The Forgotten Disputes:
Anti-Dumping and Trade Conflict at the WTO

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Abstract

Past research on trade disputes has demonstrated a clear relationship between international and domestic institutions in determining the behavior of the political leaders of member states in the decisions related to the initiation of disputes. The context has been limited to disputes under the WTO DSM, a highly constrained form of dispute. This paper expands the study of conflict behavior within the WTO to include anti-dumping disputes. These disputes represent a lower level of conflict than do DSM disputes and permit the testing of hypotheses related to dispute behavior in a large number of cases. Further, anti-dumping disputes are qualitatively different from DSM disputes and can provide further insights into how states seek to use institutional flexibility as a means of protecting domestic political survival and international institutional stability. The results suggest that domestic institutional characteristics do influence trade dispute behavior, but in ways that are different from those observed in DSM disputes. This has implications for the study of conflict management institutions at the international level.

Paper prepared for presentation at the Annual Meeting of the International Studies Association,
New Orleans, LA. Feb 17 – 20, 2010
As the world sits in the throes of a global economic meltdown with the media and political leaders raising the specter of a new Great Depression and crying for action, US President Barack Obama fired a significant salvo of protectionism against China. The logic of this action was clear. The President owed his election to trade unions in the United States and he was in the process of forcing painful concessions from them on issues related to the automobile industry. Domestic policy action favoring the trade union movement in the US was unlikely to receive rapid action in the Congress given the priorities during the emergency. So what is a President to do? President Obama turned to international trade rules, imposing anti-dumping measures on a range of products, mainly from China. While this was widely seen in the international business community as a dangerous sop to protectionism, the President was taking a step that has become the norm in the United States: using international trade rules to purchase the loyalty of politically significant groups while minimizing the disruption to the international trade system.

Since the end of the Second World War the international trade system has been managed by a global trade regime established by the United States, the United Kingdom, and the other major advanced industrial states. The General Agreement on Tariffs and Trade (GATT) and its successor the World Trade Organization (WTO) have governed a system of rules that has prevented a slide towards protectionism on a global basis along the lines of the one that took place in the interwar period. As clearly protectionist as the Obama Administrations actions were, they represented no real threat to the trade system managed by the WTO. In fact, by choosing the anti-dumping measures the policy demonstrated a commitment to act within the rules of the trade system even when violating the spirit of these same rules.
The actions of the Obama Administration parallel similar actions undertaken by both of this predecessors under the WTO as well as actions taken under the different rule structures of the GATT (Hudec 1993; Ryan 1995; Blonigen and Bown 2002). These actions represent the use of mechanisms of institutional flexibility within the WTO structure to allow member states to defect from the rules of the system when domestic politics requires it without damaging the system as a whole (Koremenos 2005). While temporary defection is permitted, the institutions force a return to compliance in the long run through the use of time limits and the option for other member to launch legal cases to force compliance (Rosendorff 2005).

The study of trade conflict at the WTO has great potential to improve our understanding of how institutional design affects state behavior at the international level. The presence of one continuous system with an evolving set of rules allows us to examine the impact of institutional change. The provision in the WTO system for different types of conflict also allows us to examine members’ behavior in different types of conflict. This has obvious implications for our understanding of international trade, but it also has significant implications for the wider study of global governance, especially in measuring the impact of institutional design in dispute settlement.

One of the major obstacles in research on the WTO has been the limited availability of data on the conflicts that take place within its institutions. While the raw data is available for anyone with an internet connection, the formatting of the data is not conducive to analysis along the lines of the data available in the study of militarized conflict. Data on disputes under the Dispute Settlement Mechanism (DSM) has been coded in a format compatible with past research on GATT disputes (Hudec 1993; Hudec 1999; Reinhardt 2000; Dixon 2010). This has permitted analysis of the impact of changes in member states’ behavior under the new institutional rules.
(Reinhardt and Busch 2002; Dixon 2010). While this has provided some insights into the role of domestic factors in member states in determining behavior within the international trade rules this has been confined only to one form of trade conflict within the system. In international trade conflict it is clear that this represents only a small fraction of the total amount of trade conflict that exists. The problem has been that observing such things as the underlying rate at which states seek to use institutional flexibility has not been possible.

This paper argues that anti-dumping disputes are a step in the direction of solving this problem. These disputes are far more frequent than their more expensive and complex cousins under the DSM. The disputes involve a wider variety of member states, including a greater number of developing states. Anti-dumping disputes allow the extension of our models of trade disputes to include lower level disputes, providing a measure of the rate at which states seek to cheat within the rules of the system.

The extension of the study of trade disputes to include anti-dumping allows us to expand past examinations of the way in which institutions interact across levels of analysis. Domestic level institutions create incentives for political leaders, but their decisions are also made in the context of a set of international institutional rules that constrain their freedom of action. In DSM disputes the international framework impacts leaders differently depending on their domestic institutions (Dixon 2010). Previously we have not been able to observe these relationships in other areas of trade conflict. This paper seeks to remedy this by extending this past research. In the sections that follow, this paper discusses the nature of anti-dumping within the WTO context and how the relationships observed in previous research on DSM disputes can be applied to anti-dumping cases. The paper then estimates a series of models to test hypotheses derived from past research on the impact of democracy on trade dispute behavior in the DSM. The paper
concludes with a discussion of the implications of the findings for future research on global governance and conflict management.

**Theory**

Most research on trade conflict at the WTO has focused on the disputes launched in the Dispute Settlement Mechanism (Reinhardt 2001; Busch and Reinhardt 2003; Josling 2003; Dixon 2010). These disputes reflect the highest level of trade conflict between the member states of the WTO. The emphasis in these disputes is on the degree to which the offending state has violated the rules of the trade regime. The disputes are a “legal” process in that they follow a set of formal rules that resemble the legal structures found in most states in which the rule of law applies. Since its inception WTO panels have elected to apply the concept of “general principles of law” as a means of organizing and governing the adjudication of disputes. (Shaw 2008) This has resulted in a process that has come to mirror the process of adjudication observed in the courts of advanced industrial democracies. While this has lent a great deal of legitimacy to the process, this also has the negative impact of raising the costs of such disputes. The cost of sending lawyers to Geneva for a period of up to five years to fight your case deters poorer states. The emphasis on accepted procedure also clashes with the culture of conflict resolution in authoritarian states. Simultaneously, the DSM procedures reinforce the norms of procedural dispute resolution found in democratic states. (Dixon 1994)

The combination of high cost and normative consistency has made DSM disputes the purview of democratic states. (Busch 2000; Reinhardt 2001; Dixon 2010) First observed under the GATT (Reinhardt 2001), the relationship between trade dispute propensity and democracy has held up under the WTO DSM (Dixon 2010). Under the conditions of the DSM, democratic
states are much more dispute-prone than are their authoritarian counterparts. A central question in this past research has been the degree to which this reflects the degree to which democratic states are prone to conflict in trade. It is possible that democracies are more prone to engage in trade disputes of all types due to the greater degree to which their political systems are open to pressure from constituencies lobbying for both violations of international trade rules to benefit local interests and for the use of international trade rules to promote local interests harmed by the cheating of others. It is also possible that democratic states are simply more likely to turn to a procedural mechanism for adjudication of the disputes that do exist. There has been no means to measure the overall level of rule-breaking in the system and to compare the responses of democratic states in this frame of reference. To draw on a parallel from the study of violent conflict, we are trying to understand conflict in the international system, but we can only observe declared wars between states. We are missing all of the lower level conflict in the world.

One method of extending our understanding of trade disputes is to move beyond the DSM and to explore other examples of trade conflict. The central problem in this effort is that the data on such disputes is either very difficult to come by, is not coded for use in statistical analyses, or is simply unavailable. One area where the data is available, although not in an ideal form is in Anti-Dumping (AD). The WTO publishes summaries of notifications under the Anti-Dumping regime as part of its data program (World Trade Organization 2010). This summary data includes all notifications of anti-dumping investigations as well as a separate list of all anti-dumping measures imposed under the AD provisions of the WTO. The AD system is separate from the DSM and is not part of the formal process of dispute resolution.\footnote{Anti-Dumping is eligible for settlement under the DSM, so these notifications can lead to DSM disputes. The notification system is used primarily to track these disputes and ensure compliance with the Anti-Dumping Framework established in the WTO treaty.} AD Notifications offer a means to observe the trade dispute process at a lower level than what we can observe in
the DSM. The AD notifications allow us to examine the effects of contributing factors such as democracy at a level of disputes that is free of the complexities in terms of cost and legal interpretation found at the DSM. Studying behavior in the AD system allows us to extend what we know about the behavior of states in trade disputes.

To understand the differences between disputes at the DSM and AD Notifications, a brief review of the institutions of the WTO is helpful. First and foremost it is important to remember what the WTO is set up to do. The WTO is not a free trade organization. It is a free-er trade organization. If the WTO were a free trade organization, the rules would be simple: does your policy obstruct trade? If so, then it is illegal. If not, then it is legal. This is not how the WTO works. The tens of thousands of pages of WTO law and jurisprudence do not exist to say “all members must trade freely”. The WTO is a complex institution for determining how trade will be managed. The WTO creates a set of minimal rules that all states must follow as members. These rules are designed to create a ceiling for trade restrictions that limits the degree to which member states can restrict trade from other states (World Trade Organization 2008).

This distinction is important for a variety of reasons. For the purposes of understanding the nature of trade conflict at the WTO it is important to remember that the system is a complex network of institutional compromises, vague legal frameworks, and fuzzily worded rules. The result is what could be termed a “fog of law” in which there is a great deal of room in which states can claim compliance with the rules of the trade regime while actually engaged in significant violations of those same rules. This permits the legal framework of the WTO to act as an institutional flexibility mechanism (Koremenos 2005), permitting members to engage in temporary defections from the system, returning to compliance when another member state elects to call them to account. The WTO institutions thus provide members with a system in
which long-term, general compliance is the norm for the member states. Simultaneously, members also engage in significant temporary defection on specific issues as their domestic political systems, economic conditions, and other constraints demand it. When the cheating behaviors of a member are trivial or do not harm key constituencies in other member states, that member can go on cheating indefinitely with no real political cost to other members. When the cheating harms another member sufficiently, the harmed member has the option of forcing compliance via the DSM.

Traditional studies of trade disputes have focused on the decision to initiate a dispute under the DSM. This involves the formal initiation of a dispute by a member state against another member. In practice the process through which such disputes emerge is roughly, as follows: A member state experiences a change in conditions (economic, political, or otherwise) that lead the political leadership to a choice of whether or not to violate the rules of the trade regime. When looking at the disputes under the DSM, the choice here is basically to cheat or not to cheat. If a state decides not to cheat, then nothing happens. If a state decides to cheat, then they make themselves a target for potential disputes under the DSM. Once the state has cheated, this sends out a ripple effect that impacts other trading partners to a greater or lesser degree. If the disruption is sufficiently large, the political leadership of the effected state must decide how to respond. Disputes under the DSM are expensive and time consuming. Under the WTO compliance is also enforced through countervailing duties assigned to offset the costs of trade. In this system potential dispute initiators must make a complex calculation. Does the negative impact of the other state’s policy hurt enough to make a dispute worth the cost? If so, then the initiator will launch the dispute.
Previous research with GATT disputes demonstrated that even under conditions in which there was no enforcement mechanism, members initiated disputes when the political benefits merited the effort (Reinhardt 2001). In addition, domestic institutions have a strong impact on this calculation, with democracies being much more likely to both initiate disputes and to be targeted (Sherman 2002). Further research on the WTO demonstrated that this logic persisted with the change to WTO institutions (Busch and Reinhardt 2003). Most recently research has demonstrated that the influence of the change from GATT to WTO institutions in dispute settlement was heavily dependent on domestic regime type (Dixon 2010). Central to this previous research is the basic assumption that the initiation of a dispute has been directed at the enforcement of the rules of the system. In these models, initiations represent attempts to bring wayward states into compliance with the rules of the system.

The problem has been that they do not tell us much about the prevailing level of non-compliance. In all of these cases, we observe the harmed state’s choice: launch a dispute or not. We do not observe the potential target’s choice whether to cheat or not to cheat. While this does not negatively impact the relevance of past research is has limited its applicability. This is particularly true in the study of the influence of regime type. Normative arguments suggest that democratic states should be more rule-compliant than non-democratic states. Despite this, democracies are targeted with much greater frequency than non-democracies in trade disputes. Does this greater propensity to be targeted reflect more frequent cheating behavior by democracies? There has been no way to know from the existing data.

Anti-Dumping Notifications serve as a way to tackle this problem. AD Notifications are not formal disputes like the cases under the DSM. The concept of “dumping” is an important part of international trade rules. Dumping is the case in which a company sells a product in an
export market for less than the price of production in its home market. An example would be if a company in the People’s Republic of China sold a bicycle in the United States for $150 that cost $175 to produce in the PRC. This sounds deceptively simple. The problems arise when one calculates the cost of production. There are no universal rules for calculating the cost of production in the home market. This effectively means that a country can use virtually any calculation they like in judging whether or not dumping is taking place. WTO rules provide a somewhat more detailed framework for what constitutes dumping, but leave the means of calculation of costs at the discretion of the members.

Under the WTO member states have a right to enact “safeguards” against products being dumped in their markets by other member states. These safeguards measures are limited in that they can only be imposed up to the amount of calculated harm and they can be imposed for no more than five years. Member states must first investigate the alleged dumping and determine the harm done by the dumping. After a determination of harm is made, states may impose such safeguards as they see fit up to the amount determined in the investigation. Beyond these vague limits, anti-dumping is essentially left to the discretion of member states. For free trade, this is bad. For those of us wishing to observe cheating behavior, this is good.

The WTO requires that members formally notify the WTO when they begin an anti-dumping investigation. A letter is formally filed at the WTO indicating the member initiating the investigation and the member begin targeted. A further bonus is that these notifications include not just full member states, but observer states as well. If a state imposes safeguard measures, they must also notify the WTO of this as well. The WTO publishes summaries of the reports of both initiations and measures, providing summary data that can be used to explore hypotheses regarding anti-dumping initiations and measures.
On the surface, these look like lower-level versions of the DSM disputes. This apparent similarity is deceptive. Actual cases of dumping are virtually non-existent. In most cases, the vague nature of the rules on calculating the cost of production allow states to argue that virtually any product is being “dumped” in their markets. Regardless of actual market conditions a member can calculate the cost of production in such a way as to “discover” that the other state is engaged in dumping. Examples of this in service of political interest abound. Most notorious is the sudden discovery by the administration of George W. Bush that nearly every steel producer in the world was dumping steel in the US market in 2002. The imposition of tariffs on steel to counter the alleged dumping was clearly for domestic political purposes and the harmed states immediately launched a dispute under the DSM. The WTO ruled in 2003 that the tariffs were illegal and the Bush Administration withdrew its tariffs near the end of 2003 when threatened with retaliatory tariffs by the EU.\(^2\)

Taking into consideration the arbitrary nature of anti-dumping investigations and measures, it is appropriate to think of them as attempts to circumvent the normal rules of the WTO system. Anti-dumping investigations and their attendant measures are a means of imposing tariffs that would be blatantly illegal under any other conditions. If we accept the idea that defection is generally temporary in response to conditions in the domestic political environment of the member states, anti-dumping is an ideal mechanism. States can issue a threat through the initiation of an investigation, thus showing resolve to their domestic audience and seeking concessions from potential targets. The imposition of measures permits violations of trade rules, but is subject to response by the targeted state. When the costs of the measures are

\(^2\) The WTO DSM ruled that the safeguard measures were illegal on several grounds, but most notably the fact that steel imports to the US had declined each of the last two years prior to the imposition of the duties. The DSM Panel authorized retaliatory tariffs against the US by a number of states and the Bush Administration withdrew the measures before the retaliation could take effect. The EU implicitly recognized the political nature of the steel tariffs by targeting their threatened retaliation at politically sensitive districts in the US.
high enough, the targeted state can seek adjudication under the DSM. In short, AD Notifications represent a form of acceptable cheating by members.

AD Notifications are attractive over blatant cheating in a number of ways. States can claim to in full compliance with WTO rules until the DSM rules to the contrary. Notification need not lead to measures if concessions can be wrung from potential targets. Even if measures are imposed, the initiating state will benefit from these policies while targeted states decide on their responses. Targeted states must pursue an expensive policy option (DSM disputes) to end the measures through the WTO procedures. As AD measures have a maximum life of five years, it may often be cheaper to simply live with the duties or negotiate bilateral concessions than to fight in the DSM. Further, states may engage in tit-for-tat investigations and measures without ever going to the DSM. In short, anti-dumping is fertile ground to study cheating behavior at the WTO in a way that is clearly measurable. Anti-dumping notifications permit the study of behavior representing trade conflict at a level beneath that of the DSM.

Anti-dumping notifications reflect two separate behaviors that are related to one another. The first type of notification is the notification that an investigation has been initiated. Generally referred to as an initiation in the related WTO literature, this is the formal notification by a member that an investigation has begun into dumping by another state. The second type of notification is the notification that safeguard measures have been applied. This second notification reflects an escalation of the process in that it involves the implementation of direct sanctions against the targeted state.3

Looking at raw numbers there are many more anti-dumping notifications than there are disputes under the DSM. As of December, 2008 there were 3,427 initiatives and 2,190 measures

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3 In principle the formal rules of the Anti-Dumping Agreement require notification of an investigation, but in a few cases measures are imposed without a corresponding initiation. The data available for both is summary data without a clear means of determining why these cases are different from the others short of reading all (3,427) of the cases.
recorded at the WTO. This compares to 405 disputes under the DSM, 59 of which were related
to anti-dumping measures. Given the different nature of the anti-dumping disputes is it
understandable that there would be a great many more of them. AD Notifications are cheap.
Escalations to the impositions of measures are also relatively cheap. That only 59 of 2,190 cases
were escalated to the DSM indicates that there is a low probability that cheating using anti-
dumping will lead to enforcement action by the targeted state.

Research into the DSM disputes has demonstrated clear patterns as discussed above.
Given the differences between the DSM disputes and the anti-dumping disputes it is not clear
that trends in dispute propensity observed at the DSM will hold in anti-dumping disputes. The
lower cost of disputes creates the opportunity for many more countries to participate. The lack
of a clear adjudication mechanism works against the normative affinity of democratic states for
the process.\textsuperscript{4} Past research has generally agreed on the impact of democracy on trade dispute
propensity across both the GATT and WTO and looking at a number of different aspects of
dispute behavior. In exploring the impact of lower levels of conflict, we also have examples
related to the impact of democracy from the democratic peace literature. Examining the impact
of democracy on anti-dumping disputes will give us some sense on whether or not our observed
dispute behaviors are consistent across the forms of trade dispute.

In the democratic peace literature there is ample evidence of the pacific effect of
democracy (Dixon 1994; Hensel, Goertz et al. 2000; Clark and Nordstrom 2005; Pevehouse and
Russett 2006; Schafer and Walker 2006). In international violent conflict, we observe that
democracies do not fight wars against other democracies, but we also observe that democracies

\textsuperscript{4} The basic argument here that anti-dumping reflects using the narrow rules to cheat on the larger rules raises a
debatable point as to what the impact of democratic norms of procedural dispute settlement would be. Do
democracies like following the narrow rules, or the larger ones? There has been little systematic research in
international conflict exploring this aspect of democracy.
do not engage in lower level militarized conflict with each other (Senese 1997; Oneal and Russett 1999). The democratic peace literature demonstrates that behavior in militarized conflict is consistent across higher and lower levels of conflict behavior. Democratic states simply do not act violently towards other democratic states. This consistency implies that the impact of democracy on varying levels of other forms of conflict may also be consistent.

The militarized conflict literature is not a perfect parallel to the trade conflict literature. In the democratic peace, democracies are less conflict prone than other states. This is the opposite of the relationship we observe in previous research on trade conflict. Higher levels of democracy lead to a greater propensity to engage in disputes under both the GATT and WTO DSM’s. Researchers have not agreed on what this means for trade conflict, with some arguing that the democratic peace does not extend to trade conflict (Sherman 2001) and other arguing that the same underlying logic drives democracies to engage in less military conflict and more trade conflict (Dixon 2010).

Democratic states engage in trade conflict for reasons of political survival. Domestic actors scream for protection, and if they have sufficient clout they get it. If the domestic group is part of a leader’s winning coalition, they stand a good chance of getting their policies implemented (Bueno de Mesquita 2003). This basic logic applies to the decision to engage in trade disputes as well as the decision to initiate anti-dumping notifications. Democratic states feel greater pressure to engage in policies that violate the trade regime in order to survive politically. This implies that democratic states are much more likely to use the flexibility mechanisms built into the WTO system such as the anti-dumping system.
In the case of anti-dumping disputes, recourse to temporary defection would be observed in a greater number of initiations by democratic states. This suggests a pair of testable hypotheses related to anti-dumping:

- **Hypothesis 1:** The higher the democracy score of a potential initiator, the greater the number of anti-dumping investigations that state will initiate.
- **Hypothesis 2:** The higher the democracy score of a potential initiator, the greater the number of anti-dumping measures that state will impose.

The democracy of the target state in anti-dumping measures should also matter. The main motivation for imposing measures is either to secure direct economic benefits through the protection of local industry or to extract concessions from the targeted state. In both cases, democracies make poor targets. Targeting tariffs at a democratic state will be almost certain to generate pressure for retaliation. The need for large winning coalitions in democracies increases the likelihood that the targeted industry will be part of the winning coalition of the targeted state. This increases the likelihood that a state will retaliate, making the imposition of measures riskier for the initiator. This implies the following hypotheses:

- **Hypothesis 3:** The higher the democracy score of a potential target, the lower the number of anti-dumping investigations targeted at that state.
- **Hypothesis 4:** The higher the democracy score of a potential target, the lower the number of anti-dumping measures targeted at that state.

**Methods**

To test the four hypotheses, a dataset was constructed containing directed dyads of all members and observers of the WTO. This dataset includes all country pairs configured as initiator and target to permit the testing of the directional hypotheses discussed above. The resulting dataset contains 32,039 country pairings. To account for the varying entry dates of member states, a variable was calculated for the age of the dyad as of 2009. Some member states have fewer years of membership and this variable permits controlling for the number of years the dyad has existed. A summary of the statistics included in the models appears in Table 2.
The data on anti-dumping disputes is based on the available summaries of anti-dumping initiations available from the WTO. These summaries provide a total number of initiations and measures for pairs of member and observer states at the WTO. The summaries reflect the total number of initiations and measures in the period for which both states were members of the WTO. This dataset includes both full members and observer states in the tables as both are required to provide the information on anti-dumping.

As the data from the WTO is aggregate data over the life of the pair of states, this presents some challenges in the use of the variables of interest and in key controls. To combine the data from individual years for these variables a number of rules were used based on what seemed most appropriate to the specific variables as used in the literature. The specifics of these decisions are discussed with the relevant variables.

Democracy data came from the Polity Project, version IV (Marshall and Jaggers 2000). The Polity scale is a measure of institutional democracy that ranges from a minimum score of -10 (most autocratic) to +10 (most democratic). The standard scaled scores for both initiator and target were included in the dataset. To aggregate the Polity scaled score, the weakest link rule was used. The Polity score for the state is recorded as the lowest score observed during the membership period.

Trade data was taken from the Correlates of War Project Trade Dataset version 2.0 (Barbieri, Keshk et al. 2009). This data includes dyadic data for a significant number of states. Two trade measures were generated: Trade volume is the total volume of imports from the other state in the dyad. Trade dependence is the value of imports as a percentage of GDP. Data aggregation for the trade data was based on the average value of the trade in the years observed. GDP data was drawn from the Penn World Tables, Version 6.3(Heston, Summers et al. 2009).
The aggregation is the average current GDP over the life of the dyad. Trade volume and GDP are logged in the models.

To test the hypotheses listed above two zero-inflated negative binomial regression models were estimated. The first model used the number of initiations as the dependent variable and the second use the number of measures. Given the nature of the data, especially the large number of zeros, the zero inflated negative binomial model is appropriate. Both models estimate the impact of the same range of variables in the main equation. In zero inflated models the inflate equation represents the likelihood that the dyad will be a certain zero (Greene 2003). States that do not trade, or in which trade volume is low, are much less likely to experience disputes. In terms of the predictive value of a certain zero, the lack of trade is a powerful predictor. As such the trade volume is used in the inflate equation for initiations. In the models for measures, the inflate equation includes the number of initiations. To impose measures requires an investigation be conducted, meaning that a non-zero value on initiations should be a strong predictor of non-zero values on measures. The results for both equations are included in Table 3.

Results

The results offer mixed support for the hypotheses above. What is clear is that the results in anti-dumping disputes show results that are not entirely consistent with the results for DSM disputes. The results of these models are displayed in Table 3.

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5 These models were estimated in STATA and appropriate comparisons were made to the standard negative binomial models and the zero inflated poisson models. All tests confirmed that the zero inflated negative binomial model was the most appropriate.

6 But not a perfect measure. As mentioned earlier in the paper, while technically an investigation is required this is not always observed in practice.
Hypothesis 1, that rising democracy scores for initiators would lead to larger numbers of investigation, is not supported by the results. While the coefficient was positively signed, the relationship between democracy and the number of initiations was not statistically significantly related to the number of initiations. Hypothesis 3, that higher democracy scores in the target state would reduce the number of disputes is supported by the model. The coefficient is negative and statistically significant. These results suggest that in the model related to initiations, the effect of target democracy performs as predicted. The higher the democracy score for the targeted state, the fewer disputes it will experience.

The results for the control variables in the initiations model are also mixed. Surprisingly the age of the dyad was not significantly related to the number of initiations the dyad experienced. One would expect that dyads with longer lives experience more disputes, but this is not the case when other factors are controlled for. The trade dependence variables were not significant in this model for either the initiator or the target indicating that trade dependence does not impact the number of disputes. Higher levels of GDP lead to higher numbers of disputes. This is not surprising as larger economies offer much greater opportunity for disputes over trade and this result is consistent with past research on trade disputes under the DSM. In the inflate equation, trade volume performed as expected with higher levels of trade decreasing the likelihood that a dyad would be a certain zero indicating the higher levels of trade on both the initiator and the target make it more likely that they will experience initiations.

In the measures model, testing Hypotheses 2 and 4 we see slightly different results from those observed in the initiations model. In this model we find support for both of the hypotheses regarding measures. Hypotheses 2 and 4 are both supported by the model. Rising levels of
initiator democracy are associated with larger numbers of measures implemented. Similarly rising levels of democracy for the target state lower the number of measures targeted at the state.

In the measures model, the age of the dyad was statistically significant, but in the opposite of the predicted direction. Older dyads experience fewer measures. It is not clear why this would be so and this is a curious result. The Trade dependence and GDP measures performed as expected. In the inflate model, the initiations variable had the predicted effect. The trade volume in this model did not have the predicted impact.

Overall the models strongly support the hypotheses regarding the relationship between the target state democracy and both initiations and measures. In both cases higher levels of democracy were associated with a lower numbers of disputes. This suggests that the likelihood of retaliation does deter potential initiators from targeting democracies.

Support for the impact of democracy on the behavior of initiators is mixed. In the decision to initiate investigations, the impact was not significant. In the decision to escalate to measures, higher levels of democracy were significantly related to larger numbers of measures implemented.

On the whole, the models offer mixed support for the theories of anti-dumping dispute behavior derived from previous research on disputes under the DSM. This is a potentially interesting finding as it indicates that the influence of democracy is different at different levels of trade conflict, exhibiting a more complex relationship in this area than that observed in militarized conflict.

**Conclusions**

The findings here are preliminary and much more work needs to be done in order to explore the relationships discussed here more fully. These results indicate that democracy does
have an impact on trade conflict below the level of the DSM. This is the first study to apply models of the impact of democracy on trade conflict behavior at the DSM to other types of trade conflict. Previous research on the two level institutional interactions has shown that the impact of international institutions varies with domestic regime type. The relationships shown here suggest that this multi-level institutional relationship continues, with democracy affecting behavior within the international institutions.

While the results here are encouraging in many ways, the availability of better data will greatly improve the quality of these results. The use of aggregate data makes it difficult to test change over time, especially in accounting for changes in economic performance and institutional durability. The aggregate nature of the data is imposed by what is currently available and this should change in the future. As better, more detailed, data become available the analysis of lower level disputes will improve.

While acknowledging the limits of the models discussed here, the results provide additional support for the further study of the interaction of domestic and international institutions. Democratic states behave differently from non-democratic ones in many cases. The models in this study also suggest that states take into account the institutions of other states in their decisions. The idea that democratic states make poor targets in trade disputes, and that this deters other from initiating against them demonstrates that institutional arrangements among member states changes how international institutions affect behavior.

In our efforts to expand the use of institutions to manage global problems it will be important for us to continue to incorporate these ideas into our institutional designs. As we learn more about how the domestic and international institutions interact, we can improve our global governance mechanisms. Ideally this will help in the management of international conflicts.
likely to emerge over economic conditions, natural resources, and other friction points in the global economy in the 21st century.
Table 1: Top 10 Members Targeted In Disputes at the WTO

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<th>Rank</th>
<th>DSM Requests for Consultations</th>
<th>Anti-Dumping Notifications*</th>
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<td></td>
<td>Member</td>
<td>Number</td>
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<td>USA</td>
<td>109</td>
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<tr>
<td>2</td>
<td>EU</td>
<td>67</td>
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<td>3</td>
<td>India</td>
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<tr>
<td>4</td>
<td>China, P.R.</td>
<td>17</td>
</tr>
<tr>
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<td>Argentina</td>
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<tr>
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<td>Japan</td>
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</tr>
<tr>
<td>8</td>
<td>Brazil</td>
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<td>9</td>
<td>Korea, Rep.</td>
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<tr>
<td>10</td>
<td>Mexico</td>
<td>14</td>
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</table>

Total: 74% 61%

* Notification of the initiation of anti-dumping investigation
### Table 2: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
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</thead>
<tbody>
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<td>32039</td>
<td>0.105996</td>
<td>1.515985</td>
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<td>Measures</td>
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<td>-3.27176</td>
<td>7.037317</td>
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<td>10</td>
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<td>27200</td>
<td>-3.2689</td>
<td>7.039784</td>
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<td>10</td>
</tr>
<tr>
<td>Age of Dyad</td>
<td>22425</td>
<td>11.81021</td>
<td>3.509672</td>
<td>1</td>
<td>14</td>
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<tr>
<td>Initiator Trade Dependence</td>
<td>26461</td>
<td>1.70E-06</td>
<td>2.32E-05</td>
<td>0</td>
<td>0.002166</td>
</tr>
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<td>2.32E-05</td>
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<td>0.002166</td>
</tr>
<tr>
<td>Initiator GDP (log)</td>
<td>30612</td>
<td>17.42659</td>
<td>2.154276</td>
<td>12.62309</td>
<td>26.0739</td>
</tr>
<tr>
<td>Target GDP (log)</td>
<td>30612</td>
<td>17.42481</td>
<td>2.152388</td>
<td>12.62309</td>
<td>26.0739</td>
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<tr>
<td>Initiator Trade (log)</td>
<td>23349</td>
<td>0.348073</td>
<td>3.806997</td>
<td>-30.6557</td>
<td>12.32774</td>
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<tr>
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<td>0.348313</td>
<td>3.806351</td>
<td>-30.6557</td>
<td>12.32774</td>
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Table 3: Impact of Key Variables in Anti-Dumping Notifications (Zero-Inflated Negative Binomial Regression Models)

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<tr>
<th>Variable:</th>
<th>Initiations Coefficient</th>
<th>Initiations Standard Error</th>
<th>Measures Coefficient</th>
<th>Measures Standard Error</th>
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<td><strong>Main Equation Results:</strong></td>
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<tr>
<td>Initiator Democracy</td>
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<td>.007</td>
<td>.014*</td>
<td>.006</td>
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<tr>
<td>Target Democracy</td>
<td>-.041**</td>
<td>.007</td>
<td>-.039**</td>
<td>.006</td>
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<tr>
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<td>.014</td>
<td>-.035*</td>
<td>.014</td>
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<td>-6573.872</td>
<td>4089.86</td>
<td>3236.602</td>
<td>2600.942</td>
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<td>2424.734</td>
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<td>Initiator GDP (log)</td>
<td>.538**</td>
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<td>.241**</td>
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<td>.406**</td>
<td>.038</td>
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<td>-11.813</td>
<td>.909</td>
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<tr>
<td><strong>Inflate Equation Results:</strong></td>
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<tr>
<td>Initiator Total Trade (log)</td>
<td>-.526**</td>
<td>.073</td>
<td>-.062</td>
<td>.095</td>
</tr>
<tr>
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<td>.038</td>
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<td>n/a</td>
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<tr>
<td>N</td>
<td>13,887</td>
<td></td>
<td>13,887</td>
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<td>$\chi^2$</td>
<td>287.69**</td>
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<td>248.26**</td>
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<td>-3085.921</td>
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<td>-1383.476</td>
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</tbody>
</table>
Works Cited


