternative measurements of median legislators. First and simplest, I use the DW-NOMINATE score from VoteView (Lewis et al. 2023). Since a value of 0 denotes an ideologically moderate legislator. The benefit of this measure is its seemingly universal application in Congressional studies; however, capturing ideologically median legislators does not align well with the concept of a median legislator on trade issues. To ameliorate this concern, I calculate the DW-NOMINATE score using only roll call votes on trade bills using the `wnominate` package (Poole et al. 2008).[41] The benefit of this approach is the construct validity — i.e., the measurement aligns closer to the concept.

I take the median one-third of these two ideal point scores in creating *DW-NOMINATE Moderate* and *Trade Modeate* for both chambers, then I weigh each district's "median"-ness with industry employment share in the district before aggregating the weighted employment share to the industry level as specified in Equation 3.

Table A5 showcases that the estimate for *Competitive Margins* is robust across the three alternative measurements for the median legislator.

[41] Roll call bills were subsetted from Lewis et al. (2023)'s VoteView database by "tariffs" bills.

Table A5: Robustness Checks: Median TPA Pre-treatment And Ideologically Moderate Legislators

Dependent Variable:	Phaseout Duration		
	Median TPA Pre-treatment	Moderate DW-NOMINATE	Moderate on Trade Roll Call
Model:	(1)	(2)	(3)
Variables			
Competitive Margins$_s$	0.233***	0.153**	0.206***
	(0.065)	(0.060)	(0.061)
Median TPA Pre-treat (HoR)$_d$	-0.170		
	(0.157)		
Median TPA Pre-treat (Senate)$_s$	-0.482***		
	(0.118)		
DW-NOMINATE Moderate (HoR)$_d$		-0.032	
		(0.053)	
DW-NOMINATE Moderate (Senate)$_s$		0.108	
		(0.082)	
Trade Moderate (HoR)$_d$			-0.047
			(0.059)
Trade Moderate (Senate)$_s$			-0.148**
			(0.060)
Ways and Means Committee$_d$	-0.015	0.021	-0.002
	(0.033)	(0.034)	(0.031)
Finance Committee$_s$	0.106***	0.050	0.072*
	(0.038)	(0.039)	(0.038)
Union PAC (HoR)$_d$	0.156**	0.194**	0.156*
	(0.075)	(0.088)	(0.090)
Union PAC (Senate)$_d$	-0.116*	-0.113	-0.072
	(0.063)	(0.072)	(0.088)
Import Threat	0.417***	0.424***	0.418***
	(0.048)	(0.048)	(0.048)
Control	Yes	Yes	Yes
Fixed-effects			
HTS Sector	Yes	Yes	Yes
FTA	Yes	Yes	Yes
Fit statistics			
Observations	102,834	102,834	102,834
R^2	0.24	0.23	0.23
Within R^2	0.05	0.04	0.04

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