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Reluctant respondents: Early settlement by developing countries during WTO disputes

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ABSTRACT

Study of inequalities in dispute settlement at the WTO tends to focus on whether developing countries participate enough as complainants. Complainants are voluntary participants in a system that is structured to favour them. This analysis instead centres respondents, who have no choice as to whether to participate. Less-developed respondents are found to settle disputes before litigation is complete, which is known to lead to worse outcomes. However, this is not due to either their lack of power or their lack of legal capacity. In addition to the analytical contribution, this paper uses an up-to-date dataset and two novel variables.

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1. INTRODUCTION

Over time, international relations have increasingly relied on legalised mechanisms for dispute settlement. Within the multilateral trade regime, these mechanisms include both investor-state approaches, typical of regional or bilateral trade agreements, and state-state approaches, such as the World Trade Organisation's (WTO) Dispute Settlement Body (DSB). However, the ultimate costs and benefits of these mechanisms are still the subject of debate, and the degree to which they can help or hurt weaker parties remains an open question (Sattler, Spilker & Bernauer, 2014).

The DSB is likely to be the busiest court of international law in the world (Reich, 2017). Most studies of developing country participation at the DSB have focused on the question of whether poorer countries are able to use the offensive potential of the court to their full advantage and, where their participation falls short, whether this is due to lack of legal capacity, or due to lack of economic and political power.

Recognising these as important questions, I approach the question of developing country participation from a different angle. I suggest that the history and design of the DSB inherently disadvantages developing countries on a structural level. The purpose of the DSB is to maintain the stability of the multilateral trading regime, rather than to necessarily produce justice for participants involved in disputes.

The DSB is not completely analogous to a national court, and disputes involve both diplomacy and litigation. In maintaining stability, rapid mutual resolution of disputes through diplomacy is explicitly preferred, rather than litigation. However, the respondents in disputes enjoy better outcomes when they resist diplomatic solutions and continue to litigation (Busch & Reinhardt, 2000). Therefore, the incentives of complainants are well aligned with the design of the system, while those of respondents are poorly aligned. WTO members can choose whether or not to complain about other members, but

cannot choose whether or not they are the target of a complaint. Therefore, I argue that the true source of developing country disadvantage at the DSB will be visible in their role as respondents, not complainants, and that it will take the form of a disproportionate tendency to settle disputes early. In line with earlier findings relating to developing country complainants, I anticipate that this will be due to lack of legal capacity.

My findings support my primary hypothesis: developing country respondents do disproportionately settle early. However, I find no support for either the hypothesis that this is due to lack of legal capacity, or due to lack of power. I interpret this to mean that developing countries concede complaints early because they are disproportionately faced with complaints that have merit, although this itself reflects a deeper injustice inherent to the Uruguay Round bargain that established the WTO.

In addition to the analytical contribution outlined above, this paper makes three methodological contributions to the literature on the DSB: it uses an up-to-date dataset, and introduces what I believe to be a novel explanatory variable and a novel control.

The remainder of the paper proceeds as follows: Section 2 provides background on dispute settlement at the WTO; Section 3 summarises the literature on developing country participation and outcomes; Section 4 outlines my methods; Section 5 my results; and Section 6 concludes.

2. THE WTO DISPUTE SETTLEMENT SYSTEM

The Uruguay Round agreement concluded between the GATT 1947 countries on 15 April 1994, resulting in the establishment of the World Trade Organisation (WTO) on 1 January 1995. Thanks to the G2 nations' (the US and EU) withdrawal from the previous GATT 1947 treaty as a negotiating tactic, member countries faced a choice between accepting the Uruguay Round agreement in its entirety, or losing access to the G2 markets.

The agreement depended on signing the "all or nothing" Single Undertaking, encompassing many issues previously unrelated to trade. This "Grand North-South Bargain" (Ostry, 2000) has been characterized as an exchange of increased "shallow" market access to wealthier markets for developing country exports - via reduced tariffs and non-tariff barriers on goods - in exchange for the "deeper" integration into the multilateral trade system by the developing countries. Deeper integration was achieved via agreements on foreign direct investment, intellectual property and other "trade-related" issues. This level of integration facilitates the proper functioning of global value chains (Azmeh, 2019), but reduces the number of policy instruments available to the developing world, including policy instruments that wealthier countries used in their own development (Chang, 2002; Shadlen, 2005).

The Single Undertaking, in addition to various pieces of trade legislation, also included the Dispute Settlement Understanding (DSU), a new treaty that aimed to resolve trade disputes in a rapid and effective manner. The stated purpose of the DSU is to *maintain the stability* of the trading system as a whole, ideally via *early settlement* of disputes, as set out in Article 3, Clause 2:

> "The dispute settlement system of the WTO is a central element in providing security and predictability to the multilateral trading system.";

Clause 3:

> "[P]rompt settlement […] is essential to the effective functioning of the WTO and the maintenance of a proper balance between the rights and obligations of Members.";

and Clause 7:

> "The aim of the dispute settlement mechanism is to secure a positive solution to a dispute. A solution mutually acceptable to the parties to a dispute and consistent with the covered agreements is clearly to be preferred."

Under Article 2, the DSU also established the Dispute Settlement Body (DSB), the court system of the WTO. The DSB is accorded a "quasi-judicial" status by legal scholars, as the dispute process involves elements of both diplomacy and international law (Smith, 2004).

Previously, under the GATT 1947 agreement, a "positive consensus" was required for disputes to proceed, in which all parties – including *both sides* of a dispute – would need to agree to proceed. Predictably, this standard was not always met (Hudec, 1993).

The DSU changed this to a "negative consensus" rule throughout the text of the agreement (e.g. Art 6.1), in which all disputes automatically continue through the legal process unless they are stopped by a consensus of members or the two sides reach agreement. Additionally, the process moves forward according to time limits on each stage (WTO, 2017). All WTO members are assumed to have a "systematic interest" in the multilateral regime and can file a dispute on any measure that they believe is unfair, whether or not they are directly harmed (Taniguchi, 2009). As a consequence of these changes, the DSB is now likely to be the busiest court of international law in the world (Reich, 2017).

Disputes proceed through the DSB in stages. A complainant (or complainants) begins the process by notifying the WTO of a request for bilateral consultations, which give the complainant(s) and the respondent (collectively the "disputants") the opportunity to settle the matter through diplomatic means, before litigation. After 60 days, if no satisfactory resolution has been achieved, the complainant can request the establishment of a panel.

At the panel stage, the WTO becomes involved as an adjudicator for the first time. The panel is requested by the complainant; then, some days later, established formally with terms of reference; then the members of the panel composed by the Secretariat of the WTO on a dispute-by-dispute basis. At the "establishment" stage, other WTO members may join as third parties, with the right to receive documentation about the dispute and to give oral submissions.[1]

[1]At this point, it is worth considering the capacities that countries can bring to bear as the dispute leaves the predominantly diplomatic "consultations" stage and enters litigation at the "panel" stage. Firstly, the use of outside legal counsel has been a feature of the dispute process almost since the initiation of the DSB, with the precedent set by Saint Lucia in DS27, the now-famous "Bananas III" dispute. Secondly, in recognition of the prohibitive costs of litigation, the Advisory Centre on WTO Law (ACWL) was established in 2001 by nine developed countries (now 12, with one associate member). The centre

After several rounds of submissions and rebuttals, the panel stage concludes with a report that summarizes the dispute and upholds or rejects the complainant's claim. Unless one or more of the disputants appeals, after a certain number of days the DSB adopts the report and its conclusions become binding on the disputants. At any time during the panel stage, the disputants can still find a mutually agreed solution (MAS) and conclude the dispute before the report is issued.

If the panel report is appealed, the dispute proceeds to the next stage of the process, where it is considered by the appellate body of the DSB, a kind of higher court that is made up of judges who serve fixed terms.[2] Since the focus of my analysis is on events leading up to the adoption of a panel report, I will pass over the details and only note that the appeals process can follow a number of distinct courses with various outcomes possible as a result of each course. Ultimately the appeal can result in "compensation" from the losing disputant in the form of tariff reductions, or even in extreme cases "countermeasures" in which the winning side is permitted to unilaterally raise tariffs on a loser who refuses to comply (WTO, 2017).

However, the WTO is a "court with no bailiff" (Rossmiller, 1994, 263) and, lacking a state monopoly on force, cannot compel compliance. Stronger parties can, if desired, ignore weaker parties since even "countermeasures" - the DSB's ultimate sanction - are not necessarily very effective. For instance, DS285, in which Antigua and Barbuda took the US to the DSB over access to markets for gambling services, resulting in the award of countermeasures when the appeals process was exhausted after a decade and the US still refused to comply and permit market access. However, to date the complainant has not chosen to apply the countermeasures[3], and it is hard to see how it could take advantage of this ruling in practical terms. The DSB appears to operate in the "shadow of power" of the stronger

offers legal advice, advocacy and capacity building for free to LDCs, regardless of whether they are members, and at subsidized rates to developing country members.

[2] This is in contrast to panelists, who are individuals that normally work for governments and international organisations. Panelists are drawn from a list when required and work on a part-time basis.

[3] Up to $21 million dollars annually since 2013, to be applied via the suspension of obligations under the TRIPS agreement on intellectual property.

disputants (Steinberg, 2002) and they are bound by its judgements only to the degree that they value the stability of the multilateral trading regime.

In this light, it's worth returning to the panel stage and the phenomenon of "early settlement" in advance of a ruling. The stated purpose of the DSB is to *swiftly resolve disputes* to maintain the stability of the multilateral trade regime. Once the dispute reaches the panel stage and the WTO becomes involved, the legitimacy of the DSB depends on the dispute being resolved fairly and impartially. However, if a MAS is agreed before the panel report is issued, there is no requirement for that solution to be fair – it just needs to be "acceptable enough" to the respondent under the circumstances – and, unlike panel reports, these solutions are not arrived at (or even reviewed) by an impartial arbiter. It's perhaps unsurprising that ultimate outcomes tend to be better for the respondent if they rely on litigation, and worse if they settle early through diplomacy (see next section). But early settlement through diplomacy is the *explicitly preferred result* of the system, as designed. If, all else equal, certain respondents settle more than others, the system as a whole will produce unjust results.

Who then designed the dispute settlement system? The design is a result of choices made during the Uruguay Round negotiations. On a superficial reading, the temptation is to treat the DSU as a sop to developing countries as part of the Uruguay Round bargain, since it allows them to take more powerful trade partners to court. However, this view is not supported by the history of negotiations. Mavroidis (2016) shows that the DSU was the price levied by the US in exchange for surrendering its freedom of unilateral action through Section 301 of the US Trade Act 1974.

In exchange for agreement to stop using Section 301 and other unilateral measures (agreed in DSU Art 23.2), the US was able to demand the "negative consensus" rule, statutory deadlines on stages and punishments in the form of "compensation" and "countermeasures" – in other words, all of the chief aspects which distinguish the DSU from previous dispute settlement under GATT 1947. The DSU, at least as originally conceived, was a sop *to the US*, not to developing countries.

Given the burdens on different parties as a result of the single undertaking, this reading is intuitively sensible. The provisions of the Uruguay Round required far more of developing countries than they did of developed countries (Wade, 2003). Therefore, given the DSU's role as a disciplinary mechanism (Sattler et al., 2014), developing countries inevitably had more to lose from the DSU as respondents

than they ever stood to gain as complainants, even assuming equal capacity to make complaints. The reverse is true for countries such as the US, which in even the worst-case scenario can ignore rulings with little to fear, as illustrated by the lack of consequences in its dispute with Antigua and Barbuda.

3. STUDYING THE DSB

Four overlapping questions are addressed in the empirical literature relating to the use of the DSU:

1) Do developing countries initiate as many disputes as would be expected?
2) Do developing countries prefer / avoid making complaints against developed countries?
3) What are the outcomes of disputes – who "wins" and who "loses"?
4) Why are some disputes settled early, and others escalated?

The econometric literature on the DSB begins with Horn, Mavroidis and Nordström's (1999) examination of participation, which concluded that countries' use of the DSB was broadly in line with expectations based on their export diversities, and that discrepancies were best explained by countries' *lack of legal capacity*, rather than fear of retaliation in some form by more powerful trading partners. Later studies strengthened these results (e.g., Abbott, 2007; Bown & Hoekman, 2005; Francois, Horn & Kaunitz, 2007).

The related question of which respondents are targeted by developing countries is addressed by Guzman and Simmons' (2005), who similarly found that *legal capacity constraints* better explain choice of respondents than lack of power. These findings are supported by other econometric studies (e.g., Kim, 2008; Bouet & Metivier, 2020) and by survey research of developing countries' WTO delegations in Geneva indicating that *lack of legal capacity* prevents developing countries from bringing as many cases as they would like (Busch, Reinhardt & Schaffer, 2009).

The first two questions relate to participation at the DSB as complainants. The third and fourth questions address the factors that drive the outcomes of the dispute settlement process.

A number of empirical findings relate to the third question: who are the ultimate "winners" and "losers" of the process? Looking deeply into outcomes is complex, because a given dispute may contain multiple legal claims, each of which could be individually upheld or rejected at the panel and appeal stages, and both legal and economic expertise is required to understand which are the more important claims. In addition, the technical victor of the process may or may not succeed (or may only be partially successful) in actually extracting concessions from the loser in the form of changed

behaviours – what Hudec (1993), in reference to GATT 1947 disputes, termed the "policy result" of the dispute. And the picture is further complicated by the diplomatic and political economic aspects of dispute settlement. While not as prevalent as under the GATT 1947, the parties may seek an outcome involving "constructive ambiguity", allowing both sides to plausibly claim victory (VanGrasstek, 2013). It's also possible that a disputant may wish to use the legitimacy of the DSB to *lose* a dispute, washing their hands of responsibility for an otherwise unpopular domestic policy decision, as in the case of DS87 (Hoekman, Horn & Mavroidis, 2008).

Despite these challenges, there is considerable empirical evidence that the eventual policy result of disputes tends to favour the complainant when the dispute is settled early, and that fewer concession are required of the respondent when a case instead proceeds to a panel ruling (Busch & Reinhardt, 2003).

Therefore - to the extent that policy changes on the part of the respondent do actually represent a win for the complainant - it is in the interests of *complainants* for cases to be settled early, at the "diplomatic" stage of the process, and in the interests of *respondents* to defend cases to the panel stage or beyond.

The tendency for early settlement to result in generous concessions helps to understand the puzzle at the heart of the fourth question, which relates to the course taken by disputes. Early settlement at the outset of the process is common, and Busch and Reinhardt (2000) found that early settlement[4] was the norm under both the GATT 1947 regime and under the WTO regime at the time of their analysis.

As the previous section makes clear, my belief is that on a "macro" scale, early settlement simply represents the system functioning as designed. However, on a "micro" scale, early settlement is hard to explain through consideration of the incentives faced by individual respondents. The most severe sanctions that the DSB is capable of imposing are retaliatory countermeasures. However, there is no concept equivalent to punitive damages at the WTO, so even in the worst-case the respondent stands to only "break even" (losing any gains from the offending measures); and as the case of DS285 illustrates, there can be serious practical problems involved in applying the "punishment" even if one is eventually awarded[5] Given the small downside risk of proceeding; the tendency for panel

[4] Albeit counting cases that "languish", see below.
[5] For a fuller discussion of the issues surrounding DSB sanctions, see e.g. Bronckers and van den Broek, 2005.

judgements to result in fewer concessions being required than those normally offered as part of early settlement; and the fact that a respondent may anyway win their case at panel or appeal stage, there seems little reason to settle early – and yet early settlement is still prevalent.[6]

A number of explanations have been offered for the phenomenon, including the threat of reputational damage from a negative panel ruling in the future (e.g. Norman and Trachtman, 2008; Lee and Wittgenstein, 2017). Whether some countries disproportionately settle early remains a key empirical question, yet evidence is mixed and incidental. Busch and Reinhardt (2003) note that when developing countries participate in disputes *as complainants*, these tend to escalate to panel stage, whereas Lee and Wittgenstein (2017) note that the controls used in their analysis suggest that developing countries may be more likely to settle *as respondents*. Busch and Reinhardt ascribe early settlement to a lack of legal capacity on the part of developing country complainants to force their respondents to settle before the panel stage. Conti (2010) provides supporting evidence for the "legal capacity" hypothesis through the lens of countries' experience at the DSB, finding that more experienced complainants were more likely to settle early, whereas more experienced respondents were less likely to do so.

Guzman and Simmons (2002) focus on the nature of the dispute, rather than the disputants, and find that "lumpier" disputes where compromise is less straightforward result in lower rates of settlement, although the exact outcome depends on a complex relationship with the disputants' political systems. Intriguingly, this suggests that disputes naturally tend to be resolved early through diplomacy, and the disputes that proceed to litigation are those in which compromise is harder.

Finally, Nordström and Shaffer (2008) have addressed an important question regarding the legal capacity hypothesis – if countries can bring in outside counsel, does this make internal legal capacity irrelevant? Through interviews with representatives of WTO members and lawyers, they found that countries' legal capacity is still important for three reasons: firstly, outside counsel is expensive, and costs rise with each stage of the dispute process (although in some cases domestic interest groups may be willing to contribute when a dispute affects their interests); secondly, developing countries face sharp opportunity costs in litigating disputes at the WTO in an environment of limited resources for

[6] A further puzzle is why formal consultations at the WTO result in concessions, given that they are presumably often preceded by informal bilateral diplomacy outside of the WTO system.

pursuing both domestic and international policy priorities; and thirdly, even outside counsel requires intrinsic legal capacities to use effectively:

> "To bring a complaint within the increasingly complex WTO legal system is thus *not* simply a matter of outsourcing a file to legal counsel. A WTO Member first needs the internal capacity to select, monitor and coordinate with outside legal counsel, including for the development of the factual basis for a claim." (p.599)

In summary, the literature has tended to follow the lead of the earliest authors in focusing on complainants to the DSB, and whether developing countries can use the system as much as they "should"; with the related questions of whether, if not, this is due to a lack of power or a lack of legal capacity. These questions are both interesting and important, but I believe that they risk overlooking a more fundamental issue. Participation in the DSB as a complainant is voluntary, and a choice that is endogenous to WTO members. However, participation as a respondent is almost completely exogenous – a country cannot avoid being made the subject of a dispute except through perfect compliance, and even a perfectly behaved country could be subject to nuisance or retaliatory disputes. Moreover, unlike in the role of complainant, respondents cannot choose who to face as their opposing disputant(s), nor the timing of the dispute, and time limits on stages give little time to mobilise domestic political coalitions, such as affected exporters, who might be willing to fund outside legal counsel.

My concern is that the usual focus on *complainants* at the DSB takes the idea of the DSB as an impartial court system at face value, and that it may overlook the unavoidable structural realities of how and why the DSB was established, and in whose interest. Therefore, I centre *respondents* in my analysis.

I wish to determine whether developing country respondents are over-represented in early settlement and, if so, whether this can be explained by either the "power" or "legal capacity" hypotheses – anticipating that, in line with earlier study of *complainants*, legal capacity is likely to be the better explanation.

I also suspect that the distinction between the languishing and early settlement phenomena is important, and abandoning it can result in imprecision. It's sometimes suggested that early settlement is driven by the complainant side, as the complainant must take action to progress the case by

requesting each new stage. However, this only gives the complainant the power to let the case *languish* or not. The decision to *settle* the case, whether by accepting or by offering terms, is ultimately down to the respondent – because only the respondent can agree to make concessions and change offending policies.

Two implications flow from this. Firstly, it seems possible that previous results that find claimant characteristics to be significant in early settlement may actually be capturing "propensity for disputes to languish", rather than "propensity to be settled early".

Secondly, having stripped my dataset of languishing cases, I would not expect *any* complainant characteristics to significantly affect early settlement in either direction.

4. METHOD

THE DATASET

One methodological contribution of this analysis is the use of an up-to-date database of disputes available on the WTO website (up to DS600, initiated 15/01/2021). Lee and Wittgenstein (2017) and Bouet and Metivier, (2020), representing two of the more recent contributions to the literature, use data up to 2009 and 2014, respectively.

This data was cleaned and processed according to the process described below and outcomes were cross-checked on a single dispute level with paperwork filed on the WTO website to ensure all resolved cases were captured (resolutions to 23 long-running cases had been overlooked in the basic dataset, which had treated them as pending). Other variables were added using a variety of separate data sources on both disputants and disputes, explained in detail in Appendix A. Following the processing steps summarized below, the 600 disputes ultimately resulted in 375 dyads with confirmed resolutions as my main dataset.

In this dataset, the earliest dispute is DS1 (initiated 10/01/1995) and the most recent is DS567 (initiated 01/10/2018).

UNIT OF ANALYSIS

I separate individual disputes with a single defendant into dyads, treating any dispute with multiple complainants as several individual disputes between dyads. For instance, DS16 involves four complainants (Guatemala, Honduras, Mexico and the US) against the EU. I treat this as four separate dyadic disputes: Guatemala-EU; Honduras-EU; Mexico-EU; and US-EU.
Note that to date, all disputes at the DSB have had a single respondent, although many have multiple complainants. (This includes disputes such as DS316, filed by the US against the EU itself and also against France, Germany, Spain and the UK individually, since the EU litigates at the DSB on behalf of its member states – see below).

It was tempting to leave disputes as single disputes regardless of complainants, as this is arguably truer to the "respondent's perspective" I am adopting, since respondents only need to engage with a single process, regardless of the number of complainants involved. This approach would not have been without precedent (see Busch & Reinhardt, 2000). However, it would raise hard questions about how to treat complainant characteristics (as a sum of all complainants, or using the maximum value?) and would have made understanding outcomes less straightforward compared to the dyadic approach, since complainants are able to reach separate settlements with a respondent during the process.

Ultimately however, I chose the dyadic approach as it represents the overwhelming precedent in the literature, and abandoning it would have reduced the comparability of my analysis to the earlier literature that I hope to engage.

Finally, I make no attempt to identify or merge "continuing disputes" (such as long-running arguments over bananas or aircraft parts). Firstly, because it seems to introduce an unacceptable level of subjectivity: what is the threshold for a continued dispute versus two separate disputes on the same topic within the same dyad? Secondly, because continued disputes must in practice reach a conclusion, or be abandoned and "languish" (see below), perhaps before being re-filed. If they reach a conclusion, that that conclusion is of interest to my analysis – even if the underlying issue was not completely resolved for whatever reason and a later dispute was filed on related grounds. If they are abandoned, then they are removed from my data set through the process described below.

TREATMENT OF THE EU

I treat the EU as a single disputant, and all cases involving countries that were member states at the time of the dispute are treated as cases with the EU as a disputant. While the EU itself and its member states are *all* recognized as WTO members, opening up potential for confusion, in practice the EU acts as a single litigant in all cases involving its members. In early disputes at the DSB, the United States attempted to bring disputes against single member states without the EU, or against the EU and one or more member states simultaneously. However, this strategy was unsuccessful and the EU defended all cases as a single respondent, as continues to be its practice (Hoffmeister, 2012).

Therefore, a case like DS86 (US complainant, Sweden respondent, initiated 28/05/1997) is treated as a US-EU dispute, as Sweden was a member state in 1997. Whereas DS235 (Hungary complainant, Slovakia respondent, initiated 11/07/2001) is treated as a dispute between the two individual countries as neither disputant became an EU member until 2004.[7]

Given EU's importance as one of the two most frequent disputants, I felt that it was not feasible to leave it out of the dataset, even when data were not immediately available for a particular variable. In these cases, I have either constructed the equivalent data for EU using data from its individual member states, or have followed other authors in assigning a particular score. Full details are available in Appendix A.

ONGOING AND LANGUISHING CASES

A large number of WTO disputes never proceed beyond the consultation stage. While most disputes overrun the supposed statutory maximum duration across each of their stages (Johannesson & Mavroidis, 2016), many of these consultations appear to have been abandoned after years or even decades and are "languishing". Several possible reasons for this phenomenon have been identified: many are actually settled in other forums (e.g. via regional trade agreements), or become redundant because of events exogenous to the DSB (e.g. sunset clauses on disputed measures). Other disputes may have been filed as vexatious litigation, or may not proceed because the costs of litigation outweigh the benefits. Aside from literature that specifically seeks to examine these cases (e.g. Reynolds, 2007), they are typically removed from the dataset or, more rarely, included in "early settlement" categories.

Where authors are studying complainants and proceeding on the assumption that continuing through the dispute settlement process is desirable, they reasonably file these as a form of "early settlement", because the complainant did not take the complaint as far as they would have wanted (e.g. Busch & Reinhardt, 2000).

The focus of this analysis is on respondents. I proceed from the assumption that early settlement is generally undesirable to respondents, so it would probably strengthen my results to treat *all* disputes

[7] WTO was notified of a MAS outcome in 2002.

that fail to reach a panel verdict as "early settlement", i.e. undesirable to respondents; and would definitely strengthen my results if I could then show that poorer countries were more likely to be the respondents in languishing disputes – which is in fact the case (see below).

Nevertheless, "languishing" is *not* necessarily an undesirable outcome for respondents. Disputes may languish due to factors that favour complainants (e.g. respondent settled early without WTO notification) or that favour respondents (e.g. complainant abandoned dispute because of cost), or due to factors that are hard to categorise in either direction (e.g. dispute is actually still ongoing; dispute became irrelevant due to exogenous factors). Additionally, even among disputes that have been studied, a considerable proportion languish for no known reason (Reynolds, 2007).[8]

Therefore, I have followed the more widespread precedent of removing all disputes that remain in consultations from my dataset (180 disputes), leaving only those where the outcome is clear. For similar reasons, I have also removed all unsettled disputes that remain at any panel stage prior to a panel ruling being issued (62 disputes). Finally, I have removed all disputes that ended because the panel's authority lapsed, as this is the result of the complainant asking to pause the process at the panel stage and not restarting it within 12 months, meaning that the dispute is "officially" abandoned by the complainant (15 disputes).

The effect of this on the proportions of complainant and respondent countries in the dataset is shown in Fig 1 using the five disputant groups introduced by Horn and Mavroidis (2011). Most proportions remain relatively unchanged, but notably the number of developing country defendants falls from 19% to 16%, indicating that a relatively large number of disputes languish in terms of overall disputes initiated against developing country respondents (a trend that merits future investigation).

[8] Some may be ongoing but near-dormant: DS83 was initiated in 1997, languished for four years, and was reported as resolved in 2001.

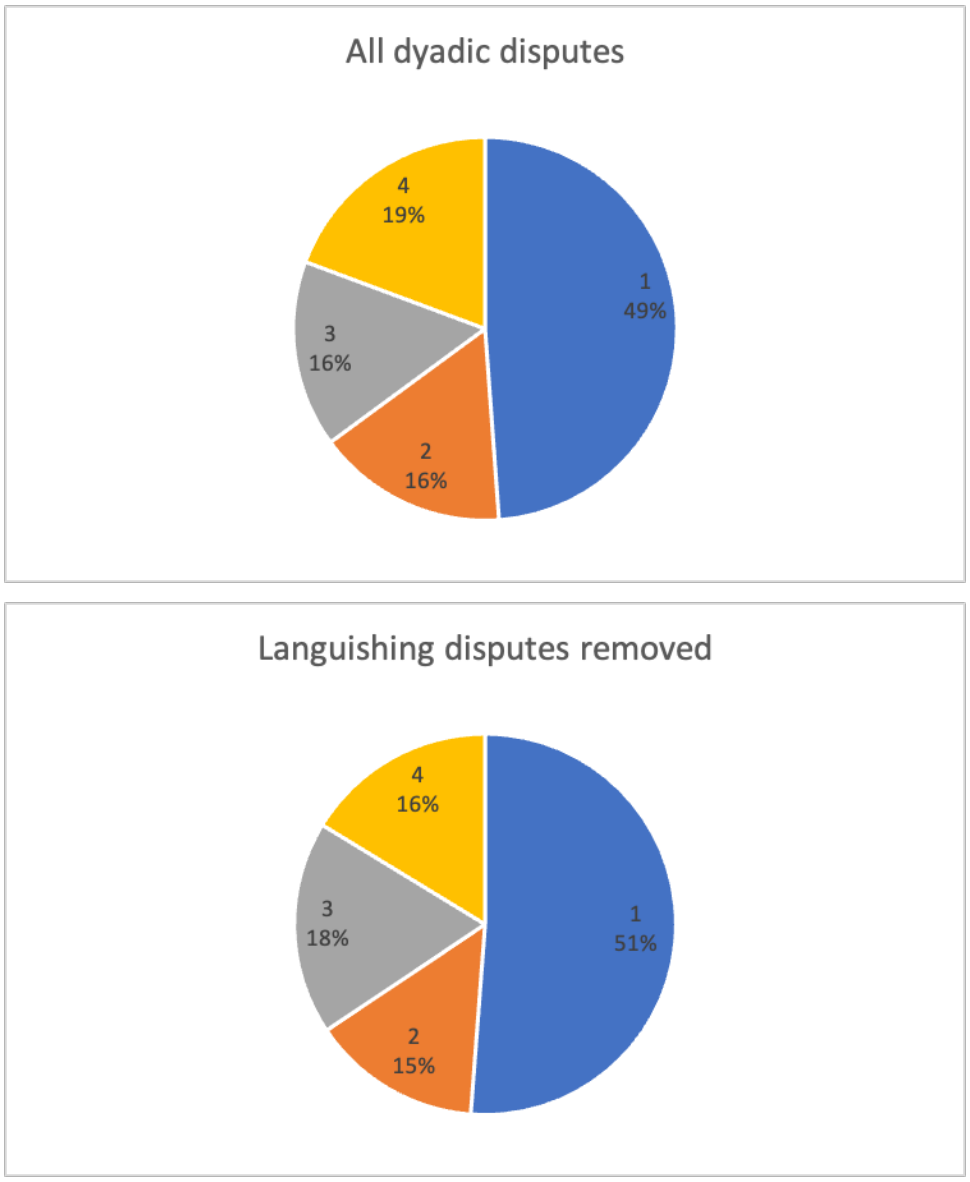

FIG 1: Effect of removal of languishing disputes on share of respondents by group.

OUTCOME VARIABLE: PROPENSITY TO SETTLE EARLY

I code disputes as "settled early" if a "MAS or other resolution" is notified to WTO at any of the stages prior to the issue of a panel ruling (i.e. during consultations; or at the stages where a panel has been requested, established, or composed, as long as the process does not ultimately reach the stage where a panel report is circulated). This is a binary outcome variable, so all of my models are run as probit regressions.

EXPLANATORY VARIABLES: DISPUTANT CHARACTERISTICS

My primary explanatory variables are the log of GDP per capita of the disputants in the year of initiation of the dispute. I hypothesise that respondents that are poorer on a per capita basis are more likely to settle disputes early, either through intimidation by richer, more powerful members, or through lack of legal capacity to defend cases. In other words, their disputes will be more subject to diplomatic dispute resolution and less subject to legal resolution.

GDP per capita is used in the literature as a proxy for both developing country status and for legal capacity (compare Busch & Reinhardt, 2003 with Guzman & Simmons, 2005). Regardless of whether this variable is taken to represent developing country status or legal capacity, I hypothesise that the effect of GDP per capita on early settlement will be negative and significant for defendants (more developed / more capable defendants are less likely to settle); and for complainants positive and/or insignificant. However, assuming that my primary hypothesis is true, I aim to then explore the mechanisms driving early settlement by poorer countries. To do this I use proxies for both power and legal capacity.

Explanatory variables for power are straightforward. I use the disputants' **LOG ABSOLUTE GDP**, representing a country's size and the importance of its market overall (available for all years). For robustness, I also use the alternative specification of a disputant's **TRADE DEPENDENCE** on the other party in the dyad, measured as the size of their exports to the dyadic opponent in the dispute's year of initiation relative to their absolute GDP. This represents the threat of losing market access to the other disputant, relative to the size of one's economy as a whole (available up to 2014).

For legal capacity, the typical proxies for legal capacity are a "least-worst" solution for reasons set out in Horn and Mavroidis (2007). Survey data from Busch et al. (2009) suggest that these proxies may correspond poorly to actual legal capacity.[9]

My model specification will be re-run with all of the typical legal capacity proxies for robustness, in addition to several extra proxies, as set out below:

[9] The results of their survey would provide better variables, but are unfortunately confidential.

TYPICAL PROXIES FOR LEGAL CAPACITY:

ICRG SCORE: A country's *International Country Risk Guide* "Bureaucratic Quality" indicator score (available for all years).

LOG NON-MILITARY SPENDING: The log of the country's expenditure at all levels of government on non-military purposes (available for all years).

SIZE OF GENEVA MISSION: The size of the country's UN delegation in Geneva from the UN Blue Book (available for 2021).

NUMBER OF EMBASSIES: The number of embassies, consulates and other diplomatic locations the country maintains abroad (available for 61 countries for 2019).

LESS-TYPICAL PROXIES FOR LEGAL CAPACITY:

EXPERIENCE: I use what I believe to be a novel proxy for experience at the DSB. My proxy captures the number of times that the disputant had previously been involved in a dispute as a *complainant*, as well as the number of times that the disputant had previously registered as a *third party at the panel stage* of a dispute, if that panel had been established prior to the initiation of the current dispute (available for all years).

While not as methodologically sophisticated as some other proxies (e.g. Conti, 2010), I believe that the use of *voluntary* involvement in the relevant stages of the WTO process (as a complainant or third party) should result in a good proxy for legal capacity in light of the established finding that legal capacity is a constraint on participation as a complainant – I would expect that increased participation therefore reflects increased legal capacity. In support of this idea, Brazil and China are known to have used third-party status to provide their staff with experience in the DSB process (Johannesson & Mavroidis, 2016; VanGrasstek, 2013).

ACWL: Whether the country is in disputant group 1,2,3 or 5[10] (see Appendix B), or are a developing country (Group 4) but also a member of the Advisory Centre on WTO Law (ACWL) at the time of the dispute (available for all years).

TRADE MISSION: Whether the country maintains a trade mission in Geneva (available for 2021).

In line with existing scholarship on complainants, I expect to find that legal capacity constraints cause weaker respondents to settle early, rather than the alternative: intimidation in the face of power.

CONTROL VARIABLES: DISPUTANT CHARACTERISTICS

As control variables I include the disputants' Polity V scores, as it is suggested that authoritarian respondents can more easily settle without worrying about domestic political consequences. If this is the case, an increase in a disputant's Polity V score should result in lower likelihood of settlement (available for all years).

I also include what I believe to be a novel control. The DSB has aspects of both common and civil law systems (VanGrasstek, 2013) and it's plausible that countries with one or the other system may have an inherent advantage. Therefore, I include whether or not a country has a tradition of common law as a control as well, although without a definite answer as to whether the DSB leans towards one or the other it is hard to predict the sign of any effect.

CONTROL VARIABLES: DISPUTE CHARACTERISTICS

As well as disputants, a number of variables relating to the character of different disputes have been suggested as influencing the chances of settlement. As I am studying disputants, I treat these as controls. These variables tend to rely on the nature of the agreements cited in the dispute. I therefore include dummies for whether the following agreements were cited: AoA (often used to represent "high

[10] LDCs (Group 5) are automatically entitled to the centre's services.

domestic political stakes"); SPS ("politically sensitive"); GATT ("granularity of dispute"). The first two controls I expect to decrease the chance of early settlement, as disputants should pursue sensitive and high stakes cases as far as possible, to demonstrate their commitment to domestic interest groups. The third should increase the chances of settlement, as disputes that involve tariffs can be settled more easily through a compromise versus cases which do not, which tend to have a "lumpier", "zero-sum" character, where one disputant must win and the other lose. I also follow Guzman and Simmons (2005) in including dummies for disputes that cite GATS or the WTO agreement itself, and for disputes concerning anti-dumping.

I also include a dummy for whether a dispute had multiple complainants, expecting this to reduce the chances of early settlement, as multiple parties must be satisfied simultaneously before a settlement can be achieved.

Finally, I include a control for disputes between the US and EU (in either direction), to ensure that my results are not driven by the largest and most frequent disputants.

DISPUTANT GROUPS

While not used in my main specification except in construction of the "ACWL" variable, the five disputant groups introduced by Horn and Mavroidis (2011) are used in the following section to give a broad overview of trends in dispute settlement. See Appendix B for a full list of countries by group.

DESCRIPTIVE STATISTICS

Descriptive statistics for all variables are available in Appendix C.

5. RESULTS AND DISCUSSION

Classifying disputants by group helps to provide a broad overview of the 375 dyadic disputes in the dataset, summarized in Table 1.

Table 1: disputes by complainant and respondent group

		Respondents					
		G2	**BRIC**	**IND**	**DEV**	**LDC**	**Total**
Complainants	**G2**	46 (12%)	35 (9%)	38 (10%)	22 (6%)	0 (0%)	**141 (38%)**
	BRIC	37 (10%)	1 (0%)	3 (1%)	3 (1%)	0 (0%)	**44 (12%)**
	IND	66 (18%)	14 (4%)	16 (4%)	13 (3%)	0 (0%)	**109 (29%)**
	DEV	43 (11%)	3 (1%)	11 (3%)	23 (6%)	0 (0%)	**80 (21%)**
	LDC	0 (0%)	1 (0%)	0 (0%)	0 (0%)	0 (0%)	**1 (0%)**
	Total	**192 (51%)**	**54 (14%)**	**68 (18%)**	**61 (16%)**	**0 (0%)**	**375 (100%)**

Of note is that the G2 (the EU and US) are respondents in a majority of cases (51%), while being a complainant in only 38%. The BRIC nations complain about and respond to the G2 about equally, and complain and respond very little with other groups, although they are targeted by the industrialised nations (OECD plus rich "developing" outliers) in 4% of cases. The lack of BRIC activity suggests strategic considerations may be at play. The LDCs are almost entirely unrepresented in WTO disputes, and the remaining category of "developing" countries – by far the largest and most diverse grouping, as Appendix B illustrates – complain in 21% of disputes and respond in 16%. As respondents, they find themselves in dispute predominantly with the G2 and with fellow developing nations. Overall then, in terms of groups, the G2 are "underrepresented" as complainants, compared to their rate of response, and the developing countries are "overrepresented". While simplistic, in some ways this overview is reassuring in terms of developing country participation, the major preoccupation of literature studying developing countries at the DSB – they in fact complain more than they respond.

Examining the tendency to settle cases early however, and the picture is somewhat different. In contrast to earlier work that found a majority of cases are settled early, after excluding ongoing and languishing cases, I find that almost exactly 25% of dyadic disputes are settled before a panel ruling. However, as Table 2 shows, there is divergence in tendency to settle between respondent groups.

Table 2: Early settlement by respondent group

Respondent	G2	BRIC	IND	DEV
Total disputes responded	192	54	68	61
Number settled early	45	14	16	19
Percentage settled early	**23%**	**26%**	**24%**	**31%**

The G2, BRIC and industrialised nations all settle between 23-26% of their disputes early, very close to the average. However, developing nations settle 31% of their disputes early, a markedly higher proportion.

I then check whether probit regressions support the hypothesis that less-developed respondents settle more. In Model 1, I first regress whether a dispute was settled early against complainant and respondent log GDP p/c. Models 2-4 introduce controls. Results for Models 1-4 are shown in Table 3.

As predicted, respondent log GDP p/c negatively affects tendency to settle disputes, and this finding is robust to controls, remaining significant at $p<0.01$. In other words, *less developed respondents are more likely to settle*. With all controls included, the marginal effect at the mean of a 1.00 percent decrease in respondent GDP p/c results in a 0.11 percentage point increase in the expected probability of settlement before a panel report is issued.

Furthermore, all the coefficients on *respondent* variables - both the explanatory variable and controls - are significant to at least $p<0.10$ and maintain the same sign and similar magnitude, whereas the corresponding coefficients on *complainant* variables vary in magnitude and are mostly insignificant, or only become significant after the introduction of controls, suggesting suppression effects.[11]

[11] The results for the dispute-related controls are interesting, but are not central to my main analysis. For reasons of space, I have moved discussion of these controls to Appendix E.

To explore the mechanism that drives this relationship, I then introduce measures of power and legal capacity, to test whether they can predict tendency to settle better than log GDP p/c. I retain log GDP p/c of disputants in my model specification, expecting to find that variables representing respondent power and legal capacity capture some of the coefficient of respondent log GDP p/c when introduced, making it weaker. Because of correlations between explanatory variables (see Appendix D), I introduce my power and legal capacity variables one-by-one in Models 5-13. Table 4 shows the results. All dispute-related controls were included in Model 5 and all subsequent specifications, but are not shown after Table 3 for reasons of space and legibility. See Appendix E for discussion of the results from dispute-related controls in Models 4-18.

Several unexpected results stand out.

The sign and magnitude of the coefficient on respondents' log GDP p/c remains roughly constant and at $p<0.01$ in all specifications, except when log non-military spending is introduced in Model 8.

One interpretation of Model 8 is that log non-military spending is the only good proxy for legal capacity; that it is capturing significance from the main explanatory variable; and that my original hypothesis was correct and Model 8 demonstrates that lack of respondent legal capacity is the mechanism for early settlement among less-developed countries. This seems implausible. I include log non-military spending as a proxy for legal capacity in keeping with previous authors, but Appendix D suggests that non-military spending may actually be a better proxy for power, given the high correlation between log absolute GDP (power proxy) and log non-military spending, which is >0.97 for both complainants and respondents. Despite this correlation, the results of Model 8 are strikingly different from those of Model 5. I ascribe this discrepancy to the loss of 50 observations from the dataset, mostly affecting industrialised (62% of missing observations) and developing countries (17% of missing observations). This lack of data availability biases the results towards the G2 and BRIC nations, who have higher absolute GDP. Therefore, I prefer to treat the Model 8 result as an artefact of selection bias on my explanatory variable, and disregard it.

Aside from Model 8, no variable representing respondent power or legal capacity reaches significance in any specification. It is possible that log GDP per capita is a better proxy for legal capacity than any

of my alternatives. However, with different outcome variables it is possible for legal capacity proxies to reach significance in the same specification as log GDP per capita (e.g. Guzman & Simmons, 2005).

Therefore, I accept the null hypothesis instead of either of my hypotheses to explain the mechanism through which respondent characteristics affect early settlement.

Before moving on, it is worth considering what the null hypothesis means in these circumstances: do less-developed respondents settle early simply "because they are less-developed" – but not because their lack of development represents a lack of power, or a lack of legal capacity? This is possible. It could be that less-developed countries genuinely are in breach of their WTO obligations more frequently, and willing to concede when breaches are identified. After all, less-developed countries had more policies to implement to comply with the Uruguay Round bargain, and fewer resources to implement them with.

In terms of disputant controls, whether a respondent has a common law system always remains negative (less likely to settle) and retains significance in two-thirds of specifications. This is not a very robust result, but could suggest that common law countries anticipate greater advantages at panel stage, or are more inclined to litigate and less likely to seek diplomatic solutions to disputes due to their own legal traditions.

A further striking result is that several coefficients on proxies for *complainant* power and legal capacity reach significance.

Both of my proxies for complainant power reach significance, but in opposite directions. The idea that complainant power could affect tendency to settle early is not implausible, although it goes against my prediction: because only a respondent can settle, I expected to find that respondent power would reduce the chances of settlement, i.e. that powerless respondents settle more. However, it could equally be the case that respondents settle more when faced with a powerful complainant. My variable for trade dependency on the dispute opponent does predict this relationship (Model 6). However, using absolute GDP instead (Model 5, my preferred specification) shows the opposite sign to the anticipated relationship.

What is still more surprising is that several proxies for complainant legal capacity reach significance at the $p<0.05$ and $p<0.01$ levels, including voluntary experience (Model 11), which I expect to be my strongest proxy for legal capacity, reflecting capacity already demonstrated at the DSB. As with power, the proxies for legal capacity also exhibit both positive and negative signs, but all of those that reach significance are negative. Taken at face value, this firstly runs against the prediction that complainant characteristics do not affect settlement, and secondly runs against the expectation that more capable complainants would prefer to settle more – the result that reach significance suggest that more capable complainants in fact settle *less*.

To clarify, I run five further specifications. While several of my explanatory variables are correlated, in Models 14-18 I use four variables for power and legal capacity that are correlated at a level <0.750; that contain observations for most of my dataset; and that all individually reach significance in Models 5-13: for "power", absolute GDP and trade dependence; for "legal capacity", voluntary experience and size of Geneva delegation. I run them in four power / legal capacity pairs, and then run all four simultaneously. Results are shown in Table 5.

Respondent log GDP p/c, my main explanatory variable, remains significant in all specifications at $p<0.01$, except for Model 18 in which it drops to $p<0.05$. The picture is more mixed for the complainant explanatory variables of interest. In terms of legal capacity, voluntary experience is significant at least to $p<0.10$ in all models in which it is included, and always reduces the chances of early settlement. Size of Geneva delegation never reaches significance, and the only power proxy to reach significance is trade dependence in Model 16, although it is not robust to alternative specifications. Therefore, I do not consider results for either proxy for complainant power to be robust and, between the two complainant legal capacity proxies studied in more detail, I only accept complainant voluntary experience as robust.

My interpretation of my results is as follows: *less-developed respondents* at the DSB settle earlier, but this is not due to either lack of power or lack of legal capacity. Rather, it is likely to be due to the *higher burden of compliance* placed on these countries by the Uruguay Round bargain.

More experienced complainants at the DSB settle less, but this may be due to their greater willingness to engage in litigation – voluntary participation at the DSB, in addition to reflecting a degree of *legal*

capacity, also necessarily reflects *greater willingness to use the DSB*, rather than alternative forms of dispute resolution.

Consideration of "willingness to use the DSB" raises an important point about the limitations of this analysis. While I hope to make a larger point about the structural disadvantages faced by developing countries in international courts such as the DSB, it is important to note that the disputes that reach the DSB are subject to acute selection bias and are very unlikely to be representative of all trade disputes between countries. As well as alternative forums for dispute resolution (such as mediation in bilateral trade agreements), disputants have a number of choices to make before a dispute reaches the DSB. They can settle disputes completely diplomatically on a bilateral level, without involving the WTO. They can also forgo the dispute settlement entirely, and instead make their issue the subject of ongoing trade negotiations (VanGrasstek, 2013). Even at the DSB, they can allow disputes to languish instead of pushing them forward.

Obvious signs of this selection bias are evident in the data presented at the beginning of this section. LDCs are almost entirely absent from the DSB. BRIC nations are very unlikely to only encounter trade disputes with the G2, and must be resolving their disputes in other forums. Therefore, this analysis is limited to the unavoidable disadvantages faced by developing countries when they participate in international dispute settlement mechanisms such as the DSB, but cannot speak more broadly to disadvantages faced in disputes under the multilateral trade regime as a whole.

Table 3

SettledEarly	(1)	(2)	(3)	(4)
Complainant variables				
LogGDPpc	-0.110	-0.159	**-0.225***	**-0.253****
	(0.088)	(0.098)	(0.118)	(0.128)
PolityV		**0.052***	0.044	0.029
		(0.027)	(0.027)	(0.028)
CommonLaw			0.248	0.075
			(0.199)	(0.219)
Respondent variables				
LogGDPpc	**-0.455*****	**-0.550*****	**-0.371*****	**-0.449*****
	(0.091)	(0.104)	(0.125)	(0.137)
PolityV		**0.040****	**0.043****	**0.043****
		(0.018)	(0.018)	(0.020)
CommonLaw			**-0.494****	**-0.461***
			(0.214)	(0.239)
Dispute variables				
MultipleComplainants				**-0.353***
				(0.186)
AoA				-0.064
				(0.236)
GATS				**0.547***
				(0.307)
GATT				**-0.920*****
				(0.208)
SPS				0.230
				(0.303)
TRIPS				0.017
				(0.332)
WTO				-0.467
				(0.353)
Anti-dumping				-0.394
				(0.258)
G2				**0.473***
				(0.275)
Constant	**4.944*****	**5.648*****	**4.624*****	**6.677*****
	(1.343)	(1.372)	(1.639)	(1.841)
Number of obs	**374**	**374**	**374**	**374**
Pseudo r-squared	0.061	0.087	0.105	0.216
Chi-square	25.921	36.827	44.460	91.023

*Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10*

Table 4

SettledEarly	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Complainant variables									
LogGDPpc	-0.081 (0.146)	-0.146 (0.144)	**-.0330*** (0.171)	-0.079 (0.179)	-0.124 (0.139)	-0.022 (0.167)	-0.106 (0.135)	-0.212 (0.133)	**-0.215*** (0.130)
LogAbsoluteGDP	**-0.134**** (0.054)								
TradeDependence		**0.004*** (0.003)							
ICRG			0.121 (0.171)						
LogNonMilitarySpending				**-0.166***** (0.056)					
GenevaDelegation					**-0.014**** (0.006)				
Embassies						**-0.004**** (0.002)			
VoluntaryExperience							**-0.005***** (0.002)		
ACWL								-0.366 (0.277)	
TradeMission									0.398 (0.284)
PolityV	0.028 (0.029)	-0.002 (0.032)	0.020 (0.030)	0.037 (0.036)	0.026 (0.030)	0.034 (0.041)	0.038 (0.029)	0.030 (0.028)	0.028 (0.028)
CommonLaw	0.092 (0.222)	0.058 (0.232)	-0.002 (0.224)	0.059 (0.238)	0.234 (0.231)	-0.005 (0.235)	0.023 (0.223)	0.098 (0.224)	-0.033 (0.228)

Respondent variables									
LogGDPpc	**-0.444*** **	**-0.501*** **	**-0.576*** **	-0.287	**-0.449*** **	**-0.512*** **	**-0.472*** **	**-0.467*** **	**-0.412*** **
	(0.161)	(0.147)	(0.171)	(0.194)	(0.154)	(0.175)	(0.151)	(0.139)	(0.138)
LogAbsoluteGDP	-0.024								
	(0.059)								
TradeDependence		-0.008							
		(0.005)							
ICRG			0.235						
			(0.159)						
LogNonMilitarySpending				**-0.124***					
				(0.071)					
GenevaDelegation					-0.002				
					(0.006)				
Embassies						0.000			
						(0.002)			
VoluntaryExperience							0.001		
							(0.001)		
ACWL								0.043	
								(0.271)	
TradeMission									0.291
									(0.224)
PolityV	0.034	0.033	0.029	0.024	0.035	0.041	0.023	**0.042** **	**0.043** **
	(0.021)	(0.022)	(0.023)	(0.022)	(0.024)	(0.025)	(0.021)	(0.020)	(0.020)
CommonLaw	-0.387	**-0.549** **	**-0.556** **	**-0.500***	**-0.430***	-0.200	**-0.458***	-0.422	**-0.56** **
	(0.243)	(0.255)	(0.247)	(0.269)	(0.254)	(0.260)	(0.241)	(0.243)	(0.251)
Constant	**9.452*** **	**6.700*** **	**7.758*** **	**11.437*** **	**5.876*** **	**5.595*** **	**5.845*** **	**6.694*** **	**5.401*** **
	(2.229)	(1.997)	(1.965)	(2.448)	(1.896)	(2.13)	(1.924)	(1.851)	(1.952)
Number of obs	**373**	**342**	**374**	**325**	**374**	**319**	**374**	**374**	**374**
Pseudo r-squared	0.231	0.224	0.223	0.270	0.229	0.247	0.238	0.220	0.225
Chi-square	97.468	90.052	94.141	101.557	96.623	82.920	100.533	92.762	94.693

*Standard errors in parentheses. Dispute variables (**MultipleComplainants, AoA, GATS, GATT, SPS, TRIPS, WTO, Anti-dumping, G2**) were included in specification but are not shown for reasons of space and clarity. *** p<0.01, ** p<0.05, * p<0.10*

Table 5

SettledEarly	(14)	(15)	(16)	(17)	(18)
Complainant variables					
LogGDPpc	-0.070	-0.047	-0.026	-0.039	0.068
	(0.146)	(0.162)	(0.147)	(0.151)	(0.176)
LogAbsoluteGDP	-0.096		-0.088		-0.067
	(0.074)		(0.059)		(0.082)
TradeDependence		0.003		**0.005***	0.004
		(0.003)		(0.003)	(0.003)
GenevaDelegation	-0.006	-0.010			-0.002
	(0.008)	(0.007)			(0.009)
VoluntaryExperience			**-0.004****	**-0.004****	**-0.003***
			(0.002)	(0.002)	(0.002)
PolityV	0.027	-0.012	0.039	0.003	-0.006
	(0.030)	(0.035)	(0.030)	(0.034)	(0.036)
CommonLaw	0.161	0.186	0.053	-0.020	0.049
	(0.239)	(0.247)	(0.225)	(0.236)	(0.259)
Respondent variables					
LogGDPp/c	**-0.448*****	**-0.463*****	**-0.435*****	**-0.491*****	**-0.412****
	(0.165)	(0.163)	(0.165)	(0.159)	(0.180)
LogAbsoluteGDP	-0.030		-0.034		-0.078
	(0.067)		(0.064)		(0.075)
TradeDependence		-0.006		-0.005	-0.005
		(0.005)		(0.005)	(0.005)
GenevaDelegation	0.001	-0.004			0.002
	(0.007)	(0.007)			(0.008)
VoluntaryExperience			0.001	0.001	0.001
			(0.002)	(0.002)	(0.002)
PolityV	0.036	0.024	0.019	0.017	0.012
	(0.024)	(0.026)	(0.022)	(0.023)	(0.027)
CommonLaw	-0.421	**-0.467***	**-0.412***	**-0.559****	**-0.554****
	(0.263)	(0.270)	(0.245)	(0.258)	(0.281)
Constant	**8.614*****	**5.807*****	**8.116*****	**5.889*****	**8.193*****
	(2.790)	(2.072)	(2.377)	(2.061)	(2.994)
Number of obs	**373**	**342**	**373**	**342**	**342**
Pseudo r-squared	0.233	0.231	0.245	0.241	0.250
Chi-square	98.141	92.731	103.162	96.881	100.407

*Standard errors in parentheses. Dispute variables (**MultipleComplainants, AoA, GATS, GATT, SPS, TRIPS, WTO, Anti-dumping, G2**) were included in specification but are not shown for reasons of space and clarity. *** p<0.01, ** p<0.05, * p<0.10*

6. CONCLUSIONS

In seeking to understand whether a legalized system of international relations provides justice to weaker parties such as developing countries, this analysis centres the respondent: in other words, the party that is powerless to choose whether or not to participate. Drawing together earlier work that shows how the US designed the current WTO dispute settlement system to produce rapid diplomatic solutions rather than litigation, and empirical findings that diplomatic solutions favour the complainant, my own analysis shows that less-developed respondents are more likely to settle early via diplomacy than proceed to litigation. The implication is that these respondents are more vulnerable to the complainant-favouring design of dispute settlement under the WTO.

Exploring the mechanisms behind this, I find that neither lack of power nor lack of legal capacity adequately explain the tendency for early settlement on the part of less-developed respondents. I accept the null hypothesis, and my interpretation is that less-developed respondents settle early because they face a greater number of claims with merit that they expect to lose at panel stage. If so, this result should not be taken as a vindication of the system: an increase in valid claims is likely to be a result of the number of obligations that developing countries had to accept under the Uruguay Round bargain to continue participating in the multilateral trade regime.

These results open several avenues for further investigation. Firstly, an econometric analysis may be possible, comparing the number of developing country respondents under the GATT 1947 regime and the WTO regime, to help to understand whether there is a discrepancy due to increased obligations.

On the other hand, I suspect that a purely econometric analysis may fall short, because of the difficulties of comparing the two regimes, and the fact that it is necessarily an indirect, macro-scale approach. Instead, a more useful line of investigation could be to individually examine disputes settled early through the lens of legal scholarship, and combine this with an analysis of the political economy that underlies the policy result of the dispute. This would help to show whether the disputes were settled because the complaints had merit (this would require legal expertise and cannot be assessed through the findings of the panel, as by definition these disputes are settled before a panel report is

issued); whether they resulted in policy changes as expected; and whether or not the policies under dispute related to new, "trade-related" compliance obligations arising from the Uruguay Round.

Another important avenue for future research in this area involves languishing disputes, and why so many complaints are opened against developing country WTO members and then abandoned. It would be instructive to trace the policy results of these disputes and understand whether opening consultations against a developing country respondent was enough to force compliance and, if so, why no result was notified to the WTO.

It would also be helpful to explore the two obvious missing categories of disputants: LDCs, and the BRIC nations. It may be that lack of LDC activity at the DSB represents lack of importance to the multilateral trade regime, but this cannot be the case for the BRIC nations. If they are not using the DSB to settle disputes with any party except the G2, then where are these disputes taking place instead; and what implications – positive or negative – could that have for the disputants?

Finally, I should note that my analysis should not be taken to suggest that weaker parties at the WTO are irrational for participating in a system that does not produce fair outcomes. The Uruguay Round bargain was just that, a bargain, and it was perhaps inevitable that it would favour the stronger parties that negotiated it (Stone, 2011). Weaker nations may choose to participate in the existing multilateral trading regime as it is the least-worst option available, and it is notable that developing countries continue to join the WTO, rather than leave it. If anything, the undermining of the DSB's appellate body under the Trump and Biden administrations suggests that the US may now feel that dispute settlement favours weaker parties too effectively, and is not working sufficiently in US interests (Pauwelyn, 2019).

Instead, my hope is that this analysis helps to clarify the costs of participation that developing countries agree to take on in exchange for the benefits that they expect to receive through greater access to wealthier markets. The possibility of attack from another country through the DSB should be seen as one of these costs, and a cost that falls most heavily on developing countries.

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APPENDIX A: DATA SOURCES AND PROCESSING

DATASET

WTO dispute data from:
WTO dates of key stages
https://www.wto.org/english/tratop_e/dispu_e/dates_of_key_stages_e.xlsx

WTO current dispute status
https://www.wto.org/english/tratop_e/dispu_e/dispu_current_status_e.htm

EU member states and date of membership from:
Europa: About the EU
https://europa.eu/european-union/about-eu/countries_en#tab-0-1

(Disputes were broken into complainant-respondent dyads (647 dyads); all contemporary EU member state disputants at the time of dispute initiation were coded as EU; resolutions were ross-checked with current dispute status to identify resolved disputes; repetitions were removed (4 repetitions); disputes that were languishing/ongoing at any stage prior to a panel ruling were removed (242 disputes); disputes in which panel authority lapsed were removed (15 disputes). Final dataset consisted of 375 dyads.)

All further variables were added to main dataset after names of WTO member were aligned.

OUTCOME VARIABLE: PROPENSITY TO SETTLE EARLY

Dummy = 1 if a "MAS or other" resolution notified to WTO in a dyadic dispute within the above dataset if no panel ruling had been issued in that dyadic dispute.

EXPLANATORY VARIABLES: DISPUTANT CHARACTERISTICS

All values for the "year of dispute" use the year of dispute initiation. Except for DS32 and DS33, this is the year the request for consultations took place. DS32 and DS33 were referred from the Textile

Monitoring Body, and the year of initiation is taken as 1996 when request for panel establishment took place.

Disputant log GDP p/c 1995 - 2018 from:
Madison project database 2020
https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020
(EU GDP p/c calculated as total GDP of contemporary member states in a given year divided by total population of contemporary member states in a given year.)

Absolute GDP 1995 - 2018 from:
IMF World Economic Outlook (WEO)
https://www.imf.org/en/Publications/WEO/weo-database/2021/April/download-entire-database
(Current GDP in USD for given year divided by deflator for given year, deflators baselined to 2019. EU GDP calculated as total of absolute GDP values of contemporary member states in a given year.)

Trade dependence 1995 - 2014 from:
Barbieri, Katherine and Omar M. G. Omar Keshk. 2016. Correlates of War Project Trade Data Set Codebook, Version 4.0.
https://correlatesofwar.org/data-sets/bilateral-trade
(Smoothed values for total exports to opponent disputant in dyad for given year divided by absolute GDP as above for given year. EU bilateral trade values for a given partner calculated as sum of contemporary member state trade values with that partner for a given year, divided by EU absolute GDP as above.)

ICRG 1995 – 2018 from:
PRS Group proprietary data, accessed via LSE Library.

Log non-military spending 1995- 2018 from:
SIPRI Military expenditure database
https://www.sipri.org/databases/milex
(Total governmental spending as a percentage of GDP for given year from IMF WEO dataset as above, using absolute GDP values for given year to give absolute figures for spending. Military spending as a percentage of total spending for given year from SIPRI, used to calculate absolute military spending for given year, which was subtracted from absolute government spending for given year. EU values calculated as sum of contemporary member state values for a given year.)

Size of Geneva mission 2021 from:
https://www.ungeneva.org/sites/default/files/blue-book/pdf/blue-book.pdf
(Delegates counted manually.)

Number of embassies 2019 from:
Lowy Institute Global Diplomacy Index 2019
https://globaldiplomacyindex.lowyinstitute.org/country_rank.html#
(EU assigned maximum value of an individual member state, i.e. France.)

Voluntary Experience 1995 – 2018 from:
WTO Dispute Settlement and Case Law Project: WTO Dispute Settlement Dataset 2020
https://globalgovernanceprogramme.eui.eu/research-project/wto-case-law-project/
(Calculated from number of times disputant had been a complainant in a numerically earlier dispute, plus number of times disputant had been a third party in a chronologically earlier panel, using data on third parties from WTO Dispute Settlement and Case Law Project.)

ACWL 1995 – 2018 from:
ACWL
https://www.acwl.ch/members-introduction/
(Dummy = 1 if disputant was a member of G2, BRIC, IND – who presumably do not need ACWL services – or LDC group – who receive ACWL services automatically – or if disputant was a member of DEV group and also an ACWL member at dispute initiation, using date of membership.)

Trade mission 2021 from:
https://www.eda.admin.ch/dam/mission-onu-omc-aele-geneve/fr/documents/Liste-MP-OMC-Del-OI.pdf
(Trade missions counted manually.)

CONTROL VARIABLES: DISPUTANT CHARACTERISTICS

Polity V scores 1995 – 2018 from:
Centre for Systemic Peace / INSCR data page
http://www.systemicpeace.org/inscrdata.html
(Using revised combined Polity score. EU given value of 9.0 for all years, following Guzman and Simmons, 2002.)

Disputant legal system from:
JuriGlobe Alphabetical Index of the 192 United Nations Member States and Corresponding Legal Systems
http://www.juriglobe.ca/eng/syst-onu/index-alpha.php
(EU counted as having a mixed system with common law and civil law traditions.)

CONTROL VARIABLES: DISPUTE CHARACTERISTICS

AoA, SPS, GATS, GATT, WTO, Anti-dumping per dispute from:
WTO Dispute Settlement and Case Law Project, *as above*

Multiple complainants:
(Dummy = 1 if dispute in original dataset had multiple complainants.)

G2:
(Dummy = 1 if disputants in original dataset were EU-US dyad or US-EU dyad.)

APPENDIX B: WTO members by group, from Johannesson and Mavroidis, 2016.

WTO Member	Group	Group Name
EU	1	G2
Austria	1	G2
Belgium	1	G2
Croatia	1	G2
Czech Republic	1	G2
Denmark	1	G2
France	1	G2
Germany	1	G2
Greece	1	G2
Hungary	1	G2
Ireland	1	G2
Italy	1	G2
Lithuania	1	G2
Netherlands	1	G2
Poland	1	G2
Portugal	1	G2
Romania	1	G2
Slovakia	1	G2
Spain	1	G2
Sweden	1	G2
United Kingdom	1	G2
US	1	G2
Brazil	2	BRIC
China	2	BRIC
India	2	BRIC
Russia	2	BRIC
Australia	3	IND
Canada	3	IND
Chinese Taipei	3	IND
Hong Kong	3	IND
Iceland	3	IND
Israel	3	IND
Japan	3	IND
Korea	3	IND
Liechtenstein	3	IND
Mexico	3	IND
New Zealand	3	IND
Norway	3	IND
Singapore	3	IND
Switzerland	3	IND
Turkey	3	IND
Albania	4	DEV
Antigua and Barbuda	4	DEV
Argentina	4	DEV
Armenia	4	DEV
Bahrain	4	DEV
Barbados	4	DEV
Belize	4	DEV
Bolivia	4	DEV

Botswana	4	DEV
Brunei Darussalam	4	DEV
Cabo Verde	4	DEV
Cameroon	4	DEV
Chile	4	DEV
Colombia	4	DEV
Congo	4	DEV
Costa Rica	4	DEV
Côte d'Ivoire	4	DEV
Cuba	4	DEV
Dominica	4	DEV
Dominican Republic	4	DEV
Ecuador	4	DEV
Egypt	4	DEV
El Salvador	4	DEV
Eswatini	4	DEV
Fiji	4	DEV
Gabon	4	DEV
Georgia	4	DEV
Ghana	4	DEV
Grenada	4	DEV
Guatemala	4	DEV
Guyana	4	DEV
Honduras	4	DEV
Indonesia	4	DEV
Jamaica	4	DEV
Jordan	4	DEV
Kazakhstan	4	DEV
Kenya	4	DEV
Kuwait	4	DEV
Kyrgyz Republic	4	DEV
Macao	4	DEV
Malaysia	4	DEV
Maldives	4	DEV
Mauritius	4	DEV
Moldova	4	DEV
Mongolia	4	DEV
Montenegro	4	DEV
Morocco	4	DEV
Namibia	4	DEV
Nicaragua	4	DEV
Nigeria	4	DEV
North Macedonia	4	DEV
Oman	4	DEV
Pakistan	4	DEV
Panama	4	DEV
Papua New Guinea	4	DEV
Paraguay	4	DEV
Peru	4	DEV
Philippines	4	DEV
Qatar	4	DEV
Saint Kitts and Nevis	4	DEV
Saint Lucia	4	DEV
Saint Vincent & the Grenadines	4	DEV

Samoa	4	DEV
Saudi Arabia	4	DEV
Seychelles	4	DEV
South Africa	4	DEV
Sri Lanka	4	DEV
Suriname	4	DEV
Tajikistan	4	DEV
Thailand	4	DEV
Tonga	4	DEV
Trinidad and Tobago	4	DEV
Tunisia	4	DEV
Ukraine	4	DEV
UAE	4	DEV
Uruguay	4	DEV
Venezuela	4	DEV
Viet Nam	4	DEV
Zimbabwe	4	DEV
Afghanistan	5	LDC
Angola	5	LDC
Bangladesh	5	LDC
Benin	5	LDC
Burkina Faso	5	LDC
Burundi	5	LDC
Cambodia	5	LDC
Central African Republic	5	LDC
Chad	5	LDC
Congo, Dem. Rep. of	5	LDC
Djibouti	5	LDC
Gambia	5	LDC
Guinea	5	LDC
Guinea-Bissau	5	LDC
Haiti	5	LDC
Lao	5	LDC
Lesotho	5	LDC
Liberia	5	LDC
Madagascar	5	LDC
Malawi	5	LDC
Mali	5	LDC
Mauritania	5	LDC
Mozambique	5	LDC
Myanmar	5	LDC
Nepal	5	LDC
Niger	5	LDC
Rwanda	5	LDC
Senegal	5	LDC
Sierra Leone	5	LDC
Solomon Islands	5	LDC
Tanzania	5	LDC
Togo	5	LDC
Uganda	5	LDC
Vanuatu	5	LDC
Yemen	5	LDC
Zambia	5	LDC

APPENDIX C: Descriptive statistics for complainant and respondent variables

Descriptive Statistics: Complainant variables

Variable	Obs	Mean	Std. Dev.	Min	Max
SettledEarly	375	.251	.434	0	1
LogGDPpc	374	9.958	.828	7.503	11.943
LogAbsoluteGDP	374	28.41	1.99	20.847	34.674
TradeDependence	343	20.311	38.941	0	213.978
ICRG	374	3.279	.924	1	4
LogNonMilitarySpending	350	27.307	2.111	21.938	29.907
GenevaDelegation	375	30.552	19.004	0	71
Embassies	336	208.887	66.933	50	276
VoluntaryExperience	375	80.725	78.061	0	249
ACWL	375	.885	.319	0	1
TradeMission	375	.827	.379	0	1
Polity5	374	7.906	4.076	-10	10
CommonLaw	375	.336	.473	0	1

Descriptive Statistics: Respondent variables

Variable	Obs	Mean	Std. Dev.	Min	Max
SettledEarly	375	.251	.434	0	1
LogGDPpc	375	10.014	.786	7.814	10.921
LogAbsoluteGDP	375	29.093	1.653	24.025	34.674
TradeDependence	344	12.132	24.532	0	201.385
ICRG	375	3.342	.897	1	4
LogNonMilitarySpending	350	28.021	1.712	22.082	29.907
GenevaDelegation	375	35.285	18.41	6	71
Embassies	349	227.748	59.609	81	276
VoluntaryExperience	375	95.293	84.403	0	250
ACWL	375	.901	.299	0	1
TradeMission	375	.832	.374	0	1
Polity5	375	7.467	4.818	-10	10
CommonLaw	375	.365	.482	0	1

APPENDIX D: Correlations between complainant variables and between respondent variables

Matrix of correlations: Complainant variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) SettledEarly	**1.000**												
(2) LogGDPpc	0.033	**1.000**											
(3) LogAbsoluteGDP	-0.074	0.473	**1.000**										
(4) TradeDependence	-0.097	0.050	-0.260	**1.000**									
(5) ICRG	0.080	**0.790**	0.414	-0.010	**1.000**								
(6) LogNonMilitarySpending	-0.082	0.539	**0.986**	-0.233	0.493	**1.000**							
(7) GenevaDelegation	-0.038	0.486	**0.740**	-0.157	0.361	0.705	**1.000**						
(8) Embassies	-0.058	0.399	**0.941**	-0.303	0.354	**0.928**	**0.814**	**1.000**					
(9) VoluntaryExperience	-0.172	0.301	0.402	0.060	0.243	0.431	0.272	0.368	**1.000**				
(10) ACWL	-0.050	0.274	0.336	0.051	0.300	0.381	0.361	0.354	0.220	**1.000**			
(11) TradeMission	0.120	0.125	0.053	0.038	0.130	0.079	-0.107	0.095	0.082	0.178	**1.000**		
(12) Polity5	0.092	0.483	0.129	-0.130	0.615	0.195	0.017	0.066	0.072	0.062	0.031	**1.000**	
(13) CommonLaw	0.107	0.574	0.180	0.080	0.513	0.190	0.385	0.118	0.032	0.232	0.284	0.358	**1.000**

Matrix of correlations: Respondent variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) SettledEarly	**1.000**												
(2) LogGDPpc	-0.249	**1.000**											
(3) LogAbsoluteGDP	-0.268	0.572	**1.000**										
(4) TradeDependence	-0.047	-0.139	-0.245	**1.000**									
(5) ICRG	-0.092	**0.773**	0.428	-0.215	**1.000**								
(6) LogNonMilitarySpending	-0.237	0.642	**0.979**	-0.257	0.531	**1.000**							
(7) GenevaDelegation	-0.245	0.441	0.632	0.005	0.160	0.566	**1.000**						
(8) Embassies	-0.168	0.464	**0.868**	-0.170	0.323	**0.857**	**0.798**	**1.000**					
(9) VoluntaryExperience	-0.263	0.413	0.492	-0.086	0.271	0.495	0.387	0.466	**1.000**				
(10) ACWL	-0.055	0.306	0.274	0.029	0.361	0.339	0.434	0.491	0.309	**1.000**			
(11) TradeMission	0.023	0.158	0.070	0.064	0.236	0.123	0.147	0.292	0.291	0.545	**1.000**		
(12) Polity5	0.011	0.525	0.050	-0.256	**0.742**	0.158	-0.186	-0.071	0.050	0.128	0.064	**1.000**	
(13) CommonLaw	-0.256	0.655	0.249	-0.019	0.526	0.236	0.466	0.181	0.271	0.258	0.278	0.390	**1.000**

Correlations>|0.700| given in **bold**

APPENDIX E: DISPUTE CONTROLS AND THE GATT AGREEMENT

I include dispute controls in all specifications from Model 4 onward (in Tables 4 and 5 they are omitted for legibility), although only the control for the GATT agreement is robust to inclusion or exclusion of disputant explanatory variables and consistently reaches significance. My GATT variable reaches significance at $p<0.01$ in almost every specification, but is always strongly negative, indicating that disputes which cite GATT are less likely to be settled early. This diverges from my hypothesis, based on the work of Guzman and Simmons (2005), which predicts that – at least under some political conditions – more granular disputes over tariffs should be easier to settle via compromise and side-payments. I ascribe this divergence firstly to the lack of sophistication of my control. Guzman and Simmons (2005), in examining respondent choice, simply include the trade agreements cited in their dispute-level controls, exactly as I do. However, in their earlier paper (2002) looking at trade agreement "lumpiness", they code every dispute at the DSB as either continuous or discontinuous, based on a wide-range of factors. Therefore, it seems likely that my "GATT" control is not a good proxy for "continuous-ness" in the sense of their 2002 paper.

This still leaves open the interesting question of why disputes citing the GATT are less likely to settle. Of my 375 dyadic disputes, 306 cite the GATT (82%). Given that only 25% of disputes are settled early, this implies that a high proportion of disputes that are settled early fall in the 19% of disputes that do not cite the GATT. This could be due to a particular characteristic shared by these disputes – perhaps a diplomatic solution is preferred by all parties in unusual disputes that deal with more obscure WTO issues – or it could simply be an artefact of my dataset – it is likely that there is significant overlap between my "usual dispute" (one of the 81% in which GATT is cited) and my "usual result" (one of the 75% that is not settled early). The correlation between my outcome variable and the GATT variable is 0.313, implying that the correlation between GATT and the tendency to settle is 0.687.