


# Developing Countries as Plaintiffs and Defendants in GATT/WTO Trade Disputes

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## 1. INTRODUCTION

 OVER the last 55 years, developing countries have increasingly participated in the formal institutions of the GATT/WTO system. The GATT era began in 1947 with 23 Contracting Parties – 12 of which might be classified as developing<sup>1</sup> countries – and the WTO now boasts a membership of over 140 and is growing. Of the current WTO membership, over 70 per cent are developing or transition economies, including 30 countries the United Nations has designated as *least developed countries* (WTO, 2003).<sup>2</sup>

The broad purpose of this paper is to address the issue of developing country participation in the formal *dispute settlement procedures* of the GATT/WTO system. Why is an understanding of the developing countries' trade dispute experience important? First, developing countries were greater participants in the Uruguay Round (UR) negotiations than in any earlier multilateral negotiating round. Thus, the expectation at the end of the UR was that developing country trade policies would be subject to greater GATT/WTO discipline than had previously been the case, and, in return, developing countries had greater expectations regarding liberalisation by industrialised trading partners in sectors critical to developing country export interests. As Petersmann (1997, p. 202)

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<sup>1</sup> These countries included Brazil, Chile, Czechoslovak Republic, Cuba, India, Lebanon, Myanmar, Pakistan, South Africa, Sri Lanka, Syria and Zimbabwe. This does not include China, which was also a founding Contracting Party to the GATT.

<sup>2</sup> Srinivasan (2000) provides a thorough history of developing country participation under first the GATT and now the WTO.

notes, the early evidence under the WTO's new Dispute Settlement Understanding (DSU) suggested that developing countries had increased the rate at which they were initiating disputes, thus signalling that they were increasingly willing to stand up for their market access rights. Developing countries were therefore at least initially optimistic that the WTO's dispute settlement provisions would be more successful than the GATT predecessor in responding to their needs.

Furthermore, an analysis of the issues involved in developing country trade disputes can shed light on some very important issues. Jackson (1997) and others have noted, for example, that the new dispute settlement system under the WTO is more 'rules-oriented' relative to the 'power-oriented' system of the GATT.<sup>3</sup> Thus, if the dispute settlement system is sufficiently 'legalised' so as not to generate barriers to the *initiation* of disputes, merely analysing the make-up of the caseload involving developing countries can reveal information on the success of both developing and non-developing national governments in implementing their Uruguay Round trade liberalisation commitments.<sup>4</sup>

Nevertheless, in spite of the more rules-oriented provisions, economists have conjectured that *compliance* with GATT/WTO rulings is still dependent on 'power' relationships, given that the agreements are self-enforcing and the threat of bilateral retaliation is the underlying means of compensation in dispute settlement negotiations. While the system may now be able to prevent countries from unilaterally impeding the initiation or legal progress of a particular dispute, there are still no fines, jails or explicit retaliatory measures imposable by a party other than the plaintiff. Thus, economic theory suggests that if a plaintiff desires compensation for a defendant's refusal to abide by its GATT/WTO obligations, it must have the capacity to make its own bilateral retaliatory threats to obtain that compensation.

A natural way to investigate the impact of the rules-oriented approach to dispute resolution is to focus on cases involving developing country plaintiffs, as these are countries that might find it difficult to threaten the retaliation necessary under a power-oriented system. This point is captured best by Dam (1970, p. 368) who remarked that under the GATT:

... even retaliation itself may prove to be a relatively weak sanction when the injured contracting party is not a major customer for a major product of the offending contracting party. Many less-developed countries have felt powerless to influence the restrictive commercial policies of developed countries because they did not consume enough of any of the latter's exports.

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<sup>3</sup> See also Petersmann (1997) and Trebilcock and Howse (1999).

<sup>4</sup> However, developing countries may still be hesitant to bring formal complaints against trading partners on whom they are reliant for bilateral aid or other assistance. We will return to this issue in our empirical discussion in Section 3 below.

On the other hand, given the ‘special provisions’ available to developing countries in dispute settlement activity (Petersmann, 1997, pp. 203–4), we might expect the threat of retaliation not to play a significant role when they are plaintiffs. Perhaps industrialised countries take into account the ‘special’ conditions facing developing countries in dispute settlement and do not rely on the usual power relationships that typically factor into the trade liberalisation negotiations.

What does the evidence show? Does ‘power’ affect the economic success of GATT/WTO trade disputes involving developing countries? To address this question, we move beyond consideration of the *initiation* of trade disputes involving developing countries and provide an initial assessment of the *economic resolution* of these disputes. While we are not the first to discuss developing country participation in GATT/WTO dispute settlement provisions, we know of no other work that uses trade data to provide even a basic empirical assessment of the economic performance of the system relating to developing country cases, let alone a data-driven analysis to explain this performance.<sup>5</sup> We take a first step in that direction here.

We provide evidence to empirically confirm the prior speculation that developing country plaintiffs have had *more* economic success in resolving trade disputes under the WTO than was the case under the GATT. Given the UR’s major institutional reforms, it is tempting to attribute this to the ‘legalisation’ of the dispute settlement provisions. We investigate this question by using the approach developed in Bown (forthcoming, a) and focusing on a sample of dispute settlement data in which developing countries are the plaintiffs. We present evidence that retaliation threats influence the economic outcomes of disputes, which suggests that a causal link between ‘legalisation’ and the economic success to dispute resolution may be premature. In fact, we investigate an alternative hypothesis that the change in the success rate may actually be attributable to a change in dispute initiation strategy on the part of developing country plaintiffs. We find evidence that developing country plaintiffs are choosing to face defendants under the WTO that are different from their GATT counterparts – the WTO defendants are revealed by the data to be more susceptible to retaliation threats. This suggests that developing countries are recognising and responding to the economic incentives and constraints under the current GATT/WTO rules, i.e., that retaliation threats matter, and they are becoming more successful participants in the dispute settlement system because they have better concentrated their dispute

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<sup>5</sup> Busch and Reinhardt (forthcoming) address some of the questions under consideration here, but they focus on the legal outcomes of the disputes, as opposed to the resulting impact on trade in the disputed sector under consideration. We discuss the implications of their approach in more detail below.

settlement resources where they can obtain results.<sup>6</sup> Finally, we also provide evidence that guilty determinations by dispute settlement panels under the GATT/WTO increase the likelihood (and size) of trade gains. We discuss how this result may contrast with the findings of prominent scholars in the political science literature on dispute settlement.

The rest of the paper proceeds as follows. In Section 2 we provide a brief summary of the relevant Uruguay Round reforms affecting the primary developing country interests and the GATT/WTO dispute settlement provisions, as well as a discussion of developing country participation in GATT/WTO dispute settlement activity. In Section 3 we provide evidence relating to the economic performance of developing country plaintiffs and defendants, and then we describe how these results relate to other recent empirical work in the economics and political science literature which focuses on trade policy decisions and GATT/WTO dispute settlement. Section 4 concludes.

## 2. THE URUGUAY ROUND REFORMS REVISITED

In this section we discuss the fundamental UR reforms that were expected to affect developing country participation and performance in GATT/WTO dispute settlement. First we consider the market access commitments and traded sectors that were expected to be of greatest concern to developing countries following the conclusion of the UR, before turning to a discussion of reforms of the dispute settlement procedures and the implications for involvement in trade disputes.

### *a. Developing Country Market Access Interests Impacted by Uruguay Round Reforms*

Before diving in to a discussion of the trade dispute activity of developing countries, we revisit the immediate, post-UR commentary that we might expect to foreshadow WTO trade dispute settlement activity involving developing countries. For this task we return to the insight of Hamilton and Whalley (1995), who identify a handful of important developing country interests impacted by the conclusion of the UR.

Most of the UR reforms of interest to developing countries affected their export products, and the two most important sectors were textiles and agriculture. The UR's Agreement on Textiles and Clothing (ATC) was designed to phase out

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<sup>6</sup> We should also clarify here that we are not attempting to assess any efficiency or equity properties of the rules of the dispute settlement system, as we simply provide evidence that is consistent with the theory that developing countries are responding to the economic incentives generated under the system.

the Multifibre Arrangement (MFA) and force trade in textiles and apparel to be subject to GATT/WTO discipline. The other key sector was agriculture, which was brought into the WTO under the UR's Agreement on Agriculture (AoA). The AoA resulted in commitments to reduce the export subsidy and other support policies prevalent in developed countries and to 'tariffy' the non-tariff measures that had previously impeded agricultural trade.<sup>7</sup>

On the other hand, intellectual property rights and services were the two new areas that were expected to impose the largest reform burden on the liberalisation of developing countries with the conclusion of the UR. The UR's General Agreement on Trade in Services (GATS) generated primarily broad principles that are expected to establish a framework from which to build firmer sectoral liberalisation commitments in future negotiations. However, with respect to intellectual property, the UR's TRIPs Agreement did establish minimum standards for copyrights, patents and trademarks. In terms of sectors impacted, Hamilton and Whalley note presciently that '[t]he key impacts from the decisions in the Round are most likely to be in pharmaceuticals, with increases in domestic prices of medicines and drugs' (1995, p. 38).

#### *b. Uruguay Round Dispute Settlement Reforms of Interest to Developing Countries*

In addition to the impact on particular sectors of interest to developing countries as both exporters (textiles and agriculture) and importers (pharmaceuticals), there were also substantial changes to the dispute settlement provisions of the GATT system. We briefly review here the most important UR reforms in these areas.

Petersmann (1997, pp. 202–9) chronicles the fundamental changes affecting dispute settlement, especially changes that were expected to positively impact developing country participation. First, there was the removal of the GATT regime's implicit 'veto power,' which was replaced with the 'reverse consensus' rule that eliminates the ability of a single country to impede the dispute settlement process. Second, the UR spelled the end of the system of plurilateral agreements that had taken shape during the Tokyo Round – all WTO members would now adhere to the entirety of the UR Agreements, no longer picking and choosing between 'Codes,' as had been the case at the conclusion of the earlier Tokyo Round. Third, the DSU established an explicit, procedural time frame

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<sup>7</sup> Agricultural trade liberalisation was not expected to be welfare-improving for all developing countries, however. For example, African countries that were net importers of agricultural products expected to face higher consumer prices with the reduction in developed country subsidies and some agricultural exporters feared that liberalisation of agricultural markets would lead to the *erosion* of preferences.

with deadlines within which the dispute settlement process would operate. Fourth, in any dispute involving a developing country, the DSU process would allow for 'special attention' in the consultations phase (DSU, Article 4:10), the panel would indicate how 'special and differential provisions . . . have been taken into account' (DSU, Article 12:11) in their final publicised report, and finally, if the defendant is a least developed Member, the complaining country should 'exercise due restraint in asking for compensation' (DSU, Article 24:1). Fifth, the WTO's Secretariat 'shall make available a qualified legal expert from the WTO technical cooperation services to any developing country Member who so requests' (DSU, Article 27:2).

From the perspective of developing countries, the 'legalisation' of the process resulted in the establishment of a system that might increase participation and remove many of the earlier barriers impeding the initiation of disputes. With this 'legalisation,' one question to ask is whether rules and not 'power' would now play the dominant role in dispute settlement, especially in disputes involving developing countries.

### *c. Developing Country Involvement in GATT/WTO Trade Disputes*

Given that the UR reforms established (i) a more 'legalised' dispute settlement process and (ii) commitments affecting developing country market access interests in well-identified sectors, does the data on the initiation of disputes since 1995 correspond to the areas where conflict was expected?

Park and Panizzon (2002) provide statistical documentation of the WTO disputes initiated between 1995 and 2001. Roughly one-third of WTO disputes (80 out of 235) have involved developing countries as plaintiffs, which is slightly higher than their share of disputes initiated under the GATT (1947–1994) period.<sup>8</sup> On the other hand, developing country defendants have been the target of roughly 45 per cent (109 out of 242 disputes) of GATT disputes, which is much higher than was the case under the GATT.<sup>9</sup>

What are the most contentious *sectors* involved in developing country trade disputes? The frequently disputed sectors facing developing country defendants and plaintiffs are agriculture, fisheries, footwear, textiles and clothing, as well as

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<sup>8</sup> Estimates by the author indicate that roughly 30 per cent of disputes initiated under the GATT involved developing countries as plaintiffs. With respect to the trade dispute data, we include not only those cases reported under the GATT's Article XXIII but also disputes identified in Hudec (1993) and under the separate dispute settlement provisions of each of the Tokyo Round's plurilateral agreements (WTO, 1997).

<sup>9</sup> Estimates by the author of the cases compiled from the sources identified in the last footnote suggest that around 11 per cent of disputes initiated between 1947 and 1994 under the GATT involved developing countries as defendants.

disputes involving the steel and automotive sectors. There have also been a number of disputes initiated against developing country defendants in the pharmaceuticals sector, which was expected due to stringent requirements of the TRIPs Agreement.<sup>10</sup>

### 3. DEVELOPING COUNTRY PERFORMANCE IN DISPUTE SETTLEMENT

In this section we focus our discussion on the question of the *economic performance* of developing countries involved in GATT/WTO trade dispute negotiations before turning to a discussion and analysis of the determinants of this performance. We investigate a sample of disputes that were initiated and completed between 1978 and 1998 in which the common allegation is that the defendant country has failed to live up to the *import liberalisation* commitments that were made in an earlier negotiating round.<sup>11</sup> We omit from the set a handful of disputes in which the defendant country was found ‘innocent,’ as we are interested in cases in which there is a reasonable likelihood that the defendant has acted in a manner that is inconsistent with its GATT/WTO obligations and thus where liberalisation could be warranted. Finally, for a case to be included in our sample, it was only necessary for the dispute to have been *initiated*, i.e. we are not limiting ourselves to cases that have reached a particular stage of the panel resolution process.

#### *a. Market Access and Defining LIBERALISATION*

Our goal is to investigate the record of economic success of the dispute settlement provisions in cases regarding insufficient import liberalisation. As documented by Petersmann (1997, p. 141), panels in GATT/WTO trade disputes are concerned with the economic question of *market access* and the conditions of competition in the sector under dispute. Therefore, the best indicator of the success of the provisions would be a measure of the change in the barrier to trade or the competitive conditions of the market under dispute. If defendant countries solely used tariff measures to restrict trade and if more comprehensive tariff data were available, a representative measure would be the *change* in the applied tariffs between the initiation and conclusion of the dispute. However, many disputes involve the imposition of some *non-tariff barrier* to trade, for which

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<sup>10</sup> See again Park and Panizzon (2002) as well WTO (2002).

<sup>11</sup> We focus on the 1978–1998 period for reasons of trade data availability. The sources of the trade dispute data are Hudec (1993), WTO (1995, 1997 and 2002) and various panel reports. A handful of the disputes have multiple plaintiffs filing jointly, but we separate these into individual disputes, given our interest and focus on bilateral negotiations.



reliable and comprehensive data is more difficult to obtain. Therefore, we take the bilateral trade liberalisation in the disputed sector as our measure of the economic success of a particular case. Again, our measure of economic success is based on the perspective of the GATT/WTO system. Not all disputes that are 'unsuccessful' by this measure will necessarily be interpreted as such by the plaintiff. For example, if a dispute concludes in a collusive outcome between export suppliers and the domestic industry through, say, a voluntary export restraint (and thus little trade liberalisation), this may be a relative success from the plaintiff's perspective even though it was not a success from the perspective of liberal trade. We return to a discussion of this issue in Section 3*d(ii)*.

We formally define our measure as the growth in the real dollar value of imports in the disputed sector in the years between: the year prior to the initiation of the dispute, which we will refer to as  $t - 1$ , and three years after the dispute was completed, which we will refer to as year  $T + 3$ .<sup>12,13</sup> We define the end year ( $T$ ) of the dispute to be: (i) the year the appellate body report was adopted, if the panel report was appealed, or (ii) the year the panel report was adopted, if it was adopted and not appealed, or (iii) otherwise the latest year that there was a formal correspondence between one of the parties and the GATT/WTO regarding the dispute. We refer to this measure as *LIBERALISATION*. If a defendant has liberalised in the sector under dispute, then we would expect to observe a value for *LIBERALISATION* that is greater than 0, and larger values of *LIBERALISATION* would correspond to a more successful economic resolution to the dispute.

#### *b. Developing Countries as Plaintiffs*

First consider the top half of Table 1, which provides descriptive statistics assessing the economic resolution of disputes in our sample of data in which developing countries were *plaintiffs*. Over the length of the sample, the mean (-31.37 per cent) and median (0.00 per cent) values for the *LIBERALISATION*

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<sup>12</sup> To construct the import data, we rely on GATT and WTO panel reports that identify the Harmonised System (HS) tariff lines of the products under dispute. We then match the HS tariff lines to the most disaggregated and comprehensive data available, the six-digit HS import data from UNCTAD (various years), as reliable trade *data* is not available in all of the GATT/WTO reports. For disputes prior to 1990, the six-digit HS data is not available and thus we use the four-digit SITC import data of Feenstra et al. (1997) and Feenstra (2000). For cases that do not explicitly state which HS or SITC products are under dispute, we rely on a description of the product at issue and the concordance files of Feenstra (2000) and UNCTAD (various years) to match the product description with the appropriate industry or tariff line number.

<sup>13</sup> Article 21.5 of the WTO's Dispute Settlement Understanding gives a defendant country up to 18 months to make policies consistent with panel rulings. Therefore, depending on when in the calendar year a ruling was adopted, the impact on trade of a policy reform may not be fully felt until the third year after the last correspondence between parties and the GATT/WTO.



TABLE 1  
Plaintiff Developing Country Performance in a Sample of Trade Disputes Involving Import  
*LIBERALISATION*<sup>†</sup> Commitments, 1978–1998

		<i>Overall</i>	<i>GATT Observations</i> (1978–94)	<i>WTO Observations</i> (1995–98)
Total Observations		64	37	27
Mean <i>LIBERALISATION</i>		-31.37%	-55.23%	1.32%
Median <i>LIBERALISATION</i>		0.00%	0.00%	9.09%
Number of Observations with <i>LIBERALISATION</i> > 0		31	16	15
<i>Variable</i>		<i>All Disputes</i>	<i>For Cases with</i> <i>LIBERALISATION</i> > 0	<i>For Cases with</i> <i>LIBERALISATION</i> ≤ 0
Mean value of defendant's exports received by the developing plaintiff (\$1992)	Overall	\$6.3 billion	\$8.6 billion	\$4.1 billion
	GATT observations	\$4.3 billion	\$6.9 billion	\$2.4 billion
	WTO observations	\$8.9 billion	\$10.5 billion	\$7.0 billion
Mean share of defendant's exports received by the developing plaintiff	Overall	1.48%	2.12%	0.89%
	GATT observations	0.95%	1.47%	0.56%
	WTO observations	2.22%	2.80%	1.48%

## Notes:

Author's calculations. <sup>†</sup>*LIBERALISATION* defined as the bilateral (defendant from plaintiff) import growth in the disputed sector between three years after the end of the dispute ( $T + 3$ ) and the year prior to the dispute's initiation ( $t - 1$ ).

measure suggest that the average dispute does not result in liberalisation of the defendant's disputed sector. This is confirmed by the fact that only 48 per cent (31 of the 64) of the disputes in the sample resulted in values for *LIBERALISATION* that were greater than 0.<sup>14</sup>

Nevertheless, there is evidence that developing country plaintiffs have experienced an increase in the rate of liberalisation obtained in trade disputes. Under the brief history of the WTO period, over half (15 out of 27) of the disputes resulted in *LIBERALISATION* being greater than 0, which is up from only 43 per cent of the cases (16 out of 37) during the GATT sample. The mean (1.32 to

<sup>14</sup> While we do not explicitly report country-specific results here, we note that there does not appear to be a pattern to which developing countries receive trade gains and which do not. For example, for those developing country plaintiffs with four or more disputes in our data set (Argentina, Brazil, Chile, Mexico and India) each had cases resulting in *LIBERALISATION* greater than zero as well as less than zero.

–55.23 per cent) and median (9.09 to 0.00 per cent) values for *LIBERALISATION* are also higher under the WTO than was the case under the GATT, suggesting that developing country plaintiffs are seeing greater success under the dispute settlement provisions of the WTO than was the case under the GATT.<sup>15</sup>

### *c. Determinants of LIBERALISATION*

In this section we focus on the potential determinants of plaintiff export growth to the defendant's disputed sector, and we consider evidence from an ordinary least squares regression that is a simplified version of the approach taken in Bown (forthcoming, a).<sup>16</sup> Table 2 thus presents estimates from a regression in which the dependent variable is our measure of the bilateral trade dispute's successful resolution, *LIBERALISATION*, or the developing country plaintiff export growth of the disputed product to the defendant between  $t - 1$  and  $T + 3$ . Our sample of data consists of 64 bilateral disputes between a developing country plaintiff and a defendant country for which we have sufficient data to empirically investigate our questions of interest.

#### *(i) Regression results*

Consider specification (1) of Table 2 and the explanatory variables that determine the defendant's disputed sector import growth stemming from the plaintiff. First, economic theory suggests that defendants may liberalise more with respect to plaintiffs that can with credibility, threaten to retaliate. The capacity to retaliate through trade policy is determined by whether the retaliating country accounts for a sufficient amount of its trading partner's exports in a particularly (politically or economically) important industry and is independent of whether the dispute has reached the stage where the GATT/WTO has given the plaintiff the authority to retaliate.<sup>17</sup> Our first explanatory variable designed to proxy for this

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<sup>15</sup> This may be partly reflective of the fact that we only have trade data to consider disputes initiated and completed under the WTO during the 1995–1998 period and the disputes resolved quickly may have thus been 'easier' to resolve than both the GATT disputes and the WTO disputes that have not been resolved by the end of 1998, and thus are more likely to result in trade liberalisation.

<sup>16</sup> The basic econometric results are consistent with those found in Bown (forthcoming, a) which focuses on disputes involving both developed and developing countries.

<sup>17</sup> Put differently, a plaintiff may be authorised by the GATT/WTO to retaliate, but if it does not consume enough of the defendant's exports, it may choose not to do so, e.g. because a tariff increase may only make a 'small' country worse off. Bown (2002a) uses a simple economic model with two countries and two traded goods to show that the retaliating country's ability to affect its terms of trade determines the country's capacity to effectively retaliate which then affects the level of negotiated compensation received. Nevertheless, it should be emphasised that the threat of retaliation is what matters, as authorised retaliation is not a common outcome in GATT/WTO

TABLE 2  
 OLS Regression Results: Developing Country Plaintiff's Export Growth to the Defendant's Disputed Sector

Explanatory Variables	Dependent Variable is LIBERALISATION: Developing Plaintiff Export Growth of the Disputed Product to the Defendant Between $t - 1$ and $T + 3$			
	Baseline Specification (1)	Alternative Retaliation Measure (2)	Add WTO Variable (3)	Probit Model <sup>†</sup> (4)
Share of defendant's exports received by the developing country plaintiff	4.902** (2.848)	–	3.237 (2.691)	4.369*** (2.021)
Real \$ value of defendant exports received by the developing country plaintiff	–	16.370** (9.917)	–	–
Share of bilateral aid the developing country plaintiff receives from the defendant	2.236** (1.196)	2.152* (1.190)	2.204** (1.146)	0.357 (0.320)
Determination of guilt by a GATT/WTO panel	0.750*** (0.364)	0.706*** (0.356)	0.868*** (0.385)	0.316*** (0.138)
Defendant violation was a non-tariff measure	–0.947 (0.704)	–0.955 (0.699)	–0.984* (0.634)	–0.130 (0.215)
Dispute took place under the WTO	–	–	0.642 (0.457)	0.095 (0.139)
Defendant's real GDP growth between $t - 1$ and $T + 3$	6.740*** (3.290)	6.886*** (3.304)	5.797** (3.412)	1.425 (1.126)
Plaintiff export growth of the disputed product to ROW between $t - 1$ and $T + 3$	0.065 (0.126)	0.076 (0.124)	0.099 (0.136)	0.022 (0.043)
Number of observations	64	64	64	68
$R^2$	0.19	0.19	0.22	–

## Notes:

*LIBERALISATION* defined as the bilateral (defendant from plaintiff) import growth in the disputed sector between three years after the end of the dispute ( $T + 3$ ) and the year prior to the dispute's initiation ( $t - 1$ ). White's standard errors correcting for heteroscedasticity are in parentheses, with \*\*\*, \*\* and \* denoting variables statistically different from zero at the 5, 10 and 15 per cent levels, respectively. Time  $t$  is the year of the dispute's initiation and time  $T$  is the year of its conclusion. Each specification also estimated with a constant term whose estimate is suppressed. <sup>†</sup>Dependent variable equal to 1 if *LIBERALISATION* > 0, and the estimates are of the marginal effects of the probit model.

disputes, and it has taken place on rare occasions. The more frequent non-retaliatory outcomes have included (i) full removal of the disputed policy, (ii) partial removal of the disputed policy, (iii) restructuring of the original disputed policy to a rent-sharing (VER-type) agreement, or (iv) failure to remove the disputed policy but compensation through additional liberalisation in some mutually agreeable alternative sector.

capacity is defined as the share of the defendant's exports received by the developing country plaintiff in the dispute. The coefficient estimate (4.902) is positive and statistically significant, as suggested by the theory that the more reliant is the defendant on the plaintiff's markets for its own exports, the more disputed sector liberalisation the plaintiff can expect to receive. Furthermore, the size of the estimate suggests that, holding everything else constant, if the defendant increased its reliance on the developing country plaintiff by increasing its share of total exports received by one per cent, then the developing country plaintiff's exports to the defendant's disputed sector would increase by 4.9 per cent between  $t - 1$  and  $T + 3$ .

The second explanatory variable in specification (1) is the share of bilateral aid the developing country plaintiff receives from the defendant. From a retaliation threat perspective of the *defendant* country, we might expect a negative relationship between these two variables – developing country plaintiffs that are more reliant on the defendant for bilateral assistance may receive less liberalisation. Perhaps surprisingly the coefficient estimate on this explanatory variable (2.236) is positive and statistically significant.<sup>18</sup> This may be indicative of two factors. First, developing country plaintiffs that are particularly reliant on a country for bilateral assistance may be hesitant to initiate a dispute against that country in the first place. Second, for those developing countries that have brought forward disputes against defendants on whom they are reliant for aid, this positive correlation may be indicative of a special political relationship between the two countries.

Consider next the third explanatory variable of specification (1), which is a dummy variable defined to take on a value of one if the case resulted in a GATT/WTO dispute settlement panel resolution determining that the defendant was 'guilty' of protecting the disputed sector in violation of its GATT/WTO obligations. International trade theorists often interpret the GATT/WTO as a commitment device, or an institution to which domestic governments turn when they cannot unilaterally convince their private sectors that they will engage in reform.<sup>19</sup> From this perspective, the determination of 'guilt' in a formal GATT/WTO trade dispute may allow the defendant government to show its protected private sector that there are large costs to continuing the protection allowing it to commit to trade liberalising reform. The positive (0.750) and statistically significant coefficient estimates provides evidence that is consistent with this theory. The size of the estimate indicates that, holding other things constant, a

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<sup>18</sup> The data on bilateral aid is derived from OECD (2001).

<sup>19</sup> For a discussion, see Bagwell and Staiger (2002, pp. 32–34). This may also be motivated by Kovenock and Thursby's (1992) cost of 'international obligation' which suggests that governments may face a political cost from failing to live up to GATT/WTO obligations or comply with panel rulings through a stigma imposed by the international community.

‘guilty’ panel determination allows the defendant to increase imports from the developing country plaintiff by 0.75 percentage points between  $t - 1$  and  $T + 3$ .

The next explanatory variable is a dummy variable that takes on a value of one if the dispute concerns a non-tariff measure, as opposed to a tariff measure. We expect non-tariff measures to result in less liberalisation given that barriers such as GATT/WTO-inconsistent domestic standards and other laws may be more difficult for the defendant country to reform than would a simple tariff matter. The coefficient estimate ( $-0.947$ ) is negative in specification (1), though it is not statistically significant in this particular specification.

The last two explanatory variables in specification (1) are variables designed to control for import demand and export supply shocks that may affect the defendant’s imports in the disputed sector from the plaintiff, but which are unrelated to the defendant’s liberalisation decision. For example, the first variable is the defendant’s real GDP growth over the period and it is designed to control for income changes – defendants with an increase in income should be expected to import more from all sectors, *ceteris paribus*. The positive (6.740) and statistically significant relationship provides evidence to confirm this relationship. Finally, the last variable is the plaintiff’s exports of the disputed product to the rest of the world (ROW), designed to control for the concern that such exports to the defendant may be changing because of a sector-specific ‘supply shock’ and not because of an underlying defendant country policy change; thus we would expect this relationship to be positive as well. It is positive, but not statistically significant.<sup>20</sup>

(ii) *Retaliation and liberalisation differences between the GATT and WTO*

In specifications (2) to (4) of Table 2 we further investigate some of these results. First in specification (2) we replace our export share measure of trade retaliation with the real value of defendant exports received by the developing country plaintiff. This coefficient estimate (16.370) is also positive and statistically significant, providing additional evidence to support the theory that the more the defendant exports to the plaintiff, the greater the plaintiff’s capacity to threaten a retaliation, and thus the more trade liberalisation it receives.

In specification (3) we add another explanatory variable to specification (1): a dummy variable that takes on a value of one if the dispute took place under the WTO period (1995–1998). We expect a positive estimate for the coefficient if WTO disputes are more likely to result in success than were GATT disputes, in accordance with the suggestive evidence of the top half of Table 1. When

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<sup>20</sup> The GDP data is derived from World Bank (2001), and the export data is taken from UNCTAD (various years).

compared to specification (1), inclusion of this variable in specification (3) leads to two interesting results: (a) a positive (0.642) but statistically *insignificant* coefficient estimate for the WTO variable, and (b) the coefficient estimate for the trade retaliation variable (3.237) is still positive, but it is no longer statistically significant.

A potential explanation for this result is collinearity between the WTO and retaliator capacity variables which could be the result of developing country plaintiffs changing their dispute initiation behaviour under the WTO, relative to the GATT. When compared to the defendants in the GATT sample, are the defendants in the WTO sample different? Do developing country plaintiffs have a greater capacity to retaliate against the WTO defendants, relative to their GATT predecessors? We investigate this question by appealing to the lower half of Table 1. Under the GATT, the statistical information for each of the retaliation measures is as expected under the theory that retaliation threats matter: the cases that obtain *LIBERALISATION* > 0 have plaintiffs which receive more of the defendant's exports on average both in dollar terms (\$6.9 billion versus \$2.4 billion) and as a share of the defendant's total exports (1.47 versus 0.56 per cent). This is similar to the WTO pattern: on average, the real dollar value of exports the plaintiff receives from the defendant in cases which obtain liberalisation is larger (\$10.5 billion versus \$7.0 billion) and the share measure is also higher (2.80 versus 1.48 per cent).

Nevertheless, the revealing statistical information in the lower half of Table 1 concerns the comparison of disputes *initiated* by developing country plaintiff countries under these samples. Compare the values in the rows contained in the 'All Disputes' column of data. Under the WTO, developing country plaintiffs have initiated disputes against defendants with whom they have over *twice* the potential for retaliation than was the case under the GATT, according to our measures. When measured by the dollar value of the defendant's exports received, the plaintiff has over twice the imports on average (\$8.9 billion versus \$4.3 billion), from which it can make threats to take market access away from a non-compliant defendant. Furthermore, the defendant is also over twice as reliant in the disputes initiated under the WTO (2.22 versus 0.95 per cent) in terms of the mean share of its total exports sent to the developing country plaintiff's market.

There are at least two complementary explanations for this phenomenon. The developing country plaintiffs could simply be choosing to initiate disputes against different trading partners under the WTO than they did under the GATT. Alternatively, many developing countries have undertaken more obligations to liberalise their own markets with the completion of the Uruguay Round. Many developing countries have thus increased their imports and their capacity to retaliate, i.e. their ability to threaten to take something of value away from trading partners that they may face in a WTO dispute.

Thus while it may be tempting to interpret the increased liberalisation gains received by developing country plaintiffs in WTO (relative to GATT) trade disputes as evidence that this is caused by the increased *legalisation* of the system, we provide an alternative explanation here. The evidence suggests developing countries are perhaps recognising the economic incentives, *learning* from their experiences, importing more from potential defendants, and *initiating* disputes in which they have the capacity to achieve economic success.

(iii) *The likelihood that a developing country plaintiff receives any liberalisation*

Our final specification (4) of Table 2 addresses the concern that there are outlier values to the dependent variable (*LIBERALISATION*) that are influencing our results. We therefore redefine our dependent variable in the estimation from our measure of the growth of imports between  $t - 1$  and  $T + 3$  to a simple dummy variable that takes on a value of 1 if the plaintiff received any trade gains in the dispute at all (i.e., if *LIBERALISATION*  $> 0$ ). Instead of using ordinary least squares, we estimate this model with a binomial probit specification and report estimates of the marginal effects of the explanatory variables. The parameter estimates of the explanatory variables of interest exhibit the relationship predicted by the theory. In particular, the ability of the developing country plaintiff to threaten to retaliate by withdrawing market access (4.369) increases the *likelihood* of the defendant offering any liberalisation, as does a panel determination of guilt (0.316).

#### *d. Comparisons with other Empirical Results*

##### *(i) Retaliation threats*

Economists have yet to reach a consensus concerning the role of 'power' in international trade agreements and their dispute settlement provisions. For example, Horn et al. (1999) conclude that there is no bias in the initiation of trade disputes under the WTO regime. Based on the results of a probabilistic model, they find that the US, EU, Canada and Japan tend to initiate more trade disputes simply because they are involved in more trade and with a wider variety of trading partners than are other members of the WTO. That result is not necessarily inconsistent with the evidence we have provided here: when it comes to the *initiation* of disputes, developing countries may be initiating more disputes than under the GATT, suggesting that the barrier to *participation* in the system has been reduced.

Nevertheless, with respect to other important questions regarding the policy decisions of governments, there is mounting evidence that the concern for retaliation does play a substantial role in influencing government behaviour. For example, the regression results of the previous section are consistent with the



more expansive analysis of Bown (forthcoming, a), which analyses the economic success of trade disputes involving a larger sample of data regarding developing *and* industrialised countries over the years 1973–1998. In related work, Blonigen and Bown (2003) find evidence that in US anti-dumping (AD) cases between 1980 and 1998, the accept/reject decision made by the AD authority is influenced by the threat of GATT/WTO trade disputes and retaliation concerns. Also, Bown (forthcoming, b) investigates a data set of countries that have made trade policy adjustments between negotiating rounds and considers what factors cause countries to implement protection by using the GATT's safeguard provisions as opposed to a 'GATT-illegal' policy, which would cause it to face a trade dispute. The evidence in that paper also points to the threat of retaliation as playing a significant role in the determination of whether a government chooses to abide by its international obligations.

This empirical research on retaliation suggests a second interpretation of our results that is within the spirit of the GATT/WTO's *reciprocity* principle (Bagwell and Staiger, 2002, Ch. 4): if the developing country plaintiff in the dispute has made valuable market access commitments to the defendant that it can threaten to withdraw as retaliation, the defendant will be better able to follow through with its own commitments to market access leading to *reciprocal* liberalisation in its disputed sector.

(ii) *The dispute settlement process*

Our result regarding the relationship between panel rulings of 'guilt' and increased liberalisation in disputed sectors is at odds with the results of other papers in the literature on GATT/WTO dispute settlement. In the political science literature, Busch and Reinhardt (forthcoming), focus on the determinants of *concessions* extended by the defendant to the plaintiff and find that cases that 'settle early' are more likely to result in 'full concessions.' Our evidence suggests that cases that do not settle early, but which result in a panel ruling that the defendant has failed to fulfil its GATT/WTO obligations, lead to larger *trade liberalisation* gains.

There are a number of potential contributing explanations for the contrasting results between the two papers. First, the Busch and Reinhardt dependent variable is an ordinal measure of legal outcomes ('substantial concessions,' 'partial concessions' and 'no concessions') which is admittedly more in the spirit of the GATT/WTO focus on conditions of market access that we discussed in Section 3a. Nevertheless, the variable is interpreted by researchers who are thus required both to possess a tremendous amount of information and to exercise discretion. For example, imagine a scenario in which the defendant legally concedes the outcome (offers 'substantial concessions' to the plaintiff) but replaces the GATT/WTO-inconsistent policy with another non-tariff barrier that, while unobservable to the researchers, has the same trade-restricting impact as the initial GATT/WTO-inconsistent policy. Because our measure of the dispute's outcome focuses on

trade volumes that would reveal such activity, we argue that *LIBERALISATION* is a measure that is better able to address this potential problem. On the other hand, our approach suffers from an alternative problem that the Busch and Reinhardt approach can potentially overcome. Disputes can result in ‘concessions’ where the plaintiff is compensated – not through the defendant’s removal of the GATT/WTO-inconsistent policy over which it originally complained – but instead through the offering of alternative means of compensation, e.g. liberalisation in an alternative sector. Our approach would not categorise such an outcome as economically ‘successful’ because there was no liberalisation in the disputed sector.<sup>21</sup>

A second potential explanation to the difference between our estimates and the Busch and Reinhardt results may rest with the data itself. Based on our desire to focus on the fairly narrow question of the determinants of trade liberalisation in disputed sectors, our data set is essentially a subset of the Busch and Reinhardt data. We focus only on disputes in which there was an allegation that the defendant has offered excessive protection to an import-competing sector with a well-defined set of products receiving the protection. The Busch and Reinhardt data set presumably includes these disputes in addition to a number of disputes regarding GATT/WTO-inconsistent policies over export subsidies and also domestic statutes that may affect a nation’s entire ‘importing sector.’<sup>22</sup> Finally, given our relatively limited number of observations, we have also a more simple indicator of ‘panel guilt’ as an explanatory variable than is the slightly more sophisticated breakdown by Busch and Reinhardt, which uses indicators for ‘ruling for complainant [plaintiff]’ and ‘mixed ruling.’

Nevertheless, our subset of data and measure of the trade dispute’s outcome allows us to address the question of the dispute’s impact on *trade*, which is arguably one of the primary concerns of the developing country plaintiff.

#### *e. Developing Countries as Defendants*

Finally, Table 3 provides a set of descriptive statistics assessing the economic resolution of a sample of 23 bilateral trade disputes in which the developing

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<sup>21</sup> Nevertheless, we do not feel that this is likely to pose a substantial problem to our approach for the following reasons. Especially in recent years with tariff barriers in most developed countries becoming negligible (except in a few politically sensitive sectors), it is increasingly difficult for defendant and plaintiff countries to find mutually agreeable alternative sectors in which to liberalise. A poignant example of this was the *EC-Measures Concerning Meat and Meat Products (Hormones)* dispute where the EC and US discussed additional concessions regarding increased EC imports of *non-hormone* treated beef as compensation (USTR, 2001, p. 174), but ultimately the US retaliated through increased tariffs.

<sup>22</sup> While not necessarily a case involving developing countries, an example of such a dispute that may be found in the Busch and Reinhardt data but which is not included here would be the *US – Antidumping Act of 1916* (DS136, DS162), in which the US anti-dumping law itself, and not the import protection of one well-defined set of products, was called into question.

TABLE 3  
Defendant Developing Country Performance in Trade Disputes Involving Import  
*LIBERALISATION*<sup>†</sup> Commitments, 1978–1998

	<i>Overall</i>	<i>GATT Observations (1978–94)</i>	<i>WTO Observations (1995–98)</i>
Total Observations	23	10	13
Mean <i>LIBERALISATION</i>	50.74%	179.58%	-48.37%
Median <i>LIBERALISATION</i>	28.75%	90.85%	11.85%
Number of observations with <i>LIBERALISATION</i> > 0	14	7	7
<i>Variable</i>	<i>All Disputes</i>	<i>For Cases with LIBERALISATION &gt; 0</i>	<i>For Cases with LIBERALISATION ≤ 0</i>
Mean value of developing country defendant's exports received by the plaintiff (\$1992)	\$8.9 billion	\$11.2 billion	\$5.2 billion
Mean share of developing country defendant's exports received by the plaintiff	18.26%	20.84%	14.25%
Mean share of bilateral aid the developing country defendant receives from the plaintiff	8.07%	9.61%	5.68%
Number of defendants receiving any aid from the plaintiff (share)	9 out of 23 (39.13%)	6 out of 14 (42.86%)	3 out of 9 (33.33%)

## Notes:

Author's calculations. <sup>†</sup>*LIBERALISATION* defined as the bilateral (defendant from plaintiff) import growth in the disputed sector between three years after the end of the dispute ( $T + 3$ ) and the year prior to the dispute's initiation ( $t - 1$ ).

country was the *defendant* in the underlying GATT/WTO case over the 1978–1998 period. Over the length of the sample, the mean (50.74 per cent) and median (28.75 per cent) values of the *LIBERALISATION* measure are significantly different, suggesting some outlier values in the data. Therefore, we also consider the raw number of disputes that resulted in a value for *LIBERALISATION* that was greater than 0, i.e. where the dispute settlement negotiations might be categorised as 'successful.' Out of 23 observations, 14 disputes, or roughly 61 per cent resulted in some liberalisation.

Consider next the question of performance under the two institutional regimes. Based on the limited number of observations reported in the sample in the top half of Table 3, it appears that developing country defendants were more willing to liberalise under the GATT regime than has been the case thus far under the

WTO. Whereas 70 per cent (7 out of 10) of the GATT cases resulted in some liberalisation by the defendant, developing countries have only liberalised in 54 per cent (7 out of 13) of the disputes to date under the WTO. These results are substantiated by a comparison of the mean and median values for *LIBERALISATION* under the two institutional regimes as well.

To investigate the role of the threat of retaliation in the cases in which developing countries are defendants in disputes, consider the information presented in the bottom half of Table 3 and the influence of the size of the defendant's exports sent to the plaintiff country. Again, if the plaintiff receives sizeable exports from the developing country defendant, economic theory suggests that the plaintiff can make a credible retaliation threat that would generate costs to the defendant for its failure to liberalise. In the cases in which the plaintiff obtains liberalisation in the sample (*LIBERALISATION* > 0), the mean value of the defendant's total exports that are imported by the plaintiff is \$11.2 billion. In the cases in which the plaintiff does not obtain liberalisation, the mean value of exports received from the defendant is less than half the size, at only \$5.2 billion. Furthermore, if we measure the potential for tariff retaliation as export shares instead of values, in the cases in which the plaintiff obtains liberalisation, the mean share of the defendant's exports that are imported by the plaintiff is 20.84 per cent as opposed to only 14.25 per cent in the cases without liberalisation.

An alternative means by which a developing country defendant could face retaliation is through the plaintiff's threat of termination of foreign aid; thus consider the last two rows of Table 3. In the cases in which the defendant yields liberalisation, the mean share of aid received from the plaintiff is 9.61 per cent. In the cases in which the defendant does not yield liberalisation, the mean share of aid received from the plaintiff is 5.68 per cent. While these numbers are not strikingly different, the last row questions whether the defendant in these cases receives *any* aid from the plaintiff. In the cases in which the plaintiff obtains liberalisation, the defendant receives some aid in 43 per cent of the cases (6 out of 14), whereas in the non-liberalisation cases the defendant only received bilateral aid from the plaintiff in 33 per cent (3 out of 9) of the cases.

While we have failed to hold constant other factors which may be affecting import liberalisation, Table 3 presents suggestive evidence that is consistent with the theory that the threat of the withdrawal of market access and development assistance affects trade dispute negotiations involving developing country defendants. Nevertheless, these results are interpreted with some caution given the relatively small number of observations under consideration. Unlike the case of developing countries as plaintiffs, we have too few observations to perform a meaningful regression analysis that would be analogous to the results presented in Table 2, because for many developing countries involved as defendants in GATT/WTO disputes, we lack sufficiently disaggregated import data to generate the *LIBERALISATION* variable.

## 4. CONCLUSION

The evidence illustrates an interesting phenomenon involving developing countries and GATT/WTO dispute settlement. First, while the UR reforms may have reduced many barriers to the initiation of disputes facing developing country plaintiffs, there is evidence from the economic resolution of disputes that developing country plaintiffs are more successful under the WTO, when compared to the GATT regime, at achieving success in the form of liberalised import markets of their defendant trading partners. It is too early, however, to attribute this success to a reduced emphasis on 'power' relationships under the WTO. In fact, the evidence suggests that developing countries are learning from their earlier failures and have changed their dispute initiation pattern so that they now initiate disputes where they have greater bilateral 'power' in making retaliatory trade policy threats against the defendant. Also, unlike Busch and Reinhardt (forthcoming), we provide evidence that 'guilty' determinations by panels lead to more successful outcomes to the disputes, holding everything else constant.

Nevertheless, there is still much research to be done to provide a complete assessment of the progress of the dispute settlement provisions under the WTO. For example, we have not addressed the question of developing country interests in trade disputes in which they are neither a plaintiff nor a defendant. As noted by Footer (2001), developing countries are also frequent 'interested third countries' in dispute settlement negotiations, suggesting that they have substantial trade interests in the liberalisation proceedings of other trading partners as well. One question relating to the success of the GATT/WTO system is whether the positive bilateral liberalisation results in trade disputes are effectively extended by the MFN rule, i.e. are they 'multilateralised' to positively impact developing third countries? This is an empirical question to be taken up in future research.

Our results do, however, have direct implications for policy discussions in two areas: (i) the DSU as a model for other matters of international concern, and (ii) proposals to reform the DSU itself. We have presented evidence that trade policy decisions and liberalisation in dispute settlement negotiations respond to the *economic* incentives generated by the rules and procedures underlying the GATT/WTO system. Our results suggest that future reforms designed to improve the rate of successful economic resolution of disputes may be best served by targeting the economic incentives facing the disputants and the costs they face for the failure to comply.<sup>23</sup>

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<sup>23</sup> Bagwell et al. (2003) propose to make retaliation rights under the WTO tradable so as to make these more valuable and thus effective for small countries with a limited bilateral capacity to retaliate. See also Bown (2002b) for a discussion of reform proposals designed to increase the effectiveness of the DSU in discouraging behaviour inconsistent with a country's WTO obligations.

A final policy question is, what can developing countries do to increase the likelihood that they will achieve success as plaintiffs in trade disputes? Can they do anything to improve the likelihood that developed countries will abide by their market access commitments? Perhaps an obvious suggestion that is frequently lost in the discussion is that developing countries should continue to liberalise and expand their own market access commitments in order to receive more exports from developed trading partners and thus to become more integrated in the world trading system. Under the UR, developing countries committed to liberalisation, and to some extent this may be contributing to their success as plaintiffs in disputes under the WTO. As developing countries import more, they are ‘investing’ in the system’s future – they are expanding their capacity to threaten retaliation in the future and are thus making themselves more powerful in future bilateral negotiations with developed country trading partners. Having substantial imports will give developing countries the power to make credible threats that they will take away valuable concessions from developed trading partners who refuse to comply with their WTO obligations and whom they might face as defendants in WTO trade disputes. As developing country imports grow and the value of these concessions increases, developed countries may also become more hesitant to implement policies that result in trade disputes and the possibility that these valuable concessions would be taken away.

## REFERENCES

- Bagwell, K. and R. W. Staiger (2002), *The Economics of the World Trading System* (Cambridge, MA: MIT Press).
- Bagwell, K., R. W. Staiger and P. C. Mavroidis (2003), ‘The Case for Auctioning Countermeasures in the WTO’ (University of Wisconsin manuscript, March).
- Blonigen, B. A. and C. P. Bown (2003), ‘Antidumping and Retaliation Threats,’ *Journal of International Economics*, **60**, 2, 249–73.
- Bown, C. P. (2002a), ‘The Economics of Trade Disputes, the GATT’s Article XXIII and WTO’s Dispute Settlement Understanding,’ *Economics and Politics*, **14**, 3, 283–323.
- Bown, C. P. (2002b), ‘Why are Safeguards under the WTO So Unpopular?’ *World Trade Review*, **1**, 1, 47–62.
- Bown, C. P. (forthcoming, a), ‘On the Economic Success of GATT/WTO Dispute Settlement,’ *The Review of Economics and Statistics*.
- Bown, C. P. (forthcoming, b), ‘Trade Disputes and the Implementation of Protection under the GATT: An Empirical Assessment,’ *Journal of International Economics*.
- Busch, M. L. and E. Reinhardt (forthcoming), ‘Developing Countries and GATT/WTO Dispute Settlement,’ *Journal of World Trade*.
- Dam, K. (1970), *The GATT: Law and International Organization* (Chicago: University of Chicago Press).
- Feenstra, R. (2000), ‘World Trade Flows, 1980–1997,’ UC-Davis, Centre for International Development Working Paper 5910 and Accompanying CD-Rom (March).
- Feenstra, R., R. Lipsey and H. Bowen (1997), ‘World Trade Flows, 1970–1992, with Production and Tariff Data,’ NBER Working Paper 5910 and Accompanying CD-Rom (January).

- Footer, M. E. (2001), 'Developing Country Practice in the Matter of WTO Dispute Settlement,' *Journal of World Trade*, **35**, 1, 55–98.
- Hamilton, C. and J. Whalley (1995), 'Evaluating the Impact of the Uruguay Round Results on Developing Countries,' *The World Economy*, **18**, 1, 31–49.
- Horn, H., P. C. Mavroidis and H. Nordström (1999), 'Is the Use of the WTO Dispute Settlement System Biased?' CEPR Discussion Paper No. 2340 (December).
- Hudec, R. E. (1993), *Enforcing International Trade Law: The Evolution of the Modern GATT Legal System* (New Hampshire: Butterworth Legal Publishers).
- Jackson, J. H. (1997), *The World Trading System: Law and Policy of International Economic Relations* (2nd ed., Cambridge, MA: MIT Press).
- Kovenock, D. and M. Thursby (1992), 'GATT, Dispute Settlement, and Cooperation,' *Economics and Politics*, **4**, 151–70.
- OECD (2001), *International Development Statistics* (Development Assistance Committee, Paris: OECD).
- Park, Y. D. and M. Panizzon (2002), 'WTO Dispute Settlement 1995–2001: A Statistical Analysis,' *Journal of International Economic Law*, 221–44.
- Petersmann, E. U. (1997), *The GATT/WTO Dispute Settlement System: International Law, International Organizations and Dispute Settlement* (London: Kluwer Law International).
- Srinivasan, T. N. (2000), *Developing Countries and the Multilateral Trading System: From the GATT to the Uruguay Round and the Future* (Boulder, CO: Westview Press).
- Trebilcock, M. and R. Howse (1999), *The Regulation of International Trade* (2nd ed., London: Routledge).
- UNCTAD (various years), *Trade Analysis and Information System (TRAINS)* (Geneva: UNCTAD).
- USTR (2001), *2000 Annual Report of the President of the United States on the Trade Agreements Program* (Washington, DC: US Government Publication, March).
- World Bank (2001), 'Global Development Network Growth Database' (on-line dataset available at <http://www.worldbank.org/research/growth/GDNdata.htm>, access date of 10 November).
- WTO (1995), *Analytical Index: Guide to GATT Law and Practice*, Vols. 1 and 2 (Geneva: WTO).
- WTO (1997), Panel Reports under the MTN Agreements and Arrangements (Tokyo Round Codes of 1979), Unpublished Document.
- WTO (2002), 'Update of WTO Dispute Settlement Cases' (WTO on-line document at [http://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm), access date of 29 December).
- WTO (2003), 'The Organization: Least Developed Countries' (on-line document at [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org7\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/org7_e.htm), access date of 16 June).