

# Inspecting the Termites: Market Structure and WTO's Consideration Process of PTAs\*

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## **Abstract**

A burgeoning literature exists on the issue of how preferential trade agreements coexist with the multilateral governance of international trade. However, scholars have not examined the juncture at which the member states of the General Agreement on Tariffs and Trade (GATT) and subsequently the World Trade Organization (WTO) may exert the greatest political influence on PTAs. Such opportunity exists during the GATT/WTO consideration process of PTAs that are notified to the multilateral institution. I argue that agreements that are more likely to affect market structure—the level of competition in an industry or in an economy—will confront more rigorous examination in terms of the number of rounds of questioning, number of questions and number of countries participating in the process. A preliminary analysis of novel data from the WTO supports the argument.

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# 1 Introduction

The relationship has always been complicated between preferential trade agreements (PTAs)<sup>1</sup> and the multilateral trading system anchored initially by the General Agreement on Tariffs and Trade (GATT) and subsequently by the World Trade Organization (WTO). On the one hand, the multilateral system champions non-discrimination among trade partners through the most favored nation (MFN) treatment norm.<sup>2</sup> On the other hand, preferential arrangements discriminate against trade partners that do not belong in their agreement. The historical irony is that the multilateral system incorporated an explicit exception to the MFN norm—Article XXIV of the GATT—allowing member states of the GATT/WTO to form PTAs.<sup>3</sup>

Utilizing this exception, since the creation of the GATT, the multilateral and the preferential trading systems of the world have co-existed. Some PTAs far exceeded the level of economic integration that the GATT/WTO members attained among themselves. The European Union (EU) is the prime example. Going beyond the simple free trade agreement and a customs union, the EU has emerged as an economic union with a single market and currency. Other PTAs—especially among developing states such as the Latin American Integration Association (LAIA)—have attempted to emulate the European experience though unsuccessfully.<sup>4</sup> In recent decades, PTAs have proliferated all over the world.<sup>5</sup> Even the Asia-Pacific region, which was slow to join the proliferation, has dramatically increased the number of arrangements in recent years.<sup>6</sup>

A longstanding debate has existed on the compatibility and complementarity between the

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<sup>1</sup> I use the term preferential trade agreements (PTAs) to refer to any international agreements among two or more states to reciprocally lower trade barriers. The WTO

<sup>2</sup> Ruggie (1982).

<sup>3</sup> Mitchell and Lockhart (2009) provides a comprehensive legal analysis of Article XXIV.

<sup>4</sup> In general, however, measuring the effectiveness of PTAs, however, is not straightforward. See (Gray and Slapin, 2012).

<sup>5</sup> Mansfield (1998); Mansfield and Milner (1999).

<sup>6</sup> Kastner and Kim (2008).

multilateral and the preferential trading systems. Bhagwati, a vocal critic of the preferential system, has referred to PTAs as termites.<sup>7</sup>

The same article of the GATT/WTO that grant the exception for member states to form PTAs also requires them to notify the GATT/WTO membership of the PTAs. Although the membership does not have the authority to veto any PTA, it does have the authority to examine the agreements that GATT/WTO members form and notify, which is known as the consideration process.<sup>8</sup> However, PTAs are subjected to varying levels of scrutiny by the GATT/WTO membership. While many receive no rounds of questioning from the other members, some PTAs are subjected to multiple rounds of questioning, requiring formal responses from the states forming the PTA. The question-and-response rounds can involve numerous members as well. While economic importance of a PTA to the world economy certainly influences the rigor and the intensity of the examination process, some PTAs receive more vigorous examination than others even controlling for such importance. Why does the WTO subject some PTAs to more strenuous examination process than others?

While the variation in the level of rigor is puzzling, the WTO consideration process may not be a valuable phenomenon to examine in its own right. Nonetheless, examining the variation is important because the phenomenon manifests a deeper dynamic between the multilateral and the preferential trading systems in the world economy. How vigorously GATT/WTO members inspect a pending PTA captures the compatibility and complementarity, or the lack thereof, between the two trade regimes. Even if the GATT/WTO membership cannot strike down a PTA, the consideration process is the point at which it can exert the greatest leverage on members forming PTAs. Subsequent to a PTA's entry into force, GATT/WTO members outside the arrangement can file dispute claims against the

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<sup>7</sup> Bhagwati (2008).

<sup>8</sup> Many members fail to notify the GATT/WTO of the PTAs they form, resulting in a large gap in the number of PTAs between what the multilateral trade institution tracks and what other institutions and scholars track.

members of the PTA for non-compliance over how the PTA functions with respect to the GATT/WTO. However, these complaints typically point to specific policy within the PTA rather than the overall design of it. Moreover, according to the WTO Dispute Settlement Data Set by Horn and Mavoridis, covering disputes through the middle of 2011, eight requests for consultation cite violation of Article XXIV—the PTA exemption—as one of the claims.

I propose a novel argument that highlights the increasing importance of market *structure* rather than market *access*. I argue that PTAs that have greater potential to restructure member states' markets will face more rigorous consideration processes. In particular, PTAs that directly shape the level of competition in markets through competition provisions and indirectly shape it through protection of intellectual property rights will have greater potential to influence market structures. A preliminary analysis of the novel GATT/WTO consideration process data gathered from the WTO supports this argument.

The paper follows the conventional scheme. The next section briefly reviews the literature on the relationship between the multilateral and the preferential trading systems in the world. Section 3 develops the logic of the argument, focusing on the role of market structure and how PTA provisions affect it. Section 4 carries out the analysis, first describing the sample analyzed and the construction of the novel data set. Lastly, Section 5 concludes by summarizing the research and discussing two potential avenues for future research.

## **2 Relationship between the Multilateral Trading System and PTAs**

Two related groups of literature address the tension-ridden relationship between the multilateral trading system and PTAs. The first group frames the issue as that of competition or complementarity, whereas the second group highlights the different types of complemen-

tarity between the two trading systems. All analyses of the consequences of PTAs originate from Viner.<sup>9</sup> Although he referred to it them as “customs unions,” his welfare analysis has provided the underlying language for examining the effects of PTAs on the world economy, namely trade creation and trade diversion. Arrangements that create more trade among themselves than reduce from non-members are trade creating, whereas those that reduce more trade from the outside than create among the members are trade diverting. For aggregate economic welfare, trade-creating PTAs are better than trade-diverting ones.<sup>10</sup>

Building on this analysis, a long-standing literature has developed on whether PTAs serve as “building blocks”—facilitating further multilateral trade liberalization—or as “stumbling blocks”—hindering further multilateral liberalization.<sup>11</sup> The viewpoints range between those that see PTAs as undermining the world economy<sup>12</sup> and those that see PTAs as providing the impetus for competitive liberalization.<sup>13</sup> The literature has developed in two strands. Empirically, some scholars have identified that PTAs do in fact limit multilateral liberalization.<sup>14</sup> For policy purposes, scholars have advocated that states should shape PTAs in ways to ensure compatibility with the GATT/WTO<sup>15</sup> or to strengthen the GATT/WTO’s oversight process of PTAs.<sup>16</sup> In contrast to these analyses, Kono provides a compelling argument about the conditions under which PTAs can promote multilateral liberalization or hinder it.<sup>17</sup> When intra- and extra-PTA comparative advantages are similar, PTAs promoted multilateral trade liberalization, but when they are dissimilar, they hinder it.

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<sup>9</sup> Viner (1950).

<sup>10</sup> Bhagwati and panagariya (1996); Bhagwati *et al.* (1998) provide the review of how this welfare analysis has evolved in economics.

<sup>11</sup> This framing of the issues involved is usually credited to (Bhagwati, 1991). (Krueger, 1999) provides a summary of the issues and the debate.

<sup>12</sup> Bhagwati *et al.* (1998).

<sup>13</sup> Bergsten (1996). As (Bhagwati, 2008) notes, the concept of competitive liberalization was advocated for by political leaders for non-trade objectives. (Ethier, 1998) argues that the rise of PTAs reflects the success of multilateralism and is thus compatible.

<sup>14</sup> e.g. Limão (2006, 2007).

<sup>15</sup> Bhagwati (1993).

<sup>16</sup> Bagwell and Staiger (1998).

<sup>17</sup> Kono (2007).

As PTAs have evolved to incorporate areas beyond traditional trade policies, a new approach has emerged in conceptualizing the relationship between the GATT/WTO and PTAs. This framework focuses on the breadth and the depth of regulatory cooperation contained in PTAs. Horn, Mavroidis and Sapir refer to provisions in PTAs that deepen and extend those in the WTO as “WTO-plus (WTO+)”.<sup>18</sup> These include free trade agreements, sanitary and phytosanitary provisions (SPS), anti-dumping (AD) and countervailing measures (CVMs). Provisions in PTAs that lie outside the extant WTO agreements are classified as “WTO-extra (WTO-X).” These include anti-corruption, competition policy, investment and human rights. While Horn, Mavroidis and Sapir focus only on PTAs that the European Union (EU) and the United States (US) have signed, Kohl expands the analysis to 296 agreements. He concludes that while some provisions can decrease trade, they constitute complements not threats to the multilateral trading system.

Despite these ongoing concerns about how PTAs fit into the existing multilateral trading system, scholars have not sufficiently examined how the GATT/WTO membership *politically* addresses PTAs that states create. My search reveals that only one analysis exists on the topic of how the multilateral institution has dealt with PTAs. Finger carries out an analysis of how effectively the GATT has applied the procedures.<sup>19</sup> He concludes, after reviewing the consideration process over the European Economic Community and arrangements involving developing countries—agreements with the EEC, the Latin American Free Trade Agreement (LAFTA) and the Association of Southeast Asian Nation’s (ASEAN) PTA—he concludes that these experiences have *not* been “supportive of a rule-based, multilateral system” by failing to fulfill member countries’ obligation with respect to GATT’s Article XXIV. His findings suggest that rather than the institution providing constraints on states’ behavior and limiting the exploitation of the PTA exemption, each consideration process was highly

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<sup>18</sup> Horn *et al.* (2010).

<sup>19</sup> Finger (1993).

politicized for member states to pursue their own objectives.

In the twenty years since Finger’s analysis, PTAs have both proliferated and evolved. Yet scholars have not updated Finger’s analysis on how GATT/WTO member states use the institution to inspect and scrutinize PTAs. Building on the extant literature on the relationship between the multilateral and the preferential trading systems, the next section develops a novel argument about the rigor of the WTO consideration process.

### 3 Market Structure, PTAs and WTO Consideration

#### 3.1 Market Access vs. Market Structures

The welfare analysis of PTAs started by Viner has long focused on the consequences of differences in trade preferences. Whether PTAs create or divert trade depend on the amount of preferences that members of the PTAs give one another relative to the amount of preferences that the members provide to non-members. As Finger argues, because Viner’s analysis was subsequent to the negotiations of the GATT, trade creation and diversion was never the criterion by which the institution evaluated PTAs.<sup>20</sup>

Instead, I argue that as the structure of the international economy has evolved throughout the post-World War II era, states’ focus has shifted away from market *access*—as defined by tariffs and other “at-the-border” measures—toward market structure. Market structure is shaped by the extent of competition within an industry and in an economy more broadly. It varies between perfect competition with a high level of competition and monopoly with no competition.

Importance of market structure relative to market access has increased over time in part due to the successful trade liberalization at the global level. As continuous trade liberalization has lowered the aggregate level of at-the-border barriers and increased overall market

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<sup>20</sup>Finger (1993).

access, the additional trade preferences that PTAs could provide to their members have steadily declined as well. The importance of market access has increased in other part due to the failure of the GATT/WTO to facilitate deeper integration among the member countries, precisely when the aggregate level of trade barriers reached a low level. Successful cooperation over at-the-border measures has necessitated cooperation over “behind-the-border” measures, which the member states of the GATT/WTO have not achieved.<sup>21</sup> Many states have sought to deeper cooperation in trade policies through PTAs instead, resulting in the WTO+ and WTO-X provisions of trade agreements.

States care about market structure for two reasons. First, the level of competition affects the economic wellbeing of industries, firms and individuals. While a high level of competition may promote economic efficiency and welfare in the long run, a low level of competition will ensure economic actors’ welfare in the short run. More specifically, limiting competition can increase firms’ market shares and help them move down the average cost curve, which in turn makes them more competitive. Second, while states may prefer lower levels of competition at home, they seek to reduce imperfect competition in foreign markets, in order for their own firms to enter and succeed in markets abroad.

Developments in the “new-new trade theory” highlight some of these economic dynamics.<sup>22</sup> Models in this class of theory highlight the importance of intra-, rather than inter-, industry trade and the heterogeneity of firms. These two factors both shape and are affected by market structures both domestically and internationally. When the level of integration among markets increases due to fall in transaction costs—involving transportation and communication—and policy costs—involving at-the-border measures—market structures within and across economies become more critical.

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<sup>21</sup> Barton *et al.* (2006).

<sup>22</sup> e.g. Bernard *et al.* (2007); Melitz and Ottaviano (2012); Melitz and Trefler (2012).



### 3.2 Market Structure Provisions and the Consideration Process

In this context, I argue that PTAs with provisions that seek to alter the market structure among their members will receive greater attention and more rigorous examination than those that do not seek to do so. The reasons for the interest are two-fold. First, provisions that directly seek to shape the market structure create a public good that can benefit even trade partners outside the PTA. These create incentives for the excluded GATT/WTO states to seek more information about the agreement in question. Second, provisions that can indirectly shape the market structure create a private good that can harm the interests of trade partners outside the PTA. I elaborate on these two channels below.

Unlike market access which states can tailor specifically to trade partners from whom goods and services originate, states cannot similarly customize the market structure within their domestic economy. If states increase the level of competition in an industry by increasing the regulation against monopolistic or other similarly anti-competitive behavior, all other states that have market access into that industry will benefit from the greater potential market share resulting from it. In other words, a PTA provision that restructures its member states' market—such as competition clauses—cannot exclude the non-members from benefiting from the provision. States forming a PTA recognize this non-excludability of restructuring markets, but they include it as part of a bundle of provisions that renders the entire trade agreement Pareto superior for the parties signing it.<sup>23</sup>

When PTA provisions that restructure markets of member states are non-excludable, WTO member states can use the PTA consideration process to obtain more information about the details for such provisions. The WTO members outside the PTA have incentives to extract as much information as possible about the provisions in order to exploit the opportunities for their firms to enter into or increase the market share in the economies of

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<sup>23</sup> Certainly not all PTAs include domestic market restructuring provisions such as competition provisions. I examine the determinants of PTA provisions and design in a separate project.

the PTA under consideration. These incentives will lead to more rigorous questioning during the process, likely involving more WTO members with more questions.

Other types of provisions in PTAs restructure markets in member economies but indirectly so. Unlike explicit competition provisions, these provisions influence the competitiveness indirectly. A prime example is intellectual property rights clauses. These provisions can affect the level of competition in an industry by affording more or less protection to effective monopolistic rights that firms of particular countries have. Unlike provisions that directly regulate market structures, these provisions can be tailored to specific countries. Accordingly, states forming a PTA can grant greater intellectual property rights protection to one another while not extending the similar protection to trade partners outside the agreement. Other regulatory provisions such as sanitary and phytosanitary standards generate similar dynamics in which regulatory coordination among PTA members can tilt the level of competition in favor of the members at the cost of states outside the agreement.

For this second type of PTA provisions, which indirectly restructure markets of member states and exclude non-members, WTO member states can use the PTA consideration process to ensure that the damage to their economic interests resulting from the PTA in question is as little as possible. As discussed above, the WTO procedure is unable to render a veto on an impending PTA, and the GATT/WTO in fact has never handed down a negative decision on a PTA it examines.<sup>24</sup> Nevertheless, the process can still require the PTA-forming members to carry out greater due diligence in the analysis of economic effects and to justify their discriminatory provisions. Accordingly, these provisions will lead to more rigorous questioning during the process.

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<sup>24</sup> Mitchell and Lockhart (2009, 112).

### 3.3 Hypotheses

The foregoing discussion leads to a testable hypothesis, and the exclusive and the non-exclusive market restructuring provisions lead to a single expectation.<sup>25</sup>

Hypothesis ( $H_1$ ): If a PTA contains market restructuring provisions, it will receive more rigorous examination during the WTO's consideration process.

More specifically, I conceptualize the *rigor* of the consideration process in terms of the following: the likelihood of a PTA being subjected to the consideration process (since not all notified PTAs undergo the examination); the number of questions-and-replies *rounds* a PTA is subjected to; the number of *questions* a PTA is subjected to during the first round of questioning; the likelihood of a PTA being questioned by the European Union (EU) or the United States (US); and the total number of WTO members participating in the consideration process for a PTA.

Thus, I anticipate that PTAs containing market restructuring provisions will have higher likelihoods and higher numbers on these dimensions than those that do not contain such provisions. In the next section, I carry out a preliminary analysis of this hypotheses using novel data on the WTO consideration process.

## 4 Analysis of the WTO Consideration Process

### 4.1 Research Design and Data

The unit of analysis in the following empirical test is PTAs. Ideally the sample would consist of all the PTAs that have entered into force in the post-World War II era, of which those that undergo the WTO consideration process constitute a subsample.<sup>26</sup> However, due to

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<sup>25</sup> Future iteration of this project can seek to distinguish between the two types of provisions and test the different implications arising from the distinctive dynamics.

<sup>26</sup> This ideal sample would also enable analysis of the selection process through which states notify some PTAs to the GATT/WTO but not others.

limitation on the data capturing PTA characteristics, the sample consists of fewer agreements than those that states have notified to the GATT/WTO. The missing data primarily results from the set of agreements that is not easily located. These agreements for which I am currently missing data are likely to 1) be among smaller economies 2) not be examined by the WTO consideration process and 3) not include market restructuring provisions. In short, the pattern between the explanatory and the dependent variables in the missing data is likely consistent with the pattern the hypothesis expects, resulting in no bias in the analysis. A total of 164 agreements are included in the sample.

#### 4.1.1 Dependent Variables

I code the dependent variable—the rigor of the WTO consideration process—in multiple ways. All the data for the measures are collected from the WTO website, which states the status of the consideration process for each PTA notified to the institution.<sup>27</sup>

The first is the total number of rounds that a PTA is subjected to by the WTO process. The count varies between 0—those that do not undergo any questioning as of the time when the data was collected—and 6. 59 agreements in the sample faced zero rounds; 34 agreements faced one round; 52 agreements faced two rounds; 15 agreements faced 3 rounds; and 2 agreements faced four rounds. Lastly, both China’s accession into the Association of Southeast Asian Nations’ (ASEAN) trade agreement and the Southern Common Market (MERCOSUR) were subjected to six rounds of questions-and-replies.

The second is the total number of questions that a PTA received from the GATT/WTO membership during the first round of the questions-and-replies. The number of questions varies between 0 for 61 agreements up to 232 questions for the North American Free Trade Agreement (NAFTA). Mean number of questions is 11 with a standard deviation of 21. In addition, I code the total number of questions across all rounds of questioning, since some

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<sup>27</sup> “Regional Trade Agreements Information System (RTA-IS)” World Trade Organization (WTO). <http://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>.

PTAs might receive more questions in the later rounds than they do in the first round.

Next, I code whether the EU or the US participates in the consideration process at all, at any point during the one or more rounds and whether the two entities participate in the first round of the process. Participation by either of these entities would indicate a higher level of scrutiny and rigor for the PTA in question. Among the 104 examined, 68 PTAs receive no (0) questions from the EU, 28 PTAs receive 1 question and 8 PTAs receive 2 questions. Focusing only on the first round, 76 PTAs receive no questions from the EU, whereas 28 PTAs receive 1 question. Greater variation exists for the US questioning. 52 PTAs receive 0 questions from the US, 31 PTAs receive 1 question; and 19 PTAs receive 2 questions. The agreement between China and New Zealand receive 3 questions and China's accession to the ASEAN agreement receive 4 questions from the US. Focusing only on the first round, 57 PTAs receive no questions from the US, whereas 47 PTAs receive 1 question. Overall, the patterns indicate that the US is the more active participant in the consideration process than the EU.

Last, I count the total number of GATT/WTO states that participate in the first round of the consideration process for each PTA. 61 PTAs are not examined (0 member); 52 PTAs face questions from 1 member; 14 PTAs face questions from 2; 10 face questions from 3; 11 face questions from 4; 10 face questions from 5; and 5 face questions from 6 member states. Both the European Free Trade Association (EFTA) – South Korea agreement and the South Korea – Singapore agreement face questions from 7 countries during the first round.

#### **4.1.2 Explanatory Variables**

I take a simple but informative approach to coding the provisions in PTAs that accurately captures the logic of the argument. To code agreement characteristics, I gathered titles of section and chapter headings for each of the agreement in the sample. I ran a set of text searches on these headings for the following keywords: competition, investment, intellectual

property, capital, labor, environment, sanitary and phytosanitary regulations and technical barriers. These are some of the main “WTO-x” provisions that Horn et al. (2006) outline.<sup>28</sup> While this approach does not capture the substance of the provisions, it sufficiently captures the characteristics of PTAs. For example, if an agreement contained a section or a chapter titled “Competition” will draw greater attention from the trade representatives of the non-member states, who will in turn seek to clarify their understanding on the nature of the agreement.

The procedure generates a count of how many times each concept appears in PTAs. Given the broad manner in which the provisions are coded, however, I reduce the information to dichotomous measures. PTAs are coded as incorporating *either* zero particular market restructuring provision *or* some positive number of the provision. Although losing information, this ensures that PTAs that have different hierarchical structures do not result in biased coding of the agreement characteristics.

In the sample, 58% of PTAs have competition provisions, investment provisions and intellectual property provisions. 13% of PTAs have capital movement provisions. 17% have labor provisions, whereas 34% have environment provisions. Lastly, 48% of PTAs have sanitary and phytosanitary (SPS) provisions, and 50% have provisions dealing with technical barriers to trade (TBT). Despite the similar percentages of agreements containing some of these eight types of provisions, the correlation is not extremely high. The highest correlation is between SPS and TBT provisions at .79. The next highest correlation is between competition provisions and intellectual property rights provisions at .73. The remaining pairs of measures are correlated at below .5. Capital mobility provisions have negative correlations with SPS and TBT provision, at -.10 and -.074, respectively. In short, the measure capture

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<sup>28</sup> The actual text searches were done using regular expression matching on the following: “competiti”, “invest”, “intellectual”, “capital”, “labo[u]\*r”, “environment”, “sanitary”, “technical barrier” and “technical regulation”. I chose these words and prefixes by iteratively running the search and manually checking the resulting matches to ensure a high level of fidelity.

substantively different aspects of PTA characteristics, although some bundling of provisions is evident.

### 4.1.3 Control Variables

In addition to the institutional characteristics of PTAs, I include control variables that can influence the rigor of the consideration process. First, in each model, I include the notification year of PTAs. That is the year members of a PTA notified the WTO membership of their agreement. This controls for the likely changes in the dynamics of the consideration process over time, as the time period of PTAs' onsets covers multiple decades.

Second, I control for the parties involved in the PTAs through three indicator variables. One variable codes whether the PTA under consideration includes the EU as a party, and another variables codes the same for the US. The third variable codes whether the PTA includes another preexisting PTA as a party. Having a major economic power as a party to an agreement may reduce the rigor of the consideration process. 24 PTAs in the sample involve the EU, whereas 13 PTAs involve the US. Consideration process may differ substantively between that of PTAs consisting only of states and those consisting of PTAs as well as states. 48 PTAs involve at least one existing PTA as a party to it.

Third, I control for the overall scope of agreements. The GATT/WTO distinguishes between PTAs that cover goods only and those that cover services as well as goods. In addition to the high likelihood that agreements with broader scopes confronting more rigorous consideration process, agreements covering services may have larger implications for market structures than those covering goods alone. In the sample, 91 PTAs deal solely with trade in goods, whereas 74 agreements deal with services as well as goods.

Lastly, I control for political and economic characteristics of PTA states aggregated at the agreement level. These are 1) the total GDP of the PTA in question as a share of the world's GDP 2) the total trade of the PTA in question as a share of the world's total trade

and 3) the average level of democracy among the members of the PTA in question, measured by the Polity score of regime type.<sup>29</sup> The GDP share measure varies between .00011 and .32 with a mean of .088. The trade share measure varies between 0 and .47 with a mean of .092. The average Polity score measure varies between -7 and 10 with a mean of 5.8.

#### 4.1.4 Modeling Strategies

I use a variety of modeling strategies and methods, depending on the specific empirical test and the nature of the particular dependent variable. For examining whether a PTA gets examined or not, I use logit with the dependent variable coding the total number of questions-and-replies rounds. All positive numbers of rounds then get treated as a 1. I also specify logit models to account for the participation by the EU and the US in the entire consideration process and the first round of the process.

For analyzing the determinants of the number of rounds in the consideration process, I use poisson regression, as the dependent variable is a count measure and it does not display over-dispersion. For the total number of questions asked during the first round of examination, by contrast, I use negative binomial regression as the dependent variable does show over-dispersion.<sup>30</sup> I also use a negative binomial regression to model the total number of countries participating in the consideration process. Given the large number of 0s for the count of questions, I also specify a zero-inflated negative binomial model to account for the excess 0s.

In all the models, I calculate and report robust standard errors that will guard against potential heteroskedasticity across PTAs in the sample.

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<sup>29</sup> The rounded average polity score for the EU, even with its evolving membership over time, never falls below 10.

<sup>30</sup> Although the counts get quite large with the number of questions, I refrain from using simple regression with logged dependent variable due to the large number of zeros, whose information would be lost through logging.



## 4.2 Results and Analysis

### 4.2.1 Does a PTA get examined?

The first step of the analysis is to test whether PTA characteristics influence whether an agreement gets examined by the GATT/WTO or not. Table 1 summarizes the results of logit models. In this and the subsequent tables, Model a is the baseline model in which only the control variables are included. Models b through i include each of the eight operationalizations of the explanatory variable.

[ Table 1 about here ]

Three of the control variables are consistently significant across the models. PTAs that cover both goods and services and those that account for a higher share of world trade have a higher likelihood of being examined. By contrast, PTAs that constitute a larger share of have a smaller likelihood of being examined. None of the other control variables reach a level of statistical significance.

Among the explanatory variables, PTAs with competition provisions or IPR provisions have a positive effect on the likelihood of going through the consideration process, whereas those with labor provisions have a negative effect. The substantive effects are quite large. I calculate the predicted probability of GATT/WTO examination using Clarify. I hold all the continuous variables at their respective means. The simulated PTAs are specified to not involve the EU, the US or any existing PTAs and to cover services as well as goods. Then I generate the probabilities for PTAs containing no competition provisions and for those containing competition provisions. The probability of examination by the GATT/WTO of PTAs that contain competition (IPR) provisions is higher by .20 (.21), increasing from .70 (.70) without the provisions to .90 (.91). All the predicted probabilities and the first difference are statistically significant at the 95-percent level. None of the other explanatory variables have any systematic effects on the likelihood of examination.

### 4.2.2 How many rounds of questioning does a PTA get?

Next I test for the number of rounds of questioning that each PTA is subjected to. Table 2 summarizes the results. For this count variable, which does not display over-dispersion, I use poisson regression.

[ Table 2 about here ]

The scope of PTAs continues to have a positive effect. Agreements covering both goods and services confront higher numbers of rounds of examination. By contrast, PTAs' shares of world GDP and world trade do not have a systematic effect on the number of rounds in the consideration process. PTAs with a higher level of democracy face fewer rounds of questioning. A better interpretation of that result, however, is that PTAs consisting of more autocratic countries face more rounds of questions-and-replies.

Among the eight explanatory variables, only one—labor provisions—have an effect and it is negative. PTAs containing labor provisions are less likely to confront high numbers of questioning rounds. While my proposed argument does not account for this finding, this result is repeated in some of the subsequent analysis. A potential explanation for the pattern might be a form of negative signaling, in which the GATT/WTO membership dismisses PTAs with labor provisions as inconsequential ones.

### 4.2.3 How many questions during the first round of consideration?

The next test looks at the number of questions that PTAs receive in their first round of questioning. Due to the over-dispersion of the count variable, I use negative binomial regression to estimate the models. Table 3 summarizes the results.

[ Table 3 about here ]

The scope continues to have a consistent and positive effect across the models. However, besides that few other control variables are significant. In Model 3d—with IPR provisions as the explanatory variable—the variable capturing PTAs involving the US is positive and significant as is the variable measuring PTAs share of world trade.

Except for environmental provisions, all the explanatory variables are statistically significant. As in the previous models, labor provisions have a negative effect on the number of questions. PTAs with labor provisions face not only fewer rounds but fewer questions. All other significant explanatory variables have a positive effect. The substantive effects are quite large as well. I generate the expected values using the same parameters as in Model 1b above. The expected count of questions for PTAs not containing any competition provisions is 10, whereas the expected count for PTAs containing such provisions is 24. The first difference between these two values is statistically significant at the 95-percent level.

#### **4.2.4 How many questions during the first round of consideration? Take 2**

A potential concern with the above models might be that they do not take into account of the high number of PTAs that do not undergo the examination process and thus face zero questions from the GATT/WTO membership. One way to account for such a data-generating process is to model the zeros separately from the positive counts of questions. Zero-inflated negative binomial regression provides a means to estimate such models. In the models, I take the following approach. I anticipate that whether a PTA gets examined or not (i.e., distinguishing between those that receive zero questions and those that receive some positive number) depends on the overall importance of the PTA. Accordingly, I include PTAs' shares of world GDP and world trade as well as the PTA average Polity score in the inflation equation. The PTA characteristic variables remain in the outcome equation to influence the *number* of questions PTAs receive during the consideration process. Table 4 summarizes the results.

[ Table 4 about here ]

The inflation equation does not explain the variation between zeros and positive counts very well. None of the variables reach a level of statistical significance. The count equation, however, confirms the results so far. Competition and IPR provisions have a positive effect on the count of questions during the first round. In addition, SPS and TBT provisions have a positive effect as well.

As for the control variables, the scope of agreements continues to have a positive effect. Notification years reach statistical significance in five models. PTAs that notify the GATT/WTO later are likely to receive fewer questions than those that notify the GATT/WTO earlier. When PTAs involve the US, they are likely to receive more questions in three of the models than those not involving the US.

#### **4.2.5 How many questions during the entire process?**

In the next set of models, I examine the determinants of the total number of questions that PTAs receive, not simply during the first round of questioning. Table 5 summarizes the results.

[ Table 5 about here ]

The results are consistent with the overall pattern of results so far. Competition and IPR provisions have a positive effect on the overall count of questions. Labor provisions have a negative effect on the total count of questions.

#### **4.2.6 Do the EU and the US participate in the process?**

While the logic of the argument would imply that PTAs leading to major market restructuring would receive more attention from the two largest economies—namely, the EU and the US—the evidence does not appear to support this implication. Table 6 summarizes

the results from models of whether the EU participates in the process at all for PTAs, and Table 7 does so for the U.S.

[ Table 6 about here ]

[ Table 7 about here ]

The only statistically significant explanatory variable across the two sets of models is IPR provisions for the EU, and it has a negative effect. In general, PTA provisions do not appear to influence the participation by the EU and the US. While I do not report the results here, I carry out corresponding analyses for whether the two entities participate during the first round, and the results are substantively the same.

#### **4.2.7 How many countries participate in the first round?**

In the last step of the analysis, I examine the determinants of how many countries participate in the first round of the consideration process. Table 8 summarizes the results.

[ Table 8 about here ]

Notification year has a positive effect, likely reflecting the expansion of the membership over time, which leads to more states to participate. The scope has a positive effect. In addition to competition and IPR provisions, SPS and TBT provisions are significant as well. Moreover, capital movement provisions are significant for the first time.

While the results are not completely consistent across the numerous dependent and explanatory variables, two sets of results emerge as a dominant pattern. PTAs with competition and IPR provisions generally receive more rigorous consideration from the GATT/WTO than those that do not contain the provisions. Competition provisions directly restructure markets, leading non-PTA members to seek more information about the non-excludable

benefits. IPR provisions indirectly restructure markets by selectively granting protection for intellectual property rights among PTA members, leading non-PTA members to limit the excludable benefits during the consideration process as much as possible.

## 5 Conclusion

Rather than categorizing all PTAs as either stumbling blocks or building blocks for multilateral liberalization, identifying the precise relationship between the GATT/WTO and particular PTAs better advances our understanding of international trade cooperation. Accordingly, the framework of classifying PTAs and their provisions as WTO-X and WTO+ is useful. At the same time, however, such approach does not address the conflictual aspect of the two trading systems. In this paper, I have sought to address this shortfall by examining the GATT/WTO consideration process of PTAs that members states have notified to the institution.

The argument I proposed highlights the movement away from the importance of market *access* to market *structure*. Consequently, PTAs that more significantly affect market structures among the members receive greater attention from the GATT/WTO membership and thus more rigorous consideration process. PTAs that contain competition provisions and IPR provisions epitomize these market structuring PTAs and thus confront more rigorous processes.

In addition to improving the sample size and the coding of the PTA provisions in the future, this research opens up promising avenues for future research. One is to analyze the *consequences* of the consideration process on the subsequent functioning of PTAs. Similar to the research by Allee and Scalera on the effects of the accession process<sup>31</sup>, more rigorous examination of PTAs may influence the trade and investment effects that PTAs generate.

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<sup>31</sup> Allee and Scalera (2012).

Another is to analyze states' decision to notify the GATT/WTO of the PTAs they form. As discussed above, states do not notify all the PTAs to the multilateral institution. Controlling for variation in state capacity, which likely affects states' ability to undergo the consideration process, characteristics of PTAs may lead states to select themselves out of the obligation to notify the GATT/WTO, in anticipation of rigorous and costly consideration process.

Table 1: Does a PTA get examined?

	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e	Model 1f	Model 1g	Model 1h	Model 1i
Notification year	.029 (.022)	.026 (.021)	.027 (.021)	.021 (.022)	.028 (.022)	.031 (.023)	.029 (.022)	.024 (.023)	.030 (.023)
PTA w/the EU	-.51 (.71)	-.12 (.71)	-.39 (.71)	-.34 (.78)	-.73 (.71)	-.37 (.70)	-.41 (.75)	-.40 (.73)	-.59 (.75)
PTA w/the US	2.10 (1.78)	2.79 (1.85)	2.16 (1.80)	2.37 (1.94)	2.16 (1.78)	2.91 (1.92)	2.07 (1.77)	1.98 (1.83)	2.15 (1.77)
PTA w/a PTA	-.35 (.58)	-.82 (.59)	-.51 (.60)	-.92 (.64)	-.47 (.59)	-.38 (.60)	-.39 (.59)	-.36 (.58)	-.31 (.62)
PTA w/Goods & Services	1.74*** (.50)	1.57*** (.51)	1.57*** (.52)	1.49*** (.50)	1.71*** (.50)	1.92*** (.55)	1.79*** (.55)	1.69*** (.50)	1.76*** (.49)
PTA's Share of World GDP	20.3** (9.45)	24.0** (9.87)	20.7** (9.49)	25.5** (10.3)	20.4** (9.43)	21.0** (9.88)	19.7** (9.48)	19.8** (9.63)	20.4** (9.34)
PTA Share of World Trade	15.3** (7.00)	18.1** (7.31)	15.7** (7.03)	19.3** (7.77)	15.5** (7.01)	15.8** (7.28)	14.9** (7.04)	15.0** (7.14)	15.5** (6.92)
PTA Average Polity	.038 (.052)	-.019 (.057)	.032 (.053)	-.0073 (.053)	.040 (.052)	.036 (.052)	.040 (.052)	.029 (.056)	.042 (.053)
Competition		1.35*** (.43)							
Investment			.37 (.41)						
IPR				1.52*** (.47)					
Capital Movement					.66 (.63)				
Labor						1.00** (.49)			
Environment							-.16 (.53)		
SPS								.26 (.44)	
TBT									-.10 (.44)
Constant	-57.3 (43.6)	-52.0 (42.8)	-53.7 (42.8)	-42.1 (44.0)	-56.1 (44.9)	-62.4 (46.2)	-58.8 (44.0)	-47.9 (45.5)	-59.3 (45.4)
Observations	163	163	163	163	163	163	163	163	163



Table 2: How many rounds of questioning?

	Model 2a	Model 2b	Model 2c	Model 2d	Model 2e	Model 2f	Model 2g	Model 2h	Model 2i
Notification year	-.0039 (.0091)	-.0046 (.0089)	-.0037 (.0088)	-.0056 (.0090)	-.0038 (.0091)	-.0020 (.0093)	-.0033 (.0090)	-.0017 (.0097)	-.0016 (.0092)
PTA w/the EU	-.12 (.34)	-.086 (.35)	-.13 (.35)	-.095 (.34)	-.14 (.33)	-.041 (.33)	-.036 (.34)	-.17 (.35)	-.31 (.36)
PTA w/the US	-.15 (.66)	-.093 (.65)	-.15 (.66)	-.097 (.64)	-.14 (.65)	.29 (.65)	-.19 (.67)	-.088 (.66)	-.0034 (.65)
PTA w/a PTA	.035 (.25)	.0072 (.26)	.043 (.25)	-.036 (.27)	.029 (.25)	-.015 (.24)	-.015 (.26)	.039 (.24)	.11 (.25)
PTA w/Goods & Services	.54*** (.16)	.52*** (.17)	.56*** (.20)	.49*** (.18)	.54*** (.16)	.60*** (.16)	.59*** (.17)	.57*** (.17)	.59*** (.16)
PTA's Share of World GDP	-1.60 (3.21)	-1.83 (3.16)	-1.57 (3.22)	-2.40 (3.13)	-1.62 (3.19)	-2.09 (3.17)	-.99 (3.37)	-1.86 (3.25)	-2.03 (3.16)
PTA Share of World Trade	1.23 (2.36)	1.40 (2.33)	1.21 (2.37)	1.82 (2.31)	1.25 (2.35)	1.57 (2.33)	.77 (2.49)	1.44 (2.40)	1.58 (2.33)
PTA Average Polity	- .037** (.016)	- .044** (.019)	- .037** (.017)	- .045*** (.017)	- .037** (.017)	- .037** (.016)	-.034* (.018)	- .034** (.017)	-.029* (.016)
Competition		.13 (.19)							
Investment			-.027 (.19)						
IPR				.25 (.19)					
Capital Movement					.045 (.23)				
Labor						-.51** (.21)			
Environment							-.16 (.19)		
SPS								-.12 (.17)	
TBT									-.26 (.16)
Constant	7.91 (18.2)	9.28 (17.9)	7.54 (17.7)	11.3 (17.9)	7.75 (18.3)	4.18 (18.5)	6.73 (18.1)	3.54 (19.3)	3.50 (18.3)
Observations	163	163	163	163	163	163	163	163	163

Table 3: How many questions during the first round?

	Model 3a	Model 3b	Model 3c	Model 3d	Model 3e	Model 3f	Model 3g	Model 3h	Model 3i
Notification year	-.013 (.023)	-.021 (.022)	-.019 (.023)	-.027 (.023)	-.016 (.023)	-.0029 (.023)	-.015 (.023)	-.029 (.027)	-.025 (.025)
PTA w/the EU	-.27 (.47)	-.065 (.45)	-.20 (.45)	-.15 (.45)	-.60 (.43)	-.12 (.50)	-.46 (.46)	-.064 (.51)	.20 (.50)
PTA w/the US	1.47 (1.00)	1.55 (1.02)	1.47 (1.00)	1.94* (1.04)	1.50 (.99)	2.03* (1.09)	1.57 (1.04)	.83 (.97)	.92 (.97)
PTA w/a PTA	.012 (.33)	-.27 (.32)	-.20 (.34)	-.32 (.31)	-.16 (.37)	-.026 (.35)	.062 (.34)	.10 (.33)	-.18 (.32)
PTA w/Goods & Services	1.54*** (.26)	1.49*** (.25)	1.39*** (.26)	1.58*** (.25)	1.51*** (.25)	1.69*** (.28)	1.48*** (.25)	1.50*** (.24)	1.50*** (.23)
PTA's Share of World GDP	-6.65 (6.00)	-8.12 (6.30)	-7.60 (6.10)	-12.4* (6.64)	-6.80 (5.90)	-8.74 (6.30)	-8.26 (6.63)	-3.69 (5.98)	-4.68 (5.78)
PTA Share of World Trade	4.99 (4.40)	6.04 (4.61)	5.74 (4.47)	9.20* (4.87)	5.18 (4.33)	6.48 (4.61)	6.20 (4.88)	2.76 (4.39)	3.48 (4.24)
PTA Average Polity	.0051 (.023)	-.040 (.025)	.0022 (.024)	-.027 (.022)	.0054 (.023)	.0051 (.024)	- .00040 (.025)	-.014 (.023)	-.013 (.021)
Competition		.92*** (.26)							
Investment			.44* (.24)						
IPR				.98*** (.26)					
Capital Movement					.68* (.35)				
Labor						-.60* (.35)			
Environment							.27 (.29)		
SPS								.50** (.24)	
TBT									.55** (.23)
Constant	26.7 (45.6)	43.8 (43.4)	38.6 (46.1)	54.6 (45.2)	34.4 (46.2)	7.31 (45.9)	31.0 (46.4)	60.0 (53.5)	51.4 (50.1)
ln(alpha)	.86*** (.15)	.79*** (.15)	.84*** (.15)	.78*** (.15)	.84*** (.15)	.84*** (.15)	.85*** (.15)	.84*** (.16)	.83*** (.16)
Observations	164	164	164	164	164	164	164	164	164

Table 4: How many questions during the first round, take 2?

	Model 4a	Model 4b	Model 4c	Model 4d	Model 4e	Model 4f	Model 4g	Model 4h	Model 4i
Notification year	-.031	-.038*	-.037*	-.042*	-.035	-.030	-.033	-	-
	(.020)	(.021)	(.021)	(.022)	(.022)	(.021)	(.021)	.052**	.050**
PTA w/the EU	.063	.090	.14	.060	-.068	.073	.0030	.23	.47
	(.37)	(.36)	(.36)	(.36)	(.32)	(.37)	(.37)	(.36)	(.35)
PTA w/the US	.76*	.64*	.66	.52	.76*	.78	.70	.53	.42
	(.43)	(.39)	(.42)	(.42)	(.43)	(.48)	(.45)	(.35)	(.38)
PTA w/a PTA	.036	-.13	-.078	-.12	-.083	.034	.058	-.0027	-.27
	(.23)	(.23)	(.24)	(.21)	(.26)	(.23)	(.23)	(.23)	(.22)
PTA w/Goods & Services	1.13***	1.11***	1.04***	1.15***	1.13***	1.14***	1.10***	1.10***	1.09***
	(.19)	(.19)	(.18)	(.18)	(.18)	(.19)	(.19)	(.18)	(.18)
Competition		.39**							
		(.18)							
Investment			.29						
			(.18)						
IPR				.43**					
				(.18)					
Capital Movement					.39				
					(.26)				
Labor						-.042			
						(.27)			
Environment							.097		
							(.18)		
SPS								.51***	
								(.16)	
TBT									.62***
									(.17)
Constant	64.9	77.9*	76.1*	85.4*	71.9*	62.7	67.8	105.6**	101.5**
	(39.8)	(41.6)	(41.1)	(44.3)	(43.1)	(42.7)	(42.2)	(45.2)	(44.2)
<i>Inflation</i>									
PTA's Share of World GDP	2.78	2.87	2.78	2.95	2.81	2.78	2.77	2.80	2.75
	(2.83)	(2.84)	(2.83)	(2.85)	(2.83)	(2.83)	(2.83)	(2.83)	(2.82)
PTA Share of World Trade	-2.17	-2.25	-2.18	-2.30	-2.20	-2.18	-2.17	-2.18	-2.15
	(2.08)	(2.09)	(2.08)	(2.09)	(2.08)	(2.08)	(2.08)	(2.08)	(2.07)
PTA Average Polity	.0100	.013	.011	.014	.0090	.0099	.010	.015	.016
	(.043)	(.044)	(.043)	(.044)	(.043)	(.043)	(.043)	(.043)	(.043)
Constant	-.77**	-.82**	-.79**	-.84**	-.77**	-.77**	-.77**	-.82**	-.81**
	(.31)	(.32)	(.31)	(.33)	(.31)	(.31)	(.31)	(.32)	(.32)
ln(alpha)	-	-	-	-	-	-	-	-	-
	.59***	.61***	.61***	.60***	.61***	.59***	.60***	.67***	.72***
	(.20)	(.21)	(.21)	(.22)	(.21)	(.20)	(.20)	(.21)	(.23)
Observations	164	164	164	164	164	164	164	164	164

Table 5: How many total questions during the entire process?

	Model 5a	Model 5b	Model 5c	Model 5d	Model 5e	Model 5f	Model 5g	Model 5h	Model 5i
Notification year	-.024 (.025)	-.029 (.026)	-.029 (.026)	-.034 (.027)	-.027 (.026)	-.011 (.025)	-.027 (.026)	-.034 (.030)	-.029 (.028)
PTA w/the EU	-.23 (.44)	-.17 (.43)	-.17 (.43)	-.22 (.42)	-.43 (.40)	-.058 (.47)	-.36 (.41)	-.11 (.47)	-.070 (.49)
PTA w/the US	1.38 (.98)	1.54 (1.02)	1.37 (.98)	1.78* (1.06)	1.40 (.99)	2.06* (1.08)	1.43 (1.01)	1.10 (.97)	1.25 (.97)
PTA w/a PTA	.062 (.28)	-.10 (.31)	-.076 (.30)	-.17 (.31)	-.030 (.31)	-.0090 (.29)	.10 (.29)	.11 (.29)	.0014 (.30)
PTA w/Goods & Services	1.53*** (.24)	1.52*** (.25)	1.44*** (.25)	1.54*** (.26)	1.52*** (.24)	1.68*** (.26)	1.48*** (.25)	1.51*** (.24)	1.52*** (.24)
PTA's Share of World GDP	-7.12 (6.11)	-8.83 (6.49)	-7.63 (6.16)	-11.5* (6.92)	-7.20 (6.12)	-9.38 (6.39)	-8.18 (6.61)	-5.84 (6.11)	-6.83 (6.02)
PTA Share of World Trade	5.34 (4.48)	6.59 (4.76)	5.75 (4.52)	8.58* (5.07)	5.44 (4.49)	6.96 (4.68)	6.14 (4.86)	4.37 (4.49)	5.10 (4.42)
PTA Average Polity	-.020 (.022)	-.042 (.026)	-.023 (.022)	-.039 (.024)	-.021 (.022)	-.019 (.022)	-.025 (.023)	-.032 (.024)	-.027 (.023)
Competition		.48* (.26)							
Investment			.27 (.24)						
IPR				.63** (.26)					
Capital Movement					.44 (.34)				
Labor						-.69* (.37)			
Environment							.20 (.30)		
SPS								.27 (.25)	
TBT									.20 (.24)
Constant	50.6 (50.4)	60.3 (52.0)	60.1 (52.6)	69.8 (53.9)	55.3 (52.0)	24.1 (50.6)	55.3 (52.0)	70.7 (60.2)	60.9 (56.4)
ln(alpha)	.94*** (.16)	.92*** (.15)	.93*** (.16)	.91*** (.15)	.93*** (.16)	.92*** (.15)	.94*** (.16)	.94*** (.16)	.94*** (.16)
Observations	164	164	164	164	164	164	164	164	164

Table 6: Does the EU participate in the process?

	Model 6a	Model 6b	Model 6c	Model 6d	Model 6e	Model 6f	Model 6g	Model 6h	Model 6i
Notification year	.27** (.11)	.27*** (.10)	.27** (.11)	.29*** (.11)	.28** (.12)	.27** (.12)	.30** (.12)	.24* (.12)	.25** (.12)
PTA w/the US	-2.89 (2.65)	-3.30 (2.59)	-2.96 (2.67)	-3.50 (2.63)	-3.24 (2.73)	-2.68 (3.08)	-3.38 (2.75)	-4.09 (2.69)	-3.54 (2.59)
PTA w/a PTA	1.15 (.76)	1.42* (.78)	1.24 (.77)	1.51* (.78)	1.51* (.80)	1.12 (.77)	.82 (.83)	1.11 (.77)	.96 (.80)
PTA w/Goods & Services	1.83*** (.58)	2.03*** (.65)	1.94*** (.73)	1.99*** (.64)	1.83*** (.59)	1.87*** (.62)	2.34*** (.61)	1.73*** (.59)	1.80*** (.59)
PTA's Share of World GDP	21.4 (14.7)	23.3 (14.3)	22.1 (14.8)	28.0* (14.9)	23.9 (15.3)	20.8 (15.5)	28.2* (16.3)	27.3* (15.0)	23.3 (14.4)
PTA Share of World Trade	- 27.7** (11.1)	- 29.9*** (10.9)	- 28.5** (11.4)	- 33.5*** (11.4)	- 30.2** (11.8)	- 27.2** (11.8)	- 32.5** (12.6)	- 30.1*** (11.1)	- 27.9** (11.0)
PTA Average Polity	-0.099 (.074)	-0.051 (.085)	-0.100 (.074)	-0.075 (.075)	-0.10 (.075)	-0.098 (.073)	-0.071 (.080)	-0.14* (.084)	-0.12 (.078)
Competition		-1.07 (.71)							
Investment			-0.22 (.72)						
IPR				-1.23* (.67)					
Capital Movement					-0.86 (.86)				
Labor						-0.16 (.88)			
Environment							-1.30 (.85)		
SPS								1.02 (.66)	
TBT									0.71 (.58)
Constant	- 535.3** (229.1)	- 547.1*** (203.3)	- 540.2** (220.3)	- 578.3*** (210.9)	- 555.0** (233.8)	- 542.5** (239.5)	- 611.4** (245.5)	- 476.0* (245.6)	- 494.5** (241.8)
Observations	104	104	104	104	104	104	104	104	104

Table 7: Does the US participate in the process?

	Model 7a	Model 7b	Model 7c	Model 7d	Model 7e	Model 7f	Model 7g	Model 7h	Model 7i
Notification year	.28* (.15)	.28* (.15)	.29* (.15)	.28* (.15)	.28* (.15)	.28* (.16)	.28* (.15)	.28* (.16)	.26* (.16)
PTA w/the EU	5.32* (3.06)	5.38 (3.28)	4.78* (2.59)	4.99 (3.24)	5.28* (2.84)	5.27* (2.90)	5.51 (3.49)	5.32* (3.03)	5.49* (3.17)
PTA w/a PTA	.27 (.63)	.32 (.67)	.42 (.67)	.19 (.67)	.20 (.62)	.25 (.64)	.39 (.69)	.27 (.64)	-.018 (.71)
PTA w/Goods & Services	1.23** (.58)	1.25** (.63)	1.41** (.65)	1.18* (.61)	1.24** (.56)	1.26** (.59)	1.17* (.60)	1.24** (.59)	1.23** (.58)
PTA's Share of World GDP	-6.87 (5.60)	-6.70 (5.79)	-7.42 (5.01)	-8.05 (6.48)	-6.88 (5.42)	-5.98 (5.57)	-7.47 (6.10)	-6.89 (5.56)	-8.58 (6.17)
PTA Share of World Trade	-7.29 (11.2)	-7.67 (12.2)	-5.63 (8.99)	-5.56 (12.6)	-7.40 (10.5)	-7.73 (10.6)	-7.90 (12.7)	-7.37 (11.1)	-4.85 (12.4)
PTA Average Polity	.0090 (.051)	.017 (.063)	.016 (.052)	.0023 (.055)	.0085 (.051)	.0089 (.051)	-.0015 (.053)	.011 (.057)	-.0082 (.055)
Competition		-.17 (.63)							
Investment			-.50 (.56)						
IPR				.28 (.61)					
Capital Movement					.24 (.74)				
Labor						-.30 (.72)			
Environment							.31 (.72)		
SPS								-.062 (.57)	
TBT									.70 (.60)
Constant	- 564.1* (305.2)	- 568.1* (303.0)	- 575.8* (301.8)	- 554.8* (306.7)	- 562.2* (305.4)	- 571.2* (313.6)	- 561.7* (304.8)	- 568.9* (325.5)	- 519.8* (314.3)
Observations	104	104	104	104	104	104	104	104	104

Table 8: How many countries participate in the first round?

	Model 8a	Model 8b	Model 8c	Model 8d	Model 8e	Model 8f	Model 8g	Model 8h	Model 8i
Notification year	.047*** (.0094)	.045*** (.0095)	.045*** (.0094)	.042*** (.0092)	.048*** (.0091)	.047*** (.0099)	.045*** (.0095)	.034*** (.0098)	.039*** (.0090)
PTA w/the EU	-.38 (.35)	-.25 (.33)	-.32 (.35)	-.33 (.34)	-.54* (.31)	-.38 (.35)	-.48 (.35)	-.15 (.35)	-.11 (.36)
PTA w/the US	.099 (.73)	.25 (.72)	.11 (.73)	.32 (.70)	.11 (.76)	.12 (.77)	.15 (.72)	-.24 (.75)	-.17 (.74)
PTA w/a PTA	.031 (.30)	-.091 (.28)	-.025 (.30)	-.20 (.28)	-.13 (.27)	.028 (.30)	.096 (.31)	-.0021 (.28)	-.083 (.29)
PTA w/Goods & Services	1.08*** (.17)	.99*** (.17)	.99*** (.20)	.96*** (.16)	1.06*** (.17)	1.08*** (.18)	1.03*** (.19)	1.01*** (.17)	1.02*** (.17)
PTA's Share of World GDP	-4.13 (3.60)	-4.61 (3.51)	-4.26 (3.60)	-6.67* (3.42)	-3.91 (3.67)	-4.18 (3.67)	-4.79 (3.62)	-2.61 (3.69)	-3.23 (3.61)
PTA Share of World Trade	2.99 (2.64)	3.33 (2.58)	3.11 (2.64)	4.85* (2.51)	2.88 (2.69)	3.03 (2.69)	3.49 (2.66)	1.83 (2.71)	2.28 (2.66)
PTA Average Polity	.016 (.019)	-.011 (.022)	.014 (.020)	-.0022 (.020)	.013 (.020)	.016 (.020)	.011 (.021)	.0031 (.021)	.0061 (.020)
Competition		.56*** (.19)							
Investment			.23 (.19)						
IPR				.76*** (.18)					
Capital Movement					.64*** (.24)				
Labor						-.021 (.20)			
Environment							.17 (.19)		
SPS								.44** (.19)	
TBT									.39** (.16)
Constant	- 93.6*** (18.9)	- 89.6*** (19.1)	- 89.8*** (18.8)	- 84.2*** (18.5)	- 96.7*** (18.3)	- 94.1*** (19.8)	- 91.3*** (19.1)	- 68.3*** (19.6)	- 78.6*** (17.9)
ln(alpha)	- 1.20*** (.40)	- 1.35*** (.43)	- 1.21*** (.40)	- 1.50*** (.49)	- 1.37*** (.44)	- 1.20*** (.40)	- 1.22*** (.40)	- 1.29*** (.42)	- 1.29*** (.44)
Observations	164	164	164	164	164	164	164	164	164

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