Political Economy of the WTO Dispute Settlement: The EU and the US' commitment to trade liberalization and the impact of global value chains*

Aydin Yildirim, University of Antwerp

Arlo Poletti, LUISS School of Government, Rome

Tyson Chatagnier, Vanderbilt University

Abstract:

In this paper we seek to advance the debate on the conditions under which the WTO Dispute Settlement Body can bring about trade-liberalizing policy change in WTO members. Under what conditions do WTO members change domestic policies or measures that are challenged in WTO litigation? Starting from the assumption that policymakers are political support-maximizers who seek to avoid the mobilization of political enemies, we argue that the degree of integration in Global Value Chains (GVCs) of the economic sectors affected by a WTO dispute influences WTO members' propensity to change domestic policies when targeted in WTO litigation. The initiation of a WTO dispute against sectors highly integrated in GVCs engenders the emergence of a domestic coalition of pro-trade liberalization groups composed of exporters seeking to avoid the imposition of retaliatory measures and import-dependent firms wishing to exploit the opportunity to access cheaper imports. Under these circumstances, trade-liberalizing responses to WTO legal challenges are therefore more likely. We test this hypothesis by applying cox regression and find that GVCs positively impact states' propensity to bring forth compliance at the WTO dispute settlement.

Introduction

International governance has witnessed a steady rise of legalization in recent years (Goldstein et al. 2000). In a wide array of issues areas, states have increasingly subjected themselves to binding international legal constraints. In the most institutionalized forms of legalization, precise and obligatory legal commitments are backed up by effective and credible enforcement mechanisms. International governance has, thus, not only witnessed a move to governance by law, but also a flourishing of international tribunals and courts with powers largely independent of the states that established them (Alter 2012; Hooghe et al. 2013; Posner and Yoo 2005).

The World Trade Organization (WTO) stands out as a prime example for the stronger legalization and delegation of authority observable in international politics (Bechtel and Sattler 2015). With the creation of the WTO, members decided to strengthen the existing mechanisms for the enforcement of commonly agreed-upon rules, replacing the model of political-diplomatic dispute settlement of the General Agreement on Tariffs and Trade (GATT) with a quasi-judicial model of dispute settlement characterized by automatic right to review, the formulation of legally binding obligations, a standing tribunal of justices, and the authority to authorize sanctions and even cross-retaliation against recalcitrant members (Goldstein et al., 2000; Poletti and De Bièvre 2015; Zangl, 2008).

The literature on the institutional foundations of international cooperation suggests that the existence of mechanisms for the credible enforcement of agreed upon rules is key to overcome problems of cooperation that are typical of international trade relations (Mayer 1981; Keohane 1984; Martin 1992; Staiger 1995; Bagwell and Staiger 2002). For a number of different reasons, states face ever-present powerful incentives to renege on their trade liberalization commitments, either by failing to implement the rules they have negotiated or by raising new trade barriers contravening the rules they have agreed upon. Cooperative equilibria in the form of trade liberalization commitments can be expected to remain stable only as long as robust and effective enforcement mechanisms ensure that cheating in the form of trade protection generates greater costs than its short-term benefits.

Thus theory thus suggest that a quasi-judicialized system of enforcement such as the WTO Dispute Settlement Mechanism should be capable of performing the twofold function of preventing first order and second order compliance problems (von Stein 2012): to create disincentives for policies incompatible with WTO rules being adopted in the first place, and to compel WTO members to bring their policies back in compliance

with WTO rules whenever their wrongdoing is ascertained by the WTO adjudicative body.

In this paper we seek to advance the debate on the conditions under which the WTO Dispute Settlement Body can bring about trade liberalizing policy change in WTO members. What factors determine how WTO members react to the formal request by the adjudicative body of the WTO? Under what conditions can we expect WTO members to meet their obligations by changing domestic policies or measures that are challenged in WTO litigation? At first glance, the empirical record of defendants' responses in WTO disputes suggests a high level of compliance (Wilson 2007). And many authors have developed plausible arguments on the different causal pathways that make the WTO DSM an effective institutional device to restore compliance with WTO trade liberalization commitments (Busch and Reinhardt 2000; Reinhardt 2001; Goldstein and Martin 2000; Goldstein and Steinberg 2008; Zangl 2008; Zangl et al. 2011).

Quite surprisingly, few studies acknowledge, and seek to account for, the observable variation in defendants' responses in WTO litigation. The WTO DSM may be more effective in incentivizing compliance than the GATT's system or the mechanisms of dispute settlement resolution of other less-legalized international institutions, and yet in many instances it has proved ineffective. The literature has widely discussed high profile cases of protracted non-compliance with WTO rulings, such as the European Union's (EU) refusal to lift its bans on imports of hormone-treated beef and genetically modified crops, or the US compliance problems in the WTO dispute on upland cotton export subsidies. To put it simply, many of the most active users of the WTO DSM consistently experience second order compliance problems (Davey, 2007, Pauwelyn, 2000).

Some of the studies that confront the challenge of accounting for such an observable variation in patterns of defendants' responses to WTO DS rulings have hitherto focused on the political role of domestic organized constituencies (Spilker 2012; Kim and Hoffman 2011; Poletti and De Bièvre 2014; Sattler et al. 2014). These arguments rely on standard political economy models of trade policy that conceive of such policies as a function of the preferences, patterns of political mobilization, and influence of domestic trade-related interests (Schattsneider 1935; Magee et al. 1989; Grossman and Helpman 2001). These studies contend that the degree of politicization of a trade dispute affects government willingness and ability to cooperate with trading partners, making defendants more likely to resist their trade partners' demands when facing strong political resistance from influential domestic constituencies standing to lose from the weakening or removal of the trade-restricting policy at stake.

The argument we develop in this paper shares these latter assumptions about the

nature of trade policy. We also conceive of policy makers as political support-maximizers who seek to avoid the mobilization of political enemies and whose ability to commit to trade liberalization ultimately depends on the relative balance of influence of those who favor and those who oppose a further opening of the economy to foreign products. However, we complement these arguments by stressing for the first time how the degree of integration in Global Value Chains (GVCs) of the economic sectors affected by a WTO dispute can affect the politics of trade in WTO defendants and thus their propensity to comply.

Trade policy is traditionally assumed to engender a political conflict pitting export-oriented sectors against import-competing ones. The first set of actors stands to gain from the increased market access opportunities that trade liberalization can bring about, while the second stands to lose from it because of the greater exposure to foreign competition in domestic markets. We contend that this distinction no longer accurately reflects the reality of contemporary trade politics in both advanced and a number of emerging economies. GVCs change the political economy of trade policymaking in crucial ways. In a world economy increasingly characterized by the emergence of these transnational chains of production (Jensen et al., 2013), the preferences, patterns of political mobilization, and influence of firms that rely on income generated import of intermediate products for their production process need to be added to the equation. In line with a number of different studies, we define this set of economic actors as import-dependent firms (Eckhardt 2011, 2013, 2015; De Bièvre and Eckhardt 2011; Eckhardt and Poletti 2015). With the expansion of these transnational chains, multinational corporations and affiliated firms all over the world deliver goods and services that are "made in the world" (Elms and Low, 2013). For firms operating in GVCs, trade liberalization simply leads to a reduction of variable costs of their imports. Whether sourcing firms operate directly in a foreign country or simply import intermediate inputs from foreign suppliers is secondary here, as in both cases import-dependent firms can expect to accrue benefits from cheaper imports (Manger, 2012). In other words, when a country has many import-dependent firms, maximizing the benefits of trade also implies lowering domestic tariffs (Lanz and Miroudot, 2011). This has important implications for the analysis of compliance in WTO dispute settlement. When WTO disputes touch upon the interests of import-dependent firms, these actors' political preferences and political mobilization can be expected to add to those of import competitors and exporters, potentially increasing the political weight of the domestic coalition favoring the removal of import-restricting trade barriers. .

We test this argument by analyzing the responses to demands for the removal allegedly WTO-incompatible policies and measures of the two most active users of the WTO DSM, the EU and the US. We examine the effect of GVC integration on the time until the resolution of a dispute, using a Cox proportional hazard model, and controlling for a number of potentially-confounding factors. Additionally, we relax the proportional hazards restriction, allowing variables to have time-varying effects on the baseline hazard. In this way, we are able to capture any changes in the impact of the variables of interest as the dispute progresses.

Many before us have stressed that the globalization of production has far reaching implications for the political economy of trade policymaking. In addition to showing how the internationalization of production can act as a constraint against the rise of protectionist demands during economic crises (Milner 1987), scholars have stressed the importance of GVCs and import-dependent firms in decreasing the political support for the imposition of anti-dumping measures (De Bièvre and Eckhardt 2011; Eckhardt 2013, 2015; Jensen et al. 2013, 2015) and in promoting support for trade liberalization through Preferential Trade Agreements (PTAs) (Antras and Staiger 2012; Baccini et al. 2015; Baldwin 2011; Chase 2003; Kim 2015; Eckhardt and Poletti 2015; Manger 2009; Orefice and Rocha 2014). The lack of attention to the implications of GVCs for the politics of trade in the WTO in general, and in the WTO dispute settlement in particular, stand out as a surprising gap in the literature. The centrality of the judicial institutions of the WTO brought about by the increasing inability of the WTO to deliver significant negotiated trade liberalization and the internationalization of production stand out as two of the most important developments in contemporary international trade relations (Antras 2010; Goldstein and Steinberg 2008). By shedding light on the systematic connections that exist between these two processes, our paper contributes to advance our understanding of the politics of multilateral trade relations.

The paper proceeds as follows. The first section starts by reviewing the literature on WTO compliance and global value chains, while introducing the alternative explanations on compliance. Secondly, we present a theoretical framework based on import-dependence of sectors. Thirdly, we present our research design and test our hypotheses employing cox regression. We conclude in the fourth section with a summary of our findings.

Global Value Chains and the Political Economy of WTO Dispute Settlement

One of the key pillars of the WTO's governance system is the dispute settlement mechanism (DSM). The DSM helps WTO members overcoming disagreements about the particular meaning of WTO rules, thus serving as an information and rule-clarification device. Most importantly however, the DSM acts as a coercive mechanism that performs the crucial functions of maintaining and restoring compliance with multilateral trade liberalization commitments (Sattler et al. 2014).

The question whether, and under what conditions, the DSM is an effective enforcement mechanism however, has received surprisingly little attention. The existing literature has shed light on different important aspects of the political economy of WTO dispute settlement (Bernauer, Elsig and Pauwelyn 2014). These include: the logic driving WTO members' choice to resort to WTO litigation (Sattler and Bernauer 2011; Busch 2007; Busch et al 2009; Young 2009; Davis 2012; Davis and Shirato 2007; Kim 2008), the politics of dispute settlement panel members' appointment (Elsig 2013; Elsig and Pollack 2014), strategic behavior by dispute settlement panels (Kelemen 2001; Garrett and Smith 2002; Busch and Pelc 2010), why disputes escalate (Busch 2000; Busch and Reinhardt 2006; Guzman and Simmons 2002; Davis 2012), the distributive effects of WTO disputes on non-litigants (Bechtel and Sattler 2015; Kucik and Pelc 2015); the long-term effects of WTO litigation on the nature and character of interest representation in WTO members (De Bièvre et al. 2016; Poletti et al. 2015), and how WTO litigation may systematically affect multilateral trade negotiations (Goldstein and Martin 2000; De Bièvre et al. 2015; Poletti and De Bièvre 2016).

Despite the abundance and quality of this literature, systematic analyses on the WTO dispute settlement capacity to foster compliance remains thin. Existing research suggests that the DSM is quite effective in deterring countries from imposing policies that conflict with multilateral trade rules, particularly in containing otherwise probable protectionist responses to economic crises (Allee 2005, Baccini and Kim 2012; Irwin and Mavroidis 2008; Davis and Pelc 2015). But of course, WTO members sometimes do impose policies that are (potentially) in conflict with WTO rules. This is so because WTO members sometimes are unable to resist both political pressures of domestic constituencies to impose WTO incompatible policies and the temptation to use tariffs to improve their terms of trade. When WTO members believe that some of their trading partners have violated their WTO commitments they can initiate a formal trade dispute to seek the removal of such violations. When can we expect WTO litigation to be successful in producing trade liberalizing policy change in defendants? In the remainder of this section we argue that the degree of integration in GVCs of the sector affected by the dispute is key to understand the politics of compliance in WTO dispute settlement.

We first provide a brief illustration of how WTO dispute settlement works, then illustrate some of the limitations of the existing literature, and finally show how focusing on GVCs can help provide a corrective to these problems.

WTO dispute settlement in brief

The WTO DS system is a legal system that unfolds in several discrete steps. The process begins when one or more members of the WTO file a formal complaint and request consultations on specific trade policy measures taken by another member. Consultations take place as confidential negotiations between the two parties and if they fail to solve the issue at this stage, the complainant can request the Dispute Settlement Body for the establishment of a panel of experts. The panel members then proceed to prepare an interim report, about which the parties can negotiate during the process of writing. At this stage, the parties are encouraged to reach a mutually agreed upon solution, but if they do not, the panel circulates its ruling in the form of its initial report (WTO 2004). Both parties may accept the ruling and the dispute would reach an end at that point. However, the respondent and the complainant also have a chance to appeal to the ruling, and if they do so, the dispute reaches the appeals phase where the standing Appellate Body (AB) reviews the dispute. The AB then issues a final ruling on the dispute, in which it may overturn or uphold the panel ruling in its entirety or in part. In disputes where the AB sides with some or all of the accusations of the complainant, the dispute moves to the implementation phase. At this stage, the respondent party is asked "to bring the measures into conformity" with WTO law and it is asked to notify the DSB of its implementation. In case of enduring non-compliance, the DSB can authorize the complainant to put in place retaliatory measures against the defendant.

Three features of the DSM are key to understanding the political-economic dynamics that underlie its functioning. First, member states are the only enforcers of WTO contracts. While governmental representatives crucially depend on information provided by private industry (Shaffer 2003; Shaffer Melendez-Ortiz 2010), they are the only ones who can trigger WTO adjudication, not the Secretariat of the WTO in the role of a supranational prosecutor, nor private actors (Hoekman and Mavroidis 2000). Second, the DSM remains largely a bilateral and decentralized enforcement mechanism, as the ultimate remedy in enduring cases of non-compliance with a WTO ruling come in the form of retaliation by the complainant. Third, the whole process of WTO litigation, both the consultation phase the period following the establishment of a panel and the issuing of a ruling, need to be taken into account when trying to grasp the politics of WTO dispute settlement compliance. Some argue that the issue of compliance becomes

relevant only as long as a Panel or AB report has ben adopted stating that the defendant country has violated WTO commitments (Spilker 2012; Hoffman and Kim 2011). Yet, a number of factors suggest considering the consultation phase equally important to the politics of compliance. More than half of all WTO disputes end up being settled in the consultation phase without the request of the establishment of a panel, showing that the anticipation of a future ruling backed by the credible threat of retaliation may generate significant political pressures for early settlements (Busch and Reinhardt 2000; Reinhardt 2001). More generally, the process that leads to the empaneling of a dispute is hugely politically charged. Indeed, government can use pressures generated by international institutions as a cover to push thorough unpopular domestic reforms (Vreeland 2003). This means that in WTO dispute settlement governments often seek the establishment of a DS panel even when they are quite certain to lose the case as a political cover for otherwise difficult domestic reform in the face of sustained pressures for maintaining protectionist policies (Alle and Huth 2006) or to signal their resolve to defending such constituencies (Davis 2012; Poletti and De Bièvre 2014).

The political economy of compliance

Many factors can explain why some WTO members are more prone to comply when acting as defendants in WTO litigation. Compliance behaviour can be affected by characteristics of defendants' political regime such as the presence of democratic institutions (Slaughter, 1995; Dixon, 1993; Milner and Moravcsik, 2009) and the number of domestic veto players (Poletti and De Bièvre 2014; Young 2004), or by WTO members' technical capabilities and legal capacity (Chayes and Chayes, 1995; Weiss and Jacobson, 1998). These studies are important in accounting for variation in compliance behavior *across* WTO members but can tell us little about why individual WTO members' compliance behavior can change so dramatically across disputes. Given the decentralized nature of the DSM as an enforcement mechanism, one important source of variation in how individual WTO members respond when challenged in WTO litigation is the degree to which complainants can credibly threaten to impose costs on them through the adoption of retaliatory measures. WTO members with large markets can more credibly threaten to impose costly retaliation on defendants in the form of market closure in cases of enduring non-compliance than members with small markets (Bown 2004; Guzmann and Simmons 2005; Poletti and De Bièvre 2014). Greater credibility of the retaliatory threat thus leads to a greater probability of compliance because only under such condition we can expect exporters in the defendant to mobilize and exert pressures on government representatives to comply and avoid incurring the costs that

retaliatory measures might bring about (Goldstein and Martin 2000; Goldstein and Steinberg 2009).

These contributions are important and yet they shed light on a small part of the empirically observable patterns of WTO dispute settlement compliance behavior. Horn et al. (2011) show with great clarity that the overwhelming majority of WTO dispute settlement cases involve democratic defendants with large administrative and legal capacity confronting complainants with credible retaliatory capacity. In order to account for the observable variation in WTO members' responses across disputes involving complainants with similar degrees of retaliatory capacity, some authors have focused on the political role of domestic constituencies. The point here is quite simple: defendants find it more difficult to comply when the dispute touches upon issues that trigger the mobilization of politically influential domestic constituencies. Disputes are more likely to generate political mobilization when they target policies or measures that shield politically influential domestic producers from foreign competition, hence promising to generate significant and concentrated costs for them (Sattler et al. 2014; Spilker 2012; Kim and Hoffmann 2011; Poletti and De Bièvre 2015). In these circumstances, WTO disputes are likely to engender a high degree of politicization which in turn can be expected to reduce the ability and willingness of survival-maximizing government representatives to cooperate with their trading partners.

GVCs, import-dependent firms and compliance

The political economy of WTO dispute settlement compliance can no longer be understood without an analysis of the effects of GVCs on the politics of trade policymaking. In line with the traditional political-economy approaches to trade policy, existing studies focus on two sets of domestic interests: exporters and import-competitors. The politics of compliance is seen as a battle between domestic producers who mobilize to ask for compliance to avoid the imposition of retaliatory measures, which may harm their access to the complainant's market, and import competitors who lobby their government representatives to keep the import-restricting policy in place to protect themselves from foreign competitors in the domestic market.

The globalization of production has changed the nature of this political conflict. While in the past producers in developed countries bought or produced the bulk of their products and inputs domestically, since the 1990s have redefined their core competencies and turned their attention to innovation and product strategy, marketing and highest value-added segments of manufacturing and services and simultaneously outsourced labour-intensive, less value-added operations to lower income countries

(Gereffi et al. 2005: 79). The latter has been done through the creation of foreign subsidiaries—that is, by vertical foreign direct investment (FDI)—or by relying on independent foreign suppliers (Lanz and Miroudot, 2011). Hence, producers have been increasingly outsourcing and off-shoring a substantial part of their production overseas, largely in Asian markets, which has turned many of these producers into importers in their domestic markets. These altered (production) structures, which have become particularly common in labor-intensive consumer goods industries (Gereffi, 1999) and the food industry (Burch and Lawrence, 2005), are usually referred to as global value chains (GVCs).

The emergence of GVCs changes the political-economy of trade in significant ways. As firms internationalize their production, the demand for trade protection decreases (Jensen et al. 2013). This is due to the fact that for firms that operate in GVCs trade liberalization simply leads to a reduction of the variable costs of their imports. Whether sourcing firms operate directly in a foreign country or simply import intermediate inputs from foreign suppliers is a secondary consideration, as in both cases import-dependent firms can expect to accrue benefits from cheaper imports (Manger, 2012). We define these firms here as import-dependent firms, that is goods-producing firms for which imports play a pivotal role in the production process (Eckhardt 2015). When a country is highly integrated in GVCs and it has many import-dependent firms, trade liberalization will therefore also be welcomed because it lowers the costs for imported inputs, and not only because it increase opportunities to access foreing markets (Lanz and Miroudot, 2011).

In addition to having clear-cut preferences for trade liberalization, these groups can also be expected to be quite capable of mobilizing politically. For instance, while exporters face collective action problems due to the relative uncertainty of the benefits they can accrue from trade liberalization (Dür 2010), import-dependent firms can anticipate with much greater precision the distributive effects of eliminating and/or lowering tariff barriers to trade with countries with which they are already in a trading relationship (Eckhardt and Poletti 2015). So, import-dependent firms are more certain that they will stand to gain from reduced tariffs than exporters. What is more, as a result of mergers and acquisitions and vertical integration, many sectors dominated by import-dependent firms (e.g. textiles and clothing, footwear, consumer electronics) have undergone a dramatic move toward increased market concentration in the last decade and a half (Dunford, 2004; Eckhardt 2015)

What are the implications of these developments for the politics of WTO dispute settlement compliance? We argue, that high integration into GVCs puts additional

pressure for states to comply with WTO partners' demands for the removal of WTO – incompatible trade barriers channelled through the WTO DSM. The initiation of a formal trade dispute against a WTO member immediately triggers the political mobilization of potentially affected domestic constituencies. When the trade dispute touches upon a sector that is not, or only weakly, integrated in GVCs, the political conflict will likely be one between import-competitors and exporters. Assuming that government representatives are mostly concerned with their chances of being re-elected or re-appointed (Grossman and Helpman 2001), we can expect the decision to comply to be dependent on the relative political weight of these two sets of groups. The political weight of these actors, in turn, depends on how relevant the economic stakes involved are, on the certainty with which such distributive effects can be calculated in advance, on the number of actors that have to act collectively, and on the presence of organizational structures that can support collective action (Hathaway, 1998; Olson, 1965). Irrespective of these factors, what matters here is that in this context trade-policymaking has to steer a course between the import-competing firms that aim to safeguard their domestic production by upholding trade barriers, and export-led firms that seek to avoid foreign market closure following the imposition of retaliatory measures.

However, the political conflict changes when a dispute touches upon a sector that is highly integrated in GVCs. In this context, the political battle is likely to be one between import-competing groups and a coalition of exporters and import-dependent firms. The removal of the WTO incompatible trade barrier will not only be supported by those who fear foreign market closure through retaliation, but also by those who wish to exploit the opportunity to access imports more cheaply. It is important to note how focusing on the political effects engendered by the initiation of the trade dispute can also shed light on the question how in the very first place a WTO member highly integrated in GVCs could adopt, or fail to modify, an import-restricting policy detrimental to import-dependent firms. After all, if such policies negatively affect import-dependent firms, one could expect them to act politically to seek their removal even in the absence of a legal challenge in the WTO. However, in the absence of the political mobilization of exporters potentially hurt by the imposition of retaliatory measures, the domestic political conflict in the defendant is one in which powerful import-competing groups are confronted only by import-dependent ones. The initiation of the dispute, and the credible threat of retaliation it can bring about, affects collective action by import-dependent firms in fundamental ways. Not only import-dependent firms will be acting with important allies, i.e. exporters, when a dispute challenges such import-restricting

measures. But because they can expect to join a larger pro-trade liberalization coalition, they will be more prone to act collectively, as an important factor influencing the decision to mobilize is precisely the likelihood of success of the lobbying effort (Olson 1965; Kono 2009). This means that the initiation of a WTO dispute significantly adds to the liberalization potential brought about by the increasing integration of WTO members in GVCs.

In sum, our argument suggests that the likelihood of compliance increases as WTO dispute challenge policies or measures that affect economic sectors highly integrated in GVCs. This is so because the initiation of such dispute engenders the emergence of a political mobilization of a coalition of domestic groups favouring compliance composed not only of exporters seeking to avoid the imposition of retaliatory measures, but also of import-dependent firms wishing to access cheaper imports.

Empirical design

In order to test empirically our argument, we rely on a novel dataset of trade disputes in which the US and the EU acted as defendants that includes a measure of the disputed sector's integration in GVCs. We examine each and every single dispute lodged against the EU and the US from 1995 until 2010. Even though we recognize that the recently litigated disputes may bring additional variation to our analysis, we have the most reliable data until 2010. Moreover, certain disputes brought against the EU or the US are actually in their appeals phase or still being examined in compliance panels, which increases the number of missing values in our dataset if we are to include them. We also excluded disputes that targeted horizontal measures, since they do not have any variation in our main IV – sector integration to GVCs – because there is no sector that is targeted. As a result, our dataset has 110 observations after excluding the cases with missing values. We analyze the dataset using Cox regression, which allows us to see the impact of our IV in leading to the "death" of a dispute over time. Since our DV – compliance – has strong variation with regards to *time*, the time it takes for defendants to meet their trade partners demands can be optimally examined with Cox regression. Besides our independent variable, we also control for a number of variables which we outline below.

A brief discussion on the selection of cases is in order before we proceed to explain how we conceptualized and operationalized our variables. We focus on the US and the EU because we are interested in grasping the effects of GVCs integration on the likelihood

that WTO litigation triggers policy change in WTO defendants. Since EU and the US represent the largest share of trade in intermediates in the world (OECD, 2014:13) as well as the largest share of foreign direct investment with third countries, they provide the most interesting variation in examining the impact of GVC integration. Moreover, Horn et al. (2011) show that the EU and the US acted as defendants in roughly half of all WTO disputes. We therefore believe that our choice to focus on the EU and US does not detract from the generalizability of our findings.

Operationalization of the variables

Compliance: Our main explanandum, compliance, is conceptually equal to meeting a trade partner's demand. We consider disputes to be complied with as long as the complainant country is satisfied. This conceptualization may receive some criticism. Clearly, even though the complainant country in a dispute "drops" the dispute – potentially through a mutually agreed solution – that may not mean the defendant is actually complying with the signed treaty. We recognize this reality. Yet, as long as the litigant is satisfied, the WTO itself considers the dispute resolved and we code the dispute as "complied" with. Thus, we emphasize that as long as parties reach an agreement between themselves – much like in a plea bargain – the defendant is not considered to be in violation. A crucial advantage of this conceptualization is that we can consider every single dispute under the umbrella of "compliance" without distinguishing partial compliance, full compliance, mutually agreed solutions etc.

For every single dispute in the sample – all the disputes involving the EU and the US as a defendant – we code for the time in months until the complainant's demands are met. Therefore, compliance is operationalized as the time it took for the defendant to meet the demands of its trade partner. The reason why we operationalize compliance by looking at time is because violation in WTO dispute settlement is very infrequent, and even disputes that dragged on for more than 15 years, like the EU Bananas dispute, eventually end in compliance. That would suggest the defendants is "in compliance" where in reality there was clear violation for a significant period of time. This results in significant loss in variation if we do not consider the aspect of timeliness in bringing compliance following a dispute.

We calculate time separately for the settled disputes and the empaneled ones. For the disputes that resulted in a mutually agreed solution, we simply calculate the time (in

months) from dispute initiation until the date of settlement reported to the DSB. For the empaneled disputes, we first subjectively evaluate the defendant's response in each dispute by focusing on the submitted memorandum to the WTO panels and the conclusion of the dispute – and if there is no information available at the WTO, we conduct process tracing. If the revised (or the newly enacted) legislation is found fully acceptable by the opposing party, we consider the dispute complied with. Then we simply calculate the amount of time it took from the circulation of the last panel report (may it be the original panel report or appellate body report) until the day the legislation was enacted.

GVC integration of a sector: We measure GVC integration of targeted sectors by measuring their import-dependence. After cross-referencing each dispute's corresponding sector at International Standard Industrial Classification (ISIC), we analyze to what extent the sector is import-dependent (for the year of dispute initiation), using World Input Output Database tables (WIODs) that has detailed data on each sector's value added trade and intermediate consumption between 1995 and 2010. After calculating the targeted sector's total output, we calculate the intermediate consumption as a percentage of its total output, which gives an estimate of the share of intermediates used for the sector's total output. The scale variable is then used as the main independent variable. Consistent with the first hypothesis, we expect the defendants – i.e. the EU and the US – to comply faster as the targeted sector's import-dependence increases. Since almost all disputes at the WTO involve a particular policy that is alleged to be WTO-inconsistent, they are concerned with measures that favour and protect a certain sector (or a number of sectors). Assuming that the defendant government drafts its trade policy based on the preferences of these mobilized actors – i.e. sectors – the level of GVC integration of the targeted sector presents a unique way of measuring the extent of the demand for protection. For the disputes that involve horizontal measures – e.g. US zeroing dispute – we code missing value since there is no targeted sector that could be mobilized to push for (non) compliance.

It is important to note that the measure of import-dependence integration has several limitations. Unfortunately there is no standard measurement for GVC integration, and the process of measurement can be extremely complex (Koopman et al, 2013). Firstly, WE recognise that ours is still a rough measure for "integration". It does not identify the whole chain of production and does not look at intra-sector trade – i.e. trade within the same sector between countries. For each sector, we do not know which country or

which sector the intermediate products come from. This is indeed a difficulty because if the intermediate products are actually imported from the complainant country and exported back to the same country, the "integration" would be at a way more significant dimension. Similarly, if the value added trade was between two countries (or more) within the same sector, it would also add a different dimension of integration. Secondly, the data we present is at the sector level, which is assumed to represent homogenous firms. This assumption needs to be carefully noted because one can argue that firms within sectors (and products within sectors) are vastly different. There are studies that use firm-level data while analyzing GVC integration. However, we assume sectors are main actors targered in WTO litigation and moreover the data on firms is only partially available, which would make it near impossible (at least with the data we have today) to calculate GVC integration for all of the WTO disputes the EU and the US were involved in.

Additional Variables Included

FDI: We control for sectors' outward foreign direct investment (FDI), by calculating the share of the sectors' outward FDI to the litigant country from the defendant.

GDP: We assume that states may fear the cost of retaliation in the WTO based on the relative economic power of the complainant. If a country has substantial leverage over the opposite party during the litigation process, it may be considered to have the potential to threaten retaliation and force its will upon its opponent, which may explain compliance. Based on power preponderance hypothesis, we calculated the ratio of the defendant (EU, US) GDP to the complainant – for each dispute – to capture the relative economic size of the complainant. To this end, we relied on data from the United Nations COMTRADE, because it has the most reliable and consistent data since 1995 – the year the WTO's current judicial structure was introduced.

Democracy: We assume that classical liberal theory can inform us about the likelihood of compliance with international trade law. We therefore investigate whether the domestic political regime of the complainant matters. Following Guzman and Simmons (2002), we look at the level of democracy of the complainants in each WTO dispute settlement case where the EU and the US were defendants. Democracy Barometer of University of Zurich is used to collect the data because it has the most sizable variation between countries as it looks at the quality of democracy by measuring various indicators such as individual liberties, rule of law, and transparency, among others (Merkel et al, 2014). Our results do not change if we use Polity IV dataset or Freedomhouse index.

Political Mobilisation: The measure looks at the extent of mobilisation of sectors that is presumed to put pressure on policymakers (Olson, 1965) which in turn might have an in impact on compliance. We look at the percentage of the employment of the targeted sector in ratio to the total employment (for the year of the dispute). The ratio of sector's employment is used as a proxy for mobilisation (Hoffman and Kim, 2013). The data on employment was collected from EUROSTAT and US Labour Statistics Dept. We originally tried to use Herfindahl-Hirschmann Index (HHI) as a proxy for this indicator. However, the data on HHI index of sectors in the EU – at least at the EU level rather than member state level – is not available.

PTA Agreement: We control for whether the complainant and the defendant have signed a Preferential Trade Agreement (PTA), as this may raise the likelihood of compliance. The variable is coded dichotomously indicating whether or not the defendant and the complainant have signed a PTA (at the start of a dispute). The data on PTAs is collected from Design of Trade Agreements (DESTA), which is the largest database covering every single PTA signed for almost every country (http://www.designoftradeagreements.org/; Baccini, Dür and Elsig 2015).

Issue complexity: We control for disputes that targeted more complex measures, which prevents defendants from reaching a swift resolution. Following Guzman and Simmons, 2002, we code defendants' targeted measures as "non-complex" if they are quotas or subsidies, which can be corrected much more easily in comparison to administrative regulations or similar behind the border barriers.
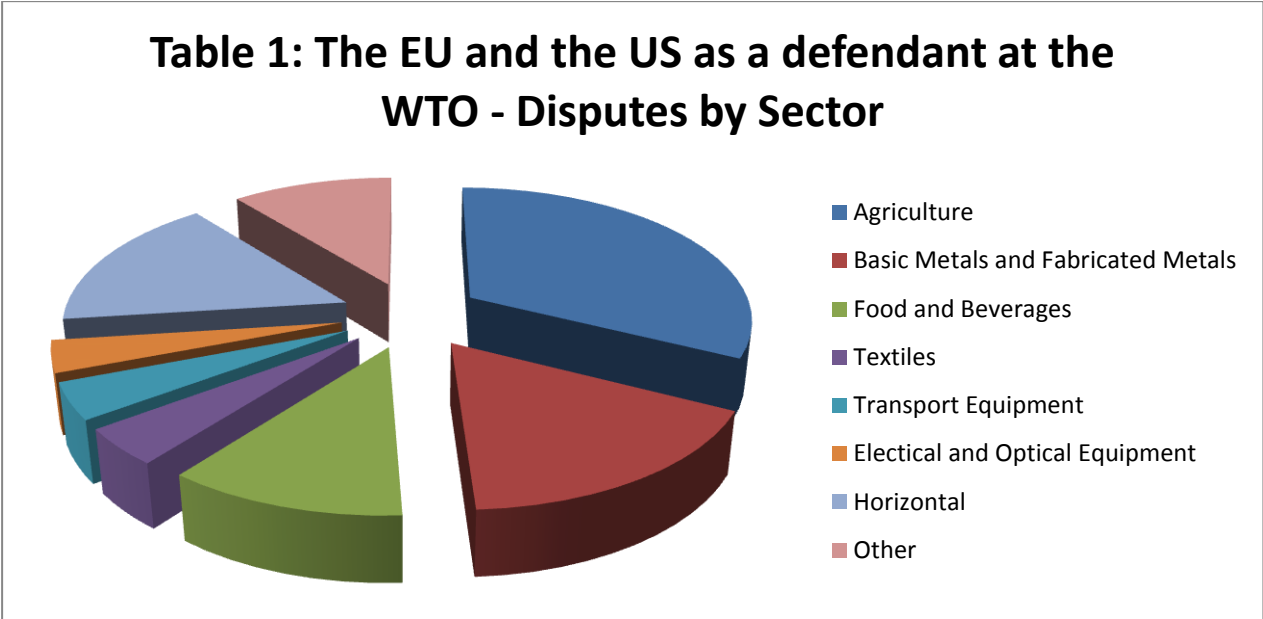
Agriculture sector: Following Spilker 2012, we code for the dispute that target the agriculture sector, as it is argued that disputes that involve the traditionally protected agricultural sector may take longer to resolve because of the status quo that is in favour of agricultural interests, in comparison to the other sectors.

Legal capacity: Few would argue that legal capacity does not matter. It is indeed logical to expect that a state's legal capacity would make it more or less likely to "lose" a dispute. To operationalize this concept, some authors look at the size of the legal delegation of states that are present in WTO headquarters in Geneva, but this hardly represents state capabilities in securing efficient, expert, legal expertise (Sattler and Bernauer, 2011). More importantly, since in this paper, we look at responses by the EU and the US as a defendant, there is no variation in their high level of legal capacity. For this reason, we do not include it in our empirical test.

Finally, it is important to note that we also do not consider the intrinsic legal merits or importance of the disputes. Some complaints brought to the WTO Dispute Settlement Body may indeed be more solidly grounded, more substantially argued, and entail more

important questions of WTO law interpretation than other dispute settlement cases. Moreover, some cases may be relatively unimportant in economic terms in and of themselves, yet may involve an important question of law that may set an important precedent in future interpretations and applications of WTO law. Yet, for the purpose of this analysis we do not consider these sources of variation as they concern legal assessments and valuations. Since we are interested in political sources of systematic variation, we thus work with the assumption that differences in the legal nature of cases are randomly distributed across the universe of cases we study.

Data and results

Table 1: The EU and the US as a defendant at the WTO - Disputes by Sector

- Agriculture
- Basic Metals and Fabricated Metals
- Food and Beverages
- Textiles
- Transport Equipment
- Electical and Optical Equipment
- Horizontal
- Other

We start our investigation by looking at the main descriptives with regards to the EU and the US' general activity in WTO dispute settlement. Table 1 demonstrates that the main targeted sectors for the two largest economies in the world are Agriculture, Manufacturing of Food and Beverages, Manufacturing of Metals, and Manufacturing of Textiles (Table 1). This is not necessarily surprising as traditionally protected sectors are usually the targeted ones – e.g. manufacturing of metals (and steel). Furthermore, Table 2 provides additional descriptive statistics on the features of U.S. and EU disputes at the WTO (excluding dummy variables). The most notable feature of these statistics is the degree of variation for our two variables of interest: compliance and GVC integration. As our variable of interest is represented by the time until the defendant complies, we analyze our data using a semiparametric Cox proportional hazards model. The Cox model is advantageous in that it does not require specification of the baseline hazard function and that estimation of the partial likelihood function with random right censoring of observations remains efficient (Efron 1977). It is also useful in that in can

incorporate predictable time-varying covariates, provided that they enter into the model linearly.

Table 2 – Descriptive Information on EU and the US characteristics

Variable	Minimum	Maximum	Mean	Std. Dev.
Compliance (months)	1	206	63.71	63.06
Import dependence (GVC integration)	39.65	76.70	60.59	9.00
Democracy score (0-100 scale)	31.37	67.99	51.25	9.22
Ratio of complainant GDP to EU GDP	0.01	124.10	25.13	38.08
Sectoral employment (percent of total)	0	23.29	3.26	4.99
Outward FDI	15,370	1,258,000	286,100	238,469

Table 3 presents the results of our Cox regression. Interpretation of the results is straightforward: positive values indicate that the variable is related to a higher probability of failure (i.e., compliance). Thus, factors with positive coefficients are associated with a shorter time until compliance. Model 1 is a baseline model, including all of the relevant covariates. In terms of our control variables, the complainant's level of democracy and the complexity of the targeted measures, and whether or not parties are part of a PTA are related to quicker compliance at the WTO DSM. By contrast, disputes that involve the agricultural sector, the defendant's level of export dependence, and the degree of employment within the targeted sector are linked with longer times until compliance. Sectoral FDI appears to have no impact on defendants' propensity to meet their trade partner's demands. Our variable of interest, GVC integration, as measured by the import dependence of the targeted sector, is surprisingly negative, though non-significant. This suggests that there is not a substantial difference between sectors that are highly integrated and those that are not; however, where a difference does exist, more heavily integrated sectors are actually *less* likely to see settlement.

Table 3 – Results from Cox Proportional Hazards Model

	Model 1	Model 2	Model 3
Democracy	0.06***	0.01	0.01
	(0.01)	(0.01)	(0.01)
Agricultural Sector	-1.53***	0.09	0.09
	(0.28)	(0.39)	(0.39)
Def. Share of exports	-0.16***	-0.00	0.00
	(0.04)	(0.04)	(0.04)

Issue complexity	0.58**	0.01	0.01
	(0.25)	(0.27)	(0.27)
PTA	1.52***	0.38	0.39
	(0.52)	(0.61)	(0.62)
Def. Share of FDI	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)
Sectoral Employment	-0.02*	-0.02	-0.02
	(0.01)	(0.01)	(0.02)
GVC integration	-0.01	0.25***	0.25***
	(0.01)	(0.03)	(0.03)
Integration x Time		-0.08***	-0.08***
		(0.01)	(0.01)
EU			0.07
			(0.48)
AIC	719.64	474.26	476.24
R^2	0.52	0.95	0.95
Number of obs.	109	109	109

***$p < 0.01$, **$p < 0.05$, *$p < 0.1$, all tests are two-tailed tests.

Our initial result is surprising; however, it may be a product of an inappropriate model specification. Indeed, it is important to note that, while the Cox proportional hazards model has numerous advantages, it has one major disadvantage: it assumes that the effect of each variable is constant over time. The validity of this assumption can be tested by examining the scaled Schoenfeld residuals for each of the covariates. In analyzing these residuals, we find that one variable in particular exhibits non-proportional hazards: GVC integration. Box-Steffensmeier and colleagues (Box-Steffensmeier and Zorn 2001; Box-Steffensmeier et al. 2003) recommend correcting for this non-proportionality by interacting each any offending variables with the log of time.

We account for this issue in Model 2, which includes interaction of GVC integration with the log of time since dispute initiation. In this specification, we find a positive and significant main effect for GVC integration, along with a negative effect for its interaction with time, indicating that the presence of high GVC integration in the targeted sector is strongly associated with settlement early on, but that this effect diminishes as time passes. As interactions can be difficult to interpret---especially when logged terms are involved---we present a graphical depiction of the effect in Figure 1.

Figure 1. Effect of GVC integration on the likelihood of compliance
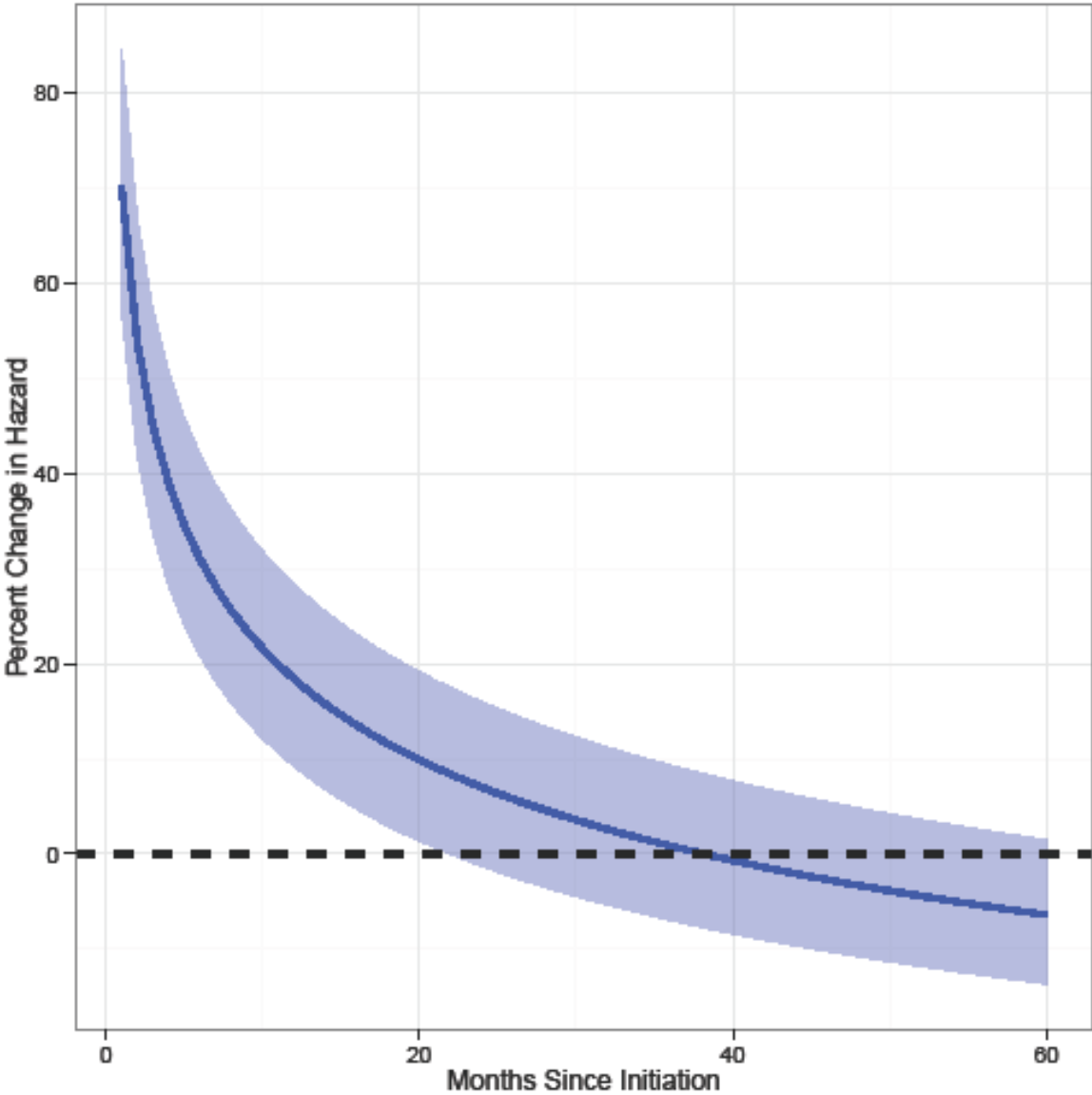

 Figure 1 depicts the effect of a one-unit increase in integration on the baseline hazard of compliance. The solid line indicates the estimate effect, as time since initiation progresses, and the shaded region gives the associated 95% confidence interval. Immediately following initiation of a dispute, a one-unit rise in import dependence is associated with an increase in the hazard of compliance of over 70%; a one standard deviation increase in GVC integration would increase the hazard of compliance more than sixfold. However, if the dispute continues beyond the first month, the effect of integration is diminished. At one year from initiation, a one-unit increase leads to a change in the hazard of only 18%. At 22 months, the effect is indistinguishable from zero, and at approximately three years, the estimated effect reaches zero. Beyond three years, an increase in import dependence is associated with a *decrease* in the likelihood of compliance.

This pattern is interesting, but not unexpected. The initial increase in the hazard of compliance is consistent with our primary hypothesis: as integration increases, states experience greater pain from the effects of non-compliance. However, non-trivial adjustment costs may explain the diminishing impact of GVC integration. Sectors highly integrated to GVCs may indeed incur substantial adjustment costs (Gilligan, 1997). In order to avoid such costs, sectors push for compliance and press their preferences to policymakers as a dispute materializes. Yet, as time progresses, continuous non-compliance may lead sectors to adjust to these changes. This reduces the associated costs in the long run, as well as the incentives for compliance. After a sufficiently long period, the targeted sector will have undergone sufficient changes such that a return to the old ways of doing business would no longer be preferable, rendering compliance costly. Thus, after several years of adaptation, more heavily-integrated sectors will reduce willingness to comply.

Conclusion

In this paper, we analyzed the international political economy of WTO dispute settlement. We investigated EU and the US responses to each and every dispute brought against them, which correspond to about the half of all the activity at the WTO DSM. We examined the EU and the US' compliance record from a theoretical perspective borrowed global value chains, arguing that when the defendants face litigation targeting a sector that is highly integrated to GVCs, the trade liberalizing preference of such sector leads them to comply faster. This is because the initiation of such dispute engenders the emergence of a political mobilization of a coalition of domestic groups favouring compliance composed not only of exporters seeking to avoid the imposition of retaliatory measures, but also of import-dependent firms wishing to access cheaper imports

The Cox regression analysis we conducted revealed that the defendants' behavior in meeting their trade partner's demand at the WTO indeed depends on the level of import-dependence of the targeted sectors. By examining a large array of variables, we found that import-dependence explains respondents' record of compliance at the WTO more than any other variable. We further found that the EU and the US is faster in meeting their trade partners' demands at the WTO DSM when the targeted sector is more import-dependent. Yet, this impact is more prevalent at the beginning of a dispute and diminishes over time. The reason we suggest is because import-dependent sectors' trade liberalizing preferences are starker earlier in any dispute, since they face non-

trivial adjustment costs when a barrier is enacted. Thus, they get into coalitions pushing for compliance. Yet, in cases where they are forced to adjust, i.e. if a dispute prolongs and trade barriers remain in place, import-dependent sectors and firms forego of their trade liberalizing preferences because they substitute and adjust to the new rules of the game.

The findings of the paper have implications for compliance literature, of which we contribute to the question of under which conditions states comply with WTO agreements. The findings presented here suggest that compliance is more likely when mobilized domestic economic actors prefer trade liberalization. Depending on their level of GVC integration and mobilization, policymakers in the EU and the US are subject to pressure from their domestic constituencies; when the targeted sectors are import-dependent ones that heavily internationalize their production, they are likely to mobilize and press their trade-liberalizing preferences to the EU policymakers, who then bring forth compliance following disputes. This particular finding contributes to the debate on compliance by underlining the impact of domestic actors in shaping state preferences to abide by their international commitments.

The study further contributes to the literature on GVCs where and the results advance the scholarship's expectation that GVCs promote further liberalization. Even though the trade-liberalizing impact of these transnational chains of production has been demonstrated in bilateral agreements, this paper also shows that the expansion of internationalization also has the potential to remove trade barriers multilaterally at the WTO. This paper is amongst the very first works that systematically link the impact of GVC integration on multilateral trade liberalization through the WTO dispute settlement. By arguing that GVC integration helps explain states' propensity to comply with WTO rules, the paper has also been able to introduce a novel variable to the literature. Indeed, the potential impact of "the level of GVC integration" as a key variable has been demonstrated within this article.

References

1. Allee, T. (2005). *The 'Hidden' Impact of the World Trade Organization on the Reduction of Trade Conflict. 2005 Midwest Political Science Association Conference*. Chicago, Illinois.
2. Alter, K. (2012), 'Global Spread of European-Style International Courts', West European Politics, 35 (10): 135-154.
3. Antràs, Pol. 2010. International Trade and Organizations. Vol. 2. NBER Reporter 2010, 2, 7-10.

4. Antras, P. and R. W. Staiger (2012) Offshoring and the role of trade agreements. American Economic Review 102(7): 3140–3183.
5. Baccini, L., Kim, H.Y (2012) Preventing protectionism: International institutions and trade policy. The Review of International Organizations, 7(4): 369-398.
6. Baccini, L., Pinto, and Weymouth. (2014) 'International Economic Agreements and the Activities of Heterogenous Multinational Firms' Paper presented at the ECPR General Conference, Glasgow, UK.
7. Bagwell, K. and Staiger, R.W. (2002). The Economics of the World Trading System. MIT Press.
8. Baldwin, R. (2012) Global Supply Chains: Why They Emerged, Why They Matter, and Where They Are Going. Fung Global Institute Working Paper Series, FGI-2012-1.
   a. (2011) 21st Century Regionalism: Filling the gap between 21st century trade and 20th century trade rules. World Trade Organization, Economics Research and Statistics Division Working Paper, 2011-08.
9. Bernauer, T., M. Elsig and J. Pauwelyn (2014). *Dispute Settlement Mechanism: Analysis and Problems. The Oxford Handbook on The World Trade Organization* M. Daunton, A. Narlikar and R. M. Stern. Oxford, Oxford University Press
10. Bechtel, M. and Sattler, T. (2015) "What is Litigation in the World Trade Organization Worth?" International Organization 69 (02) 375-403.
11. Bown, C. (2004) 'On the economic success of GATT/WTO dispute settlement', The Review of Economics and Statistics 86(3):811-823.
12. Box-Steffensmeier, J. M. and C. J. W. Zorn (2001). Duration Models and Proportional Hazards in Political Science. American Journal of Political Science 45 (4): 972-988.
13. Box-Steffensmeier, J. M., D. Reiter, and C. J. W. Zorn (2003). Nonproportional Hazards and Event History Analysis in International Relations. Journal of Conflict Resolution 47 (1): 33-53.
14. Busch, M. (2007). 'Overlapping Institutions, Forum Shopping, and Dispute Settlement in International Trade', *International Organization* 61(4): 735-761
   a. (2000) 'Bargaining in the shadow of the law: early settlement in GATT/WTO disputes', Fordham International Law Journal 24:158–172.
15. Busch, M. and Pelc, K. (2010) The politics of judicial economy at the World Trade Organization. International Organization 64(2):257-259.
16. Busch, M. and Reinhardt, E. (2006) 'Three's a crowd: third parties and WTO dispute settlement', World Politics, 58 (April):446-77.
   a. (2000) Bargaining in the shadow of the law: early settlement in GATT/WTO disputes. *Fordham International Law Journal* 24:158–172.
17. Busch, M., Reinhardt, E. and Shaffer, G. (2009) Does Legal Capacity Matter? A Survey of WTO Members. *World Trade Review*, 8 (4): 559-577.
18. Chase, K (2003), 'Economic Interests and Regional Trading Arrangements: The Case of NAFTA', International Organization, 57(1):137-74.
19. Chayes, A., and Chayes, A. (1993) 'On compliance', International Organization, 47 (2): 175–205.
20. Davey, A. (2007) Implementation in WTO Dispute Settlement: An Introduction to the Problems and Possible Solutions. *Illinois Public Law Research Paper* No. 05-16 – November 30, 2005.
21. Davis, C. (2012) *Why adjudicate: enforcing trade rules in the WTO*, NJ: Princeton University Press.
22. Davis, C. and Shirato, Y. (2007) Firms, governments, and WTO adjudication: Japan's selection of WTO disputes. World Politics 59(2):274-313.
23. Davis, C. and Pelc, K. (2014) 'Cooperation in Hard Times: Self-Restraint of Trade Protection' Journal of Conflict Resolution.
24. De Bièvre, D. and Eckhardt, J. (2011) 'Interest Groups and EU Anti-Dumping Policy,' Journal of European Public Policy 18(3):339-60.

25. De Bièvre, D., Poletti, A., Hanegraff, M., Beyers, J. (2016) "International institutions and interest mobilization: The WTO and lobbying in EU and US trade policy" Journal of World Trade 50 (2).

26. Dixon, W. (1993) 'Democracy and the Management of International Conflict', Journal of Conflict Resolution, 37 (March): 42-68.

27. Dür, A. (2010) Protection for Exporters: Power and Discrimination in Transatlantic Trade Relations, 1930-2010, Ithaca: Cornell University Press.

28. Eckhardt, J. (2015) Business Lobbying and Trade Governance: The Case of EU-China Relations, New York/Basingstoke: Palgrave Macmillan.
    a. (2013) 'EU Unilateral Trade Policy-Making: What Role for Import-Dependent Firms?,' Journal of Common Market Studies 51(6):1089-1105.
    b. (2011) 'Firm lobbying and EU Trade Policy Making: Reflections on the Anti-Dumping Case Against Chinese and Vietnamese Shoes (2005-2011)' Journal of World Trade, 45 (5) 965-991.

29. Eckhardt, J. and Poletti A. (2015) 'The Politics of Global Value Chains: import dependent firms and EU-Asia trade agreements' Journal of European Public Policy.

30. Efron, Bradley. (1977) The Efficiency of Cox's Likelihood Function for Censored Data. Journal of the American Statistical Association 72 (359): 557-565.

31. Elsig, M. (2013) "The Democratizing Effects of Multilateral Organizations: A Cautionary Note on the WTO" World Trade Review, 12(3):487-507.

32. Elsig, M. and Pollack, M. (2014) Agents, Trustees, and International Courts: Nomination and Appointment of Judicial Candidates in the WTO Appellate Body" European Journal of International Relations 20(2): 391-415.

33. Gereffi, G. (1999) 'International Trade and Industrial Upgrading in the Apparel Commodity Chain,' Journal of International Economics 48(1):37–70.

34. Gereffi G., Humphrey, J. and Sturgeon, T. (2005) 'The Governance of Global Value Chains,' Review of International Political Economy 12(1):78-104.

35. Goldstein, J. L. and L. L. Martin (2000). 'Legalization, Trade Liberalization, and Domestic Politics: A Cautionary Note', *International Organization* 54(3): 603-632.

36. Goldstein, J. J. and R. R. Steinberg (2008). 'Negotiate or litigate? Effects of WTO judicial delegation on US trade politics', *Law and Contemporary Problems* 71(1): 257-282.

37. Goldstein, J. Kahler, M., Keohane R., and Slaughter, A. Introduction: Legalization and World Politics" International Organization 54 (3) pp 385-399.

38. Grossman, G. and Helpman, E. (2001) Special Interest Politics, Cambridge: MIT Press.
    a. (1994) Protection for Sale. The American Economic Review 84 (4): 833-850.

39. Guzman, A., and Simmons, B. (2002) 'To Settle or Empanel? An Empirical Analysis of Litigation and Settlement at the WTO', Journal of Legal Studies, 31: 205–235.

40. Harpaz, M. (2010) Sense and sensibilities of China and WTO dispute settlement. Journal of World Trade 44(6): 1155 – 1186.

41. Hathaway O. (1998), 'Positive Feedback: the Impact of Trade Liberalization on Industry Demands for Protection,' International Organization 52(3):575-612.

42. Hiscox, M.J. (2001) Class Versus Industry Cleavages: Inter-Industry Factor Mobility and the Politics of Trade. International Organization, 55: 1-46.

43. Hix, S. and Hoyland, B. (2011) The Political System of the European Union, London: Pelgrave Macmillan.

44. Horn, H. and Mavroidis, P. (2008) 'The WTO Dispute Settlement System Data Set: Some Descriptive Statistics', Washington: World Bank (available at www.worldbank.org/trade/wtodisputes).

45. Irwin D. A. and Mavroidis, P. C. (2008) 'The WTO's Difficulties in Light of the GATT's History', Vox.

46. Jensen, B., Quinn, D., and Weymouth, S. (2013) Global Supply Chains, Currency Undervaluation, and Firm Protectionist Demands. National Bureau of Economic Research, http://www.nber.org/papers/w19239. Accessed on September 17 2015
47. Keohane, R. (1984) After Hegemony: Cooperation and Discord in the World Political Economy, Princeton University Press: New Jersey.
48. Kim, M. (2008). 'Costly Procedures: Divergent Effects of Legalization in the GATT/WTO Dispute Settlement Procedures', *International Studies Quarterly* 52(3): 657-686.
49. Hoffman, T. and Kim, S.Y. (2011) Picking Fights: Rising Powers in WTO Disputes. Unpublished manuscript
50. Kelemen, D. (2001) 'The limits of judicial power: trade-environment disputes in the GATT/WTO and the EU', Comparative Political Studies, 34 (6): 622-650.
51. Kono, D. (2009) 'Market Structure, Electoral Institutions, and Trade Policy, 53, pp 885-906.
52. Koopman, R.; Powers, W.; Wang, Z.; Wei, S.-J. 2011. "Give Credit to Where Credit is Due: Tracing Value Added in Global Production Chains", NBER Working Paper No. 16426, September 2010, revised September 2011 (Cambridge MA, National Bureau of Economic Research).
53. Kucik, Jeffrey, and Krzysztof J. Pelc. 2012. How Widespread Are Discriminatory Settlements in the WTO? Unpublished manuscript.
54. Lanz, R. and Miroudot, S. (2011) Intra-Firm Trade: Patterns, Determinants and Policy Implications, OECD Trade Policy Papers, No.114, OECD Publishing.
55. Magee, S., Brock W. and Young L. (1989) Black Hole Tariff and Endogenous Policy Theory, Cambridge: Cambridge University Press
56. Manger, M. (2012) Vertical Trade Specialization and the Formation of North- South PTAs. World Politics, 64: 622-658.
    a. (2009) Investing in Protection: the Politics of Preferential Trade Agreements Between North and South, Cambridge: Cambridge University Press.
57. Martin, L. (1992) 'Interests, power, and multilateralism', International Organization, 46 (4): 765-92.
58. Milner, H., Moravcsik, A. (2009) Power, Interdependence, and Nonstate Actors in World Politics. Princeton University Press: New Jersey
59. Olson, M. (1965) *The Logic of Collective Action. Public Goods and the theory of groups*. Cambridge, Mass., Harvard University Press.
60. Orefice, G. and Rocha, N. (2014) Deep Integration and Production Networks: An Empirical Analysis. The World Economy, 37 (1): 106–136.
61. Pauwelyn, J. (2005) 'The Transformation of World Trade', Michigan Law Review, 104(1), 0–65.
    a. (2000) Enforcement and Countermeasures in the WTO: Rules are Rules-Toward a More Collective Approach. *American Journal of International Law*, (April) 94 (2): 335-347.
62. Poletti, A. and De Bièvre D. (2016) Judicial Politics and International Cooperation: from disputes to deal-making at the World Trade Organization, Colchester:ECPR Press.
63. Poletti, A. and De Bièvre D. (2015) Judicial Politics in International Trade Relations: Introduction to the Special Issue. World Trade Review, 14, pp S1-S11.
64. Poletti, A. and De Bièvre, D. (2014) 'Political mobilization, veto players, and WTO litigation: explaining European Union responses in trade disputes', Journal of European Public Policy, (June), pp.1–18.
65. Poletti, A., De Bièvre, D., and Hanegraff, M. (2015) "WTO Judicial Politics and EU Trade Policy: Business Associations as Vessels of Special Interest?" British Journal of Politics and International Relations.
66. Reinhardt, E. (2001), Adjudication without Enforcement in GATT Disputes, 45 Journal of Conflict Resolution 2, 174–195.

67. Sattler, T., Bernauer, T. (2011) 'Gravitation or Discrimination? Determinants of litigation at the World Trade Organization', European Journal of Political Research, 50 (2), 143-167.

68. Sattler, T., G. Spilker and T. Bernauer (2014). 'Does WTO Dispute Settlement Enforce or Inform?', *British Journal of Political Science* 44(04): 877-902.

69. Schaffer, G.C.(2003). Defending Interests: Public-Private Partnerships in WTO Litigation. Brookings University Press.

70. Shaffer, G.C. and Melendez-Ortiz, R. (2010) Dispute Settlement at the WTO: The Developing Countries Experience, Cambridge: Cambridge University Press.

71. SCHATTSCHNEIDER, E. E. 1935. Politics, Pressures and the Tariff, New York, Prentice Hall.

72. Simmons, B. A. (2000) 'International law and state behavior: Commitment and compliance in international monetary affairs', American Political Science Review, 94(4), 819–835.

73. Slaughter, A. (1995) 'International Law in a World of Liberal States', European Journal of International Law, 6: 503-38.

74. Spilker, G. (2012) 'Compliance with WTO Dispute Rulings', Swiss National Centre of Competence in Research Working Paper.

75. Staiger, R.W. (1994). International Rules and Institutions for Trade Policy, NBER Working paper, 4962.

76. , N. (2007) 'Impossible Cases: Lessons from the First Decade of WTO Dispute Settlement', University of Pennsylvania Journal of International Economic Law, 28(2):308-447.

77. Tsebelis, G. (2002) Veto Players: How Political Institutions Work. Princeton University Press.

78. Weiss, E., Jacobson, H. (1998) Engaging Countries: Strengthening Compliance with International Environmental Accords. MIT Press: Cambridge, MA.

79. Wilson, B. (2007). 'Compliance by WTO Members with Adverse WTO Dispute Settlement Rulings: The Record to Date', *Journal of international economic law* 10(2): 397-403.

80. WTO (2004) Handbook on the WTO Dispute Settlement System, Cambridge University Press.

81. Young, A.R. (2010) 'Effective multilateralism on trial: EU compliance with WTO law' in: Blavoukos, S. and Bourantonis, D. (eds.) The EU's Presence in International Organisations. European Union Series: Routledge advances in European politics (67). Routledge, Abingdon, UK, pp. 114-131.
    a. (2009). 'Confounding conventional wisdom: political not principled differences in the transatlantic regulatory relationship', *British Journal of Politics and International Relations* 11(4): 666-689
    b. (2004) 'The incidental fortress: the single European market and world trade', Journal of Common Market Studies, 42(2), pp.393–414.

82. Zangl, B., A. Helmedach, A. Mondré, A. Kocks, G. Neubauer and K. Blome (2011). 'Between law and politics: Explaining international dispute settlement behavior', *European Journal of International Relations*.

83. Zangl, B. (2008) 'Judicialization Matters! A Comparison of Dispute Settlement Under GATT and the WTO', International Studies Quarterly, 52(4): 825-854.