Elections and The Timing of Trade Disputes

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Abstract

What explains the variation in timing of WTO disputes over antidumping duties? Without a clear domestic opposition group, countries have incentives to bring up disputes as quickly as possible so as to limit the harm to their domestic industries subject to these duties. However, the average amount of time between duty imposition and WTO dispute initiation is quite large: almost 6 years, with a standard deviation of nearly 6 years. I argue that countries time their disputes around elections of executives so as to gain political support from large domestic industries, especially countries where trade is a more salient political subject. Using data on all WTO disputes dealing with antidumping duties, I test this hypothesis with a discrete time hazard model and find evidence that countries are more likely to bring up a dispute the closer they get to elections.

Keywords: Antidumping duties, WTO, trade disputes

1 Introduction

In 2002, Argentina challenged Peru's antidumping (AD) duties on its vegetable oil through the WTO's Dispute Settlement Mechanism (DSM), waiting less than a year from the imposition of those duties. However, it accepted 7 years of similar trade barriers from the Unied States over oil casing and tubing products before deciding to challenge them. Similarly, Japan opted to challenge AD duties from the U.S. on hot rolled steel products within a year of imposition of those duties, but waited more than a decade to challenge the U.S. on AD duties based on zeroing. This is a common pattern in the AD dispute data and raises a general puzzle: why is there such wide variation in the time countries wait to dispute AD duties?

What makes this variation in timing particularly puzzling is the suspicious nature of AD duties. Many have argued these duties are simply clever protectionism (Blonigen and Prusa 2003; Prusa 2005) countries can manipulate data to justify AD duties when dumping is not really occurring

Considering the success rate, if a country is willing to dispute AD duties, they should initiate the dispute sooner rather than later, because those trade barriers harm their domestic industries, and they are likely to win some aspect of the dispute. However, the data show the average time between duty imposition and WTO challenge is approximately six years, with a standard deviation of approximately five years. This is a rather long time gap, with substantial variation. It seems perplexing why countries pursue these disputes with such irregularity.

I hypothesize that this variation is due to political reasons, namely electoral timing. Over half of WTO AD duty disputes occur within a year of election in the complainant country. I argue that political leaders use these disputes to gather support from key domestic industries prior to elections. Additionally, I argue that, due to their limited resources, developing countries disputing duties from developed countries will rely on this tactic the most.

This paper will proceed as follows. I will describe the puzzle and then highlight the key

literature on the topic of antidumping, trade disputes, and electoral politics. I will then specify my theory. Next, I will describe my statistical model and explain the key variables. Following that, I will test my theory, using a discrete time hazard model. Following my results, I will point out further areas for research and discuss what my findings suggest about the role of domestic politics in international institutions.

2 Puzzle

Why do countries opting to dispute AD duties through the WTO DSM challenge those duties with such varying times? Why did Argentina accept 7 years of trade barriers before challenging the United States in 2002 over AD duties on Oil Country Tubular Goods, but challenged Peru in 2002 over vegetable oil AD duties it placed earlier that very year? Why did Japan utilize the WTO DSM within a year of the United States placing AD duties on hot rolled steel in 1999, but wait over a decade before using it to dispute zeroing calculations by the United States? This pattern is consistent in the data - there is a wide degree of variation between the time AD duties are imposed and the country challenges that duty at the WTO. The average time gap is 5.9 years, and the standard deviation is 4.9 years among duties that lead to disputes.

This time gap is puzzling, given the fact that these duties harm domestic exporters. It becomes more unusual given the somewhat arbitrary nature of AD duties, as many argue that AD duties are merely a clever form of protectionism instead of a way to counter dumping activity (Lindsey and Ikenson 2003; Prusa 2005; Blonigen 2006). This explains why most WTO disputes find some aspect of the AD duties imposed to be problematic. As such, if AD duties have little to do with actual dumping activity (as opposed to false claims of dumping), and challenges to these duties through the WTO DSM are often successful, countries willing to challenge AD duties at the WTO have every incentive to do so as early as possible, as they would probably win and move towards getting improper duties lifted sooner.

Another key factor behind the puzzle is that there are no clear domestic opposition against disputing AD duties. Unlike trade policy, where there is often opposition from exporters or import-competing industries, it is difficult to think of a domestic interest group that could make challenging an AD duty costly to a politician. Perhaps ideological supporters of free trade might be opposed, but they would hardly constitute a coalition that could harm a political leader.

Additionally, firms in affected industries should be united in supporting disputes. While these firms face a collective action problem when lobbying *for* AD duties, there is no such problem in *challenging* these duties, since they should all want these trade barriers eliminated. This is also primarily an exporter issue there is no reason to think domestic firms importing foreign products would oppose challenging those duties, because the trade barriers only apply to products being exported. Finally, there may be a positive effect, either from the general voting public, or amongst voters in affected industries, for political leaders challenging potentially unjust trade barriers as elections approach. This was hinted at as the reason for American action at the WTO against China in the 2012 U.S. presidential race[1]. Overall, there seem to be no real opposition groups to complicate the domestic politics of an AD dispute challenge, only potential supporters. This all makes delays in challenging an AD duty puzzling.

3 Antidumping Duties: Trends and Strategic Use

The research on antidumping duties reveals that countries are strategic in their use of this kind of trade barrier. AD duties are imposed by countries when they find that imports are harming domestic industries by virtue of being sold at below-market prices. These duties are imposed with great frequency in international trade - initially mostly by developed countries, but increasingly by developing countries. Also, emerging market countries, particularly India and China, are now respondents, not just complainants, as AD activity is becoming

[1]See: http://thecaucus.blogs.nytimes.com/2012/09/17/filing-trade-suit-obama-raps-romney-on-china/

a South/South issue (Bown 2011; He and Sappideen 2012). As trade has liberalized, AD duties have become one of the only tools left for countries to address industry injuries from increased imports.

The WTO Anti-Dumping Agreement (ADA) mandates that countries have an administrative process to investigate claims of dumping. Firms must overcome a collective action problem (Olson 1965) because they have incentives to free-ride off the efforts of others in their industry to initiate and finance an AD investigation. The ADA also requires that the investigative authority has substantial evidence to prove dumping was occurring (Bown 2008).

AD duties may simply be clever protectionism: these duties no longer require proof that dumping is the primary cause of industry injury, adding a potential arbitrariness to them (Blonigen and Prusa 2003; Prusa 2005). Current AD rules result in investigations regularly finding below-market prices; cases are usually rejected only because industries are found to be uninjured (Lindsey and Ikenson 2003; Irwin 2005; Blonigen 2006; Finger 2011). AD duties are often used to help industries during economic slowdowns, particularly firms facing high import penetration rates (Knetter and Prusa 2003; Bown 2008; Ahn and Shin 2011). Concentrated producer groups mobilize best to get AD duties through better lobbying, as they have an easier time overcoming the collective action problem (De Bièvre and Eckhardt 2011).

AD usage also involves strategy, not just economics. Countries use AD duties more against countries who also use it and against those who have used it against them before (Prusa and Skeath 2002). However, countries are less likely to impose AD duties against countries capable of pursing a tit-for-tat strategy against them (Blonigen and Bown 2003). Countries need to be strategic about AD duties, as each case could cost well over 1 million dollars (Finger 2011).

4 International Trade Disputes: History and Research

The dispute settlement system under the General Agreement on Tariffs and Trade (GATT), which preceded the WTO, was flawed in its design, but surprisingly effective. Cases would begin with a request for consultations from the complainant country. If a settlement could not be negotiated in the consultation phase, the complainant country could request a panel. However, the respondent country could block the panel request, though this did not occur very frequently. The 1989 Dispute Settlement Procedure Improvements gave countries the right to a panel, though this did not change panel initiation (Busch and Reinhardt 2003*b*). Respondents could also block the adoption of panel reports, which is what they did more frequently. Still, the GATT dispute settlement system worked fairly well (Hudec 1990).

The WTO DSM aimed to address the GATT system's main shortcomings: blocking panels/panel reports, and the use of unilateral sanctions (Pauwelyn 2005). The resulting WTO DSM made it almost impossible to block panels, and improved mulitlateralism to limit the use of unilateral sanctions like the U.S. Section 301 of the Trade Act of 1974. Additionally, it including the Appellate Body (AB) to soften the blow of panel decisions. Similar to the GATT, the first step of the process involves consultations between the countries. If an agreement cannot be reached, there is third-party adjudication through a 3 member ad-hoc panel of experts. If the countries are not satisfied with the panel finding, they can appeal to the 7-member AB. The dispute settlement body then adopts the AB report, and countries must comply with the ruling. It is extremely hard to reject AB findings: there would need to be either consensus or a 3/4 majority to impose authoritative interpretation (Alter 2008; Grant and Keohane 2005). The dispute settlement body monitors implementation, with the possibility of a compliance panel or WTO-sanctioned retalation if there are any issues with compliance.

The WTO DSM facilitates global trade by deterring non-compliance with free trade principles through the imposition of a legal process for countries reneging on WTO commitments. This leads to enforcement if non-compliance is found, but the DSM is careful to limit

the level of retaliation so as to not encourage countries to withdraw from the WTO. Some legal scholars suggest the WTO DSM is more than just a commitment and enforcement device: it also serves to clarify legal rules (Schwartz and Sykes 2002). However, research suggests the DSM appears to be an enforcement device, not a rules-clarification device (Sattler, Spilker and Bernauer 2011). It also appears to work fairly well, as 83% of panel or AB reports are implemented, though implementation is tougher with trade remedies, sanitary and phytosanitary measures, agriculture, and subsidies (Davey 2005).

While the move from the GATT to the WTO was intended to limit the impact of power by shifting from a diplomatic approach to a rules-oriented highly legal system, this has not necessarily worked out. The transition to the WTO has raised entry costs into the dispute settlement system, as legal capacity has become increasingly important (Busch and Reinhardt 2003*a*; Kim 2008). While there have been many AD duties imposed by countries over time, only a fraction have been disputed at the WTO. Due to costs, countries are less interested in disputed duties over small amounts of trade (Bown 2005*a*,*b*). Some research suggests asymmetry plays a role in DSM usage, as smaller states stay away from disputes because they fear revenge or lack the ability to enforce rulings through retaliation(Francois, Horn and Kaunitz 2010). As such, as power asymmetry between countries rises, disputes are less likely to be initiated (Sattler and Bernauer 2011).

More particular characteristics of countries and/or subject-matter of the issues at hand also shape dispute escalation. All-or-nothing lumpy disputes, where there is limited area for compromise, are more likely to go to panels, while early settlement is more likely with disputes over easily divisible issues like tariff rates (Guzman and Simmons 2002). Environmental, health, and safety issues are more likely to end up in compliance review panels. Finally, countries tend to "learn by doing", as developing countries are more likely to initiate a dispute if they have been involved in dispute before (Davis and Bermeo 2009).

5 Signalling and Elections

Research suggests that countries use international institutions to signal particular audiences. For instance, nations use IMF commitments to signal priavte market actors (Simmons 2000), trade agreements (Mansfield, Milner and Rosendorff 2002) and trade disputes (Chaudoin 2012) to signal domestic or foreign voters, and bilateral investment treaties (Elkins, Guzman and Simmons 2008) and trade agreements (Büthe and Milner 2008), to signal foreign investors. In all these cases, leaders in countries use institutions to signal their commitment to being good economic actors in order to secure benefits: votes and foreign investment, in these cases. These institutions can serve as a "fire alarm" - when a country violates institutional rules, others can take actions against it, and the violation reveals information about that country to actors who can then pressure that government (Dai 2002; Fang 2008). This raises the costs of defection, making cooperation easier through credible commitments. Alternatively, institutions could simply be a cost-inducing signal used by a leader or a country to convey its intentions to others in order to get private benefts.

There is a broad literature that examines how political leaders use their policies to signal voters. Election-motivated leaders prefer policies that are more targetable and timable, manipulable, and attributable to themselves (Franzese Jr 2002). This fits well with the research on the political business cycle (PBC), which suggests that political leaders base their economic decisions on the electoral calendar, often pursing expansionary policy before an election and austerity afterwards (Nordhaus 1975; Rogoff and Sibert 1988; Alesina and Roubini 1992; Schuknecht 2000; Frye 2002; Baleiras and da Silva Costa 2004; Frye and Mansfield 2004; Egger, Egger and Greenaway 2008; Guo 2009). The theory holds that expansionary policies can help political leaders at the ballot box, and with multiple years between elections, austerity soon after an election allows the economy to recover well before the next cycle of expansionary policy preceding the following election. PBCs occur more in closer elections (Aidt, Veiga and Veiga 2011), and appear to be successful in terms of electoral results (Drazen and Eslava 2010). They also seem to be tied to institutions: PBCs

are more likely in countries with weak institutions as there is less oversight on leaders and more uniformed voters (Shi and Svensson 2006). There is also research that suggests IMF lending (Dreher and Vaubel 2004), country credit ratings, and bond spreads are also tied to a countrys electoral calendar (Block and Vaaler 2004).

6 Theory

Given the lack of a clear opposition group, there should be minimal domestic resistance to a WTO dispute of an AD duty. Still, there is wide variation in the time from AD duty imposition to dispute initiation. I argue this variation can be explained by domestic politics in the complainant country. Specifically, I theorize that executives are strategic in their use of trade disputes: they are more likely to initiate WTO disputes over AD duties as elections draw near, in an effort to gain support from workers in affected industries, and possibly voters in particularly salient trade disputes. The distribution of AD duties going to a WTO dispute, sorted by the years until an executive election, suggests this. Figure 1 shows a large percentage of these cases occur in either an election year or a year preceding an election, and suggests a possible linear pattern.

The key actors are executive leaders and workers in domestic industries. Executive leaders could use the WTO DSM to signal the general voting public, particularly when the public is very protectionist, but voters struggle to vote for their own trade interests or understand overall trade policy, let alone something as specific as antidumping, so they may not understand the signal (Hainmueller and Hiscox 2006; Guisinger 2009; Mansfield and Mutz 2009). In contrast, workers in industries impacted by AD duties are much more likely to be informed, at least with regard to their industry. It is a much more salient issue for them. [2] As such, it is easier for political leaders to effectively signal their views to these workers by initiating a dispute, in an effort to gain their support.

[2]For instance, Vietnamese seafood exporters mounted opposition to a preliminary U.S. AD decision within days of the announcement. See: http://www.globaltimes.cn/content/809157.shtml

Since initating a trade dispute is not cheap, it serves to reveal some information to industries being affected by AD duties that the leader in power (and, by that extension, the leader's party) stands with them. Leaders have interests in staying in power, or keeping their party in power if they have reached a term limit, and need support from voters to do that. Industries are interested in removing any trade barriers they face in exporting their goods, particularly those that are suspicious and may simply be clever protectionist barriers. Initiating a trade dispute could benefit both parties.

A leader initiating a trade dispute undertakes a costly policy in order to signal to impacted industries that they stand with them. However, leaders are interested in maximizing votes, so they should pursue this policy closer to an election in an effort to privately gain from the dispute, namely more votes and campaign contributions from targeted industries. Trade disputes are initiated on behalf of major domestic industries, not minor ones, so the support could be important in elections. In addition, initiating a dispute could also signal support to workers in other industries subject to AD duties, who could view the leader as being more likely to dispute the duty they are facing in the future. Given the track record, industries should view dispute initiation positively, since most disputes result in some form of the AD duty being found WTO-inconsistent. While compliance with a WTO ruling could take several years, and actual compliance is murky, foreign investors respond to WTO dispute rulings (Jensen 2007; Desai and Hines Jr 2008; Busch, Raciborski and Reinhardt 2008), so there is reason to expect industries will as well.

It is important to note that this is a supply-side, not a demand-side, theory. If societal actors were able to demand trade disputes, we would see many more of these disputes than we do. The imposition of AD duties can be seen as demanded by societal actors, which seems appropriate since they pay most of the costs. This is also why there are thousands of AD duties imposed by countries. With AD-related trade disputes, however, governments pay the costs, and there are many fewer disputes than there are duties. A supply-side explanation makes much more sense here, as it appears that country institutions, specifically elections,

shape the policy, not demand from societal actors. If the latter were true, we should see many more trade disputes.

I argue that, given the transaction costs, developing countries should be the most likely to use WTO disputes as signals to domestic industries for electoral purposes. With fewer overall resources, these countries can be expected to use their disputes more conservatively, opting to pay the expenses when they can maximize their domestic political gain. Since they rely on access to advanced industrial country (AIC) markets for their exports to balance against their high level of imports, AD duties can cause great harm to these countries by limiting their exports, leading to serious economic trouble in these less diversified economies. Thus, they have strong incentives to initiate disputes, particularly over suspicious AD duties. However, even the WTO acknowledges that "developing country Members wanting to avail themselves of the benefits of the dispute settlement system face considerable burdens"[3] given their lack of resources. Indeed, high costs have limited developing countries in their use of, and success with, the WTO DSM (Busch and Reinhardt 2003*a*; Smith 2004; Bown and Hoekman 2005). As elections draw near, the political utility of filing a dispute rises greatly.

Chaudoin (2012), looking at all American-imposed AD duties, argues that that the domestic politics of the respondent shapes the AD dispute initiation process. I broaden this by focusing on all WTO AD disputes, not just those including American duties, and theorize that that leaders initiate AD disputes primarily to satisfy their *domestic* political needs. While they are undoubtedly monitoring the politics in the respondent country, that should be overwhelmed by political concerns at home.

Ideally, executives would make clear statements to provide evidence of the mechanism I suggest. However this is unlikely for two reasons. First, while these leaders want to kowtow towards particular voters, they would unlikely be so blatant as to essentially say they will initiate a trade dispute for support from a particular voting bloc. Second, there is limited media coverage of antidumping disputes as-is. A simple search on Lexis-Nexis or Google

[3]From the WTO Dispute Settlement Training Module: see http://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c11s1p1_e.htm.

News returns, at best, several hundred news stories from around the world, and many of those refer to the same disputes. As such, direct evidence of this mechanism is hard to find. Indirect evidence exists,though. For instance, Indonesia has initiated disputes against AD duties targeting their paper industry which happens to represent 250,000 jobs and 1% of the entire country's GDP.[4] While there may not be direct statements from leaders on the campaign trail, paper is an incredibly important industry in Indonesia. Similarly, Vietnam has disputed AD duties targeting its fish industry. Not surprisingly, this is a major export industry in the country, with shrimp exports exceeding $2.5 billion in 2013.[5] Other countries have brought up disputes in key potential voting industries as well, including steel in Japan, steel and computer memory in Korea, poultry and metal in Brazil, steel and cement in Mexico, and steel and the pharmaceutical industry in India. While indirect, the fact that political leaders seem to bring up disputes in key industries near elections does suggest that they may be doing so for domestic political gain.

7 Data and Model

To test my theory that countries initiate WTO AD trade disputes as their elections approach, I use a Discrete Time Hazard model (Allison 1982; Singer and Willett 1993; Jenkins 1995; Shumway 2001). This survival model, commonly used to study event occurrence, does not have a proportionality assumption, unlike the frequently-used Cox model. It also allows the inclusion of time-varying covariates, critical in this analysis given the key explanatory variable changes with each year. Additionally, it allows me to account for multiple instances of a key event in a single dispute. For example, Vietnam's dispute over America's AD duties on shrimp spanned two elections, and a discrete time hazard model allows me to account for that. As such, it allows a dampening of the effect when cases last longer than a single election, suggesting that a statistically significant effect for an election year is a strong finding. I rely

[4]See: http://www.cifor.org/ard/documents/background/Day5.pdf

[5]See: http://vietnamnews.vn/economy/245070/viet-nam-hopes-shrimp-exports-exceed-annual-target.html

on the discrete time hazard module in Stata (Dinno 2011) to set up the data. I did run a Cox model, but through Schoenfeld residuals, found a problem with the proportionality assumption.

My dependent variable is whether the complainant country requests consultations at the WTO over an AD duty in a given year. It is a dichotomous variable, coded as either a 0 (dispute not initiated) or 1 (dispute initiated) in each year for the case. I follow each AD duty that eventually leads to a trade dispute, by year. Thus, my unit of observation in the dataset is AD duty-year. Being that I am interested in studying the variation in the time a country takes before disputing an AD duty, and not whether a country chooses to challenge a duty, I believe my data generation process is appropriate. There are more duties than disputes, since multiple duties can lead to a dispute. An event intiates the first year an AD duty is imposed, and it fails in the year in which the country initiates a WTO dispute. The European Union is dropped from the data because, except for the few instances in which disputes were initiated on behalf of clearly identified European nations, there is no way to gather data on domestic politics for these disputes. Alternatively, I also code an EU country as Germany, and later France, as these are the two most powerful countries in the EU. I use Chad Bown's Technical Trade Barriers Database, including both the Global Antidumping Database and the WTO Dispute Database (Bown 2012), to gather information about the specifics of each case. I combined information between these two databases and cleaned up the data where there were inconsistencies. There are 213 AD duties that result in 87 WTO disputes in this data.

My key explanatory variable is the number of years a country is away from the election of its executive. While legislatures can sometimes play a role, executives are usually in charge of trade policy, so this is why I focus on their elections. I use the 2013 update of the Database of Political Institutions (DPI) for this variable (Beck, Clarke, Groff, Keefer and Walsh 2001). For parliamentary systems, DPI uses parliamentary elections for the executive. Additionally, I created two categorical election variables for robustness. The first measures

whether a country has an election within the next calendar year. The second measures whether a country has an election in the current calendar year. I use these variables to ensure that I am measuring the election effect properly, in case elections have a categorical, and not a linear, effect.

I use the years-until-election variable as a proxy for political signaling toward domestic industries, not the general public. For the latter, I create an interaction term, relying on the notion that voters are generally uniformed about trade and their views may correspond more closely with overall protectionism or sociotropic effects, not economic self-interest (Guisinger 2009; Mansfield and Mutz 2009). That term interacts the years-until-election variable with the unemployment rate (to measure general protectionist sentiments in a country). To address the sociotropic effect, I interact the years-until-election variable with the log of the trade balance with the rival country. For the former, unemployment is commonly used to measure protectionism (Chaudoin 2012), and political leaders can tap into that sentiment with a trade dispute to aid their election campaigns. For the latter when the home country has a substantial deficit with its rival, such as the United States' trade deficit with Japan in the 1980s, the general public might be more informed about trade policy, enabling political leaders to use WTO AD disputes as a signal to the broad voting public. I do not expect either of these variables to be significant, however.

There is a concern about precision with calendar years. A variable measuring the months until an election is a more precise variable, but, as noted earlier, there might be a theoretical reason to use annual data: governments seem unlikely to base WTO AD dispute initiation on monthly data. Additionally, researchers using monthly data routinely pool this data to deal with random fluctuations, anyway. For instance, Chaudoin (2012) uses a 6-month average of unemployment data for each monthly figure. More importantly, many key control variables are only available annually, not monthly, for most countries. Using monthly data would mean dropping a number of variables or countries in the analysis. Also, given the need for whole numbers in the discrete time hazard model, one cannot use monthly information and

divide by 12. Finally, the use of a linear variable to measure years until elections, and a large sample including all AD duties leading to WTO disputes, should mitigate concerns about using calendar years. Some of the cases may be slightly inaccurate regarding the election year timing, but on the aggregate, spurious correlation seems highly unlikely. Thus, I believe using calendar years is a valid approach for testing my theory.

To test whether developing countries are more likely to use disputes for domestic electoral purposes against developed countries, I take the difference of the of the log of the GDP per capita between the complainant and respondent. This number will be negative if the complainant is the poorer nation; this difference becomes increasingly negative as the development gap between the countries increases. I then interact this variable with the years-until-election variable. Thus, I expect this interaction term should be significant and positively signed. Alternatively, I look at on South-North disputes, because most trade from the South goes to the North, meaning these disputes should be more impactful than South-South disputes, which involve minimal trade. Additionally, targeting the North in a dispute could have a positive political effect in developing countries, as their leaders can tout confronting richer countries over questionable trade barriers. I use the G-20 as a measure of North and South; G-20 members are in the North, and everyone else is in the South. I then intereact a South-North categorical variable with the years-until-election variable. As noted above, I theorize that developing countres are more likely to use disputes for electoral gain, given their limited resources. The G-20 is a better development indicator than the OECD because it includes key emerging market countries, such as Brazil, China, and India. I expect this variable will be significant and negative, though because it is less precise than the development gap above, it may not be significant.

To account for time, I include a sequence variable and square it as well. This allows me to account for the time of a case in its dispute initiation. Some research using discrete time hazard models includes a dummy variable for each year in an event, but since there is no theoretical reason to do so in this case, I use the sequence variable to avoid the loss of a

substantial number of degrees of freedom, while still modeling time (Carter and Signorino 2010).

Based on my discussions with several AD government analysts, I also include a variable for zeroing. Zeroing is method employed by several countries to calculate dumping margins. It is controversial because it zeroes out any negative dumping margins (those in which the exporter's prices are above-market) for products. For instance, if two companies exported 100 of the same products each from a country, and one company priced their product at $1 below market price, while the other company priced their product at $4 above market price, zeroing would lead to a potential dumping claim, because the 100 above-market-price products would be zeroed out. In 2001, the WTO Appellate Body ruled in the EC-India Bed Linen case that the European Union's use of zeroing was inconsistent with WTO rules. Prior to the ruling, countries assumed that zeroing was permitted (Bown and Sykes 2008; Prusa and Vermulst 2009). Not surprisingly, some WTO AD disputes dealing with duties in place for many years, were initiated over zeroing after this ruling. Thus, I create two variables, one for zeroing overall, and one for zeroing post-Bed Linen case. I expect zeroing overall will have a negative effect on dispute initiation, while zeroing after the Bed Linen decision may have a positive effect. However, given how steadfast the United States and others were to defend zeroing initiatlly, it may be the case that even after 2001, zeroing had a negative effect. Only recently has the United States, for example, conceded that zeroing is problematic.

One common concern in analyzing trade disputes is a selection effect - unobserved heterogeneity could lead to biased statistical inferences. As noted above, I am interested in studying the timing of disputes, not whether duties are disputed, so in that sense, studying just the disputes seems appropriate. However, I attempt to deal with potential selection effects in two ways. First, following the example from previous work that estimated the likelihood of selection for trade litigation (Horn, Mavroidis and Nordström 1999; Sattler and Bernauer 2011), I predict the probability of an AD duty being disputed, using cross sectional

data on all AD duties. Examing data from the year before an AD duty is imposed I use several covariates employed by others to predict which duties are disputed (Bown 2005*b*; Busch, Raciborski and Reinhardt 2008), including trade balance, respondent legal capacity, import penetration, WTO membership, and PTA membership. I then run a Hosmer-Lemeshow test (Hosmer and Lemesbow 1980; Lemeshow and Hosmer 1982) to see if the model predicted the results well, which it did. I then incorporate this predicted probability into the data on disputes. This is conceptually similar to a selection model or propensity score matching, both of which are not possible to do given the structure of my data. As a second strategy, I run a discrete time hazard model on all AD duties (results not including here for space purposes). The problem with this approach is that I lose the zeroing variables, since there is no dataset that codes the several thousand AD duties for zeroing. Being that zeroing cases comprise a large number of AD duty-years in the data, I think including this control variable is important.

I have several control variables that may impact a complainant country challenging an AD duty at the WTO. First, I include the trade balance between the two countries, from the perspective of the complainant country. I use the 2012 Correlates of War Trade Database version 3.0 (Barbieri, Keshk and Pollins 2009), which relies on the IMF Direction of Trade Statistics. I want to be certain that it is the election year, and not a large trade deficit, that is driving a WTO dispute. To address potential skewnewss in this variable, I transformed it through a log function. When the trade flow is negative (i.e. a trade deficit), I take the log of the absolute value of the number and multiply it by negative one, since attempting to take the log of a negative number would lead to an empty data point.

I also include several economic variables from the World Bank's World Development Indicators (WDI). To account for domestic economic conditions, I include a country's annual unemployment rate to ensure that a WTO AD duty dispute is not being driven by a slumping domestic economy. To account for legal capacity, I include the log of GDP per capita; this helps separate legal capacity from election timing in terms of WTO disputes, since bringing

a duty to dispute can be quite expensive for many developing countries. Like net trade flow, I log transform the data to address issues with skewness. Chaudoin (2012) found that the respondent country's characteristics impact a WTO dispute, so I include unemployment and legal capacity for the respondent. Since the trade flow data will be the exact opposite for the respondent country, it will drop out of the analysis if I include both directions, so I only include one direction of trade flows: those from the view of the complainant country. I also include a dichotomous measure for democracy. While the election year variable does eliminate any country from the analysis that does not have an election, there are still a few nations left in the analysis, where the "election" is one in name only. Given the importance of electoral politics in my theory, I need to control for those few cases, so I include a simple dichotomous democracy variable (Cheibub, Gandhi and Vreeland 2010).

8 Results

The results in Table 2 show support for my hypothesis that the timing of WTO AD disputes can be explained by the election cycle in the complainant country. Additionally, I find evidence that developing countries are particularly likely to dispute duties, particularly those imposed by developed countries, as elections draw near. In almost every model, the election year variable is statistically significant and negative, as expected. This means that as an election year gets nearer, a country becomes more likely to dispute an AD duty. The results were essentially the same in a Cox model which I ran, but because of the proportionality assumption concerns, I have not included it here.

The variable is insignificant in Models 4 and 5, when I include the development variables. In model 4, the interaction term is almost significant at conventional levels (p-value of .102), but the sign is as expected. Being a developing country alone has a positive effect on dispute initiation with a developed country. In model 5, the interaction term is significant and correctly signed. As an election of the executive approaches and the development gap

widens negatively from the perspective of the complainant, a dispute is more likely.

The respondent country variables are insignificant at conventional levels. Additional model specifications, not shown here, showed the same result: the domestic politics of complainant countries overwhelm concerns they might have about politics in respondent countries. In order to avoid potential multicollinearity problems achen2002, achen2005, I remove most of the respondent country variables, in models 4 and 5.

The proxy variable for appeals to the general public, the interaction between years until election and the unemployment rate, does not approach significance in any model specification. It is also incorrectly signed. The same holds for the proxy for potentially salient trade disputes, the interaction between years until election and the log of the trade balance between the two countries. These results were as expected: the public is poorly informed on trade policy, and it does not appear that executives use disputes to gather electoral support amongst them.

Finally, zeroing has a somewhat unexpected effect. Overall zeroing is not significant in most of the models, and the sign is inconsistent, though it is negative, as expected, in Model 5 when it is significant. Zeroing after the Bed Linen ruling is significant in every model, but it has a negative effect on dispute initiation. This may not be so surprising, however, as the main users of zeroing, particularly the United States, were steadfast in its defense until very recently. As such, even though countries knew they could win a dispute over zeroing, they may have anticipated a difficult process and opted to wait to dispute these AD duties. Given the United States' current view on zeroing, there may be more of these cases arising in the near future, though.

Since discrete time hazard models are not easy to interpret, some level of post-estimation is needed to properly understand the impact of the results. Table 3 illustrates some of the findings. I used model 5 for the calculations, and utilized data directly from the WTO dispute between India and South Africa over South Africa's AD duty on penicillin from India (DS-168). Using the data from 1997, the first year the AD duty was in place, I found

that simply changing altering India's election timing a substantial difference. If India had elections that year, as opposed to 2001, the probability of initiating a WTO dispute over the AD duties increased by approximately 24 percentage points. To test the development theory, I altered the development gap between the two countries to rival that between India and the United States. With that change, the predicted probability for a trade dispute increased by approximately 35 percentage points in moving the election calendar up. Thus, as elections draw near, countries are more likely to initiate WTO disputes over AD duties, but the effect is even more prononced for developing countries initiating disputes against industrialized countries. This example also illustrates that the effect is not only statistically significant, but also substantively large.

Tables 4 and 5 show the results when I substituted German and French data in for cases involving the EU - those cases were dropped in the initial model, because it is unclear what the EU's domestic politics would be. Germany and France are the two most powerful nations in the EU, so I wanted to see if the results changed at all. The findings were pretty similar - as elections draw near, countries are more likely to initiate WTO trade disputes over AD duties, and the effect is stronger for developing countries in disputes against more developed countries. Table 6 shows the results when I include all AD duties in the analysis, and not just the duties that lead to disputes. As I have noted before, one shortcoming of this is that I am unable to include any variables that differentiate the disputes themselves, specifically the zeroing variables, since that data is not available for the several thousand AD duties in the dataset. That being said, the results from Table 6 mirror my earlier findings. In this case, even accounting for the many AD duties that do not result in disputes, leaders, and particularly leaders from developing nations, seem to initate trade disputes as their elections draw near. I exlude the variable predicting dispute initiation from these models because, unlike the data in earlier tables, this includes all AD duties, not just the ones leading to disputes. also ran all the models with the alternate versions of the election year variable - dichotomous variables that coded an election year as either one in which

the election was within a calendar year, or within the current calendar year. The results remained essentially the same across 20 additional model specifications. The election year variable was significant in almost all model specifications; it became insignificant in some of the models that incorporated the development variables. The other variables followed almost the exact same pattern of significance and sign. The respondent country variables were largely insignificant, and the general voting public proxy variable was significant, but only in a few models using the dichotomous election year variable in which the complainant was in their election year. The development variables were significant in about half of the alternate specifications. The development difference measure was almost always significant when interacted with either alternate election year variable.

9 Conclusion

In this paper, I believe I have taken an important step in uncovering a particular aspect of domestic politics in international trade disputes. I examined the variation in the timing of WTO AD disputes, and found that countries engaging in these disputes are more likely to do so as elections approach. This suggests that leaders use disputes to appeal to domestic industries in order to secure as many of their votes as possible. Unlike the general voting public, people in particular industries are more likely to be informed about trade policy, so the disputes are far more salient. This effect holds, even when I control for protectionist sentiment.

Perhaps more importantly, I found a more nuanced mechanism behind the effect: country development. There is evidence that poorer countries time their disputes with richer countries around elections more than anyone else. The independent effect of a development gap between complainant and respondent coupled with an approaching election is quite substantial. This suggests developing countries are using trade disputes for political reasons more than other countries. Because they have fewer resources, these countries must be more

strategic about their use of AD disputes, and it seems they save them for when they can help them gain more support for elections. This is important to keep in mind, as developing countries are increasingly using the WTO DSM.

As a smaller, but important, point, I have tried to differentiate AD duties on one important aspect, zeroing. As far as I know, no other paper examining AD duties has done so. This is an important step for two reasons. One, zeroing is a contentious topic and is a factor in many AD disputes. Second, because of how the WTO treated zeroing, both before and after the EC-India Bed Linen case, zeroing should play an important role in when countries decide to dispute an AD duty. The pattern does not show up in my results as expected, but now that the United States has backed away from zeroing, I expect there will be an uptick in older duties that are based on this methodology. As such, we should account for zeroing in future research on AD duties and disputes.

Overall, I argue that countries use international institutions, here the WTO DSM, for domestic political purposes. I find that countries are not particularly concerned with politics of the respondent country - while they might have concerns, their own domestic concerns tend to overwhelm these worries. This follows more in line with the work of Mansfield, Milner and Rosendorff (2002), which suggests that countries using international institutions to signal their own voters.

As research has advanced beyond questions of whether institutions work to how they work, my findings suggest that countries can use international institutions to advance domestic political purposes. While raising a WTO dispute might not attract much attention amongst the general voting public, it is the type of action that workers in the affected industry, or other industries facing AD duties, would pay attention to. These workers are more likely to be well-informed about trade politics than the generally uninformed median voter, at least with respect to antidumping.

On the one hand, poorer countries are at an economic disadvantage in terms of the WTO DSM. With fewer resources, they are unable to capitalize on early settlement in

disputes, so they gain less economically in disputes. On the other hand, they seem to use this resource disadvantage to maximize their political benefits at home by timing their disputes around their electoral calendar. Offering poorer countries legal support at the WTO could be a way to address both issues. It would almost certainly help them benefit more from early settlements, and would also limit their ability to use the WTO for domestic electoral gains, since industries would know that the government doesn't face debilitating financial constraints to engage in a dispute. In such a scenario, if leaders still choose to wait until an election to initiate a WTO dispute, they could be punished, rather than rewarded, at the ballot box for engaging in political gamesmanship.

10 Appendix

[Insert Figure 1 here]

[Insert Table 1 here]

[Insert Table 2 here]

[Insert Table 3 here]

[Insert Table 4 here]

[Insert Table 5 here]

[Insert Table 6 here]

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Figure 1: Distribution of WTO AD Disputes by Years until Election

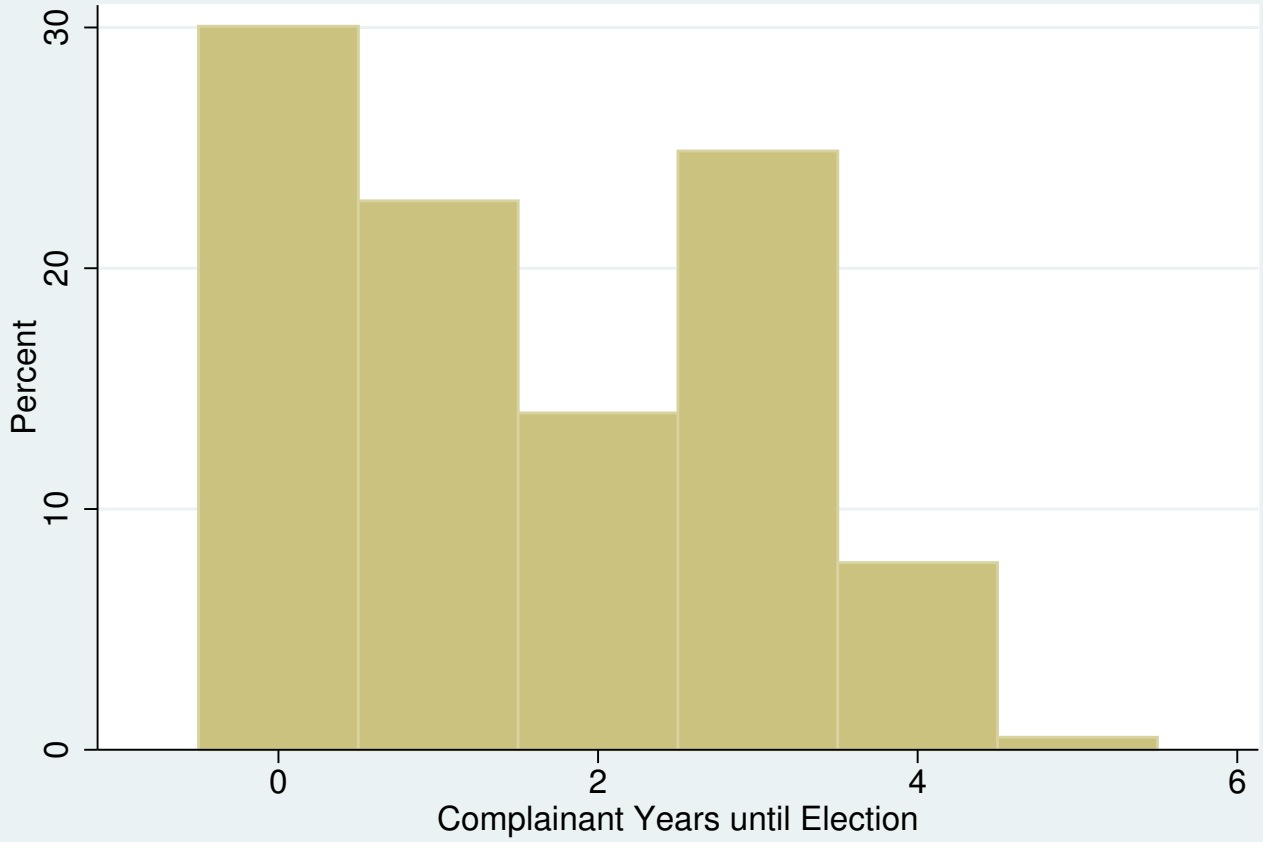

Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
WTO Antidumping Dispute Initiation	0.174	0.38	0	1	849
Case Sequence Year	5.905	4.9	1	21	849
Case Sequence Yearˆ2	58.845	86.350	1	441	849
Complainant Years until Election	1.895	1.373	0	5	782
Respondent Years until Election	1.704	1.242	0	5	849
Complainant Legal Capacity	9.435	1.212	5.724	11.198	758
Respondent Legal Capacity	9.470	1.594	6.043	10.781	823
Complainant Unemployment	7.105	3.418	1.2	18.8	700
Respondent Unemployment	6.357	4.098	0.9	27.2	703
Complainant Years until Election * Unemployment	13.724	12.55	0	51.6	699
Respondent Years until Election * Unemployment	10.217	11.46	0	106.8	703
Complainant log of Trade Balance	-9.108	20.292	-26.208	23.393	737
Complainant Years until Election * Trade Balance	-16.89	48.581	-113.78	92.855 ¿	733
Zeroing	0.59	0.492	0	1	849
Zeroing post-Bed Linen case	0.574	0.495	0	1	849
Complainant Development Gap	-0.292	1.505	-4.355	4.144	732
Complainant Years until Election * Development Gap	-0.62	3.626	-17.421	16.117 ¿	731
Probability of Dispute	0.171	0.132	0.004	0.570	644
Complainant Democracy Status	0.931	0.254	0	1	753

Table 2: Predictors of WTO Antidumping Dispute Initiation, Discrete Time Hazard Model (EU is excluded)

	(1)	(2)	(3)	(4)	(5)
Complainant Years until Election	-0.225*	-0.331+	-0.197*	-0.0371	-0.0918
	(0.0967)	(0.174)	(0.100)	(0.0943)	(0.0925)
Respondent Years until Election	0.0226	-0.0732	-0.0141		
	(0.103)	(0.154)	(0.102)		
Case Sequence Year	-0.241*	-0.275*	-0.195*	-0.0868	-0.0993
	(0.0981)	(0.0966)	(0.0886)	(0.0941)	(0.0898)
Case Sequence Year^2	0.0165*	0.0179*	0.0165*	0.0122*	0.0120*
	(0.00493)	(0.00492)	(0.00464)	(0.00475)	(0.00460)
Complainant Legal Capacity	0.222				
	(0.278)				
Respondent Legal Capacity	-0.179				
	(0.150)				
Complainant Unemployment	-0.0434	-0.0545	-0.0619	-0.0454	-0.0514
	(0.0453)	(0.0552)	(0.0439)	(0.0426)	(0.0420)
Respondent Unemployment	0.0703+	0.0251	0.0170		
	(0.0425)	(0.0399)	(0.0240)		
Probability of Dispute	1.662	1.392	3.215*	3.586*	3.308*
	(1.045)	(0.982)	(1.042)	(0.991)	(1.025)
Complainant Democracy Status	-1.056	-0.718	-0.742	-0.628	-0.623
	(0.881)	(0.702)	(0.753)	(0.591)	(0.611)
Complainant log of Trade Balance		-0.00382	-0.00702		
		(0.00776)	(0.00719)		
Complainant Years until Election * Unemployment		0.0116			
		(0.0208)			
Respondent Years until Election * Unemployment		0.0181			
		(0.0203)			
Zeroing			-0.115	-0.358+	-0.225
			(0.235)	(0.214)	(0.342)
Zeroing post-Bed Linen case			-1.645*	-1.698*	-1.591*
			(0.322)	(0.286)	(0.337)
South/North Dispute				1.740*	
				(0.636)	
Years until Election * South/North Dispute				-0.483	
				(0.295)	
Complainant Development Gap					-0.122
					(0.122)
Complainant Years until Election * Development Gap					0.132*
					(0.0524)
Constant	-1.088	-0.539	-0.124	-0.818	-0.574
	(2.862)	(0.852)	(0.931)	(0.681)	(0.690)
Observations	559	559	559	603	603

Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$

Table 3: Predicted Probability of WTO AD Dispute Initiation using data from India-South Africa dispute over Soth Africa's AD duties on Indian penicillin (DS-168)

Scenario	**Indian Election in 4 Years**	**Indian Election in Current Year**	**Difference in Predicted Probability Due to Approaching Elections**
Current Development Levels	.1052	.3454	.2403
Larger Development Gap (S. Africa with U.S. development)	.0499	.4019	.3521
Difference in Predicted Probability Due to Greater Development Gap	.0553	-0.0565	

Table 4: Predictors of WTO Antidumping Dispute Initiation, Discrete Time Hazard Model (German data for the EU)

	(1)	(2)	(3)	(4)	(5)
Complainant Years until Election	-0.208+	-0.424*	-0.185	0.106	0.0451
	(0.113)	(0.202)	(0.115)	(0.113)	(0.106)
Respondent Years until Election	-0.0790	-0.0707	-0.157		
	(0.111)	(0.188)	(0.106)		
Case Sequence Year	-0.182	-0.154	-0.0898	0.0279	-0.0879
	(0.123)	(0.125)	(0.122)	(0.119)	(0.116)
Case Sequence Year^2	0.0133*	0.0121*	0.0114+	0.00703	0.0111+
	(0.00596)	(0.00609)	(0.00599)	(0.00576)	(0.00575)
Complainant Legal Capacity	0.0490				
	(0.219)				
Respondent Legal Capacity	0.336				
	(0.326)				
Complainant Unemployment	-0.137*	-0.193*	-0.149*	-0.108*	-0.126*
	(0.0531)	(0.0751)	(0.0519)	(0.0462)	(0.0548)
Respondent Unemployment	0.0934	0.0856	0.0506		
	(0.0572)	(0.0559)	(0.0391)		
Probability of Dispute	4.478*	4.750*	6.167*	4.862*	4.408*
	(1.244)	(1.237)	(1.292)	(1.238)	(1.176)
Complainant Democracy Status	0.350	0.197	0.315	-0.194	0.790
	(1.063)	(0.947)	(0.974)	(0.922)	(1.042)
EU	1.453*	1.571*	0.767	-0.353	0.417
	(0.567)	(0.560)	(0.591)	(0.462)	(0.572)
Complainant log of Trade Balance		-0.0104	-0.0173+		
		(0.00876)	(0.00904)		
Complainant Years until Election * Unemployment		0.0312			
		(0.0268)			
Respondent Years until Election * Unemployment		-0.00433			
		(0.0291)			
Zeroing			-0.0718	0.181	-0.384
			(0.290)	(0.582)	(0.750)
Zeroing post-Bed Linen case			-1.641*	-1.898*	-1.258+
			(0.386)	(0.584)	(0.702)
South/North Dispute				2.165*	
				(0.850)	
Years until Election * South/North Dispute				-0.515	
				(0.417)	
Complainant Development Gap					-0.671*
					(0.194)
Complainant Years until Election * Development Gap					0.262*
					(0.0741)
Constant	-6.037	-1.788	-1.553	-1.993+	-2.051+
	(3.898)	(1.148)	(1.249)	(1.039)	(1.069)
Observations	477	476	476	520	520

Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$

Table 5: Predictors of WTO Antidumping Dispute Initiation, Discrete Time Hazard Model (French data for the EU)

	(1)	(2)	(3)	(4)	(5)
Complainant Years until Election	-0.207+	-0.422*	-0.187	0.150	0.0353
	(0.113)	(0.204)	(0.116)	(0.112)	(0.103)
Respondent Years until Election	-0.00259	-0.144	-0.0946		
	(0.112)	(0.212)	(0.107)		
Case Sequence Year	-0.185	-0.164	-0.0864	0.0415	-0.0978
	(0.123)	(0.125)	(0.120)	(0.121)	(0.117)
Case Sequence Year^2	0.0134*	0.0126*	0.0115+	0.00692	0.0119*
	(0.00599)	(0.00611)	(0.00593)	(0.00582)	(0.00577)
Complainant Legal Capacity	0.0853				
	(0.244)				
Respondent Legal Capacity	0.354				
	(0.339)				
Complainant Unemployment	-0.140*	-0.196*	-0.158*	-0.133*	-0.142*
	(0.0529)	(0.0748)	(0.0522)	(0.0483)	(0.0549)
Respondent Unemployment	0.103+	0.0467	0.0487		
	(0.0628)	(0.0763)	(0.0385)		
Probability of Dispute	4.391*	4.647*	6.083*	5.389*	4.386*
	(1.188)	(1.209)	(1.297)	(1.310)	(1.203)
Complainant Democracy Status	0.248	0.309	0.407	-0.224	0.779
	(1.093)	(0.949)	(0.978)	(0.927)	(1.035)
EU	1.439*	1.330*	0.631	-0.386	0.207
	(0.566)	(0.603)	(0.679)	(0.451)	(0.612)
Complainant log of Trade Balance		-0.00846	-0.0146		
		(0.00888)	(0.00898)		
Complainant Years until Election * Unemployment		0.0305			
		(0.0274)			
Respondent Years until Election * Unemployment		0.0188			
		(0.0329)			
Zeroing			-0.130	0.158	-0.387
			(0.307)	(0.601)	(0.776)
Zeroing post-Bed Linen case			-1.639*	-2.012*	-1.335+
			(0.409)	(0.601)	(0.730)
South/North Dispute				2.375*	
				(0.917)	
Years until Election * South/North Dispute				-0.579	
				(0.433)	
Complainant Development Gap					-0.647*
					(0.172)
Complainant Years until Election * Development Gap					0.248*
					(0.0611)
Constant	-6.597	-1.660	-1.628	-2.011+	-1.866+
	(4.225)	(1.204)	(1.229)	(1.050)	(1.046)
Observations	477	477	477	520	520

Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$

Table 6: Predictors of WTO Antidumping Dispute, Discrete Time Hazard Model (All AD Duties)

	(1)	(2)	(3)	(4)	(5)
Complainant Years until Election	-0.131	-0.235+	-0.151	0.0227	-0.0653
	(0.0956)	(0.140)	(0.0931)	(0.0907)	(0.0904)
Respondent Years until Election	0.0725	-0.0950	-0.0201		
	(0.0869)	(0.147)	(0.0804)		
Case Sequence Year	-0.118*	-0.0770	-0.0761	-0.0660	-0.0392
	(0.0542)	(0.0562)	(0.0557)	(0.0502)	(0.0515)
Case Sequence Year^2	0.00766*	0.00711*	0.00710*	0.00686*	0.00600*
	(0.00227)	(0.00231)	(0.00230)	(0.00215)	(0.00217)
Complainant Legal Capacity	0.248+				
	(0.133)				
Respondent Legal Capacity	0.472*				
	(0.193)				
Complainant Unemployment	0.0184	-0.000808	0.0188	0.0190	0.0246
	(0.0228)	(0.0404)	(0.0254)	(0.0206)	(0.0198)
Respondent Unemployment	-0.0161	-0.0654	-0.0428		
	(0.0413)	(0.0672)	(0.0351)		
Complainant Democracy Status	1.004+	1.537*	1.558*	1.964*	1.605*
	(0.525)	(0.429)	(0.426)	(0.425)	(0.425)
Complainant log of Trade Balance		-0.00575	-0.00573		
		(0.00716)	(0.00717)		
Complainant Years until Election * Unemployment		0.0122			
		(0.0139)			
Respondent Years until Election * Unemployment		0.0115			
		(0.0203)			
South/North Dispute				0.384	
				(0.387)	
Years until Election * South/North Dispute				-0.387*	
				(0.182)	
Complainant Development Gap					-0.184+
					(0.0949)
Complainant Years until Election * Development Gap					0.158*
					(0.0508)
Constant	-12.54*	-5.719*	-6.022*	-6.986*	-6.648*
	(2.444)	(0.924)	(0.754)	(0.559)	(0.557)
Observations	13342	13310	13310	16684	14640

Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$