

# Learning from the Past: WTO Litigation Experience and the Design of Preferential Trade Agreements

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## Abstract

Scholars of international cooperation have recently started to examine the context of negotiations over the design of new institutional arrangements. We add to this debate by analyzing the context-design nexus in the issue area of international trade. We argue that countries' experiences of interaction in WTO disputes influence the design of their preferential trade agreements (PTAs). The paper identifies common effects of experiential learning guided by domestic economic industry interests. If a country partakes in a complaint against a prospective PTA partner at the WTO, the challenge in Geneva rings the fire alarm among the defendant's import-competing industries with respect to potential challenges under the planned PTA. As a result, these industries become more vocal on trade policy, exerting pressure on their government to preserve leeway under the future trade deal. We expect this pressure to lead to increased flexibility and a lower level of enforcement in the respective treaty. We test our hypotheses by analyzing 347 PTAs concluded in the post-1990 period. The results show that the past indeed matters for the design of future institutional arrangements: Experiences in the WTO as a proximate forum of interaction spill over to negotiations on PTA design.

- **Keywords:** *Trade, WTO, preferential trade agreements, institutional design, dispute settlement, context of cooperation*

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Which factors are important when countries negotiate over the design of international institutions? The 21<sup>st</sup> century landscape of international institutions is densely populated and covers a plethora of issue areas ranging from the environment over human rights, trade and investment to security affairs. Existing institutions exhibit notable variation in design along the axes of the scope and depth of commitments enshrined therein, the number of member states, as well the degrees of enforcement and flexibility. Scholars of international cooperation have argued that the observed variation in institutional design can primarily be explained based on factors which render collective action more or less onerous. In this regard, problems of monitoring, enforcement, as well as different forms of uncertainty have been posited to be the key factors when governments convene at the international bargaining table.<sup>1</sup>

However, international negotiations do not take place in a “vacuum”.<sup>2</sup> Rather, they are embedded in a web of existing institutions based on which prospective treaty partners have already interacted with each other. Recent contributions have shown that the density of this institutional context of cooperation matters for the design of new international institutions. Most prominently, Copelovitch and Putnam present empirical evidence according to which the dispute settlement and flexibility provisions found in new treaties are *inter alia* influenced by how well countries “know” each other from prior bilateral interaction.<sup>3</sup> The authors contend that the learning lessons drawn from prior interaction can mediate the effects of issue-area specific levels of uncertainty on institutional design.

In this study, we seek to provide additional theoretical and empirical building blocs for research on the context-design nexus. For this purpose, we build on the contribution by Copelovitch and Putnam to ask two overarching questions: First, which actors are drawing learning lessons from prior instances of interaction?

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<sup>1</sup>Koremenos, Lipson, and Snidal 2001.

<sup>2</sup>Odell and Tingley 2013, 154.

<sup>3</sup>Copelovitch and Putnam 2014.

Second, through which mechanism are these actors learning? We undertake an effort to provide a first set of answers to these questions by zeroing in on the issue area of international trade, and preferential trade agreements (PTAs) in particular. PTAs have proliferated at a rapid pace across the globe since the early 1990s and constitute nowadays a central pillar of the international economy.<sup>4</sup> The design of these agreements is informative about the extent to which member states open up their domestic markets to foreign flows of goods, services and investment, under which conditions governments can deviate from their contracted obligations and how swiftly they can be brought in line in the event of unwarranted defection. Moreover, and importantly for our analysis, PTAs are embedded in a complex architecture of already existing agreements, including the multilateral forum of the World Trade Organization (WTO), bilateral investment treaties (BITs) as well as agreements existing in more distant issue areas.

Concerning our first question on the agents involved in the learning process, we argue that import-competing industries are pivotal in influencing PTA enforcement and flexibility provisions. Import-competing industries screen their home government's track record of prior bilateral interaction with a prospective trade agreement partner. The learning lessons drawn in this context will affect how vocal these industries are in calling for their preferred PTA design features. As regards the mechanism of learning, we posit that import-competing industries are particularly sensitive to prior instances of conflict-laden interaction. We argue that experiences in WTO dispute settlement in particular provide clues to these industries about the risk of being challenged by a PTA partner under a planned new trade agreement. If the WTO litigation history of two countries is marked by conflict-laden events, the import-competing industries of the member in the defendant role perceive an increased risk of becoming challenged under a future trade agreement by the member on the complainant side. A higher perceived risk

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<sup>4</sup>Mansfield and Milner 1999.

of challenge leads these industries to seek wiggle room under a PTA in the form of flexibility and a low level of enforcement. Their preferences for institutional design will then be taken up by their government and travel to the international bargaining table, resulting in flexible agreements with weak enforcement mechanisms.

We test our theoretical conjectures in an econometric analysis of 347 PTAs in the post-1990 period. In this context, we use novel measures to account for countries prior interaction at the WTO (disputes and coalitions) and through BITs. Moreover, we replicate the measure of bilateral cooperation in economic and non-economic issue areas used by Copelovitch and Putnam. Empirically, we find that the more countries were opposed in WTO disputes prior to inking a PTA, the more likely they are to shy away from substantive enforcement provisions (notably on retaliatory mechanisms) and strings attached to flexibility instruments in their agreements. The results are both statistically significant and substantial in magnitude: Prior involvement in WTO disputes leads to striking variations in PTA design. For instance, we observe that if two countries switch from no interaction in litigation to being opposed in one case prior to finalizing their PTA, they are 1.37 and 1.53 times more likely to abstain from any tangible retaliation provisions or strings attached to flexibility instruments in their trade agreement, respectively. Our findings further reveal that instances of positive interaction in litigation (i.e. being on the same side in a WTO dispute) are not consequential for PTA design. Finally, the results show that experiential learning dynamics are confined to the issue area of international trade: Import-competing industries draw learning lessons exclusively from litigation at the multilateral trade club as the most proximate and salient forum for interaction.

With this study we aim to make three contributions: First, while we acknowledge that prior interaction can matter for the design of new institutions, we add the qualification that it can take on multiple forms and take place in multiple

fora, with different implications for design. In this context, beyond the presence of agreements creating ties between countries, researchers can also shed light on patterns of interactions based on existing agreements. At the WTO, for instance, countries are making reciprocal commitments to trade liberalization, yet differ in their patterns of alignment and opposition regarding each other's propensity to implement the same commitments. These patterns of interaction, in turn, provide clues to domestic industries regarding a prospective PTA partner's behavior under a planned treaty. Second, our results are telling against the background of the increasingly popular idea of templates in PTA negotiations. Scholars have argued that countries enter bargaining processes with a clear-cut view of how the envisioned agreement should ideally look like. According to the template narrative, agreements cluster in design around a few model treaties pushed by the United States and the European Union as trading heavyweights.<sup>5</sup> We find that despite pressures for harmonizing PTA design, countries still preserve a room for manoeuvre in defining flexibility and enforcement provisions in their trade agreements. Third and finally, the results presented in this paper may hint at more general dynamics underpinning international cooperation. Our findings tie in neatly with existing empirical evidence on patterns of learning under uncertainty in other issue areas such as sovereign debt and investment.<sup>6</sup> At a general level, these contributions suggest that the universe of countries' and domestic industries' prior experiences matters when proposals for new institutional arrangements are tabled.

## Context of Institutional Design

Research on international cooperation has been marked by shifting debates over time: In the early 1980s, scholars haggled over the question of whether cooperation under anarchy is possible and inquired into drivers of state compliance with

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<sup>5</sup>Baccini, Dür, and Haftel 2015.

<sup>6</sup>Gray 2013; Poulsen 2014; Poulsen and Aisbett 2013.

international rules. A decade later, this debate was substituted with theories on interstate bargaining processes and on the dynamic interaction between the domestic and international political arenas. Recently, these considerations have been followed by studies on the design of cooperative arrangements as well as the interplay among different institutions at the international level.<sup>7</sup>

In the context of these so-called third generation models of international cooperation researchers have examined the design of agreements in issue areas as diverse as security,<sup>8</sup> human rights,<sup>9</sup> investment,<sup>10</sup> and trade.<sup>11</sup> In this newest wave of research on institutional variation in international cooperation, scholars have attempted to identify different determinants of key design features. In a recent contribution, Copelovitch and Putnam argue that negotiations over design are *inter alia* influenced by their past and present institutional context. The authors define institutional context as “the presence or absence of existing and prior agreements between prospective partners in ‘new’ cooperation.”<sup>12</sup> For the purpose of this study, they make the following central claim: A dense institutional context mitigates uncertainty arising from concerns about cheating, enforcement, and credibility. Consequently, countries with an extensive track record of prior interaction are posited to refrain from enshrining a strong enforcement mechanism in their PTA given that fears about unwarranted defection are alleviated. Similarly, they are expected to commit to long-term agreements in light of positive implementation prospects. The authors find support for this theoretical conjecture based on an empirical analysis of 144 UN-notified bilateral agreements drawn from the issue areas of economics, human rights, the environment, and security.<sup>13</sup> Based on their analysis, Copelovitch and Putnam stake out several avenues for

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<sup>7</sup>Gilligan and Johns 2012.

<sup>8</sup>Kydd 2001; Morrow 2001.

<sup>9</sup>Hafner-Burton, Helfer, and Fariss 2011.

<sup>10</sup>Allee and Peinhardt 2014.

<sup>11</sup>Dür, Baccini, and Elsig 2013.

<sup>12</sup>Copelovitch and Putnam 2014, 471.

<sup>13</sup>For further information on the agreements analyzed see Koremenos (2005).

further research, two of which are particularly noteworthy for the current research: First, they identify a need for a more nuanced account of the context of institutional design beyond the raw count of UN-notified bilateral treaties as indicators of successful (i.e. uncertainty-reducing) prior cooperation. Second, while there is empirical evidence that institutional context matters, the authors underscore that the exact mechanisms and agents through which it operates to affect institutional design are unclear.<sup>14</sup> We seek to provide further evidence in this regard by zeroing in on experiential learning lessons from WTO disputes, which potentially bear an influence on the design of PTAs.

Even though the research agenda outlined above is still in its infancy, we are certainly not the first to shed analytical light on the litigation-design nexus in international cooperation. Recently, analysts of BITs have examined whether countries adjust the design of their investment agreements as a function of prior experiences in investment disputes. The findings are inconclusive, with one study showing a positive effect of involvement in disputes on the degree of legal precision enshrined in BITs,<sup>15</sup> and a subsequent study failing to confirm this result.<sup>16</sup> In international trade, there are both qualitative and quantitative contributions on the influence of litigation experience on institutional design. In an analysis of the developments leading to the “legalization leap” from the General Agreement on Tariffs and Trade (GATT) to the WTO, Elsig and Eckhardt document how the European Community’s increasingly positive experiences in litigation under the GATT led it to endorse a more formal dispute settlement mechanism in the Uruguay Round negotiations. The authors attribute this change in position to a self-centered process of experiential learning. According to their argument, success in disputes increases a GATT/WTO member’s propensity to opt for a strong enforcement mechanism, while repeated defeats exert the opposite effect.<sup>17</sup>

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<sup>14</sup>Copelovitch and Putnam 2014, 488-489.

<sup>15</sup>Manger and Peinhardt 2014.

<sup>16</sup>Alschnner and Skougarevskiy 2015.

<sup>17</sup>Elsig and Eckhardt 2015.

Poletti and de Bièvre provide further insights in this regard by analyzing more recent WTO negotiations on tariffs and trade-related issues through the prism of prior experiences in dispute settlement. The authors claim that litigation affects negotiation outcomes and hence institutional design mainly through the channel of the domestic political economy battle between export-oriented, import-competing and import-dependent industries, with the direction of the effects being *a priori* unknown.<sup>18</sup> Finally, Rühl broadens the scope of research on experiential learning by examining learning spillovers from the multilateral to the regional level: In an empirical analysis of 262 PTAs concluded post-1945, the author finds that countries are more likely to opt for strong dispute settlement provisions in their trade agreements if they were already involved at least once in GATT/WTO litigation. He explains this finding with the idea that being invested in dispute settlement creates pro-enforcement constituencies within the private sector and government and further enhances legal capacity.<sup>19</sup>

We build on these existing studies to examine the litigation-design nexus in a more systematic manner. Based on an empirical analysis of 347 PTAs, we seek to further distill to what extent and in what form countries factor in past experiences when crafting new institutional arrangements. Below, we will present our main argument as well as the ensuing hypotheses.

## WTO Litigation Experience and PTA Design

Our theoretical framework links countries' history of prior interaction in WTO litigation to the enforcement and flexibility provisions found in their PTAs. Our argument comes in two parts: First, we contend that experiences in WTO disputes with a future PTA partner lead the import-competing industries on the defendant side to update their beliefs about the probability of being challenged by this same

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<sup>18</sup>Poletti and De Bièvre 2016.

<sup>19</sup>Rühl 2014.

partner under the planned trade agreement. In this context, we claim that a challenge at the WTO rings the fire alarm among these industries, which start to perceive a higher risk of litigation under an envisioned trade agreement. As a result of this clue from prior interaction, import-competing industries become more mobilized on trade policy. Positive experiences from instances of alignment in WTO litigation, in turn, are expected to matter little, if anything, for mobilization. Second, we posit that the lessons learned from litigation in Geneva spill over to the government level to inform preferences for PTA design along the axes of enforcement and flexibility. As a result, we expect conflict-laden experiences to translate into weak enforcement provisions and a high degree of flexibility. In what follows, we explain each part of our argument in turn.

We start our theoretical discussion with the assumption that governments design trade policy (including PTAs) as a weighted balance between export-oriented and import-competing interests.<sup>20</sup> Export-oriented industries can reap concentrated benefits from trade liberalization, while import-competing industries suffer from concentrated costs inflicted by market opening. As a result, these industries face lower hurdles to collective action than segments of society with more diffuse costs and benefits, which endows them with greater political clout.<sup>21</sup> In light of these considerations, which aspects of trade policy are particularly important for export-oriented and import-competing industries, respectively? The existing empirical evidence shows that exporters of goods and capital are mainly instrumental for the launch and the definition of the scope of trade negotiations.<sup>22</sup> Import-competing industries, in turn, have been found to be relatively more vocal on the design end of the PTA bargaining process: If they cannot avoid an ambitious agreement pushed by exporters, they seek to obtain at least certain flexibilities within the PTA to ensure sustained protection.<sup>23</sup> For example, in the

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<sup>20</sup>De Bièvre and Dür 2005, 1274; Dür 2007b, 462.

<sup>21</sup>Frieden and Rogowski 1996.

<sup>22</sup>Baccini and Dür 2015; Dür 2007b; Dür 2007a.

<sup>23</sup>Baccini, Dür, and Elsig 2015.

case of the EU-South Korea trade agreement negotiations, the small and medium-size car producers in the EU feared losses due to increased imports of Korean cars. The companies affected did not reject the overall ambition of the treaty, such as the elimination of tariffs over time (depth), but focused their mobilization efforts on the design of a special safeguard clause to allow them to demand protection from sudden surges in imports.<sup>24</sup>

There is further evidence that mobilization on trade policy design is not a given but anchored in focal points. In this context, scholars have argued that these focal points often come in the form of “fire-alarm-type mechanisms”, triggering loss aversion among domestic industries.<sup>25</sup> For instance, outward-oriented sectors in both the European Union and the United States have been more active on trade policy under the risk of losing market shares abroad due to PTA negotiations or existing agreements involving direct competitors.<sup>26</sup> In this paper, we argue that import-competing industries also mobilize around focal points, namely their home government’s experiences in litigation at the multilateral trade club in Geneva. More specifically, we contend that conflict-laden instances in litigation with a prospective PTA partner country ring the fire alarm among import-competing industries with respect to potential challenges under the planned agreement, leading to a higher level of mobilization on trade policy.

How do import-competing industries learn from their home country’s experiences in WTO disputes? We adopt the state-level arguments on experiential learning by Guzman and Elsig and Eckhardt to argue that import-competing industries go through a process of so-called Bayesian updating to judge whether a specific institutional design feature favors their interest.<sup>27</sup> Under Bayesian updating, prior beliefs are modified via a likelihood to form a posterior belief, as information con-

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<sup>24</sup>Elsig and Dupont 2012.

<sup>25</sup>Dür 2007b, 461.

<sup>26</sup>Dür 2007a; Dür 2007b.

<sup>27</sup>Elsig and Eckhardt 2015; Guzman 2008, 84.

sistent with a hypothesized relationship accumulates, or fails to accumulate.<sup>28</sup> We claim that experiential learning is at play when import-competing industries update beliefs about a foreign country’s propensity to challenge the trade policies of its own government based on patterns of prior interaction in WTO litigation. These beliefs then inform import-competing industries’ mobilization patterns and their governments’ preferences for the design of an envisioned PTA. Referring to an abstract example involving the prospective PTA partners A and B, consider the following two scenarios: i) The two countries were never involved in the same WTO dispute prior to inking their PTA and ii) they were exclusively opposed in one or several WTO disputes. Taking the first scenario as the baseline, one can assume that the relevant domestic industries hold a certain belief about the probability of being challenged by the partner country under the planned PTA. For the import-competing industries, this so-called prior determines how much they fear seeing their government’s autonomy in affording protection curbed under the trade agreement. In the absence of any clues from prior litigation experience at the WTO, the beliefs about the probability of being challenged are informed by an underlying scope for disputes<sup>29</sup> and located at a given level. If the countries now move to being opposed in a WTO dispute, with country B challenging country A, the industries in the latter will update their belief about the risk of being challenged under a PTA by moving towards a higher perceived risk of challenges. This challenge triggers a fire-alarm-type mechanism, as the import-competing industries in country A become more wary of losing existing levels of protection and mobilize accordingly. *A priori*, we don’t expect instances of alignment in litigation to exert the opposite effect. In light of the empirical evidence on focal points discussed above, we are skeptical about a potentially risk-alleviating effect

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<sup>28</sup>Dobbin, Simmons, and Garrett 2007, 460; Bayesian updating was originally expressed in statistical terms, with individuals updating the probability of a hypothesis (H) being true based on new evidence (E) through the move from  $Pr_1(H)$  to  $Pr_2(H) = \frac{Pr(E|H)*Pr(H)}{Pr(E)}$ .

<sup>29</sup>In our empirical analysis, we undertake a deliberate effort to approximate the prior by including economic and political control variables for the likelihood that PTA partners engage in a trade dispute.

of alignment in multilateral trade litigation, whereby taking the same position in disputes would lead import-competing industries to be less vocal on-going PTA negotiations.

At this point, three aspects of our theoretical framework merit further discussion: First, one could object that we make too strong of an assumption in stating that if a WTO Member challenges a peer in the international organization's dispute settlement fora it might also do so under a PTA. Regarding this objection, we have two reasons to believe that our assumption is valid: First, there is empirical evidence on Latin American PTAs showing that if a country challenges its trading partners under a prior agreement (WTO or PTA), it is likely to be a "repeat player" under regional agreements, providing that mechanisms for challenges are in place.<sup>30</sup> Based on this path dependency logic, a challenge in the past can reasonably be expected to raise fears about challenges under a prospective PTA. Second, even if a country does not become a repeat player under an envisioned PTA, the mere fact that it launched challenges in the past would suffice to elicit fears of sustained attacks among import-competing industries.

Second, one might be at odds with our depiction of the domestic political economy forces in the individual countries. So far, we have assumed that experiences in WTO litigation mainly operate through the channel of import-competing industry mobilization to affect PTA design. *A priori*, we do not contest that exporters and import-dependent firms can also have a say in this regard.<sup>31</sup> A strongly enforceable and rigid agreement would favor these interests, given the higher levels of transparency and predictability emanating from such a trade deal.<sup>32</sup> However, taking the mobilization levels of domestic groups in the absence of prior interaction in WTO litigation as the benchmark, we follow Goldstein and Martin in assuming that import-competing industries become relatively more

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<sup>30</sup>Gomez-Mera and Molinari 2014; for additional evidence within the WTO see Davis and Bermeo 2009.

<sup>31</sup>Poletti and De Bièvre 2016.

<sup>32</sup>Kahler 2000, 668.

mobilized as soon as there is a prior challenge at the WTO.<sup>33</sup> Two reasons motivate this assumption: First, as mentioned above, exporters have been found to be primarily vocal when it comes to the launch and definition of the scope of preferential trade negotiations. Second, we believe that a dispute at the multilateral trade club mainly transmits information about government B's determination to take position against member state A, rather than the underlying potential for challenges or alignment between the two countries. We expect that the determination for litigation matters more for import-competing industries when they form preferences about PTA design, while export-oriented industries and import-dependent firms, would be, if anything, more sensitive to the underlying scope for disputes (i.e. the prior).

A third and final point relates to the use of alternative fora for trade litigation. Scholars have affirmed that in international trade governments can engage in strategic shopping among the different regional fora and the WTO in order to pursue their interests and set precedents for future trade disputes.<sup>34</sup> In our context, one could claim that a complainant can always revert to the WTO to challenge a PTA partner's trade policy, thereby reducing the need for specific agreement design features. While it is true that 38 percent of the PTAs in our dataset<sup>35</sup> explicitly allow countries to bring a dispute under the respective agreement to the WTO and/or another external international court, we believe that PTA design still matters for two reasons. First, if a complainant brings a PTA-related case to the WTO, there is a high likelihood that the corresponding WTO panel will not pronounce itself on PTA provisions falling outside the ambit of the multilateral trade club due to questions of jurisdiction. As a result, the PTA dispute settlement mechanism can be seen as the primary avenue for addressing PTA-related disputes. Second, among those agreements in our dataset with scope for referral

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<sup>33</sup>Goldstein and Martin 2000.

<sup>34</sup>Busch 2007.

<sup>35</sup>This and the following figure have been calculated based on the coding in the Design of Trade Agreements (DESTA) database by Dür, Baccini, and Elsig (2013).

to external courts 89 percent feature a so-called “fork-in-the-road provision”: As soon as one forum is invoked for dispute settlement, another forum cannot be used. In this context, reverting to the WTO dispute settlement process with the risk that some points of contention fall outside the scope of jurisdiction of the arbitrators is not an ideal solution for complainants.

Given these considerations, the following question becomes important: If import-competing industries fear a high risk of being challenged under a PTA, which PTA design features would matter for them particularly? In the rational design of international institutions literature, researchers have identified three main dimensions along which PTAs can vary: Depth, enforcement and flexibility.<sup>36</sup> The depth of a PTA reflects the “the extent to which (an agreement) requires states to depart from what they would have done in its absence.”<sup>37</sup> This departure can result from a widened scope of commitments and/or a deepening of existing commitments.<sup>38</sup> The enforcement of a PTA refers to the dispute settlement provisions found in the treaty: Countries can opt for a more or less legalized dispute settlement mechanism, depending on the level of delegation to third parties as well as the strength and automaticity of the retaliation mechanisms.<sup>39</sup> Finally, concerning flexibility, governments can decide whether they are allowed to invoke escape clauses in the form of safeguards in case of balance of payments difficulties and import shocks, as well as anti dumping and countervailing duties in the presence of unfair trading practices by partner states. Moreover, PTA partners can attach strings on the use of escape clauses through transparency and coordination requirements as well as limited duration provisions.<sup>40</sup>

In our baseline analysis, we focus on PTA enforcement and flexibility provisions. We contend that enforcement provisions are particularly important because

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<sup>36</sup>Koremenos, Lipson, and Snidal 2001.

<sup>37</sup>Downs, Rocke, and Barsoom 1996, 383.

<sup>38</sup>Dür, Baccini, and Elsig 2013, 358-360.

<sup>39</sup>Allee and Elsig 2015.

<sup>40</sup>Baccini, Dür, and Elsig 2015.

if import-competing industries anticipate a high risk of becoming challenged by a partner country under a PTA, they have incentives to prevent such challenges by pushing for a weak enforcement mechanism with limited delegation and retaliation. The reasoning for flexibility is analogous: Opposition in a WTO dispute accentuates concerns over a loss of autonomy for the government in protecting import-competing industries, which will lead the latter to develop strong preferences for flexibility under a planned PTA. We don't expect this mechanism to play out for the design feature of agreement depth: Even if two countries were opposed in numerous WTO disputes prior to inking a PTA, they may have a preference for venturing more deeply into trade integration, for example by developing harmonization guidelines for technical standards. *A priori*, we have no reason to believe that import-competing industries will devote the lion's share of their resources to mobilize against a generally higher level of commitments in a PTA. Again, this argument resonates with the empirical studies mentioned above according to which exporters are the pivotal actors behind the conclusion and the definition of the depth of trade agreements. The level of enforcement and as well as the degree of flexibility defined in a PTA, to the contrary, are salient design features for import-competing industries.<sup>41</sup>

How do these dynamics play out in real-world trade negotiations? The following two examples illustrate the litigation-PTA design nexus: In June 2007, South Korea and the United States inked a bilateral trade agreement (KORUS). The PTA is considered very deep, with provisions reaching well beyond tariff cuts into the regulation of services, intellectual property rights, standards and procurement. In light of this high level of ambition, the United States Trade Representative touted KORUS as the “most commercially significant free trade

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<sup>41</sup>To drive home our point about flexibility and enforcement as the most salient PTA design features, we conducted an additional empirical analysis with depth as the dependent variable and regressors for prior litigation experience. For this purpose, we used three alternative indicators for PTA depth developed by Dür, Baccini, and Elsig (2013) and Allee and Elsig (2015). Our findings do not show any statistically significant effect of litigation experience on PTA depth. Results are available upon request.

agreement in almost two decades.”<sup>42</sup> While the PTA generally received wide support in the United States, certain industries voiced strong concerns about the flexibility provisions of the agreement. In a submission to the International Trade Commission, the American Semiconductor Industry Association cautioned that the trade remedies chapter of KORUS should not be designed so as to undercut the government’s autonomy in affording protection to import-competing industries. In 2003, South Korea had launched a complaint against the United States for the imposition of countervailing duties on Dynamic Random Access Memory Semiconductors.<sup>43</sup> The United States lost the case and had to remove the countervailing duties. Informed by this negative experience, the semiconductor industry lobbied against additional constraints on the exercise of trade remedies under KORUS.<sup>44</sup> A second example relates to the envisaged trade agreement between Canada and the European Union, commonly known as CETA. CETA was signed in October 2016 and is currently pending ratification. According to observers, in the negotiations, the Canadian government was especially circumspect regarding public procurement. The domestic renewable energy industry had warned that the government’s autonomy in using flexible procurement rules could be further curbed under CETA. In August 2011, the European Union had already challenged Canada at the WTO for procurement rules aimed at favoring local energy generators in supplying services to the Ontario Power Authority.<sup>45</sup> In this context, Canada had to comply with an adverse ruling by liberalizing its procurement rules. A research note by the Canadian Centre for Policy Alternatives on the prospects of the Canadian renewable energy sector concludes that:

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<sup>42</sup>United States Trade Representative 2007.

<sup>43</sup>See WTO DS296: *United States – Countervailing Duty Investigation on Dynamic Random Access Memory Semiconductors (DRAMs) from Korea*.

<sup>44</sup>Cooper et al. 2010, 26.

<sup>45</sup>See WTO DS426: *Canada – Measures Relating to the Feed-in Tariff Program*.

In light of the WTO decision, it will be even more essential for the Ontario government to fully safeguard its existing policy flexibility over procurement and renewable energy in ongoing trade and investment treaty negotiations directed by the federal government.<sup>46</sup>

These examples provide anecdotal evidence for how the lessons learned from interaction under one agreement can spill over to the design of subsequent trade deals. We argue that this mechanism is at play more generally between experiences in WTO dispute settlement and the design of PTAs. As a result, our two main hypotheses read as follows:

**H1:** *The more countries were opposed in WTO disputes prior to signing a PTA, the weaker the enforcement mechanisms found in their trade agreement.*

**H2:** *The more countries were opposed in WTO disputes prior to signing a PTA, the higher the degree of flexibility found in their trade agreement.*

## Data and Measurement

We test our two central hypotheses econometrically in a large-n setting. For this purpose, we refer to all PTAs concluded after 1990 and covered in the Design of Trade Agreements (DESTA) database by Dür, Baccini and Elsig.<sup>47</sup> The restriction to agreements in the post-1990 era is motivated by two reasons: First, the Cold War had a substantial impact on patterns of cooperation pre-1990, which might introduce bias in our findings. Second, the instances of prior interaction in WTO dispute settlement are only theoretically possible starting in the 1990s. We begin in 1990 rather than 1995 (when the WTO saw its light) because some of the reforms leading to the new WTO Dispute Settlement Mechanism were already implemented on a provisional basis as early as 1989 in the midst of the Uruguay

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<sup>46</sup>Sinclair 2013, 20.

<sup>47</sup>Dür, Baccini, and Elsig 2013.

Round negotiations. These reforms included among others the explicit acceptance of a complainant’s right to a panel.<sup>48</sup> For this reason, litigation behavior in the late phase of the GATT, the forerunner institution of the WTO, is comparable to the one under the WTO.<sup>49</sup>

Concerning the specifics of the agreements, we excluded PTAs with an accession character (e.g. Angola’s accession to the Southern African Development Community in 2002). In this context, little if any deviation from the design of the original agreement can be expected. Moreover, we omitted internal EU agreements (e.g. the Amsterdam Treaty of 1996) due to the peculiarities of the EU: In WTO disputes, the member states are not in the driver seat but the supranational institutions of the European Union, in particular the European Commission. Moreover, there are good reasons to believe that intra-EU decision-making processes on questions of institutional design are different from the ones outside the old continent.<sup>50</sup>

## Operationalisation

### Dependant variables: PTA Enforcement and Flexibility

The dependent variables are operationalized using the DESTA dataset. For DESTA, 156 variables have been coded manually to reflect PTA design along different dimensions. Based on these variables, different aggregate indices for agreement enforcement and flexibility exist. As regards the design feature of enforcement, we refer to a disaggregated form of the index proposed by Allee and Elsig: We use a dummy termed *Legal dispute settlement* indicating whether countries acquiesce to any form of legal dispute settlement in a PTA. This can be *ad hoc* third-party arbitration panels or a standing body with delegated powers. In

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<sup>48</sup>Busch and Reinhardt 2003; The conferral to complainants of a right to a panel prevents a selection effect in WTO disputes: Potential defendants can no longer veto the establishment of a panel, which implies that *a priori* any dispute can escalate to the expert panel stage.

<sup>49</sup>Our results are not affected by the exclusion of PTAs signed between 1990 and 1994.

<sup>50</sup>Weinberg 2016.

addition, we revert to an ordinal 0-5 index for the strength of the retaliatory measures in case of non-compliance in PTA disputes. The variable *Retaliation mechanism* accounts for the presence of provisions on retaliatory measures, whether the complaining party can choose the level of retaliation, clauses on same-sector and cross-sector retaliation (two separate values) and the scope for monetary sanctions in the form of fines.<sup>51</sup> Concerning flexibility, we rely on the measure for *Flexibility strings* proposed by Baccini, Dür and Elsig: It is an ordinal index ranging from 0 to 6 reflecting whether PTA members refer to and are consequently bound by WTO provisions on anti-dumping measures, safeguards as well as subsidies, whether safeguards are only possible during a transition period, whether the parties envisage developing a common policy on subsidies and whether they agree on a more ambitious *de minimis* dumping margin as compared to the WTO.<sup>52</sup>

Since our dependent variables are ordinal in scale, we will estimate ordered probit models. The output from these models indicates whether the odds of obtaining a high value on the regressand increase (positive coefficient) or decrease (negative coefficient) with a positive change in the respective regressor.

### **Independent Variables: WTO Litigation Experience**

Turning to the main independent variables, we use different measures to account for countries' experiences in WTO dispute settlement prior to a PTA. Since the unit of observation on the left-hand side of the regression models is at the PTA-level, we opt for the following strategy in aggregating the observations: For each dyad within a trade agreement (e.g. PTA members A and B) we account for the number of instances of opposition in previous WTO disputes. The cut-off point for prior interaction is the official signature date of a PTA: It is theoretically

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<sup>51</sup>Allee and Elsig 2015.

<sup>52</sup>Baccini, Dür, and Elsig 2015; We revert to this flexibility strings variable rather than the authors' index for escape flexibility for two reasons: First, the latter variable only indicates the presence of provisions on escape clauses. Second, it displays little if any variation on analytically interesting dimensions. For example, there are only very few PTAs with an outright ban of escape clauses.

possible that a multilateral trade dispute starting just slightly before the end of PTA negotiations influences the final design process of the agreement. Once we have the information at the dyadic level, we aggregate the data to the PTA level by taking the average across all treaty dyads.<sup>53</sup>

At the WTO, there are different possibilities for Members to be involved in disputes. At a general level, they can partake in the proceedings of a case as either principal or third parties. The principal parties act as a complainant, co-complainant or defendant, while third parties can participate in the meetings with the panels and the AB and are allowed to make oral as well as written submissions. In their contributions, third parties can take either a neutral, pro-complainant or pro-defendant position. We include these actors in our measure for prior litigation experience for two reasons: First, if a third party takes say a pro-complainant position in a dispute, the defendant and the relevant domestic industries can observe this positioning and interpret this move as implying a heightened risk of becoming challenged under a PTA by the same country with WTO third party status. Second, more than 60 percent of WTO disputes involve at least one third party, a phenomenon which we ought to capture empirically.<sup>54</sup> The specific operationalization looks as follows: If two countries were opposed in a WTO dispute (e.g. a defendant and a third party with a pro-complainant position) prior to signing a PTA, we interpret this as a conflict-laden instance of prior interaction. To analyze whether learning lessons are indeed only driven by fire-alarm-type events, we further control for instances of alignment in disputes, i.e. cases where countries take the same position. Data on the involvement and positioning of WTO Members in disputes come from Bechtel and Sattler and Kucik and Pelc.<sup>55</sup> In addition to the principal complainants and defendants, these authors have manually coded the positioning of third parties by going through the

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<sup>53</sup>Our main results are confirmed when choosing different rules for aggregation (e.g. maximum values across dyads).

<sup>54</sup>Johns and Pelc 2014, 666.

<sup>55</sup>Bechtel and Sattler 2015; Kucik and Pelc 2015.

panel reports available in the WTO online documentation center. We merged their datasets and obtained a full coverage of disputes from 1995 to 2006, and found that a few additional cases had been coded beyond 2006. Given that the DESTA dataset features agreements until 2015, we coded WTO Members' positioning in nine remaining years of trade disputes.

In addition, we extracted information on GATT disputes from the GATT Digital Library of Stanford University. As mentioned above, an important part of the reforms leading to the establishment of a new dispute settlement system was already implemented under the GATT, which makes an analysis of the trade disputes occurring post-1989 and up to the establishment of the WTO in 1995 suitable for our purposes. In our coding exercise, we followed the instructions by Bechtel and Sattler to differentiate between a pro-complainant, pro-defendant and neutral third party position.<sup>56</sup> We examined a total of 187 WTO disputes, 47 of which involved third parties for which we have information on written and/or oral submissions. 14 GATT disputes were added to the coding list. Overall, we covered 304 third parties. As to the specific coding procedure, in a first step, two researchers performed the coding in a blind manner. Second, a third person arbitrated over potential differences in coding. In case of lingering doubts about the alignment of a third party, the third coder was instructed to assign a neutral position.<sup>57</sup> Our coding exercise results in two main variables: *WTO disputes opposed* and *WTO disputes aligned*. For each PTA, *WTO disputes opposed* is a count of the average number of disputes in which the PTA countries were opposed before inking their trade deal. *WTO disputes aligned*, in turn, reflects the average number of disputes in which the members to the agreement were aligned prior to the signature of their PTA. The distribution of values on these two variables

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<sup>56</sup>Third parties are considered as taking a neutral position if they advance arguments in favor of both sides in a case or issue opinions relating to more systemic concerns about the interpretation of WTO rules (Busch and Pelc 2010; Busch and Reinhardt 2010).

<sup>57</sup>Overlap among coders amounted to 85 percent, which suggests a high degree of inter-coder reliability.

is zero-inflated and skewed, with many PTA dyads having no track record of interaction in disputes prior to signing their trade deal and only very few with an extensive interaction history (e.g. South Korea and the United States with nine instances of alignment and 27 instances of opposition in WTO litigation prior to their PTA). To avoid that these outliers drive our findings, we apply a log-transformation analogous to Copelovitch and Putnam.<sup>58</sup>

### Control variables

In addition to our WTO litigation variables, we include a number of controls in our baseline model to account for potentially confounding factors.

First, we use additional variables for prior interaction between PTA members. The purpose here is to gauge whether other forms of interaction in international trade and trade-related issue areas matter for PTA design. We identify three fora for further interaction: WTO negotiation rounds, BITs and the international arena for general cooperation. Other than through litigation, the members of the multilateral trade club regularly interact through one additional channel in the area of negotiations: Coalitions. WTO coalitions are country groupings negotiating trade liberalization with a common voice based on shared interests. Members of a coalition can pool their bargaining power (primarily by offering access to a larger aggregate market) as well as the resources required for preparing, carrying out and monitoring negotiations.<sup>59</sup> One could hypothesize that if countries shared or continue to share membership in a WTO coalition when inking a PTA, this constitutes an instance of positive prior interaction. Data on shared coalition membership come from the WTO website as well as three scholarly contributions.<sup>60</sup> We focus on coalitions which are classified as issue-specific by the WTO,

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<sup>58</sup>Copelovitch and Putnam 2014, 478; The transformation goes as follows:  $\log(x + 1)$ , with  $x$  being the number of disputes in which the countries were opposed prior to the signature of their PTA. The same transformation was applied to other zero-inflated and right-skewed count covariates.

<sup>59</sup>Narlikar 2003.

<sup>60</sup>Narlikar 2003; Narlikar and Tussie 2004; Rolland 2007.

namely groupings which are tailored to a particular negotiation issue at stake (e.g. the Cairns Group on agricultural trade liberalization). These issue-specific coalitions differ from general country groupings (e.g. the African Group comprising all the African WTO Members) as neither geography nor political objectives drive their establishment. Based on the different sources of information available we create the count variable *WTO coalitions*, which indicates the average number of issue-specific GATT/WTO coalitions in which the PTA dyads shared membership when signing their trade agreement.

Other than our WTO regressors, we use a set of variables for prior interaction in the field of investment law as well as for more general cooperation patterns. Regarding investment, we check for the presence of BITs and, in the affirmative case, BIT disputes among PTA partners. Research has shown that BITs and BIT disputes are focal points for preference formation in the international economy.<sup>61</sup> Due to the inextricable links between trade and investment in 21<sup>st</sup> century value chains, investment agreement ties and dispute cases could also matter for PTA design. In fact, more and more PTAs include investment provisions. For the purpose of our analysis, we classify a BIT between PTA members A and B as an instance of positive prior interaction. Data on BITs comes from the Investment Policy Hub by the United Nations Conference on Trade and Development (UNCTAD). Since there are only very few dyads with more than one BIT, the variable *BIT* is a dummy indicator for the presence of an investment agreement among PTA members.<sup>62</sup> BIT disputes, in turn, are considered as constituting an instance of challenge between countries. Foreign investors mostly act in an unmediated manner by directly suing respondent states, yet their headquarters endows them with a home country affiliation. By their very bilateral nature, BIT disputes generally oppose only two parties, with no scope for third party activism compared to the WTO. Therefore, we have created a dummy variable labeled

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<sup>61</sup>Allee and Peinhardt 2011.

<sup>62</sup>In case of a plurilateral PTA, we take the mode across dyads.

*BIT disputes*: For each PTA, it indicates whether the parties to the PTA were involved in a BIT dispute before sealing their trade deal. The information comes from UNCTAD’s Investment Policy Hub, and was cross-checked with data provided by the International Centre for the Settlement of Investment Disputes as well as the Permanent Court of Arbitration.

Finally, we include a count variable for general cooperation patterns prior to the signature of a trade agreement. Copelovitch and Putnam argue that a more dense track record of prior interaction through bilateral treaties is generally indicative of successful cooperation. In line with the authors, we rely on the United Nations Treaty Series (UNTS) online collection to extract the following information: For each PTA, we count the average number of UN-notified bilateral treaties prior to the conclusion of PTA negotiations (*UNTS bilateral*).

Next to these prior interaction variables, we include a host of additional controls commonly used in empirical studies on PTA design. On the political side, we account for the regime type of the PTA members. More democratic regimes have been shown to be more likely to acquiesce to enforceable and rigid agreements.<sup>63</sup> Processes of democratization, in turn, may increase countries’ desire for wiggle room under an agreement through low enforcement and high flexibility due to the fundamental uncertainty inherent in transitioning regimes.<sup>64</sup> We rely on information from the PolityIV dataset to create a variable for the average *Polity score* across dyads as well as a binary indicator for whether all members have undergone a process of *Democratisation* by crossing the threshold of 6 on the polity scale in the ten years prior to inking their agreement.<sup>65</sup> In addition, we include a measure for *Veto players* based on the POLCON dataset.<sup>66</sup> Research has shown that domestic political constraints render countries more likely to opt

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<sup>63</sup>Allee and Huth 2006; Baccini, Dür, and Elsig 2015; Gomez-Mera and Molinari 2014; Sattler and Bernauer 2011.

<sup>64</sup>Baccini, Dür, and Elsig 2015; Kucik 2012.

<sup>65</sup>Marshall, Gurr, and Jaggers 2016.

<sup>66</sup>Henisz 2000.

for weakly enforceable and flexible PTAs.<sup>67</sup> Regarding the WTO, we include two variables: *WTO membership* is a dummy indicating whether all members of the PTA were also part of the multilateral trade club (GATT or WTO) when inking their agreement. WTO membership has been shown to correlate positively with highly enforceable and rigid PTAs.<sup>68</sup> In addition, we include the average *WTO mission size* across PTA members to proxy for legal capacity. The inclusion of this variable is motivated by the fact that low-capacity members are less active in the WTO dispute settlement and may also be more wary of committing to strong enforcement and rigidity.<sup>69</sup> Finally, we integrate three variables to account for potential power asymmetries in PTA negotiations: Two dummies indicate the presence of the *United States* or the *EU* in a PTA. If these two trading heavyweights are among the prospective PTA partners, they may very well be able to push through their desired design templates in the bargaining process, irrespective of interaction patterns in WTO dispute settlement.<sup>70</sup> To capture patterns of power asymmetry more generally, we further add a measure for *GDP asymmetry* among PTA partners, which is the average of the GDP ratios across dyads in a given agreement.<sup>71</sup> Data come from the World Bank Development Indicators (WDI).

The political variables are complemented with a set of economic covariates: *GDP* and *GDP per capita* reflect the natural logarithm of the average GDP and GDP per capita levels across PTA members. Relatively well-off countries and countries with large markets may encounter fewer problems in committing to highly enforceable and rigid agreements. Additionally, we include a logged average

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<sup>67</sup>Mansfield and Milner 2012.

<sup>68</sup>Allee and Elsig 2015; Baccini, Dür, and Elsig 2015; Mansfield and Reinhardt 2003; We assume that if a country is not member of the GATT/WTO its relevant domestic import-competing industries cannot form preferences for PTA design based on prior interaction in litigation. Our results are not sensitive to the exclusion of PTAs where at least one member is not part of the GATT/WTO.

<sup>69</sup>Busch, Reinhardt, and Shaffer 2009; Busch and Reinhardt 2003.

<sup>70</sup>Allee and Elsig 2015; Baccini, Dür, and Haftel 2015.

<sup>71</sup>The higher GDP level is always in the numerator, the lower in the denominator. Due to the severe skew in this variable, a simple log-transformation was applied.

measure for *Trade flows* (imports plus exports) among the PTA partners: More intensive trading relationships may accentuate the need for a solid enforcement mechanism and rigidity in design to ensure stability in trade flows, but could also exert the opposite effect due to adjustment costs concerns. GDP data are again obtained from the WDI, the information on trade flows come from the Correlates of War Project.<sup>72</sup>

On the PTA design side, we include a measure for the number of *Member states*: The theoretical literature on the rational design of international institutions has claimed that membership is positively correlated with enforcement and flexibility.<sup>73</sup> Moreover, our baseline model features a variable for PTA depth: Deep agreements have been found to contain strong dispute settlement provisions and flexibility strings.<sup>74</sup> We rely on the DESTA measure for *Depth* calculated as a 0-48 index. It captures the scope and degree of commitments along six dimensions.<sup>75</sup> In the regression for flexibility, we additionally include a measure for *Escape flexibility*: Escape flexibility can lead to more strings attached to the use of flexibility instruments because countries become wary of abuse.<sup>76</sup>

Our baseline model is rounded up with dummies for regional fixed effects and time trends: For this purpose, we refer to the regions of Asia, Africa, the Americas and Oceania<sup>77</sup> as well as an indicator for the year in which a PTA was concluded. These variables will soak up any effects on PTA design driven by regional peculiarities or global trends over time. Due to space constraints, their coefficients will not be reported in the output tables.

The main descriptive statistics of the variables are displayed in Table 1:

A preliminary glance at the data reveals interesting variation on our primary

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<sup>72</sup>Barbieri and Keshk 2012.

<sup>73</sup>Koremenos, Lipson, and Snidal 2001.

<sup>74</sup>Allee and Elsig 2015; Baccini, Dür, and Elsig 2015.

<sup>75</sup>The six dimensions are: services, investment, intellectual property rights, public procurement, standards and competition policy.

<sup>76</sup>Baccini, Dür, and Elsig 2015.

<sup>77</sup>The baseline category is constituted of the few external PTAs involving European countries as well intercontinental agreements.

Table 1: Descriptive statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
<b>Dependant variables</b>					
Legal dispute settlement	0.513	0.5	0	1	394
Retaliation mechanism	1.548	1.654	0	5	394
Flexibility strings	1.975	1.332	0	5	394
<b>Main independant variables</b>					
WTO disputes opposed	0.213	0.53	0	3.638	394
WTO disputes aligned	0.355	0.662	0	3.434	394
<b>Control variables</b>					
WTO coalitions	0.277	0.453	0	1.792	394
BIT	0.508	0.501	0	1	394
BIT dispute	0.018	0.132	0	1	394
Polity2	5.609	4.433	-8.5	10	378
Democratization	0.098	0.298	0	1	378
Veto players	0.34	0.142	0	0.587	369
WTO membership	0.515	0.5	0	1	394
WTO mission size	4.979	3.689	0	19.5	393
GDP asymmetry	2.459	1.546	0	7.275	376
European Union	0.079	0.27	0	1	394
United States	0.041	0.198	0	1	394
GDP	25.301	1.887	19.821	29.685	393
GDP per capita	8.684	1.296	5.573	11.309	393
Trade flows	5.202	2.422	0	12.161	362
Member states	5.122	7.501	2	91	394
Depth (0-48)	12.868	11.822	0	43	394
Escape flexibility	3.421	1.56	0	5	394

variables of interest. The following comparison is illustrative in this regard: In 2004 and 2006, the United States inked PTAs with Australia and Peru, respectively. While the two trade deals exhibit nearly the same level of depth (values of 40 and 41 on the variable *Depth*), they differ in their retaliation mechanisms and flexibility string provisions. The Australia-US Free Trade Agreement is less ambitious on enforcement and has fewer flexibility strings because of the absence of an explicit provision on cross-sector retaliation as well as the lack of a reference to the WTO Agreement on Subsidies and Countervailing Measures. *Inter alia*, this difference could be driven by different patterns of prior interaction in litigation at the WTO: Peru and the United States interacted only through alignment in three disputes before signing their trade agreement. Australia and the United States, to the contrary, were aligned in seven disputes but opposed in 15 cases, including three salient cases shortly before the signature of the PTA.<sup>78</sup>

<sup>78</sup>The three cases touch on flexibility instruments, import regimes and subsidies: i) DS217: *United States – Continued Dumping and Subsidy Offset Act of 2000*, ii) DS245: *Japan – Measures Affecting the Importation of Apples* and iii) DS267: *United States – Subsidies on Upland Cotton*.

## Baseline Results and Analysis

The main results from our analysis are reported in Table 2. Overall, we find that prior interaction in WTO litigation matters for the retaliation mechanisms and flexibility strings found in a PTA. In line with our first hypothesis, opposition in WTO disputes leads to weak retaliation mechanisms. Our second theoretical conjecture is also borne out in the data: Challenges in litigation at the multilateral trade club result in less strings attached to the use of flexibility instruments.

Interestingly, we find no evidence that the lessons learned in WTO disputes matter for the likelihood of observing a PTA with legal dispute settlement provisions. This non-result could suggest that committing to legal dispute settlement (mostly through *ad hoc* arbitration panels in our dataset) is less costly than shouldering a strong retaliation mechanism for countries with a track record of negative prior interaction. This implication can be brought in line with our theory if one considers that subscribing to legal dispute settlement *per se* does not yet guarantee that every decision taken by arbitrators or standing judges will be implemented. It is only through retaliatory actions launched by the complainant and pursued in the same sector or even across sectors that a challenge becomes truly threatening for import-competing industries. In particular, the experiences in the WTO have shown that recourse to cross-sector retaliation, e.g. to waive copy-rights obligations when retaliation in the same sector (e.g. on tariffs) is not feasible, puts extra pressure on defendants to comply. This option has been particularly appealing for WTO Members with low market size and hence weak same-sector retaliatory capacity: For instance, Ecuador and Antigua and Barbuda successfully reverted to cross-retaliation on intellectual property rights to ensure the implementation of a favorable WTO ruling by the European Union and the United States, respectively.<sup>79</sup>

Since the output of the ordered probit models is little informative about the

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<sup>79</sup>Anderson 2002; Jackson 2012.

magnitude of the identified causal effects, we perform a set of corollary predicted probability calculations. For each of the two dependent variables, we compare the probability of observing a particular value on the ordinal scale for PTA members with no prior interaction in WTO disputes to the probability of observing the same value if the corresponding countries were opposed in a single dispute. All the other variables are fixed at their mean or, in the case of binary and ordinal regressors, at their respective mode. The results are displayed in Tables 3 and 4.

Based on these calculations, it can be seen that countries differ substantially in how they design their PTAs as informed by patterns of prior interaction at the WTO. For instance, if two countries were opposed in a WTO dispute before signing their trade agreement, they are 11.3 percentage points more likely to refrain from enshrining any retaliation provisions in their PTA than a dyad with no interaction in WTO litigation. The pattern is the same for flexibility strings (4.1 percentage point increase).<sup>80</sup>

Returning to the main output table, the control variables largely perform as expected. In this context, it is particularly noteworthy that the additional variables for prior interaction do not seem to matter for PTA design. The variable for joint WTO coalition membership proves to be statistically insignificant. The same non-results are observed with the BIT regressors<sup>81</sup> and the general cooperation variable from UNTS.<sup>82</sup> From this pattern we can infer that countries take lessons from the past into account when bargaining over the design of a PTA, yet do so

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<sup>80</sup>Recently, there has been a debate in the empirical literature about the merits of the standard average-case approach (used for tables 3 and 4) relative to the observed-value approach in predicting probabilities for non-linear models (Hanmer and Ozan Kalkan 2013). For the sake of comparison, we also calculated predicted probabilities based on the observed values on the different covariates in the sample. The results obtained with this procedure differ from the baseline findings in terms of the levels of values obtained, but not their ranking: For instance, the predicted probability of observing no flexibility strings provisions in the absence of any prior interaction at the WTO is 0.179. The predicted probability switches to 0.202 if there is one prior instance of opposition in litigation. Detailed results are available upon request.

<sup>81</sup>The findings for BIT disputes are to be interpreted cautiously. In our dataset, we have only very few dyads which clashed over the application of an investment treaty prior to signing a PTA.

<sup>82</sup>The only exception is *UNTS bilateral*, which is positively signed and statistically significant in the regression for flexibility strings.

Table 2: Baseline results

Variables	Legal Dispute Settlement	Retaliation mechanism	Flexibility strings
WTO disputes opposed	-0.383 (0.383)	-0.440** (0.199)	-0.350** (0.174)
WTO disputes aligned	0.414 (0.290)	0.158 (0.186)	0.179 (0.163)
WTO coalitions	0.0764 (0.315)	0.234 (0.209)	0.0661 (0.185)
BIT	-0.197 (0.212)	-0.145 (0.162)	-0.235 (0.143)
BIT dispute	-0.667 (0.791)	-0.0150 (0.477)	-0.233 (0.449)
UNTS bilateral	0.0323 (0.134)	-0.140 (0.0986)	0.172** (0.0874)
Polity2	0.0291 (0.0368)	0.0670** (0.0300)	-0.0259 (0.0245)
Democratization	-0.197 (0.395)	-0.451 (0.308)	0.166 (0.252)
Veto players	-1.583 (1.084)	-0.519 (0.873)	-1.501** (0.724)
WTO membership	-0.202 (0.253)	0.0246 (0.205)	0.265 (0.180)
WTO mission size	0.0605 (0.0552)	0.0747* (0.0383)	0.0496 (0.0330)
GDP asymmetry	-0.217** (0.0977)	-0.0537 (0.0725)	0.00425 (0.0635)
European Union	-0.112 (0.563)	-0.587 (0.370)	1.464*** (0.374)
United States	-1.961** (0.982)	0.762 (0.482)	-0.907** (0.424)
GDP	0.204 (0.138)	-0.0970 (0.109)	-0.0611 (0.0955)
GDP per capita	0.137 (0.116)	0.115 (0.0929)	0.179** (0.0819)
Trade flows	0.0399 (0.0680)	0.123** (0.0553)	0.00670 (0.0473)
Member states	0.0500** (0.0254)	-0.00525 (0.0139)	-0.0239 (0.0149)
Depth (0-48)	0.0849*** (0.0204)	0.0745*** (0.0102)	0.0301*** (0.00866)
Escape flexibility			0.616*** (0.0662)
Regional controls	Included	Included	Included
Time trend	Included	Included	Included
Observations	347	347	347
Model	Probit	Ordered probit	Ordered probit

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 3: Predicted probabilities retaliation mechanism

Prior interaction in WTO disputes	Retaliation mechanism					
	0 (none)	1	2	3	4	5 (many)
No interaction	0.301	0.017	0.512	0.033	0.137	$1.54 \cdot 10^{-5}$
Opposition (1 case)	0.414	0.019	0.463	0.023	0.081	$3.87 \cdot 10^{-6}$

Table 4: Predicted probabilities flexibility strings

Prior interaction in WTO disputes	Flexibility strings					
	0 (none)	1	2	3	4	5 (many)
No interaction	0.081	0.191	0.481	0.239	0.085	$1.07 \cdot 10^4$
Opposition (1 case)	0.124	0.234	0.465	0.173	0.004	$3.97 \cdot 10^{-5}$

in a limited sense. WTO litigation experience appears to be salient for learning, while the exposure in other fora generates no spillover effects to PTAs. This finding is consistent with prior evidence on militarized conflicts, according to which countries form preferences for behaviour in a specific area based on prior interaction within the same area (in our case PTAs) or proximate areas (the WTO).<sup>83</sup> It also fits the analogy by Guzman that learning about other actors is comparable to “the ripples a stone dropped in a lake creates, with the place where the stone enters the lake being analogous to the location of a violation.”<sup>84</sup> The ripples or learning effects can spill over to proximate areas, but gradually get diluted the farther one moves from the point of impact. Guzman used this comparison to argue that military regimes such as Chile under Salvador Allende in the second half of the 20<sup>th</sup> century possess multiple reputations, with violations in one issue area (e.g. human rights) generating little if any spillover effects to another issue area (e.g. economic cooperation). We adopt this analogy and think of a challenge

<sup>83</sup>Weisiger and Yarhi-Milo 2015.

<sup>84</sup>Guzman 2008, 103.

at the WTO as the stone dropped in the lake, with PTAs located close enough to be reached by the ripples from the impact. The ripples from stones dropped farther away (e.g. a treaty on cultural cooperation) do not reach PTAs.

## Robustness Checks

We also conduct an extensive range of robustness checks to examine whether our results are sensitive to the inclusion of additional control variables and different measurement approaches. The output tables can be found in the appendix starting from page 46 of this document.

First, we change the estimation procedure from ordered probit to ordered logit. By relying on the former, we have so far assumed that the error terms follow a normal distribution. Ordered logit, in turn, presumes a logistic distribution. When estimating the baseline models with ordered logit, we find our results to be confirmed.

Second, we shed light on potential problems of multicollinearity. Looking at the pairwise correlation coefficients in our baseline model, we detect non-trivial correlations among several regressors. Amongst others, alignment in WTO disputes correlates positively with opposition, suggesting that some dyads align with each other in certain issue areas, but remain opposed in others. To check whether the correlations on the right-hand side of our models drive our results, we calculate variance inflation factors (VIFs) for all variables. We find that the VIFs are generally low, with an average of 2.68. No variable exceeds the value of 10, after which econometric convention would dictate further investigation.

In a third step, we inquire into the root causes of WTO disputes and, indirectly, PTA design. A legitimate concern with our baseline model is that we don't account enough for the underlying scope for litigation between countries. While we already include variables commonly used in the literature to explain

litigation at the multilateral trade club (e.g. *trade flows* for the level of economic interaction, *GDP*, *GDP per capita* for market size, and *WTO mission size* for legal capacity), other factors might also determine the scope for trade disputes and thereby industries' preferences for PTA design. We identify two additional variables: Intra-industry trade (IIT) and retaliatory capacity. Concerning IIT, one could argue that a less cautious approach to PTA design might be more likely if countries engage in IIT rather than inter-industry because the former is less adjustment-cost intensive and hence conflictual due to monopolistic competition.<sup>85</sup> The rationale behind introducing retaliatory capacity as an additional covariate goes as follows: The higher the retaliatory capacity of a partner state, the more leverage the latter enjoys in enforcing trade commitments and hence the more prone it is to engage in disputes.<sup>86</sup> This might elicit fears among import-competing industries about challenges under a prospective PTA independently from existing patterns of interaction in WTO litigation. To account for these potentially confounding factors, we estimate models with variables for the average Grubel Lloyd index of IIT (as calculated by the research institute CEPII) as well as a measure for the average share of countries' exports going to their PTA partners as a share of their total exports. Our results remain unchanged with these modifications. The variable for retaliatory capacity exerts a statistically significant and negative effect on the strength of a PTA's retaliation mechanism.

Next, we undertake a more deliberate effort to account for power asymmetries in PTA negotiations. One could argue that the most powerful states in the world trading system dictate the rules of trade liberalization. To probe this conjecture, we opt for two alternative model specifications: First, we include a dummy for the presence of an OECD member in a PTA bargaining group. Second, we build on and slightly modify the approach by Rühl by including a regressor for the modal PTA enforcement / flexibility design found in the past agreements concluded by

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<sup>85</sup>Helpman 1981.

<sup>86</sup>Bown 2005.

the partner country with the highest GDP level.<sup>87</sup> To avoid an overemphasis on old and consequently shallow PTAs, we consider prior agreements starting from 1989. Our baseline findings are again corroborated.<sup>88</sup>

Fifth, we employ a different measure for WTO litigation experience: One could claim that being opposed in a single WTO dispute suffices to elicit fears about challenges under a PTA among import-competing industries. Following this reasoning, additional cases of opposition in dispute settlement would add only marginally to these industries' beliefs and mobilization levels. To test this account, we create binary litigation variables indicating whether prospective PTA partners were opposed or aligned in at least one WTO dispute prior to inking their PTA. Our initial results are confirmed.

Moreover, we seek to analyze whether our results hold when considering only a subset of prior disputes. It could be that disputes which lie back well in time do not exert a statistically significant effect on PTA negotiations. To test the sensitivity of our results to different temporal lags, we employ a moving windows approach: For this purpose, we only consider multilateral trade disputes which started 20, 15, 10, 5 and 3 years prior to the signature of a PTA, respectively. We find that the variable *WTO disputes opposed* is consistently negatively signed. Moreover, the coefficient on the variable is statistically significant for all but the most recent disputes. For these disputes, p-values fall short of the 10 percent threshold of statistical significance. In line with our theory, this finding could be explained based on reverse causality: States might shy away from launching complaints against a partner shortly before the finalization of PTA talks if they fear an adverse reaction from the import-competing industries in the defendant country's domestic political arena.

In a seventh step, we include regressors for countries' overall involvement

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<sup>87</sup>Rühl 2014, 65.

<sup>88</sup>Moreover, our results hold when taking the modal indices across all PTA partners and the maximum commitment only.

as defendants in trade litigation at the WTO. One might make a case that when forming preferences for the design of a PTA, import-competing industries not only look for clues about prospective challenges in the track record of interaction with a prospective partner country, but examine generally how often their country was challenged at the multilateral trade club. It could be that the characteristics of the complainant matter much less than the fact of being challenged for a national trade policy. For this purpose, we add a variable for the average number of times PTA partners were on the defendant side (both as principal and third parties) in WTO disputes prior to inking a PTA. Analogously, we include a variable for general complainant activity to proxy for countries' eagerness to challenge other members' trade policies at the multilateral trade club. Rühl has advanced the argument that general involvement in WTO litigation – both on the complainant and defendant side – increases countries' propensity to endorse strong enforcement provisions in a PTA.<sup>89</sup> Our results paint a slightly more nuanced picture: In line with our theory, we find that the coefficient for defendant activity is negatively signed and statistically significant in both regressions. Complainant activity, in turn, indeed increases the odds of observing retaliation mechanisms with teeth and flexibility strings. Further research is required to explore these links. Importantly for our analysis, even with this change our two main regressors retain the same signs as in the baseline output and remain statistically significant.

In the final robustness check, we account for a potential selectivity behind our sample. One could reasonably claim that the selection into the PTA bargaining process is non-random and *inter alia* influenced by countries' experiences in WTO dispute settlement. It could be that countries opposed in many disputes shy away from embarking on PTA negotiations, a hypothesis for which Mavroidis and Sapir find correlational support.<sup>90</sup> Conversely, opposition in disputes may create pro-enforcement constituencies in the complainant country. Irrespective

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<sup>89</sup>Rühl 2014.

<sup>90</sup>Mavroidis and Sapir 2015.

of the relative merits of these accounts, any selection dynamic could unduly influence our results. To address this concern, we estimate a Heckman selection model. For this purpose, we create additional entries in our dataset with non-treatment observations. In our case, non-treatment observations are constituted of dyad-years for which we don't observe the onset of PTA negotiations or existing PTA ties after 1990.<sup>91</sup> For these observations, we insert the values on our main covariate as well as the control variables. Moreover, to meet the exclusion restriction in the first stage, we include variables commonly used in the literature on PTA determinants.<sup>92</sup> The results show that experiences in WTO disputes matter for both the on-set of PTA negotiations and trade agreement design. Strikingly, alignment in WTO disputes leads to higher odds of observing preferential trade negotiations (first stage), while opposition in litigation matters only for the design process (second stage). These findings resonate with our theoretical assumption that exporters are mainly instrumental for the on-set of PTA negotiations, while import-competing industries tend to be relatively more vocal on flexibility and enforcement provisions. If two countries are often aligned in multilateral trade disputes, exporters can successfully lobby for trade negotiations in light of the shared interests among the two governments in question. Import-competing industries would enter the stage as soon as the fire alarm rings due to instances of opposition in litigation in Geneva.

Overall, our robustness checks confirm the results from our baseline analysis:

Experiences in WTO litigation influence PTA design.

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<sup>91</sup>The EU is treated as a bloc, accounting for the different accession dates of the member states.

<sup>92</sup>The variables are the following: Geographic distance, common language, contiguity and competitive pressures measured through diffusion, i.e. the number of PTAs concluded at the global scale in a given year. Other classical variables invoked as determinants of PTAs (e.g. trade flows) are already part of the baseline model.

## Conclusion

Does past interaction matter when countries design new international institutions? In this paper, we answer in the affirmative based on an analysis of the context-design nexus in international trade. We present a theory according to which patterns of interaction in litigation at the WTO inform preferences for PTA design. Our theoretical framework rests upon two pillars: First, the lessons learned from prior interaction mainly operate through the channel of domestic actors to affect new institutional design. Second, past instances of interaction can take on different forms, with different upshots for institutional design. We have applied this theoretical framework to PTAs to argue that import-competing industries draw learning lessons from their home government's involvement in WTO disputes with prospective agreement partners. According to our argument, negative instances of prior interaction in WTO litigation accentuate import-competing industries' concerns over maintaining leeway under a PTA, leading to a weakly enforceable and flexible trade agreement. We find support for our hypotheses in an empirical analysis of 347 PTAs in the post-1990 period. Prior instances of interaction in WTO dispute settlement have a statistically significant effect on the design of PTA retaliation mechanisms and flexibility strings provisions. The results are also important in magnitude, with the involvement in just a few disputes substantially altering the makeup of modern-day trade agreements. We further find empirical evidence for a dilution of learning spillovers across issue areas: Learning lessons are consequential for PTA design if they are anchored in prior conflict-laden experiences at the WTO as the most proximate and salient forum for interaction.

With this study we have attempted to provide further conceptual and empirical building blocks for the nascent research agenda on the context-design nexus in international cooperation.<sup>93</sup> Our findings carry two broader implications: First,

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<sup>93</sup>Copelovitch and Putnam 2014.

the results further underscore the importance of contextualizing international negotiations. Existing studies of international cooperation have generally treated groups of bargaining partners as congregations of countries with idiosyncratic characteristics, which are collectively responding to issue-area specific concerns over uncertainty, monitoring and enforcement. However, the design of new international institutions might partially be attributed to the universe of prior experiences accumulated by the member states and observed in their corresponding domestic political arenas. Studies in the fields of investment and sovereign debt have yielded insights on similar learning dynamics, hinting at possibly generalizable patterns of learning by international and domestic actors.<sup>94</sup> Second, our findings on the dynamic interaction between the multilateral and the regional levels in trade cooperation suggest that information can travel between different cooperation fora, as soon as there is a common underlying uncertainty structure. Import-competing industries are particularly sensitive to their home government's involvement in WTO disputes. In a different issue area, different pivotal actors may monitor different developments to draw different learning lessons.

In light of these considerations, we conclude by staking out three avenues for further research: First, at a general level, scholars could attempt to examine to what extent the findings from this study travel to other issue areas. Second, it would be worthwhile to further elucidate the mechanisms underpinning dilution of learning lessons from prior interaction. For instance, it might be possible that a change in the partisan color of a government leads actors abroad to “clear” the learning lessons anchored in the predecessor government's behavior. Third and finally, more effort could be devoted to examining the micro-mechanism through which past interaction influences discussions over new institutional design. In this regard, one could delve more deeply into the debates on planned agreements in the domestic political arena as well as the mobilization of antagonistic political

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<sup>94</sup>Gray 2013; Poulsen 2014; Poulsen and Aisbett 2013.

economy forces. Irrespective of the specific direction chosen, further research on the context-design nexus would extend the frontiers of our understanding of international cooperation.

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## Appendix

- Ordered logit estimation (table 5)
- Intra-industry trade and retaliation (table 6)
- Power asymmetries (table 7)
- Binary litigation variables (table 8)
- Moving time windows (table 9)
- General litigation activity (table 10)
- Two-stage estimation (table 11)

Table 5: Ordered logit estimation

Variables	Retaliation mechanism Ordered logit	Flexibility strings Ordered logit
WTO disputes opposed	-0.879** (0.374)	-0.505* (0.301)
WTO disputes aligned	0.351 (0.331)	0.404 (0.281)
Polity2	0.114** (0.0524)	-0.0475 (0.0442)
Democratization	-0.796 (0.527)	0.487 (0.419)
Veto players	-0.985 (1.499)	-2.169* (1.265)
WTO membership	-0.0525 (0.349)	0.475 (0.320)
WTO mission size	0.160** (0.0696)	0.0957* (0.0570)
GDP asymmetry	-0.149 (0.129)	-0.0352 (0.111)
European Union	-0.854 (0.598)	2.202*** (0.581)
United States	1.298 (0.911)	-0.872 (0.739)
GDP	-0.242 (0.182)	-0.0444 (0.160)
GDP per capita	0.166 (0.158)	0.343** (0.148)
Trade flows	0.180* (0.0958)	0.0229 (0.0818)
Member states	-0.00330 (0.0228)	-0.0292 (0.0230)
Depth (0-48)	0.134*** (0.0183)	0.0460*** (0.0158)
Escape flexibility		1.027*** (0.120)
Regional controls	Included	Included
Time trend	Included	Included
Observations	347	347
Model	Ordered logit	Ordered logit

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 6: Intra-industry trade and retaliation

Variables	Retaliation mechanism	Flexibility strings
WTO disputes opposed	-0.474* (0.257)	-0.363* (0.194)
WTO disputes aligned	0.0705 (0.240)	0.117 (0.177)
Polity2	0.0501 (0.0351)	-0.0381 (0.0254)
Democratization	-0.516 (0.327)	0.202 (0.256)
Veto players	-0.213 (1.011)	-1.350* (0.753)
WTO membership	-0.170 (0.225)	0.276 (0.186)
WTO mission size	0.124** (0.0489)	0.0724** (0.0351)
GDP asymmetry	-0.107 (0.0863)	0.0183 (0.0678)
European Union	-0.0211 (0.396)	1.147*** (0.352)
United States	9.009 (213.6)	0.638 (0.633)
GDP	-0.344*** (0.131)	-0.0255 (0.0972)
GDP per capita	0.112 (0.105)	0.274*** (0.0862)
Trade flows	0.266*** (0.0850)	-0.0456 (0.0610)
Grubel Lloyd	0.472 (1.130)	1.132 (0.822)
Retaliation	-6.303*** (1.663)	0.0934 (1.307)
Member states	-0.0145 (0.0187)	-0.0230 (0.0149)
Depth (0-48)	0.107*** (0.0128)	0.0326*** (0.00899)
Escape flexibility		0.620*** (0.0679)
Regional controls	Included	Included
Time trend	Included	Included
Observations	320	320
Model	Ordered probit	Ordered probit

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 7: Power asymmetries

Variables	Retaliation mechanism	Flexibility strings	Retaliation mechanism	Flexibility strings
	OECD	OECD	Template	Template
WTO disputes opposed	-0.451** (0.186)	-0.372** (0.163)	-0.426** (0.209)	-0.330* (0.183)
WTO disputes aligned	0.186 (0.177)	0.216 (0.157)	0.153 (0.207)	0.224 (0.181)
Polity2	0.0615** (0.0295)	-0.00520 (0.0239)	0.0532 (0.0334)	-0.00257 (0.0282)
Democratization	-0.312 (0.309)	0.0108 (0.253)	-0.158 (0.353)	0.228 (0.310)
Veto players	-0.890 (0.858)	-1.241* (0.713)	-0.451 (0.929)	-1.931** (0.794)
WTO membership	0.0721 (0.203)	0.267 (0.176)	0.0950 (0.229)	0.372* (0.203)
WTO mission size	0.0706* (0.0369)	0.0518 (0.0320)	0.0697* (0.0402)	0.0575 (0.0351)
GDP asymmetry	-0.0161 (0.0676)	-0.0609 (0.0588)	-0.0567 (0.0778)	0.000982 (0.0672)
GDP	-0.187* (0.0962)	0.0709 (0.0829)	-0.160 (0.109)	-0.0417 (0.0942)
GDP per capita	0.0886 (0.0935)	0.176** (0.0804)	0.140 (0.0999)	0.138 (0.0866)
Trade flows	0.120** (0.0531)	0.00480 (0.0450)	0.119** (0.0575)	0.0115 (0.0488)
Member states	-0.0142 (0.0129)	0.00301 (0.00990)	-0.0108 (0.0163)	-0.0167 (0.0128)
Depth (0-48)	0.0768*** (0.00949)	0.0242*** (0.00780)	0.0697*** (0.0111)	0.0321*** (0.00927)
Escape flexibility		0.586*** (0.0638)		0.561*** (0.0714)
OECD	0.176 (0.211)	-0.128 (0.189)		
Retaliation template			0.0220 (0.0689)	
Flexibility strings template				-0.000271 (0.0716)
Regional controls	Included	Included	Included	Included
Time trend	Included	Included	Included	Included
Observations	347	347	287	287
Model	Ordered probit	Ordered probit	Ordered probit	Ordered probit

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8: Binary litigation variables

Variables	Retaliation mechanism Binary	Flexibility strings Binary
WTO disputes opposed binary	-0.455* (0.243)	-0.624*** (0.214)
WTO disputes aligned binary	0.0840 (0.226)	0.356* (0.205)
Polity2	0.0706** (0.0296)	-0.0207 (0.0243)
Democratization	-0.427 (0.304)	0.198 (0.251)
Veto players	-0.848 (0.849)	-1.315* (0.711)
WTO membership	0.0494 (0.201)	0.320* (0.177)
WTO mission size	0.0738** (0.0367)	0.0592* (0.0323)
GDP asymmetry	-0.0482 (0.0701)	-0.00439 (0.0616)
GDP	-0.126 (0.103)	-0.00395 (0.0907)
GDP per capita	0.100 (0.0917)	0.156* (0.0804)
Trade flows	0.104** (0.0522)	0.0155 (0.0452)
Member states	-0.00377 (0.0131)	-0.0188 (0.0132)
Depth (0-48)	0.0742*** (0.00989)	0.0296*** (0.00856)
Regional controls	Included	Included
Time trend	Included	Included
Observations	347	347
Model	Ordered probit	Ordered probit

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 9: Moving time windows

Variables	Retaliation mechanism Moving 20	Flexibility strings Moving 20	Retaliation mechanism Moving 15	Flexibility strings Moving 15	Retaliation mechanism Moving 10	Flexibility strings Moving 10	Retaliation mechanism Moving 5	Flexibility strings Moving 5	Retaliation mechanism Moving 3	Flexibility strings Moving 3
WTO disputes opposed 20 years	-0.682*** (0.211)	-0.498*** (0.181)								
WTO disputes aligned 20 years	0.280 (0.204)	0.305* (0.175)								
WTO disputes opposed 15 years			-0.683*** (0.215)	-0.521*** (0.184)						
WTO disputes aligned 15 years			0.278 (0.206)	0.336* (0.176)						
WTO disputes opposed 10 years					-0.726*** (0.233)	-0.445** (0.233)				
WTO disputes aligned 10 years					0.263 (0.233)	0.224 (0.195)				
WTO disputes opposed 5 years										
WTO disputes aligned 5 years										
WTO disputes opposed 3 years										
WTO disputes aligned 3 years										
Polity2	0.0696** (0.0299)	-0.0178 (0.0241)	0.0694** (0.0299)	-0.0181 (0.0241)	0.0677** (0.0299)	-0.0172 (0.0241)	0.0655** (0.0296)	-0.0156 (0.0240)	-0.577 (0.363)	-0.478 (0.318)
Democratization	-0.421 (0.304)	0.202 (0.250)	-0.420 (0.304)	0.203 (0.250)	-0.412 (0.304)	0.202 (0.250)	-0.405 (0.304)	0.200 (0.250)	0.224 (0.277)	0.197 (0.248)
Veto players	-0.825 (0.859)	-1.403** (0.710)	-0.826 (0.859)	-1.408** (0.710)	-0.834 (0.858)	-1.403** (0.710)	-0.853 (0.855)	-1.453** (0.710)	0.0678** (0.0294)	-0.0145 (0.0259)
WTO membership	0.0555 (0.203)	0.319* (0.177)	0.0502 (0.203)	0.317* (0.177)	0.0549 (0.203)	0.311* (0.177)	0.0408 (0.202)	0.301* (0.176)	0.0597 (0.176)	0.305* (0.176)
WTO mission size	0.0785** (0.0377)	0.0559* (0.0327)	0.0790** (0.0378)	0.0556* (0.0328)	0.0781** (0.0380)	0.0575* (0.0329)	0.0784** (0.0378)	0.0572* (0.0326)	0.0746** (0.0371)	0.0691* (0.0324)
GDP asymmetry	-0.0577 (0.0707)	-0.000397 (0.0611)	-0.0557 (0.0707)	-0.00190 (0.0611)	-0.0606 (0.0706)	-0.00446 (0.0608)	-0.0634 (0.0703)	-0.00201 (0.0605)	-0.0377 (0.0688)	0.00126 (0.0600)
GDP	-0.146 (0.103)	-0.0319 (0.0897)	-0.147 (0.103)	-0.0315 (0.0897)	-0.141 (0.103)	-0.0289 (0.0897)	-0.131 (0.104)	-0.0271 (0.0900)	-0.148 (0.103)	-0.0344 (0.0808)
GDP per capita	0.110 (0.0918)	0.176** (0.0796)	0.110 (0.0917)	0.177** (0.0796)	0.109 (0.0919)	0.172** (0.0796)	0.112 (0.0917)	0.174** (0.0796)	0.113 (0.0907)	0.168** (0.0793)
Trade flows	0.115** (0.0524)	0.0221 (0.0448)	0.115** (0.0524)	0.0212 (0.0449)	0.115** (0.0522)	0.0251 (0.0448)	0.104** (0.0519)	0.0197 (0.0447)	0.105** (0.0512)	0.0236 (0.0444)
Member states	-0.00166 (0.0131)	-0.0157 (0.0132)	-0.00246 (0.0131)	-0.0195 (0.0132)	-0.00250 (0.0131)	-0.0186 (0.0132)	-0.00542 (0.0131)	-0.0196 (0.0133)	-0.00563 (0.0133)	-0.0199 (0.0134)
Depth (0-48)	0.0765*** (0.0101)	0.0302*** (0.00846)	0.0765*** (0.0101)	0.0302*** (0.00845)	0.0758*** (0.0101)	0.0299*** (0.00845)	0.0764*** (0.0101)	0.0305*** (0.00840)	0.0743*** (0.00984)	0.0311*** (0.00840)
Regional controls	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Time trend	347	347	347	347	347	347	347	347	347	347
Observations	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit	Ordered probit
Model										

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.10

Table 10: General WTO litigation experience

Variables	Retaliation mechanism	Flexibility strings
WTO disputes opposed	-0.496** (0.194)	-0.321* (0.168)
WTO disputes aligned	0.159 (0.181)	0.228 (0.160)
WTO disputes defendant activity	-0.494** (0.245)	-0.576*** (0.211)
WTO disputes complainant activity	0.427** (0.186)	0.368** (0.162)
Polity2	0.0747** (0.0306)	-0.0120 (0.0248)
Democratization	-0.429 (0.309)	0.221 (0.251)
Veto players	-0.656 (0.865)	-1.338* (0.718)
WTO membership	0.00996 (0.204)	0.314* (0.178)
WTO mission size	0.0799* (0.0426)	0.0691* (0.0367)
GDP asymmetry	-0.0644 (0.0726)	0.0133 (0.0632)
GDP	-0.148 (0.112)	-0.00547 (0.0975)
GDP per capita	0.0510 (0.0956)	0.108 (0.0834)
Trade flows	0.104* (0.0535)	0.0122 (0.0460)
Member states	0.000573 (0.0131)	-0.0182 (0.0135)
Depth (0-48)	0.0743*** (0.0101)	0.0269*** (0.00859)
Regional controls	Included	Included
Time trend	Included	Included
Observations	347	347
Model	Ordered probit	Ordered probit

Standard errors in parentheses. Constant (cuts) omitted from the output table.

Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01

Table 11: Two-stage estimation

Variables	Retaliation mechanism	Retaliation mechanism	Flexibility strings	Flexibility strings
	Second stage	First stage	Second stage	First stage
WTO disputes opposed	-0.482** (0.207)	-0.0114 (0.0656)	-0.311* (0.172)	-0.0131 (0.0650)
WTO disputes aligned	0.314 (0.211)	0.386*** (0.0662)	0.198 (0.157)	0.385*** (0.0660)
Polity2	0.0692** (0.0328)	0.0395*** (0.00896)	-0.0158 (0.0260)	0.0399*** (0.00890)
Veto players	-0.595 (0.908)	0.139 (0.240)	-1.367** (0.688)	0.132 (0.239)
WTO membership	0.0503 (0.273)	-0.0579 (0.0649)	0.332* (0.174)	-0.0560 (0.0645)
WTO mission size	0.0670 (0.0596)	0.0123 (0.0124)	0.0506 (0.0326)	0.0125 (0.0123)
GDP	-0.249 (0.182)	-0.370*** (0.0358)	-0.000367 (0.0989)	-0.370*** (0.0355)
GDP per capita	0.0990 (0.0977)	0.0557* (0.0316)	0.152* (0.0862)	0.0532* (0.0310)
Trade flows	0.191 (0.176)	0.246*** (0.0172)	0.00404 (0.0566)	0.247*** (0.0171)
Diffusion		0.0122*** (0.00252)		0.0124*** (0.00241)
Geographic distance		-9.62e-05*** (1.11e-05)		-9.68e-05*** (1.14e-05)
Common language		0.191*** (0.0612)		0.186*** (0.0623)
Contiguity		0.571*** (0.105)		0.555*** (0.106)
European Union	-0.305 (0.364)		1.047*** (0.307)	
United States	0.385 (1.261)		-0.586 (0.449)	
Member states	-0.00489 (0.00904)		-0.0201** (0.00942)	
Depth (0-48)	0.0670*** (0.0152)		0.0291*** (0.00894)	
Observations	347	75'456	347	75'456

Standard errors in parentheses. Constant (cuts) omitted from the output table.  
Levels of statistical significance set conventionally: \*\*\* p<0.01, \*\* p<0.05, \* p<0.01