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Ana Nikolic April 12, 2011

The World Trade Organization's Most Favored Nation Principle: analyzing its application to dispute settlement

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Abstract

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By Ana Nikolic

The World Trade Organization was founded on the principle of non-discrimination among member states. The most favored nation clause requires that all trade liberalization be applied equally to all member states. This paper addressed how this principle applies to dispute settlement. Do disputes get resolved in favor of the plaintiff without being discriminatory to other parties exporting the same product?

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The Research Question

Most international institutions suffer from the problem of enforcement. Multilateral arrangements face an additional complication, however: the threat that a deal reached through reciprocal concessions could be undermined by subsequent discriminatory, bilateral deals. For this reason, the World Trade Organization's (WTO) most favored nation (MFN) principle, which prohibits policies discriminating among trade partners, has been described as the "most important principle underlying multilateral trade agreements" and "the central pillar of the global multilateral trading system" (Saggi 2009, 132; Saggi, Sengul, Yildiz 2007, 543). Every time a country lowers a trade barrier or opens up a market, the MFN principle requires that it do so for all other WTO member states. Member-states in the WTO liberalize their own trade policies in expectation of equal trade treatment from their partners.

Adherence to the MFN principle in practice is enforced by processes defined in the WTO Dispute Settlement Understanding (DSU), a central function of which is to ensure that disputes get resolved in line with this principle in a way that favors all nations equally. Specifically, after a defendant is found guilty of violating WTO agreements, all nations supplying the disputed product should be extended the benefits of removal of the offending trade measure. Is this actually how WTO disputes work? How much discrimination is reflected in WTO dispute settlement outcomes in practice?

The Literature Review

Ninety-seven percent of global trade occurs through member nations of the WTO. The creation of the WTO in 1995 expanded trade rules from covering just traded goods, to include "services, inventions, creations and designs" (WTO 2009). To date, the WTO

"is the only international body dealing with the rules of trade between nations" (WTO 2009). How the WTO deals with such rules of trade continues to be the subject of much controversy.

Multilateral trade agreements are signed to provide a way for nations to "escape" the prisoner's dilemma of non-cooperation. Even when it serves both sides' interests to cooperate, absent formal trade agreements, nations will engage in unilateral escalation of trade restrictions to protect themselves from other nations engaging in similar unilateral restrictions (Bagwell and Staiger 2004, xii). The goal of such actions is to maximize their individual payoffs. Absent agreement, such practices have a Pareto-suboptimal equilibrium; each state defects and increases protectionist policies even though both states' rewards would be higher if they cooperated. A trade agreement creates a framework for cooperation, which reduces incentives to act unilaterally. It also increases the welfare for all member states involved by reducing protectionist pressures (Bagwell and Staiger 2004, 2-3). By agreeing to a reciprocal trade equilibrium, governments can obtain Pareto improvements in their welfare. Nations can achieve tariff levels that are mutually beneficial when compared to the Nash equilibrium in a traditional prisoner's dilemma game by reducing incentives to shift costs to other nations (Bagwell and Staiger 2004, 23, 28). In other words, the WTO is a solution to the problem of noncooperation (Bagwell and Staiger 2009, 2).

The "rules-based" structure of the WTO requires governments to agree to certain principles. Such a system allows all countries, regardless of size or power to benefit equally from the agreement (Bagwell and Staiger 2004, 5). A defining principle of the WTO is non-discrimination among member states and the idea that all states should have

equal opportunities to trade. Under WTO agreements a country cannot discriminate between its trading partners. Instead, the system functions under the norms of reciprocity and non-discrimination. This principle is so important to the functioning of the WTO that it is specifically written into the articles governing the three main WTO agreements: the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS), and the Agreement on Trade-Related Aspects of Intellectual property Rights (TRIPS).

The MFN principle means that every time a country grants another country a special favor, such as lowering a trade barrier or opening up a market, it has to do so for the same goods or services from all WTO member states, regardless of whether the state is rich or small, weak or strong. All trading partners are to be granted trading opportunity equal to what is given to the most-favored nation. Granting special favors, such as lower customs duty rates for just one country's export products, would be discriminatory treatment. Instead, all trade practices are to be applied to all WTO members equally. This prevents states from bilaterally agreeing to practices that harm third-parties. This also means the third party government cannot free ride on cuts made by other nations without changing their own practices (Bagwell and Staiger 2004, 8).

Another important contribution of the MFN principle is reducing the incentive for states to agree to bilateral deals that undermine the multilateral framework of the WTO agreements. Absent the MFN principle, incentives to join the WTO and comply with the agreement would be undermined. This concern is embodied in Bagwell and Staiger's theory of "bilateral opportunism." They write:

> "A particular concern is that the value of concessions that a government wins today may be eroded in a future bilateral negotiation to which it is not party. Taking the argument a step further, if governments recognize that current market access relations may be vulnerable to opportunistic bilateral agreements in the future, then they may exchange concessions with trepidation" (2004, 2)

As states engage in bilateral renegotiations of agreements, previous concessions have to be protected for governments not participating, since incentives exist to renegotiate to enhance a country's own well-being at the expense of countries not involved. Two countries "can always find a way to negotiate further changes in their tariffs on each other's imports which benefit them at the expense of" a third country (Bagwell and Staiger 2004, 4). An incentive for states to join the WTO and agree to concessions is the comfort of knowing the market access it has secured will not be undermined by future negotiations it does not participate in (Bagwell and Staiger 2004, 24). The MFN principle reduces such fears of diminished future market access. The WTO bargaining approach does allow negotiations to occur bilaterally between states. As Bagwell and Staiger write, "the MFN rule permits the liberalizing force of reciprocity to be harnessed in an essentially bilateral manner even in a multilateral world" (2009, 24). Nations can voluntarily negotiate lowering trade barriers bilaterally or within small groups. However, after the negotiations are complete, the results must then be "multilateralized" so that all member of the WTO receive the same, non-discriminatory treatment (Bagwell and Staiger 2009, 1).

The WTO functions on multiple levels; the rules based system of MFN and non-discrimination is evident in all these roles. It functions as a negotiating forum for

member states to negotiate reduced trade barriers and further trade liberalization. It is a set of rules, which is the combination of agreements governments have bound themselves to since the negotiation of the GATT. It is a means of implementing and administering the rules to which nations have agreed. Finally, it is an arbitrator that settles disputes that arise between nations over trade rules (WTO, 2009). The role of arbitrator is what this research will further address. The Dispute Settlement proceedings in the WTO are the primary means of ensuring enforcement of the MFN principle, and are designed to ensure disputes are settled in a non-discriminatory manner.

The enforcement mechanism established under the WTO was a significant change that came with the transition away from General Agreement on Tariffs and Trade (GATT). The diplomacy-based system of GATT was replaced with a "more legalistic architecture" (Busch and Reinhardt 2003, 719). Previously, GATT's ruling body applied inconsistent rules and lacked enforcement power (Busch and Reinhardt 2003, 721). Under the WTO DSU, the WTO created a panel with the power to enforce its rules and make binding decisions. The DSU also included a "single set of procedures for disputes" (721). By streamlining and synchronizing the system for all disputes, nations in violation of trade rules would hopefully comply with less delay, countries would use litigation more frequently, and all countries could equally benefit from the process (721).

Dispute settlement is a vitally important yet particularly controversial aspect of the WTO. It is important, because even after signing on to a trade agreement, the temptation to deflect by setting higher tariffs or shifting costs unilaterally is still high. Bagwell and Staiger write, "this temptation does not go away simply because an agreement is signed" (2009, 26). The goal behind the creation of the Dispute Settlement

Body (DSB) is "to ensure… temptations to deviate from the agreement are balanced against the anticipated costs of the retaliatory response by other governments that the deviation would promote" (Bagwell and Staiger 2009, 26). The DSB can find a nation in violation of WTO trade rules, require compliance, and authorize retaliation in response to a non-compliant state. In theory, after a dispute, if a guilty respondent follows through by reversing their unfair trade practice, for example by lowering tariffs or removing quotas, every country exporting that good or service involved in the dispute should benefit equally under the MFN principle (Bown 2007, 266).

As in a typical domestic legal setting, WTO dispute settlement has a complainant, a nation challenging a policy of a member government, and a respondent, the alleged violator of the treaty agreement. If a "member government believes another member government is violating an agreement or commitment it has made in the WTO" a dispute can be filed (WTO 2011). The procedures for dispute settlement are outlined in the DSU. A complainant begins by filing a request for consultations to the DSB under Article 4 of the DSU. The DSB is made up of representatives from all WTO member governments. Authority to establish a panel of experts to hear the case, accept or reject the panels' findings, accept or reject the results of an appeal, ensure implementation of rulings and recommendations, and authorize retaliation in the instance of non-compliance rests solely with the DSB. After the request for consultations is filed, member nations are required to spend up to 60 days in negotiation in an attempt to reach a solution. Consultations can result in a mutually agreed solution, in which case the dispute does not proceed further. If preliminary consultations do not result in a solution, then the complainant can request the establishment of a Dispute Panel under Article 6. The panelists review the evidence

and issue a report for or against the respondent after conducting hearings, rebuttals, and consultations with experts. The final report is then circulated to WTO members, and includes recommendations for bringing disputed trade measures in conformity with WTO rules. This procedure is designed to take six months, but additional time is often requested and granted. After sixty days, the report becomes the DSB's ruling or recommendation. Either side can then appeal the panel's ruling. These are heard by the Appellate Body, a seven-member permanent body serving four-year terms. The Appellate Body can uphold, modify or reverse the previous decision, which is then accepted by the DSB.

After either the panel or Appellate Body has made a decision in favor of the complainant, it remains up to the losing respondent to implement the recommendations. A statement of intention to implement the rules must be made to the DSB within 30 days. If necessary, the defendant can be granted a "reasonable period of time" to implement the ruling. After notification has been made to the DSB of compliance to a level satisfactory to the complainant, the dispute procedure is complete. In an instance where the guilty party fails to reverse its disputed trade practices, negotiations begin with the complainant about mutually acceptable compensation. If these fail, a request can be made by the complainant to the DSB to impose limited trade sanctions, otherwise known as "suspended concessions or obligations." (See Appendix A for the timeline and order of the dispute settlement process)

A WTO dispute can include participation on multiple different levels from member states. A co-complainant is a member nation that joins the complaint as a fellow plaintiff. Article 9.1 of the DSU states that "where more than one Member requests the

establishment of a panel related to the same matter, a single panel may be established to examine these complaints" (Bown 2005, 293). All the member states that requested the panel are therefore considered complainants. Third parties are observers to the dispute. Busch and Reinhardt define third parties as "other governments that wish to monitor and influence the proceedings" (2003, 446).[1] Article 10.2 states, "Any [WTO] member having a substantial interest in a matter before a panel and having notified its interest to the DSB… shall have an opportunity to be heard by the panel and to make written submissions to the panel" (Bown 2005, 293). In instances where a panel is not formed interested member states can make "a formal request to the respondent and complainant to join the consultations… based on substantial trading interest in the products under dispute" under Article 4.11 of the DSU (Bown 2005, 296). At any point during the dispute proceedings any WTO member may request their rights to participate in the dispute as a third party. Finally, there are the non-participating member states involved in disputes. These states will be interested in the dispute outcome if they are suppliers of the disputed good. Bown writes, "For every two-country… WTO dispute, there may be dozens of developing countries which also trade in the disputed produced and which are thus potentially affected by the dispute's economic resolution" (266, 2007). An important question is what effect dispute settlement has on these parties. The WTO DSM was created to enforce the non-discrimination principle. The research question I will address is whether disputes get resolved in favor of the plaintiff without being discriminatory to other parties exporting the same product. If only one state files a

[1] Busch and Reinhardt, also note that while the WTO does not formally define third

dispute, do other exporters of the same product experience the same effects on their exports as the complainant? Or, does only the plaintiff benefit?

Dispute settlement is analogous to a bilateral negotiation between the complainant and the defendant over increased market access. The MFN principle is designed so that states not participating in the dispute should not have to fear that their market access will be diminished as a result of the dispute. If dispute settlement leads to discriminatory outcomes that "result in the systematic diversion of trade away from third country exporters the WTO would no longer function as intended (Bown 2004, 719). So while in theory all trading partners should be treated equally, if this does not occur in dispute settlement, the multilateral framework underpinning the WTO agreement would be undermined. Bown writes, "the economic impact… on trade flows in disputed sectors may not be all that different from what might occur from the negotiation of a set of discriminatory, preferential trading agreements" (2004, 719).

Often times, trade barriers are put in place against one or more countries. However, if only one country actually files the dispute, the effect the dispute has on the exports of other suppliers of the same product should be the same because of MFN principle. One goal behind the MFN principle is to ensure third party rights are protected in dispute settlement. To test the theory of non-discrimination, the research design will analyze at how all parties involved in the dispute, including the complainant, co-complainants, third parties, and non-participating member states, are affected by the results. If, in practice, non-discrimination is followed, the dispute should get resolved in a way that favors all exporters, and not just the plaintiff (Bagwell and Staiger 2004).

Obstacles such as legal capacity and market power often brought up as barriers to increasing member nation's participation as complainants in WTO disputes (See Busch and Reinhardt 2003, Alavi 2007). However, if nations are able to reap all the rewards of a dispute without formally participating and can benefit from legal action pursued by others, this becomes less relevant (Bown 2007, 277-78). Nations can benefit from improved access to markets through the removal of import protection and export promotion even if they are not formally involved in the dispute. Dispute settlement though the WTO can be considered a public good since its benefits should extend to all member states, especially "if one country's litigation efforts contribute to the removal of a trade barrier that adversely affected the market access rights of *other* WTO Members" (Bown and Hoekman 2005, 862).

Statement of Hypothesis

One basic hypothesis is that, after winning a dispute in the WTO, all suppliers of the disputed good that are members of the WTO should experience a greater increase in exports of the disputed product than non-WTO member states do.

Hypothesis 1:

H_1: $\beta_{complainant}, \beta_{Third\ Parties}, \beta_{WTO\ Members} > \beta_{Non\text{-}WTO\ Members}$

The second hypothesis is that complainant and third parties should experience a greater increase in exports of the disputed product than other WTO member states do.

Hypothesis 2:

H_2: $\beta_{complainant}, \beta_{Third\ Parties} > \beta_{WTO\ Members}$

The third hypothesis is that the plaintiff should experience a greater increase in exports of the disputed good(s) to the defendant, relative to that of third party participants and uninvolved WTO member states.

Hypothesis 3:

H_3: $\beta_{complainant} > \beta_{Third\ Parties}, \beta_{WTO\ Members}$

The Theory Behind the Most Favored Nation Principle in Dispute Settlement

The theory underlying my research is that if states are violating agreed upon trade policies through restrictive trade practices, and these are negatively affecting a country's' ability to compete in the global market, then successful litigation through the WTO should reverse those unfair trade practices and countries should be able to experience the full benefits of globalization. Regardless of a country's role in the dispute, if a nation implements a WTO legal ruling, therefore reducing import restricting and/or price distorting policies, the world price of that product should increase and nations with a competitive advantage should be able to compete and sell their products, increasing their exports (Bown 2007, 267).

An important variable to factor into account is the type of trade policy in dispute. If the disputed policy is discriminatory, allowing some states more favorable trading options than others, removal of such a policy would leave the countries that benefited from the discriminatory trade practice worse off. However, if a state implements a policy that negatively affects all states trading ability, and is not discriminatory against any WTO members, a reversal of that policy should benefit all countries exporting that product (Bown 2007, 282) that are members of the WTO.

The dispute against the European Community (EC) Sugar Regime provides an interesting case study of the potential divergent effects of WTO dispute settlement. Although disputes were initially brought forth by Australia, Brazil, and Thailand, many non-complainant countries would be affected by the results. Since the EC was accused of artificially lowering prices of their sugar exports, the predicted outcome of the dispute, assuming compliance, would be an increase in world sugar prices. This would allow exporting countries to export their goods at a more competitive price than they would have previously. But, part of the dispute against the European Community was due to the WTO-inconsistent policy of preferential import market access for African, Caribbean, and Pacific sugar producers. While other suppliers of the dispute good stand to "gain" from removal of preferential markets, these countries would "lose" as a result of the dispute through the removal of discriminatory preferential treatment.

Trade disputes generally fall into three basic categories, outlined by Bown:

> "(1) allegations of excessive import protection of a product by the respondent through tariff or nontariff measures; (2) allegations of excessive export promotion of a product by the respondent, typically due to domestic support policies such as subsidies; and (3) allegations of excessive export restrictions by the respondent" (2007, 270).

Each dispute type has a unique a set of beneficiaries from an outcome resolved in favor of the complainant. The effects vary based on whether a state is an importer or exporter of the disputed product. This paper will focus on exporters that fall into the first two categories of disputes, to better understand the benefits third parties, formal and informal, experience from the dispute settlement process.

1. Allegations of Excessive Import Protection: These disputes allege a respondent country has limited market access for imports of a specific good. All states that are exporters of the same good, and therefore harmed by such restrictive practices, should experience an increase in export as a result of successful dispute outcome. If, however, the state benefited from the respondents discriminatory policy through preferential market access, resolution of the dispute in favor of the complainant would remove those benefits, hurting those states.
2. Allegations of Excessive Export Promotion: These disputes allege a respondent has unfair export promotions, such as subsidies. All states that are exporters of the disputed good should benefit from a successful dispute outcome through the removal of artificially competitive advantage.
3. Allegations of Excessive Export Restrictions: These disputes allege a state has restricted exports, and is initiated by an importing country. Other states that export the disputed product would have benefited from the restricted imports through the creation of artificial scarcity.

The first category, excessive import practices, is the area that most disputes fall under, and will therefore be the main focus of this research. The third category of disputes will be excluded, since the expected results and the data necessary to study the effect of dispute settlement for export restrictions is different from disputes involving the other types of WTO rules violations.

The important consideration is not whether the disputed trade measures differ in certain ways, such as whether the disputed policy is discriminatory or not. What needs to

be considered is that there is almost always the possibility for discriminatory settlement to occur, even over a non-discriminatory measure. This can occur in the form of a one-time resolution in favor of the complainant only. For this reason, my analysis, while aware of the potential discrepancies that can exist within a dispute, can be fairly applied to both types of measures.

These discriminatory outcomes can relate to the stage in which in which disputes are resolved. If a dispute gets settled through negotiation, in what Busch and Reinhardt describe as "the shadow of the law," and not the panel or Appellate Body stage, the result is likely to be more favorable for the plaintiff (2003, 720). But, the potential for increased discrimination exists during this stage, since negotiations occur only between the formal parties of the dispute and can result in concessions only being given to the complainant and not other exporters of the disputed product. Busch and Reinhardt write, "The promise of a rule of law system is to level the playing field (2003, 734)." Implementing more "legalism" into the system was the motivation behind reforming the dispute settlement system of the GATT through the creation of the WTO and the DSU. However, "negotiations are still the driving force behind WTO dispute settlement, notwithstanding the more legal architecture of the DSU" (Busch and Reinhardt 2003, 733). The outcome of most cases is determined during settlement and this bargaining is likely to result in discriminatory settlements for other exporters. Bown writes, "such bilateral dispute settlement negotiations… could lead to bilaterally opportunistic or discriminatory behavior… could facilitate a collusive outcome, where the respondent provides the complainant with increased market access at the expense of other… third country exporters, whose own trade will fall" (2007, 288). My analysis will thus have to

be sensitive to these different modes in which disputes end. The chief goal is to compare the degree or discrimination evident in settled disputes with that in disputes with rulings for the complainant. This will answer whether disputes in which defendants settle early discriminate against non-complainants.

The Research Design

I constructed a data set with one observation per supplier per dispute. I include WTO disputes occurring between 1995 and 2006. 1995 was the start date since this is the year the WTO was created and the first dispute settlement proceedings occurred. I chose 2006 as the end date since this allows analysis of change over time in trade volume and prices for a period after a dispute, since there most likely is a lagged effect on the dependent variable. The WTO numbers each dispute with a unique "Dispute Settlement (DS)" number, and as the end of 2006, there were 356 disputes filed. I generated a randomized list of those 356 disputes with equal probability of each dispute being selected. With such a large number of disputes, collecting the relevant data for the independent and dependent variables for each dispute is a project that would take longer than an honor thesis allows for. Due to these time limitations, I evaluated only the first 100 disputes on this randomized list.

Of relevance to my research were the disputes in which a specific export product, or products, was disputed. The request for consultation filed for these disputes lists a specific Harmonized Systems (HS) Code, which I used to determine the products involved.[2] Having a specific product or products involved was necessary to gather

[2] In instances where the HS code is not listed in the WTO dispute correspondence, the World Bank WTO Dispute Settlement Database was used.

quantitative export and price data, because these were the disputes in which changes in trade volume and prices can be measured. In certain instances where multiple complainants participated in the same panel proceedings against a defendant, the disputes were collapsed into a single dispute.[3] The final sample contained 66 disputes. I eliminated 33 disputes from the sample not relevant to my research because they involved disputes about general practices or issues without specific products in question. In addition, I eliminated one further dispute; this particular case focused on export restrictions, and therefore the complainant country was an importer, and not exporter, of the disputed good. Analyzing the effects of dispute settlement in this particular instance would require information about exports from the defendant country, and not imports into the defendant country, which is the approach the rest of the model takes.[4] Table 1 lists the disputes involved in the data set.

Table 1: WTO Trade Disputes Used in the Analysis

[3] Many disputes in the WTO include the same product or products, filed by different countries against the same complainant. When a dispute appeared in the random sample that was related closely to disputes filed by other countries over the same product, special caution was taken in categorizing these and determining whether Article 9.1 of the DSU was invoked, establishing a single panel to examine the complaint. Eleven disputes in my sample required evaluation. Disputes 54 and 55; 51, 52, 65 and 81; 90, 91, 92, 93, 94, and 96; 177 and 178; 248, 249, 251, 252, 253, 254, 258. 259, and 274; and 265, 266, and 283 I collapsed into one dispute, as the WTO DSB decided to treat those disputes as one in panel proceedings. Disputes 18 and 21 and 434 and 354 I treated as separate, because they were not combined by the WTO. For disputes 109 and 110; 121, 123, and 164; and 236, 247, 257, 264, 277, and 311 I created two sets of variables, one treating them as separate, and another as different, as the supporting documents were not clear on how to categorize these.

[4] The disputes in question was DS155 - Argentina — Measures Affecting the Export of Bovine Hides and the Import of Finished Leather, in which the European Union claimed "*de facto* export prohibition on raw and semi-tanned bovine hides…is in violation of GATT Articles" (WTO Dispute Settlement 2010)

Disputes in the data set (66)	DS1, DS2, DS5, DS6, DS9, DS15, DS17, DS18, DS19, DS21, DS24, DS30, DS40, DS42, DS54, DS55, DS62, DS66, DS70, DS74, DS75, DS81 (DS51, DS52, DS65), DS90 (DS91, DS92, DS93, DS94, DS96), DS97, DS109 (DS110*), DS112, DS122, DS132, DS138, DS142, DS143, DS155, DS156, DS164 (DS121, DS123*), DS165, DS177 (DS178), DS179, DS203, DS206, DS211, DS215, DS225, DS232, DS233, DS235, DS255, DS256, DS258 (DS248, DS249, DS251, DS252, DS253, DS254, DS259, DS274), DS262, DS266 (DS265, DS 283), DS272, DS280, DS297, DS299, DS303, DS305, DS309, DS311 (DS236, DS247, DS257, DS264, DS277), DS312, DS328, DS329, DS336, DS337, DS343, DS344, DS345, DS348
Unique disputes in the data set	66

Note: A dispute in parenthesis is combined with the immediately preceding dispute. If a asterisk is included, two categories of variables, with the disputes combined and not combined, were included in the dataset.

I then compiled a standard set of information about each dispute. From the WTO dispute settlement gateway I was able to gather the complainant and respondent country, the issue of the dispute, the disputed product or products, the date filed, third parties, how the dispute proceeded, and the end date. Information about the dispute proceedings included whether a panel was formed, whether it was appealed, and whether the panel's decision was implemented. From the United Nations Commodity Trade Statistics (COMTRADE) Database I was able to find all the countries supplying the disputed product to the defendant country. I was also able to gather the trade value, the net weight of exports, and the trade quantity of exports to the respondent country for a period five years before and five years after the dispute.

The Dependent Variable: Exports to the Defendant

The dependent variable is a measure of a country's exports to the defendant before and after the dispute. The main question the dependent variable will address is what degree a country's exports of the products in question increase or decrease from a time period before the dispute and a time period after. The data for the dependent variables was gathered from the UN COMTRADE Database. Then, I used the CPI index from the United States Bureau of Labor Statistics to convert the trade values as reported to COMTRADE from current prices to constant 2000 US dollars.

I used two different measurements of the change in exports as the dependent variable: first, the difference in the natural log of exports,

Ln(1+Exports in 2000 prices in time 1) - Ln(1+Exports in 2000 prices in time 0),[5]

and second, the difference in exports adjusted for GDP,

(100*Exports in 2000 prices for time 1/GDP in 2000 dollars for time 1) -
(100*Exports in 2000 prices in time 0/GDP in 2000 dollars in time 0).

As can be expected when collecting statistics on international phenomena like export volumes and values, countries are not perfect at reporting such information and often times chose not to report it at all. In the dataset, there were many cases where export data for certain countries and goods was missing. This could mean one of two things: either a country did not export any of that product for that specific year, and therefore reported no information, or, it could also mean that the supplier just failed to report their information to the United Nations. To take this into account, I created a separate set of dependent variables. For the export volumes where data was missing, I

[5] The natural log of exports was used to transform the highly skewed distribution of the export values into a more normal distribution.

filled the values in with zeros.[6] I then created two additional dependent variables modeled off the first two. Calculating the results with the missing values of zero results in a larger sample size.

Windows of time were created before and after the dispute to compare the difference in export values. These windows included one year, three years, and five years before the dispute start date and after the last year of legal proceeding occurred.[7] These different windows allowed for measuring the effects on exports from certain time periods before the disputes and certain time periods after to see if the effect on exports was lagged. Therefore, when the dependent variables were created, time 0 and time 1 were adjusted in the dependent variables to create variables for each of the different windows. For the purpose of this study, a country's exports are included in the dependent variable if it had a nonzero export of the disputed good to the complainant in any of the years falling in the respective windows.

The Independent Variable

My independent variable is the nation's status in the dispute, which is a categorical variable coded into one of four categories: a complainant, a third party, a WTO member state supplying the disputed good, or a non-WTO member state supplying the disputed good. The complainant is the state that initiated dispute proceedings. In the instances where disputes were merged, I treated each of the plaintiffs from the individual

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[6] This is obviously a bold assumption that all "missing" data should be valued at zero, but I decided to include variables with this assumption to use as a comparison with the other dependent variables.

[7] This date was readily available for disputes where a request for consultations was withdrawn, a mutual withdrawn solution was reported to the DSB, or a panel or Appellate Body decision was implemented. For disputes where no progress was made after the initial filing of the dispute, the year of the start date was also used as the end date.

disputes as complainants. Most of the disputes in the data set have only one country in this category. Third parties are those states that have formally chosen to participate in the dispute during the consultation or panel stage. For the purpose of this study, in disputes in which a panel was formed, third parties are coded as the countries that formally intervened in the dispute as third parties under Article 10.2 of the DSU. In disputes in which the dispute did not progress past the consultation stage, third parties are coded as the nations that submitted a request to join the consultation under Article 4.11 of the DSU.[8] Of the 66 disputes in the sample, all but 20 had third parties involved, indicating the fairly widespread use of this practice. A separate category is reserved for WTO member states that export the disputed good to the defendant, but are not participating in the dispute as a complainant or a third party. The final category of country will be a non-WTO member states that also supplies the disputed good to the plaintiff. Table 2 lists the frequency in which each exporting country was a complainant, third party, WTO member, and non-WTO member in the disputes in the sample.

Table 2: Affected WTO Member Exports as Complainants, Third Parties, WTO Member Non-Participants, and Non-WTO Members

Exporter	Complainant	Third Party	WTO Member	Non Member
Albania	0	0	19	4
Algeria	0	0	0	25
Andorra	0	0	0	10
Antigua and Barbuda	0	0	21	0
Azerbaijan	0	0	0	24

[8] There is a distinction to be made between formal and informal third parties. In addition to the states that formally declare their interest through Article 4.11 and 10.2, there are also "implicitly interested third parties, countries that are affected by the dispute due to trading interests. These are countries that export the disputed good to the respondent country, but chose to not formally exercise their third party rights. For the purpose of this study, those are classified as either WTO members or non-WTO members based on their status at the time of the dispute initiation. For further analysis, see Bown 2007.

Argentina	1	0	55	0
Australia	3	1	54	0
Bahamas	0	0	0	27
Bahrain	0	0	25	0
Bangladesh	0	0	43	0
Armenia	0	0	11	13
Barbados	0	1	38	0
Bhutan	0	0	0	10
Bolivia	0	0	36	0
Bosnia and Herzegovina	0	0	0	28
Botswana	0	0	21	0
Brazil	4	3	51	0
Belize	0	1	26	0
Solomon Islands	0	0	4	0
Brunei	0	0	27	0
Bulgaria	0	0	45	7
Myanmar	0	0	3	0
Burundi	0	0	12	0
Belarus	0	0	0	26
Cambodia	0	0	10	14
Cameroon	0	0	16	0
Canada	5	13	43	0
Cape Verde	0	0	3	15
Central African Republic	0	0	6	0
Sri Lanka	0	0	48	0
Chile	4	4	48	0
Hong Kong	0	3	0	51
Macao	0	0	0	32
China	1	10	27	22
Colombia	0	1	50	0
Comoros	0	0	0	3
Congo	0	0	7	0
Costa Rica	1	0	47	0
Croatia	0	0	33	14
Cuba	0	1	22	0
Cyprus	0	0	31	0
Czech Republic	0	0	45	0
Benin	0	0	14	0
Dominica	0	0	12	0
Dominican Republic	0	1	33	0
Ecuador	0	1	39	6
El Salvador	0	1	36	0

Ethiopia	0	0	0	21
Eritrea	0	0	0	3
Estonia	0	0	24	13
Fiji	0	1	28	0
Djibouti	0	0	2	0
Gabon	0	0	14	0
Georgia	0	0	19	7
Gambia	0	0	21	0
Ghana	0	2	30	0
Kiribati	0	0	0	3
Grenada	0	0	23	0
Guatemala	0	1	44	0
Guinea	0	0	17	0
Guyana	0	1	33	0
Haiti	0	0	8	0
Honduras	0	1	38	0
Hungary	3	0	43	0
Iceland	0	2	37	0
India	5	8	47	0
Indonesia	1	1	52	0
Iran	0	0	0	36
Israel	0	0	47	0
Code d'Ivoire	0	0	29	0
Japan	5	16	32	0
Kazakhstan	0	0	0	39
Jordan	0	0	30	10
Kenya	0	1	38	0
South Korea	5	6	44	0
Kuwait	0	0	33	0
Kyrgyzstan	0	0	18	5
Lebanon	0	0	0	27
Lesotho	0	0	5	0
Latvia	0	0	24	11
Lithuania	0	0	23	16
Madagascar	0	1	33	0
Malawi	0	1	22	0
Malaysia	0	0	53	0
Maldives	0	0	13	0
Mali	0	0	20	0
Malta	0	0	20	0
Mauritius	0	1	35	0
Mexico	3	6	48	0
Mongolia	0	0	18	6
Moldova	0	0	13	6

Montenegro	0	0	0	6
Morocco	0	0	37	0
Mozambique	0	0	30	0
Oman	0	0	26	11
Namibia	0	0	29	0
Nepal	0	0	6	12
Vanuatu	0	0	0	5
New Zealand	3	1	52	0
Nicaragua	0	0	38	0
Niger	0	0	16	0
Nigeria	0	0	25	0
Norway	3	2	51	0
Pakistan	0	1	42	0
Panama	1	0	21	4
Papua New Guinea	0	0	24	0
Paraguay	0	1	31	0
Peru	0	1	49	0
Philippines	0	1	50	0
Poland	2	0	42	0
Guinea-Bissau	0	0	1	0
Timor-Leste	0	0	0	14
Qatar	0	0	28	0
Romania	0	0	50	0
Russia	0	0	0	53
Rwanda	0	0	12	0
St. Kitts and Nevis	0	1	22	0
St. Lucia	0	1	25	0
St. Vincent	0	0	23	0
Sao Tome and Principe	0	0	0	3
Saudi Arabia	0	0	16	28
Senegal	0	0	35	0
Serbia	0	0	8	31
Seychelles	0	0	0	15
Sierra Leone	0	0	1	0
Singapore	1	1	56	0
Slovakia	0	0	37	0
Vietnam	0	1	9	39
Slovenia	0	0	38	0
South Africa	0	0	57	0
Zimbabwe	0	0	30	0
Sudan	0	0	0	12
Suriname	0	0	25	0
Swaziland	0	1	12	0

Switzerland	2	0	59	0
Syria	0	0	0	16
Tajikistan	0	0	0	2
Thailand	4	3	47	0
Togo	0	0	18	0
Tonga	0	0	0	2
Trinidad and Tobago	0	1	37	0
United Arab Emirates	0	0	50	0
Tunisia	0	0	41	0
Turkey	1	1	52	0
Turkmenistan	0	0	0	4
Uganda	0	0	30	0
Ukraine	0	0	7	38
Macedonia	0	0	12	16
Egypt	0	0	34	0
Tanzania	0	0	38	0
United States	15	13	20	0
Burkina Faso	0	0	12	0
Uruguay	1	0	45	0
Venezuela	1	1	47	0
Yemen	0	0	0	29
Zambia	0	0	30	0
European Union	12	21	26	0
Total	87	142	3798	874

Table 2 indicates the United States and the European Union participate as complainants in the most disputes. The sample has 15 disputes in which the United States was a complainant and 12 in which the European Union was the complainant. Of the disputes in the sample, 50 have only one country as the complainant. The maximum number of complainants is 8. The mean number of complainants is 1.32. The European Union (21), Japan (16), the United States (14), Canada (13), and China (10) have third party participation levels far above the other countries. The average number of times a country participates as a third party, after excluding the five most frequent participants above, in .55. This indicates most countries do not participate as third parties very frequently. The number of third parties in a dispute ranges from 20 to 0. The dispute

with twenty third-parties is DS266, "European Communities — Export Subsidies on Sugar." This is not surprising given the dispute involved a commodity that is an important export product of many nations. The mean number of third parties is 2.15 when including all countries in the sample.

In theory, the WTO is founded on the principal of non-discrimination, so each member state exporting the disputed good should experience the same benefits from dispute settlement regardless of the role they play in the dispute. By analyzing the effect on nations other than just the complainant and respondent, I can test whether different country types experience different benefits as a result of legal proceedings. These results will demonstrate whether discrimination occurs among different member states in WTO Dispute Settlement practices based on the states level of participation.

The outcomes of the disputes were also included to further differentiate the independent variable, as different results can have different effects on the parties involved. I created a categorical variable labeled *Outcome*. For disputes in which the request for consultation was filed, but there was no further progress in the dispute after that date or the request for consultations was withdrawn, the dispute was labeled a 1. If a mutually agreed solution was reached, indicating successful consultation occurred without a panel being formed, the dispute was categorized as a 2. The final category was for disputes in which consultations failed to result in an outcome agreeable to both parties, and the complainant requested the formation of a panel. If a panel or the Appellate Body ruled in the dispute, and the defendant complied with the ruling, the dispute was categorized as a 3. The number of disputes falling into each category is

displayed in Table 3.[9] There is a large portion of the sample that falls within each category, with most of the disputes resulting in the formation of a panel.

Table 3: Outcome of Disputes

No Progress	22
Mutually Agreed Solution	16
Panel	28
Total	**66**

Testing the Relationship

To compare changes in exports between different states before and after disputes, I created bar graphs of the means. I divided the countries by the independent variable, and further divided the results by the dispute outcome. This way, I could compare how the outcome of the dispute interacted with a country's status in the dispute, and whether the level of discrimination varied among different outcomes.

Analyzing the Results

Graph 1 displays the results of the first test. I chose to use the means of the export differences five years after the dispute occurred. After comparing the graphs for one, three, and five years, the results were not substantially different, but I chose to use the five year window to ensure ample time was given for the respondent to fully liberalize the markets in dispute and the exporting countries were able to adjust to market changes. I chose to use the logged difference in exports without missing values filled.

[9] In two disputes in the sample, the request for consultations was withdrawn. Due to the small sample size falling within this category, these disputes were categorized as a 1, indicting no progress was made on the dispute after the initial request for consultations was filed.

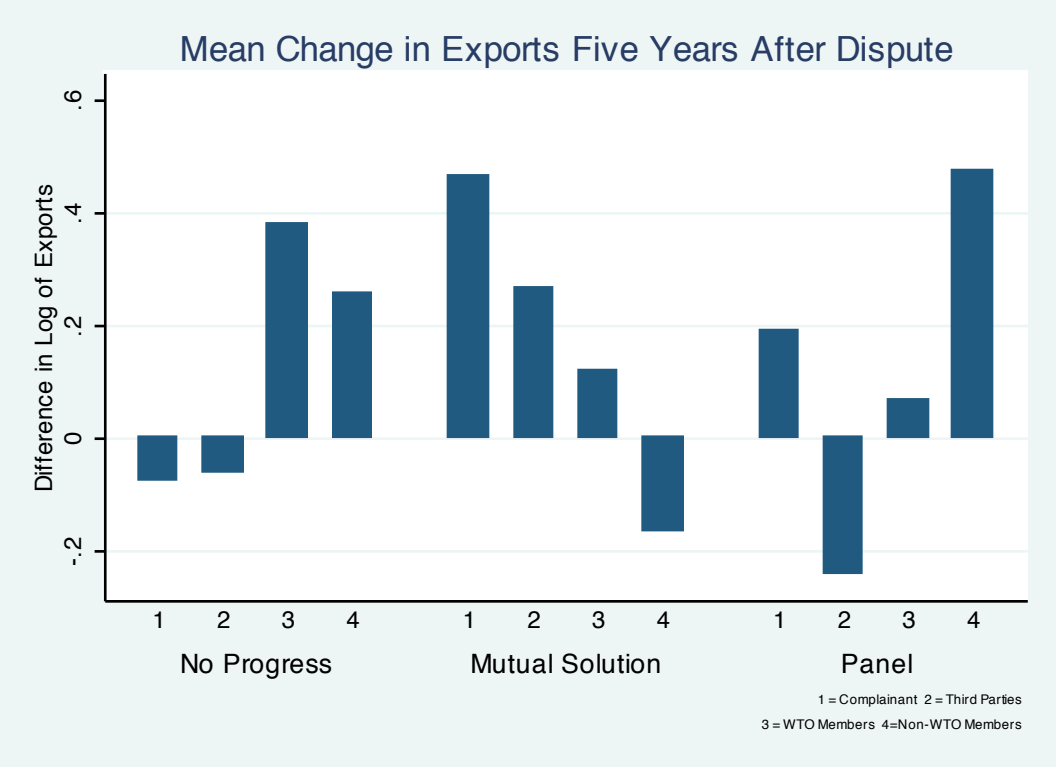
The graphs looked similar for all of four different measure of the dependent variable, but since filling in the missing values was an assumption that I could not be sure was accurate I chose to not use those versions of the variables. Additionally, I chose to use the difference in logged exports since the numbers deflated by GDP created a lot of very small and zero values, which did not occur in the difference of the logged exports.

At first glance, the results do not represent a clear story. Fitting with the hypothesis, in disputes where a mutually agreed solution occurred, which likely involved a set of bilateral negotiations between the complainant and respondent, the complainant's exports changed the most. This is consistent with the third hypothesis, that there is a decreasing benefit that occurs from dispute settlement in which a mutually agreed solution was reach between complainants, third parties, WTO members, and non-WTO members. Third parties and other WTO member states experienced increased exports, but at a declining rate from the complainant country. Hurt the most are the Non-WTO members, who experience decreased exports. This is not surprising, given these states are not privileged to receive any of the reduced tariff barriers or open markets that WTO membership provides.

In instances where a panel was formed, the complainant experiences increased exports as a result, which can be expected. However, third party's exports decrease as a result, which is something that needs further investigating. Also interestingly, non-WTO members experience the most gains. In disputes with no progress after the initial request for consultations, the plaintiff and third parties experience decreased exports, which could be a result of the disputed policy staying in place. However, the fact that other WTO members and non-WTO members exports decreased is not explained by the theory.

To try and gain a better understanding of these results, I applied additional tests to disputes in which panels were formed. First, I excluded China. China did not join the WTO until 2001, and as a large, export oriented economy its continued economic growth could be the reason non-WTO member's exports increased so significantly during the time period of the dispute (See Appendix B). Excluding China did not change the graph for disputes that reached the panel stage. However, in disputes in which a mutual solution was reached, the non-WTO member's exports decreased, likely as a result of excluding the export growth China contributed to this category.

Graph 1: Mean Change in Exports Five Years After a Dispute



I analyzed the resulted excluding just the cases in which the ruling was in favor of the defendant, since it would not result in any changes in trade policy regarding the

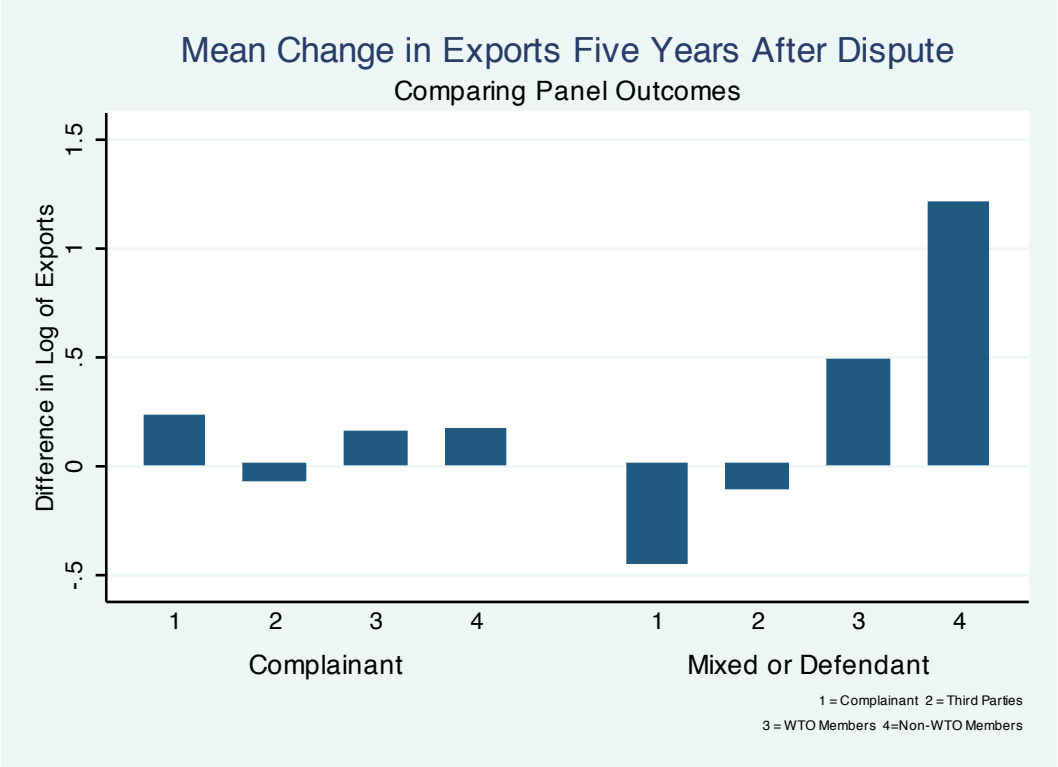
disputed good. Only one dispute fell into this category, and excluding only this one dispute it did not change the graph (See Appendix C).[10]

I then compared the results in which a panel ruling was in favor of the complainant to those disputes in which the panel ruling was in favor of the defendant or mixed, meaning it was not completely in favor of either the complainant or the defendant.[11] The resulting changes in the defendant's trade policies would also be mixed. The results are displayed in Graph 2. The graph on the right displays the results for disputes in which the ruling was for the complainant. The graph on the left displays the results for disputes in which the ruling was mixed or in favor of the defendant. When the panel ruling was mixed or in favor of the defendant, this resulted in negative values of changes in exports for complainants and third parties. However, non-WTO members experienced an increase in exports as a result. None of these changes, however, can be explained by the theory.

Graph 2: Comparing Rulings in Favor of the Complainant or the Defendant

[10] This was DS211 - Egypt — Definitive Anti-Dumping Measures on Steel Rebar from Turkey

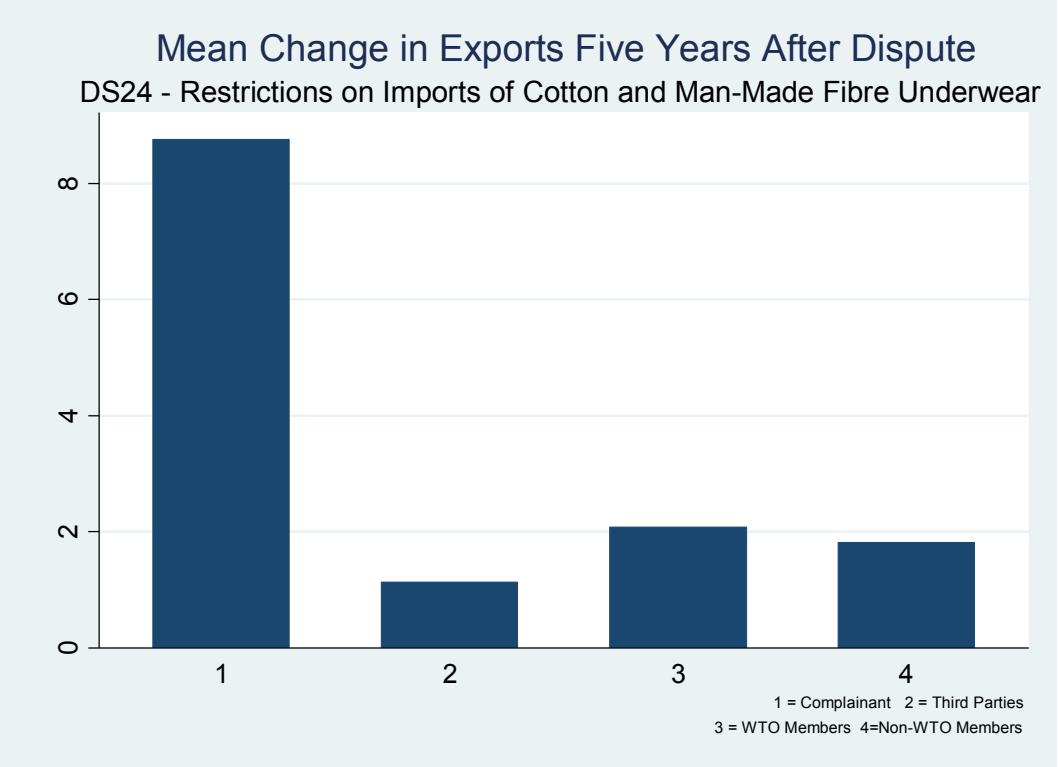
[11] These were DS54, DS55, DS179, DS206, DS299, DS312, DS177, DS344, DS70, DS211



Therefore, to further make sense of the data, I looked at individual case studies of certain disputes. I focused on disputes in which a panel was formed. This allowed me to analyze how the unique circumstances of each dispute affected changes in exports before and after the dispute. Graph 3 displays the first case study, DS24: Restrictions on Imports of Cotton and Man-Made Fibre Underwear. In this dispute, Costa Rica accused the United States of excessive import protection. Costa Rica alleged "the U.S. had violated its obligations under Article 6.2 and 6.4 of the ATC [Agreement on Textiles and Clothing] by imposing a restriction on Costa Rican exports without having demonstrated that serious damage or actual threat thereof was caused by such imports to the U.S. domestic industry" (WTO 2010). Looking at the graph, it is evident that all states benefited from removal of the restrictions. This is because the export restrictions were not discriminatory, other countries were also hurt by the US restrictions, including

Honduras, Thailand and Turkey, whose exports benefited from the DSB panel ruling in favor of Costa Rica. However, Costa Rica, the complainant, benefited the most. This is likely because of the importance of the textile sector in Costa Rica. Breckenridge writes "clothing manufacturing had been one of the fastest growing export sectors in the Costa Rican economy" (2005). Also significant is the fact that Costa Rica was privileged to preferential access to the US market through the Caribbean Basin Initiative, which "provides beneficiary countries with duty-free access to the U.S. market" (Breckenridge 2005, USTR 2009). Therefore, the industry was able to capitalize on the removal of quantitative restrictions and take over a significant portion of the US market share.

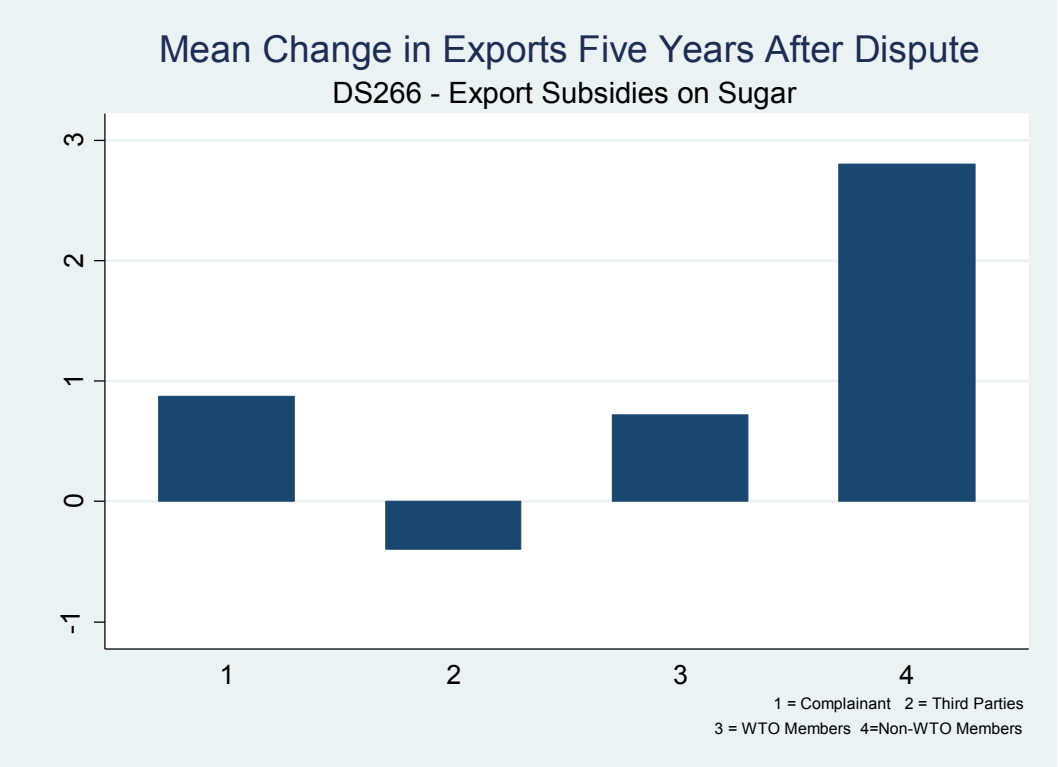
Graph 3: Mean Change in Exports Five Years After DS 24



A second case study, described earlier, is the dispute against the European Communities' sugar regime. This dispute involved multiple different violations of WTO

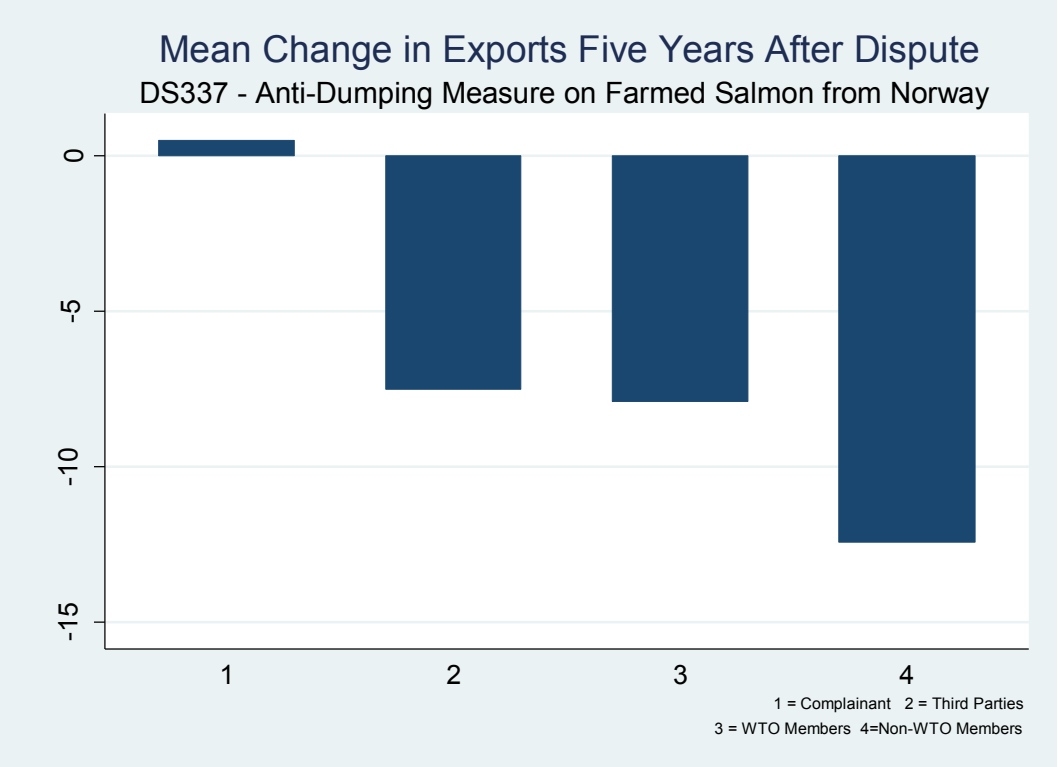
rules, including: “high guaranteed internal prices, quotas, tariffs, export subsidies and preferential access to EU markets for ACP [Africa, Caribbean, and Pacific] sugar producers in Sugar Protocol Countries” (Hudson 2006). Australia, Brazil and Thailand each filed separate disputes, which were later merged by the DSB into one case. As Graph 4 shows, the complainants experienced increased exports as a result of the panel’s decision. Third parties, however, experienced a decrease in exports. The reason for this is because the African, Caribbean, and Pacific sugar producers that benefited from preferential market access to the European Community joined the dispute as third parties. These states were interested in a ruling in favor of the defendant, because a ruling in favor of the complainant would result in removal of the disputed preferential, and discriminatory, treatment that benefited their domestic sugar industries. These third parties were “reliant on the preferential market access which they have enjoyed since the entry into force of the Sugar Protocol in 1975” (Hudson 2006). After the dispute, they no longer had “enjoyed preferential access to the high and guaranteed prices of the EU market” (Hudson 2006). The discriminatory nature of the original policy explains the decrease in third party’s exports, and fits with the theory of the MFN principle.

Graph 4: Mean Change in Exports Five Years After DS 266



Graph 5 demonstrates another example of differing outcomes as a result of the specific circumstances of the dispute. DS 337: Anti-Dumping Measure on Farmed Salmon from Norway was initiated by Norway against the European Communities. This dispute was about import protection against a specific country's product. Norway's salmon farming industry is large, export-oriented, and important to the country economically (Lorentzen 2009). After the removal of the disputed anti-dumping measures, Norway's access to the European market increased. This is shown in the graph, with the complainant country's exports into the EU increasing. Because of its large market power, Norway was quickly able to increase exports to the EU, and crowd out other exporters as a result, which could explain the decrease in exports from third parties, other WTO members, and non-WTO members.

Graph 5: Mean Change in Exports Five Years After DS 337



Conclusion and Opportunities for Future Research and Development

The WTO has been "widely acknowledged to be one of the most successful international institutions ever created" (Bagwell and Staiger 2010, 224). This success has been attributed to the MFN principle (Saggi 2009; Saggi, Sengul, Yildiz 2007). However, the rules based structure itself is not enough to ensure success. Agreeing to rules and obligations through accession to the WTO does not remove the substantial "temptation… for a government to unilaterally select a high tariff and shift costs" (Bagwell and Staiger 2010, 248). For this reason, "dispute settlement is the central pillar of the multilateral trading system. Without a means of settling disputes, the rules-based system would be less effective because the rules could not be enforced" (WTO 2011). Therefore, it is important to understand how these vital aspects of the WTO function, both to ensure the

continued success of the WTO and so that the lessons learned can be applied to other international organizations.

The WTO prides itself on its "rule-based" structure of dispute settlement, stating on the organization's website that the rule of law embodied in the DSU ensures the trading system is secure and predictable (WTO 2011). At the same time, the WTO actively encourages that disputes get resolved bilaterally through the consultation stage, stating "the preferred solution is for the countries concerned to discuss their problems and settle the dispute by themselves" (WTO 2010). Interestingly, the results of this study indicate that when disputes are settled through negotiations and consultation, the propensity for discriminatory settlement is much higher. As indicated in Graph 1, on average, a mutually agreed solution being reached results in the complainant benefiting the most through increased exports of the disputed good. Third parties benefit less than the complainant and WTO member states that do not participate in the proceedings benefit even less than third parties.

A large number of disputes never even reach the panel stage. By January 2008, of the 369 disputes filed only 136 actually reached the panel process. Sixty-three percent of disputes are decided before then, either "settled out of court" or remaining in what the WTO calls "a prolonged consultation phase" (WTO 2011). As Busch and Reinhardt write, "this percentage emphasizes to the importance of early settlement under the WTO" (2003, 724). The results of this study are significant, as they indicate that the rules of dispute settlement do not prevent discrimination in instances where cased are settled. The frequency in which disputes are resolved in consultation increases the importance of understanding the outcomes of the negotiation process. While WTO dispute settlement

has been successful in preserving the multilateral trading system, the rules can be, and actually are, evaded through early settlement.

Legalistic, rules based multilateral institutions can and quite often do work as they are designed to. The WTO is a testament to this. However, preserving the integrity of these international systems requires understanding how processes that allow the rules to be side-stepped affect the functioning of these organizations. Since more discrimination occurs in cases that are settled, it appears that resolving disputes through a panel or tribunal setting prevents discriminatory treatment from occurring. These lessons can be applied to the enforcement mechanism of other international institutions. Countries will take advantage of flexible systems that allow for opportunistic behavior. Removing such options can promote outcomes that live up to the ideals of multilateralism.

These results are not, however, an argument for the removal of the consultation phase of the dispute settlement process. Rather, they are an indication that application of additional structure to the negotiation process could result in the ideals of the WTO, namely the MFN principle, being better upheld. Unlike the results of a panel or Appellate Body decision, the outcome of a negotiation and the terms of the agreement are not published in the WTO documents. A simple notification that the two nations have reached a mutually agreed solution is submitted to the DSB. Perhaps requiring the terms of the agreement be made public or requiring the presence of observers could result in more transparency in the system. Without such procedures, there is nothing preventing the defendant country from granting special favors to the complainant country that satisfy them enough to stop further progression of the dispute, but don't necessarily result in full removal of the disputed trade practice. Transparency could reduce the incentive to reach a

discriminatory outcome, because if such outcomes were made public, other member states would likely request equal treatment.

In disputes that were resolved in the negotiation phase, the type or issue of the dispute was not a significant factor in whether discrimination occurred. The aggregate results indicate that regardless of the type of dispute, a country's status in the dispute is important, because the possibility of discriminatory treatment is taken advantage of. The panel results indicate a much different outcome, and this is because the legal issues in the dispute are what the panel assesses and places emphasis on when deciding a dispute.

After closely analyzing disputes in which a panel was formed, the case studies reveal there is a pattern that falls in line with the theories presented. It is clearly evident by the research that the type of restrictions that are disputed determines how third parties fare as a result of dispute settlement. In instances like the dispute against the European Communities Sugar Regime, the initial policy was discriminatory. Removing that policy resulted in less restrictive, more open market for all WTO member states, in line with the MFN principle. The resulting changes in exports were beneficial to the states that had previously been discriminated again, and detrimental to the states that had benefited from the discriminatory policy. The dispute against the European Union over Norwegian salmon also resulted in a removal of a previously discriminatory policy, resulting in equalized market access to the complainant, and decreased exports for the states that previously benefited from discriminatory access. In instances like the dispute against the United States over underwear, the policy in question was non-discriminatory, and hurt all nations. As a result, when this policy was corrected, all nations in the WTO benefited, in accordance with the MFN principle. However, this is not demonstrated in the aggregate

graph of all disputes that reached the panel stage in the sample. The reason for this is that the aggregate graph fails to take into account the specific intricacies of the disputes.

Further study can be done to test and apply a generalizable theory of how the MFN principle works in dispute settlement. Categorizing the disputes by the type of policy in question, and whether it was about import protection, preferential markets, or export promotions could be a useful further study. These intricacies have important effects on how complainants and third parties exports change as a result of the dispute. Another consideration for further study is the role that third parties hope to play when joining the dispute. Third parties do not necessarily join the dispute hoping for the same outcome as the complainant. In the instances where third parties are in favor of a ruling for the plaintiff, they likely stand to lose exports as a result of the dispute. Taking into consideration what the desired outcome each third party hopes for could better explain why in some instances third parties lose exports as a result of the dispute and in other instances increase their exports.

The research design was limited to whether the supplier's trade in the disputed sector increases or decreases based on their status in the dispute and the outcome of the dispute. Running a model that takes into account additional control variables would be a beneficial further study. Bown, when conducing a similar study focused on developing countries as third parties, writes "A more rigorous analysis would also control for other factors likely to affect product-level trade flows such as other demand determinants, cost shocks, etc" (2007, 272). Market power of the supplier can be a determination of outcome. Including the access the supplier had to the respondent's disputed market before the dispute, the share of the respondent's disputed market the supplier occupied,

and the share of the exporter's total exports in the disputed sector the respondent's market made up could further control for market power effects. This can give an indication of how quickly a supplier would be able to scale up their production of the disputed good after the removal of restrictive trade policy and increase their exports to the respondents market. Factors such as GDP growth can result in exports increasing, since "greater values of trade are positively associated with economic growth" (Ruka 2004), and would therefore be another useful contorl

Variables outside the supplier's control, like currency changes, could also have significant results. Appreciation of the supplier's currency would result in their exports being more expensive for the importing country, and the total volume of exports would decrease. In contrast, depreciation of the supplier's currency would decrease the relative price of their exports for the importing country, and result in the total volume of their exports increasing. Also important is the state's authority type, since "democracies… set trade barriers at a lower level" and therefore are more likely to trade with one another (Mansfield, Milner, Rosendorth 2000, 305). International events, such as global economic downturns or conflicts, negatively affect trade levels, and contorling for those factors would also be important.

Finally, "there are historical, cultural, ethnic, political and geographic factors affect the level of trade between countries" (Cheng and Wall 2005, 54). Control variables associated with the gravity model of trade could be taken into account. Geographic proximity is important because relative trade costs are an important determinant of trade, and ease of transport is a key determinant of the cost of trade (Anderson Van Wincoop 2003, 188-9).

While the results of the study at this point are not generalizable to all disputes, further study of the MFN principle and its application to dispute settlement that takes into account additional details of the disputes and additional control variables could provide an interesting, general theory on whether or not discrimination occurs as a result of dispute settlement.

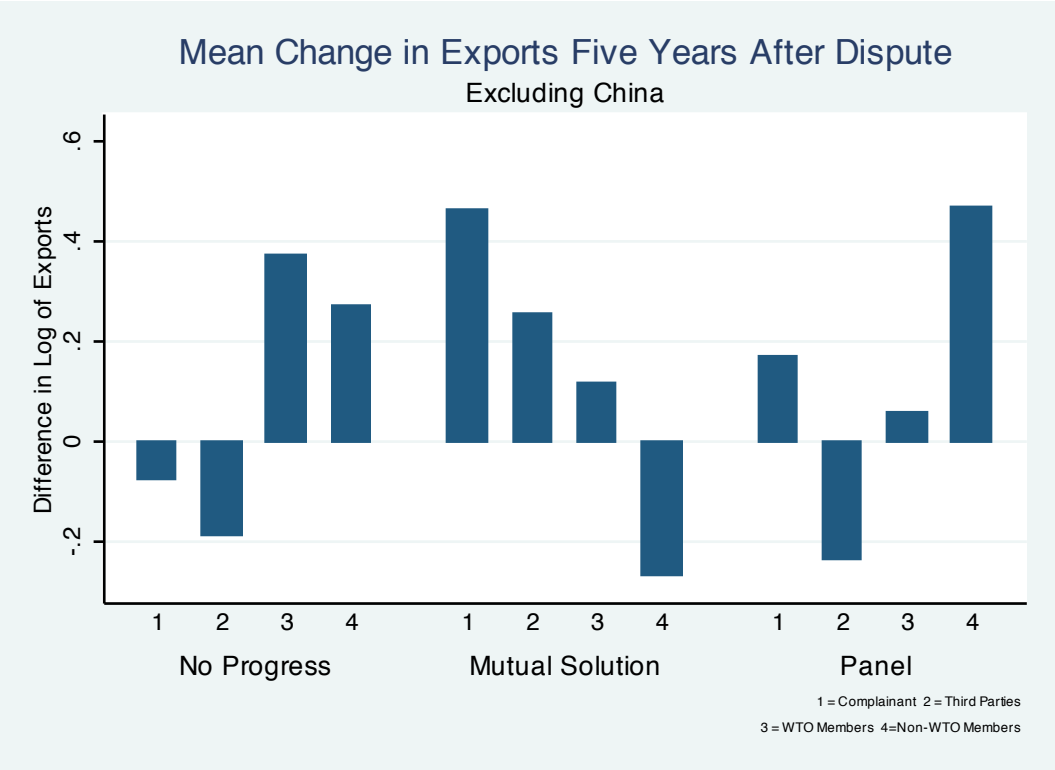
Appendices

Appendix A: How long to Settle a Dispute

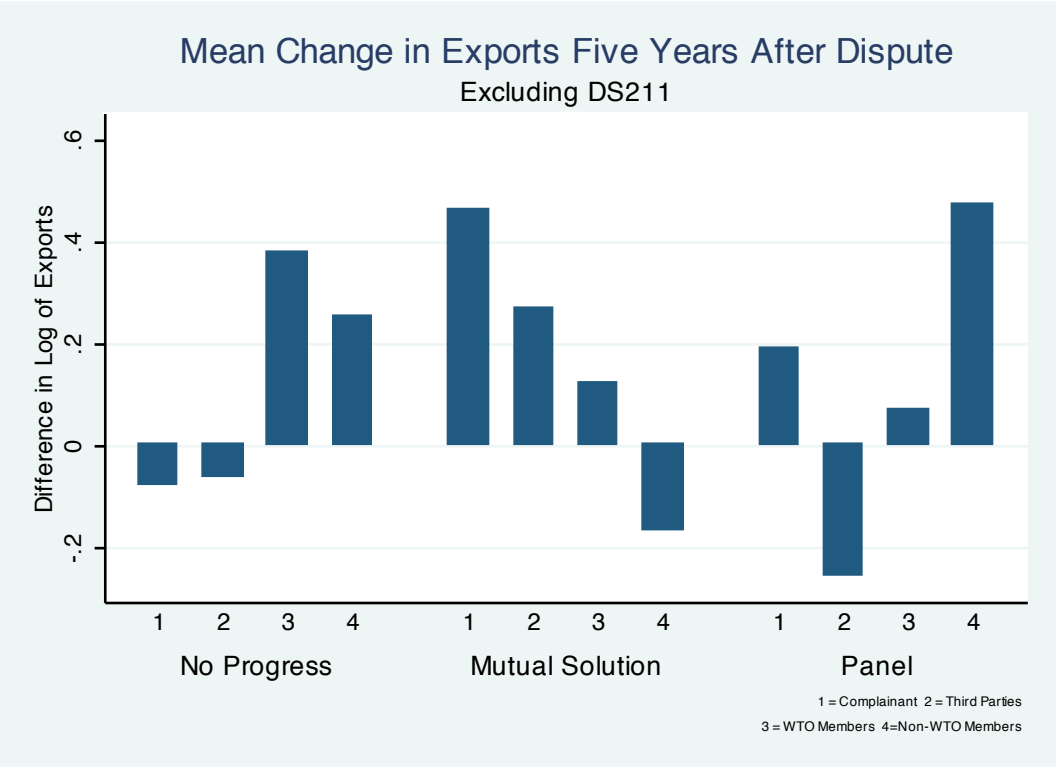
These approximate periods for each stage of a dispute settlement procedure are target figures — the agreement is flexible. In addition, the countries can settle their dispute themselves at any stage. Totals are also approximate.

60 days	Consultations, mediation, etc
45 days	Panel set up and panelists appointed
6 months	Final panel report to parties
3 weeks	Final panel report to WTO members
60 days	Dispute Settlement Body adopts report (if no appeal)
Total = 1 year	**(without appeal)**
60-90 days	Appeals report
30 days	Dispute Settlement Body adopts appeals report
Total = 1y 3m	**(with appeal)**

Appendix B: Mean Change in Exports Five Years After Dispute Excluding China



Appendix C: Mean Change in Exports Five Years After Dispute Excluding DS211 - Egypt — Definitive Anti-Dumping Measures on Steel Rebar from Turkey



Works Cited

Anderson, James E and Eric Van Wincoop. "Gravity and Gravitas: A Solution to the Border Puzzle. *American Economic Review* 93 (1): 170-92.

Bagwell, Kyle and Robert W. Staiger. 2010. "The World Trade Organization: Theory and Practice. *Annual Review of Economics* 2010 (2): 223-56.

Bagwell, Kyle and Robert W. Staiger. 2009. "The WTO: Theory and Practice. *National Bureau of Economic Research Working Paper*

Bown, Chad P. 2004. "Trade Policy Under the GATT/WTO: empirical evidence of the equal treatment rule." *Canadian Journal of Economics* 27 (3): 678-720.

Bown, Chad P. 2005. "Participation in WTO Dispute Settlement: Complainants, Interested Parties, and Free Riders. *The World Bank Economic Review* 19 (2): 287-310.

Bown, Chad P. 2009. "MFN and the Third-Party Economic Interests of Developing Countries in GATT/WTO Dispute Settlement." In *Developing Countries in the WTO Legal System*, eds. Chantal Thomas and Joel P. Trachtman. USA: Oxford University Press, 266-288.

Bown, Chad P. and Bernard M. Hoekman. 2005. "WTO Dispute Settlemetn and the Missing Developing Country Cases: Engaging the Private Sector. *Journal of International Economic Law* 8(4): 861-890.

Breckenridge, John. 2005. "Costa Rica's Challenge to US Restrictions on the Import of Underwear." www.ppl.nl/bibliographies/wto/files/5368.pdf

Busch, Marc L. and Eric Reinhardt. 2003. "Developing Countries and General Agreement on Tariffs and Trade/World Trade Organization Dispute Settlement. *Journal of World Trade* 37(4): 719-735.

Hudson, Alan. 2006. "Case Study: The Reform of the EU's Sugar Regime." Oversees Development Institute. www.odi.org.uk/resources/download/2799.pdf.

Lorentzen, Torbjorn. 2009. "The Salmon Agreement Between Norway and the European Union – A Welfare Economic Analysis." *The International Trade Journal* 24(1): 4-30.

Mansfield, Edward D., Helen V Milner, and B. Peter Rosendorff. "Free to Trade: Democracies, Autocracies, and International Trade." American Political Science Review. 94.2 (2000): 305-321.

Rruka, Dardana. "Decoding the Effects of trade Volume and Trade Politics on Economic Growth." International Trade. http://ideas.repec.org/p/wpa/wuwpit/0405003.html

Saggi, Kamal. 2009. "The MFN Clasue, Welfare, and Multilateral Cooperation Between Countries of Unequal size." *Journal of Development Economics* 88: 132-143.

Saggi, Kamal, Frauk Sengul, and Halis Murat Yildiz. 2007. "Sustaining Multilateral Cooperation Among Asymmetric Countires: Does MFN Helop? *International Review of Economics and Finance* 16: 534-562.

World Trade Organization. 2011a. "Dispute Settlement." http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm

World Trade Organization. 2011b. "Dispute settlement: Dispute Settlement: Dispute DS24." http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds24_e.htm

World Trade Organization. 2011c. "Understanding the WTO: Settling Disputes." http://www.wto.org/english/thewto_e/whatis_e/tif_e/disp1_e.htm

World Trade Organization. 2011d. "The WTO… In Brief." http://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr00_e.htm