International Studies Quarterly (2007) **51**, 165–181

When Do Trade Blocs Block Trade?

DANIEL Y. KONO

University of California

Because the gains from international cooperation typically rise with the number of countries involved, the ideal international agreement is often multilateral. In practice, however, the modal agreement is not multilateral but regional or bilateral. The prevalence of "minilateralism" begs the question: Do minilateral agreements help or hinder multilateral cooperation? I investigate this question by examining the impact of regional free trade agreements (FTAs) on multilateral trade liberalization in 30 countries from 1988 to 1998. I find that FTAs have important but contradictory conditional effects: they promote multilateral liberalization when members' intra- and extra-FTA comparative advantages are similar but impede such liberalization when these comparative advantages are different. FTAs can thus, depending on the circumstances, either help or hinder broader trade liberalization. My findings have important implications, not only for the relationship between FTAs and multilateralism, but also for the political consequences of customs unions and nontrade minilateral agreements.

The gains from international cooperation typically rise with the number of countries involved. The ideal international agreement is thus often a multilateral one: a global free trade regime, a global treaty on global warming, a global nonproliferation pact, and so on. In reality, however, most agreements are not multilateral but regional or bilateral. This contrast between the multilateral ideal and a minilateral reality begs the question: are the former and the latter friends or foes? Do minilateral arrangements help or hinder multilateral cooperation?

Although scholars have long studied the relative efficacy of minilateral and multilateral cooperation (Oye 1985; Kahler 1992; Martin 1992; Pahre 1994; Gilligan 2004)—treating each as independent of the other—they have only recently begun to consider how the formation of a minilateral agreement affects subsequent multilateral cooperation. The growing attention to this question owes much to the recent proliferation of minilateral trade agreements and fears that such agreements may undermine the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO). It is thus not surprising that, with one exception (Downs, Rocke, and Barsoom 1998), analyses of this question have focused on trade. These analyses have fueled a lively debate on whether regional trade pacts are "building blocks" or "stumbling blocks" to broader trade liberalization (Bhagwati 1993). However, while this debate has produced some insightful hypotheses, it has yielded no generally accepted conclusions because, as Winters (1999) observes, few if any of these hypotheses have been empirically tested.

Author's note: I thank Rob Feenstra, Bob Jackman, Gary Marks, Tim McKeown, Jeannette Money, Gabriella Montinola, Thomas Oatley, Steven Poe, and three anonymous *ISQ* reviewers for helpful comments. Replication materials can be found at http://www.isanet.org/data_archive.html

© 2007 International Studies Association.
Published by Blackwell Publishing, 350 Main Street, Malden, MA 02148, USA, and 9600 Garsington Road, Oxford OX4 2DQ, UK.

This paper examines the effects of regional free trade agreements (FTAs) on multilateral trade liberalization. It advances our understanding of minilateralism's effects in two ways. First, it identifies an important mechanism through which minilateral pacts can affect multilateral cooperation. I argue that FTAs can cause either a rise or a decline in the economic power, and hence the political influence, of the pro-multilateralism lobby: they strengthen this lobby when members' intra-FTA and extra-FTA comparative advantages are similar ("convergent") and weaken it when these comparative advantages are different ("divergent"). Although the details of my argument pertain to trade, its core logic is far more general. All minilateral agreements create winners and losers. All such agreements can thus alter the domestic balance of pro- and anti-multilateralism forces and hence governments' derived policy preferences. My approach thus complements that of Downs, Rocke, and Barsoom (1998): whereas they analyze the impact of minilateral agreements on intergovernmental bargaining with exogenously given preferences, I examine the effects of such arrangements on government preferences themselves.

Second, I exploit the coexistence of minilateral and multilateral trade regimes to examine empirically the relationship between the two. Both FTA members and nonmembers reduce nondiscriminatory Most-favored-nation (MFN) tariffs through multilateral GATT/WTO negotiations. MFN tariff reductions by GATT/WTO members that do not belong to FTAs provide a plausible estimate of what multilateral liberalization would look like in the absence of FTAs. Hence, by comparing MFN tariff changes of FTA members and nonmembers, we can assess whether FTAs lead to more or less liberalization than the multilateral counterfactual. I perform this analysis with tariff changes in 30 countries between 1988 and 1998 and find that convergent FTAs promote, while divergent FTAs discourage, MFN tariff liberalization. My analysis thus introduces much-needed empirical content to the now largely theoretical "building block-stumbling block" debate.

Are Minilateralism and Multilateralism Friends or Foes?

To my knowledge, Downs, Rocke, and Barsoom (1998) provide the only general (i.e., non-issue-specific) analysis of this question. They compare two possible scenarios, both of which assume that governments' preferences become more liberal (i.e., cooperative) over time. In the first scenario, governments form a multilateral arrangement that evolves in a liberal direction over time. In the second, governments form a minilateral arrangement that becomes multilateral through sequential admission of new members. They show that the minilateral-to-multilateral route leads to deeper cooperation than the purely multilateral one because, in the latter scenario, conservative members can slow the evolution of the regime.

Although Downs, Rocke, and Barsoom's argument is interesting, their conclusions hold only to the extent that minilateral agreements grow significantly over time. This has not happened to most minilateral trade agreements and, in fact, what we observe empirically is not the expansion but the proliferation of such agreements. Moreover, while Downs, Rocke, and Barsoom analyze both minilateral and multilateral scenarios, they do not consider a world in which minilateralism and multilateralism coexist. Their model thus does not address the central question of the building block-stumbling block debate: how does the formation of minilateral agreements affect the *concurrent* process of multilateral liberalization? For answers to this question, we must turn to the literature on FTAs.

Because there are two distinct literatures on the desirability of FTAs, I begin by delineating these often-conflated strands of research. The first examines the welfare effects of FTAs, which depend on the relative magnitude of trade creation and

trade diversion (Viner 1950). This literature addresses an economic question: how do FTAs affect trade *flows* and hence economic welfare? This question has been studied extensively (Aitken 1973; Frankel 1997; Soloaga and Winters 1999) and is not addressed here. A second, more recent, literature examines the effects of FTAs on multilateral trade liberalization. This literature addresses a political question: how do FTAs affect subsequent trade policy making and hence members' trade *policies* toward nonmembers? I focus on this second question, although I discuss the welfare implications of my argument in the conclusion.

Scholars make three claims concerning the external trade-policy effects of FTAs. First, some argue that FTAs increase political support for broader trade liberalization (Richardson 1990, 1993; Oye 1992; Frankel and Wei 1998; Lazer 1999). Second, others claim that FTAs decrease such support (Panagariya and Findlay 1996; Levy 1997a; Krishna 1998; McLaren 2002). Finally, still others argue that FTAs can have either effect (Westhoff, Yarbrough, and Yarbrough 1994; Levy 1997b). The central characteristic of extant literature is thus its theoretical indeterminacy and the absence of any generally accepted conclusions.

This discord reflects a near-absence of empirical evidence concerning the effects of FTAs on broader trade liberalization (Winters 1999). The reason is simple: we wish to measure the impact of FTAs on trade policies toward nonmembers over time, but time-series data on such policies are hard to obtain. Measures for which long time series exist, such as average tariffs or exchange-rate distortions, aggregate policies toward all trading partners and thus tell us little about FTA members' policies toward nonmembers of the FTA. In principle, dyadic trade-based measures could surmount this problem by examining only trade between FTA members and nonmembers. In practice, however, this solution is problematic due to the trade-diverting effects of FTAs. FTAs typically divert trade even when trade barriers toward nonmembers fall: for example, in Wei and Frankel's (1998) simulation, trade diversion occurs unless tariffs against nonmembers fall by at least 40 percent. As a consequence, a fall in external trade is consistent with falling, rising, or unchanging trade barriers toward the rest of the world. More generally, we cannot determine whether a given change in external trade reflects a change in external trade policies or the purely economic effects of intra-FTA liberalization. This problem limits the value of trade-based measures for our purposes, as well as the inferences that can be drawn from previous research on the effects of FTAs on trade.

To determine how FTAs affect policies toward nonmembers, we need to examine either partner-specific trade policies or nondiscriminatory policies such as MFN tariffs. MFN tariffs are ideal because a country's MFN rate is imposed equally against all GATT/WTO members except those that receive preferential treatment within FTAs. Hence, if Mexico has an MFN rate of 10 percent, this rate applies equally to imports from Brazil, Germany, Pakistan, and all other GATT/WTO members with whom Mexico does not share an FTA. To see why this matters, suppose that Mexico eliminates tariffs against other members of the North American Free Trade Agreement (NAFTA) but simultaneously raises its MFN rate from 10 to 20 percent. Mexico's average tariff—calculated as tariff revenue divided by import value—will probably fall due to the elimination of tariffs on Canadian and U.S. imports. However, this fall in the average tariff does not mitigate the 10 percent rise in Mexico's tariffs against all other countries, at least as far as these other countries are concerned. Because MFN tariffs capture this rise in external protection while average tariffs do not, the former are more appropriate for studying FTA members' policies toward nonmembers. Although a few previous studies do employ MFN tariffs (Sapir 1992; Foroutan 1998), these studies are atheoretical and do not consider the possibility—suggested by extant theory—that FTAs might have conditional effects. Perhaps for these reasons, these studies have failed to settle the building block-stumbling block debate.

Theory

My argument is similar in spirit to those of Richardson (1990, 1993) and McLaren (2002). Like Richardson, I argue that FTAs can boost support for multilateral liberalization by strengthening export-oriented sectors and weakening import-competing ones. However, like McLaren, I argue that FTAs can also promote growth in inefficient "sensitive sectors," thus reducing support for multilateral liberalization. My contribution is to identify the conditions under which the former or the latter outcome prevails and to test my hypotheses empirically. Note that, because my theory assumes that governments set trade policies independently in response to domestic pressures, it applies to FTAs but not to customs unions, in which governments adopt a common external tariff.

Richardson (1993) employs a modified Stigler–Peltzman political support model in which governments maximize a weighted sum of sectoral utilities and the weights attached to sectors are proportional to the latter's size. FTA partners A and B each contain a globally efficient sector and an inefficient sector "which is slightly less hopeless in country B than in country A" (311). Following FTA formation, country A's globally efficient sector expands as it exports more to B, but its inefficient sector contracts due to increased imports from B. Growth in the pro-free trade export sector and decline in the protectionist import-competing sector increases the former's political influence and reduces the latter's. As a consequence, A's tariff against the rest of the world falls. Richardson's political-support function implies that the political weights of sectors reflect voting by specific-factor owners.[1] However, Richardson (1990) demonstrates that this argument holds when sectoral lobbying is explicitly modeled: "As an industry contracts in the face of increased competition from the FTA partner, so its lobbying activities decrease and the level of protection from nonmembers granted it by policy makers also decreases."

In contrast, McLaren (2002) argues that FTAs lead to patterns of specialization that reduce support for multilateral liberalization. The key difference between McLaren's model and Richardson's is that, in McLaren's, regionalism leads to reduced investment in globally efficient sectors and increased investment in sectors with a global comparative disadvantage. This reduces bloc members' subsequent gains from, and incentives to engage in, multilateral liberalization.

Both Richardson and McLaren argue that FTA formation leads to structural changes that alter the political feasibility of multilateral liberalization. They reach different conclusions, however, because the FTAs in their models lead to different patterns of specialization. In Richardson's model, the FTA leads to growth in globally efficient sectors and thus increases political support for broader trade liberalization. In McLaren's model, the FTA leads to growth in globally inefficient sectors and thus reduces such support. Both outcomes are theoretically possible, so these claims are not mutually exclusive. However, to reconcile them we must consider the conditions under which each argument holds.

Richardson's analysis suggests one important condition. Recall that in his model, FTA formation leads to growth in country A's globally efficient sector and decline in A's globally inefficient sector. This outcome occurs because A's globally efficient (inefficient) sector is also efficient (inefficient) within the FTA. The FTA thus increases A's political support for broader trade liberalization *because A's intra-FTA and extra-FTA comparative advantages are similar.* Note, however, that country B's globally inefficient sector is efficient within the FTA. Although Richardson does not develop this point, it implies that FTA formation should lead to growth in B's inefficient sector, and—by diverting investment—a decline in B's globally efficient sectors. In B, the FTA thus reduces political support for broader trade liberalization *because B's*

[1] As this model involves structural change, factors are implicitly mobile in the long run. Factor specificity thus implies that adjustment costs are high or time horizons are short.

intra- and extra-FTA comparative advantages are different. In short, the FTA affects A and B differently because they exhibit different patterns of intra- and extra-FTA comparative advantages. It promotes external liberalization in A, whose intra- and extra-FTA comparative advantages are similar, but discourages external liberalization in B, whose intra- and extra-FTA comparative advantages are different.

The effects of FTAs should also depend on their economic importance to members, which varies greatly across FTAs. For example, when NAFTA was formed, the U.S. conducted less than 30 percent of its trade with other NAFTA members, while Mexico's share was nearly 80 percent. Such variation is politically relevant because FTAs affect external trade policies via trade-induced structural change, and such change—and hence the effects of FTAs—should increase along with the volume of intra-FTA trade. The effects of FTAs should thus depend on both member comparative advantages and the volume of intra-FTA trade: the former determine the nature of FTA effects (liberal or protectionist), while the latter determines their magnitude. I thus hypothesize that *an increase in intra-FTA trade will promote external trade liberalization in members whose intra- and extra-FTA comparative advantages are similar but will discourage such liberalization in members whose intra- and extra-FTA comparative advantages are different*. I henceforth refer to the similar comparative-advantage pattern as "convergent" and to the dissimilar one as "divergent."

As an applied example, consider the cases of Switzerland in the European Economic Area (EEA) and Bolivia in the Andean Community. Before joining the EEA in 1992, Switzerland exhibited convergent comparative advantages: sectors that were competitive within the EEA bloc (e.g., industrial and other chemicals, furniture, other wood products) were also globally competitive, while sectors that were uncompetitive within the EEA bloc (e.g., footwear, apparel, food products, beverages, electrical machinery) were also globally uncompetitive. Given this, Swiss accession to the EEA should have caused growth in Switzerland's globally competitive sectors but decline in its globally uncompetitive ones. This is in fact what happened: the former sectors' share of national output rose from 22 to 28 percent between 1992 and 1997, while the latter sectors' output share fell from 28 to 26 percent over the same period. This relative growth in the free-trade lobby should, in turn, have boosted its political influence. Although influence is hard to measure directly, a clear empirical implication is that Switzerland's tariffs against non-EEA members should have fallen. In fact, Switzerland's average MFN tariff fell from 4.4 to 3.2 percent over roughly the same period.

Bolivia, in contrast, had divergent comparative advantages before joining the Andean FTA in 1993: sectors that were regionally competitive (e.g., food products and beverages) were globally uncompetitive, while global exporters (e.g., apparel, petroleum refining) were uncompetitive within the FTA. Intra-FTA liberalization should thus have caused growth in Bolivia's globally uncompetitive sectors but decline in its globally competitive ones. In fact, the former sectors' combined output share rose from 39 to 44 percent between 1993 and 1999, while the latter sectors' share fell from 25 to 23 percent. This relative growth in protectionist sectors should have boosted their political influence, so it is not surprising that Bolivia's average MFN tariff rose from 9.5 to 9.8 percent over this period. Although this increase is small, it is nonetheless noteworthy because this period encompassed the conclusion of a GATT round and a global downward trend in MFN tariffs.

Before turning to a more rigorous test of my hypotheses, I wish to address several issues not raised above. First, for simplicity I have thus far focused on two-good models. It is, however, worth discussing what comparative-advantage convergence and divergence mean in a multi-good context. Second, in a model with only one import-competing sector, the distinction between sectoral and national trade policies is moot. However, consideration of multiple goods forces us to ask whether the trade-policy effects of FTAs are narrowly sectoral or broadly national. Third, it is worth discussing the tension between my argument—that sectoral

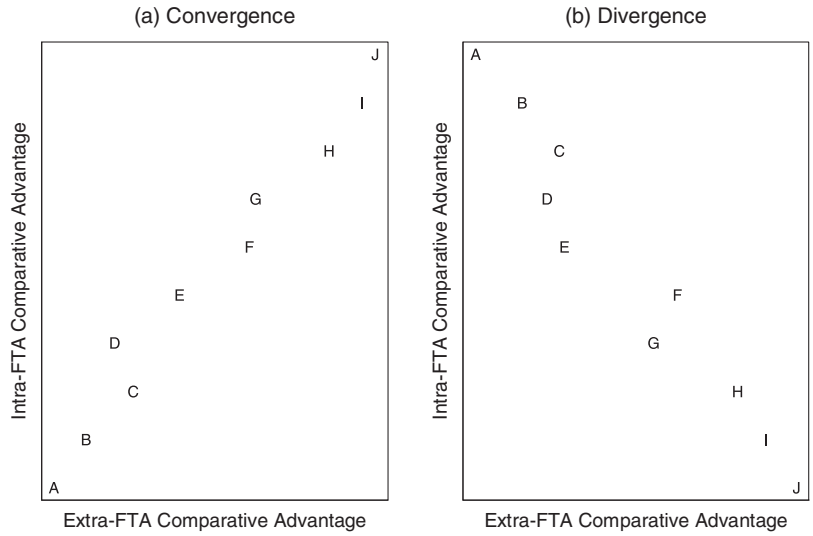

FIG. 1. Convergence and Divergence with Multiple Sectors

decline leads to reduced political influence—and the alternative possibility that declining sectors demand greater protection.

Convergence and divergence in a multi-good world are illustrated in Figure 1, which presents intra-FTA and extra-FTA comparative advantages for 10 goods (A–J) in two FTA members. The member in 1(a) has convergent comparative advantages: sectors that are uncompetitive within the FTA (e.g., A and B) are also uncompetitive outside the FTA, while sectors that are competitive within the FTA (e.g., I and J) are also competitive vis-à-vis the rest of the world. Note that, in the convergent case, the member's intra- and extra-FTA comparative advantages are positively correlated across sectors. In contrast, the member in 1(b) has divergent comparative advantages: sectors that are competitive within the FTA (e.g., A and B) are uncompetitive outside the FTA, while sectors that are uncompetitive within the FTA (e.g., I and J) are externally competitive. This member's intra- and extra-FTA comparative advantages are negatively correlated across sectors. Because such correlations may be more or less pronounced, convergence and divergence are, in a multi-good context, a matter of degree.

Will the FTAs in Figure 1 have sector-specific or national trade policy effects? By sector-specific, I mean that a change in sector A's political influence leads to changes in and only in sector A's tariff. By national, I mean that a change in sector A's political influence leads to tariff changes in sectors B, C, D, and so on—that is, the policy consequences of changes in sector A's influence are not confined to sector A. Both theory and previous research suggest that FTAs should have national effects. Theoretically, growth and decline in exporting sectors should lead to tariff changes in other sectors. Suppose, for example, that the FTA in 1(a) leads to growth in sector J. This sector should seek lower tariffs, not for itself but on imported inputs (perhaps sectors A and B) and in sectors that are important for securing reciprocal market access abroad (perhaps sectors C and D). In this case, the policy consequences of sector J's growth will be felt entirely in other sectors. This will not always be true, but if such cross-sectoral lobbying is prevalent—as previous studies suggest it is (Gilligan 1997; Davis 2004)—then my theory generates no clear predictions about the effects of a particular sector's growth and decline on that sector's trade policies. It does, however, generate clear predictions about how broad patterns of growth and decline should affect national trade policy aggregates: growth in

exporting sectors should lead to lower tariffs on average, while growth in import-competing sectors should have the opposite effect. Because my theory generates clear national-level predictions but unclear sectoral predictions, my empirical analysis focuses on average national tariffs.

Previous research shows that (1) import-competing sectors receive more protection than exporting ones, and (2) larger sectors receive more protection than smaller ones (Lee and Swagel 1997; McGillivray 1997). The robustness of this finding underpins my argument that growth in export sectors and decline in import-competing ones should lead to lower protection. There is, however, some tension between this argument and the finding that import surges lead to greater protection (Trefler 1993). The latter finding suggests that increased imports within a convergent FTA could actually provoke greater demands for external protection. How can we resolve the tension between these declining-industry arguments, one of which predicts reduced protection for declining industries, and one of which predicts increased protection?

Brainard and Verdier (1993) and Choi (2001), who model this tension explicitly, suggest one possible solution. In their models, sectors threatened by imports have two options: they can adjust (i.e., workers and capital can exit the sector), which leads to reduced protection, or they can lobby, which leads to increased protection. The optimal strategy depends on expectations about the future costs of nonadjustment, which include the costs of lobbying. If a price shock is viewed as large and permanent, the future costs of nonadjustment are high and adjustment is the optimal strategy. However, if a shock is seen as small and impermanent, the need to adjust is smaller and lobbying may dominate. Different types of import surges should thus elicit different responses from threatened industries. Temporary import surges caused, for example, by terms-of-trade shocks should lead to increased protection because threatened industries will see no long-term need to adjust. However, permanent changes in import competition caused by technological change or fundamental changes in the trade regime should induce exit from threatened sectors and a decline in protection.

For our purposes, the point to note is that FTAs constitute a credible long-term commitment to liberalize trade among members (Mansfield, Milner, and Rosendorff 2002). For this reason, they typically affect private trade and investment flows even before they come into effect (Baldwin 1994; McLaren 2002). Because FTAs permanently alter the relative profitability of different sectors, they are more likely to induce adjustment, and less likely to induce lobbying, than temporary import surges. I thus expect the adjustment effects of FTAs to outweigh compensatory lobbying effects, although this is ultimately an empirical question.

Data and Analysis

I test my hypotheses by examining the relationship between FTA participation and MFN tariff changes from 1988 to 1998. My sample includes all GATT/WTO members for which data were available both before and after the Uruguay Round of GATT negotiations: 29 countries plus the European Union (EU), which is treated as a single unit.[2] It includes six FTAs formed in the 1980s and 1990s but before the close of the Uruguay Round. These FTAs, their dates of entry into force, and the members included in the sample are shown in Table 1.

The sample also includes, besides the EU-12, six customs union members: Argentina and Brazil in MERCOSUR, and Austria, Finland, Sweden, and Turkey, which joined the EU customs union during the period under study. It also includes six countries that belonged to no preferential arrangements before the close of the

[2] The EU is the EU-12, consisting of Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom.

TABLE 1. Comparative Advantage Convergence in Current Preferential Arrangements

	Member	Entry Into Force	Convergence Measure		MFN Tariff Change
			RCA	EXIMP	
Free trade agreements					
Andean community	Bolivia	1993	− 0.05	− 0.59	0.31
	Colombia		0.89	0.44	5.85
	Ecuador		0.78	0.66	2.60
	Venezuela		0.00	0.60	− 6.90
Australia–New Zealand Closer	Australia	1983	− 0.31	− 0.12	− 8.14
Economic Relations Trade Agreement (ANZCERTA)	New Zealand		0.21	0.32	− 5.83
Association of Southeast Asian	Indonesia	1992	0.70	0.49	− 3.95
Nations Free Trade Agreement (AFTA)	Malaysia		0.94	0.83	3.96
	Thailand		0.86	0.80	− 21.0
European Economic Area (EEA)	Iceland	1992	0.98	0.98	− 3.03
	Norway		0.78	0.82	− 1.43
	Switzerland		0.97	0.81	− 1.14
Europe agreements	Czech Republic	1992	0.62	0.36	− 3.55
	Poland		0.48	0.09	10.2
North American Free	Canada	1994	0.01	0.08	0.15
Trade Agreement (NAFTA)	Mexico		− 0.13	0.32	3.34
	United States		0.70	0.37	− 0.01
FTA average			0.49	0.43	− 1.68
Customs unions					
European Union (EU)	EU-12	1958	0.89	NA	2.11
	Austria	1995	0.85	0.45	− 4.25
	Finland		0.95	0.88	− 1.28
	Sweden		0.93	0.78	1.87
	Turkey		0.54	0.35	− 36.0
Southern Common Market	Argentina	1991	0.96	0.93	2.31
(MERCOSUR)	Brazil		0.37	− 0.27	− 22.4
Customs union average			0.78	0.52	− 8.23

Convergence scores are based on 28 three-digit ISIC sectors.

Uruguay Round: Chile, India, Japan, Morocco, South Korea, and Sri Lanka. Including these last two sets of countries allows me to compare the policies of FTA members with nonmembers.

Variation in Extant FTAs

I first examine the degree of convergence and divergence exhibited by extant FTAs. I do this by calculating intra-FTA and extra-FTA comparative advantages for each country and sector, then, within each country, correlating these measures across sectors. As discussed earlier, positive correlations indicate convergent comparative advantages, while negative correlations indicate divergent ones.

Because FTAs, once formed, bias revealed comparative advantages, I measure the latter as a 3-year average for the years preceding FTA formation. To ensure that my results are robust to different measures of comparative advantage, I employ two. The first, RCA_{ijk}, is Yeats's (1997) measure of country i's revealed comparative advantage vis-à-vis partner j in sector k. Values between zero and one indicate a comparative disadvantage, while values greater than one indicate a comparative advantage. The second, $EXIMP_{ijk}$, is the ratio of country i's export dependence to import penetration vis-à-vis partner j in sector k. Values between zero and one

indicate that sector k gains less from exports than it loses from imports, while values greater than one indicate that k gains more from exports than it loses from imports. I calculate both measures for both FTA and non-FTA trading partners.[3]

Because my theory assumes that larger sectors receive a higher political weight than smaller ones, I calculate output-weighted scores by multiplying each sector's RCA and EXIMP score by its share of national output before correlating across sectors. I also log comparative advantages before weighting for several reasons. First, it reduces the influence of outliers. Second, the logged indices have negative values for comparative-disadvantage sectors and positive values for comparative-advantage sectors. This facilitates interpretation of the weighted scores because low values then clearly indicate large sectors with a comparative disadvantage, while high values indicate large sectors with a comparative advantage. Finally, the marginal impact of sectoral (un)competitiveness on lobbying probably declines after a certain point. Logging accounts for these diminishing marginal effects.

Because the convergence measures are output-weighted, and because output is integral to the EXIMP scores, both comparative-advantages measures are calculated at the three-digit International Standard Industrial Classification (ISIC) level, for which cross-national output data are widely available. Three-digit ISIC classifies industries into 28 broad manfacturing sectors, such as food products (ISIC311), textiles (ISIC321), apparel (ISIC322), transport equipment (ISIC384), and so on. A drawback of the ISIC classification, aside from the relatively high level of sectoral aggregation, is that it covers only manufacturing sectors. To ensure that this is not a problem, I have also performed my analysis with an unweighted RCA measure calculated at the much less aggregated three-digit Standard International Trade Classification (SITC) level. The SITC classifications are more detailed, distinguishing 236 sectors per country, and include agricultural as well as manufacturing sectors. As this measure generates practically identical results, I employ only the output-weighted measures in the paper.

Convergence scores for all FTAs and customs unions in the sample are shown in Table 1. Note first that the two convergence measures are highly correlated ($r = 0.75$), indicating that they reliably measure convergence. Note also that convergence scores vary considerably across countries, ranging from -0.59 (Bolivia in the Andean Community) to .98 (Iceland in the EEA). We should thus expect variation in FTA effects, with convergent FTAs promoting and divergent FTAs retarding multilateral trade liberalization. Finally, note that the average FTA convergence scores are 0.49 and 0.43 for the RCA and EXIMP measures, respectively. FTAs should thus, on average, foster multilateral liberalization.

Dependent Variable

My dependent variable, $\Delta\ln(Tariff_i)$, is the difference between first and last periods in country i's simple mean MFN tariff rate. Tariff changes for FTA and customs union members are shown in Table 1.[4] I employ MFN tariffs because, compared

[3] $RCA_{ijk} = [(x_{ijk} \div X_{ij}) \div (x_{wk} \div X_w)]$, where x_{ijk} is i's exports of k to j, X_{ij} is i's total exports to j, x_{wk} is world exports of k, and X_w is total world exports, where world values are calculated exclusive of intra-FTA trade. For intra-FTA RCAs, j = other FTA members; for extra-FTA RCAs, j = all non-members of the FTA. Export dependence is $\text{exports}_{ijk} \div \text{output}_{ik}$, where exports_{ijk} is i's exports of k to j and output_{ik} is i's output in sector k. Import penetration is $\text{imports}_{ijk} \div \text{output}_{ik}$, where imports_{ijk} is i's imports of k from j. $EXIMP_{ijk}$ is export dependence divided by import penetration. I do not calculate EXIMP convergence scores for the EU because the EU's EXIMP score vis-à-vis itself is 1 for all sectors. Sectoral trade data are from Feenstra (2000). Output data are from UNIDO's *Industrial Statistics Database* (2001).

[4] I logged tariffs before differencing because the dependent variable was highly skewed. After logging, this variable is normally distributed. Tariff changes for non-members of preferential arrangements are: Chile (0), India (-50.8), Japan (-0.71), South Korea (-2.10), Morocco (-3.71), and Sri Lanka (-6.29). Tariffs for OECD members are from the OECD's *Indicators of Tariff and Non-Tariff Trade Barriers* (1997) where possible; otherwise, they

with other policy measures, they most accurately capture FTA members' trade policies toward nonmembers. They do not reflect intra-FTA tariff liberalization, as would average tariff measures, nor do they reflect the purely economic effects of trade diversion, as trade-based measures would. Changes in MFN tariffs thus provide the cleanest possible test of my hypotheses.

Due to differences in data availability, initial and final tariff dates vary slightly across countries. However, in all countries the first and last periods are separated by approximately 8 years between 1988 and 1998. To ensure that all countries experienced similar external pressures for trade liberalization, the first period always precedes while the last always follows the Uruguay Round of GATT negotiations.

Independent Variables

Because the effects of FTAs should be proportional to the volume of intra-FTA trade, I measure FTA participation continuously rather than dichotomously. *FTA Trade Share*$_i$ is i's intra-FTA trade as a share of i's total trade, calculated as the average from 1990–1995 and coded 0 for nonmembers of FTAs.[5] *Convergence*$_i$, my measure of comparative-advantage convergence, has already been discussed. FTA and CU members receive the scores shown in Table 1, while nonmembers of preferential arrangements receive a score of 1 because, in their case, the sets of preferred and nonpreferred trading partners are identical.[6]

I hypothesize that the effects of intra-FTA trade should depend on members' convergence scores. To test this hypothesis, I include *FTA Trade Share*$_i$ × *Convergence*$_i$, an interaction term formed by multiplying the two constituent variables. If intra-FTA trade causes tariffs to fall in convergent members but to rise in divergent members, as predicted, the interaction term will be negatively signed. Both components of the interaction term were centered around a mean of zero before interacting them. This does not alter the conditional effects of any variables (Kam and Franzese 2007), but it does facilitate presentation because the coefficient on each component gives the effect of that component when the other is at its mean.

Control Variables

I include only two controls. ln(*Initial Tariff*$_i$) is the log of country i's initial tariff, that is, the tariff before the liberalization under study. Because deeper tariff cuts are possible in countries with high initial tariffs, initial tariffs should be negatively signed. ln(*Income*$_i$) is the log of country i's 1990 per capita Gross Domestic Product (GDP). Because poor countries have weak state capacity, they rely more than rich ones on tariffs as a source of revenue. As this should make poor countries more reluctant to liberalize tariffs, income should be negatively signed.[7]

In alternative model specifications, I included numerous controls that might, theoretically, affect trade policy. These controls included economic growth rates, changes in unemployment, changes in the real exchange rate, participation in International Monetary Fund lending programs, political regime type, the number of domestic veto players, government spending as a proportion of GDP, and a dummy for customs union membership. To address the possible nonindependence of the EU accession cases, I also included an EU dummy and performed the analysis with all EU cases omitted. None of these controls were significant or affected

are from UNCTAD's *Trade Analysis and Information System* (TRAINS) versions 3.0 and 6.0. These data sources are comparable, as the OECD obtained its data from TRAINS. Non-OECD tariffs are from TRAINS.

[5] Bilateral trade data are from Feenstra (2000).

[6] Because multilateral tariff reductions are extended to all trading partners, multilateral trade liberalization should have qualitatively the same political effects as a perfectly convergent FTA. See Bailey, Goldstein, and Weingast (1997) for an argument to this effect.

[7] Data on GDP per capita are from the World Bank's *World Development Indicators*.

TABLE 2. FTA Participation and MFN Tariff Changes

	Convergence Measure	
Explanatory Variable	*RCA*	*EXIMP*
ln(*Initial Tariff*$_i$)	− 0.698** (0.100)	− 0.712** (0.093)
ln(*Income*$_i$)	− 0.211** (0.049)	− 0.215** (0.047)
FTA Trade Share$_i$	− 0.002 (0.002)	− 0.002 (0.002)
Convergence$_i$	0.115 (0.127)	− 0.021 (0.116)
FTA Trade Share$_i$ × *Convergence*$_i$	− 0.014** (0.004)	− 0.017** (0.004)
Constant	3.36** (0.629)	3.44** (0.591)
Observations	30	29
$p>F$	0.0000	0.0000
R^2	0.74	0.77

Dependent Variable = Δln (Tariff$_i$).
*$p<.05$, **$p<.01$.
Standard errors in parentheses.

my results; hence, to preserve degrees of freedom, I include only the significant controls in the present analysis.

Estimation and Results

I estimate the following model using ordinary least squares (OLS) regression:[8]

$$\Delta\ln(Tariff)_i = \beta_0 + \beta_1\ln(Initial\,Tariff_i) + \beta_2\ln(Income_i) + \beta_3 FTA\,Trade\,Share_i + \beta_4 Convergence_i + \beta_5(FTA\,Trade\,Share_i \times Convergence_i) + \varepsilon_i.$$

Results are presented in Table 2. Results for the FTA variables are consistent with theoretical expectations. FTA trade share is negative in both models but is not statistically significant, perhaps because the mean convergence score is only moderately positive. The convergence variable on its own is insignificant. The interaction term is, however, both correctly signed and significant. It shows, as expected, that intra-FTA trade leads to larger tariff reductions at high convergence levels than at low ones. To measure more precisely the conditional effects of FTAs, I calculate conditional FTA trade share coefficients and standard errors at different levels of convergence. I do this for the mean convergence score and for the mean levels of convergence in the most-convergent and least-convergent quartiles.[9] Results are shown in Table 3.

At the mean convergence level, intra-FTA trade has no significant impact on MFN tariff changes. At high (strongly positive) convergence levels, however, intra-FTA trade has a significant negative effect. FTA members with highly convergent comparative advantages thus reduce tariffs more rapidly than do other members and nonmembers of FTAs. In contrast, at low (negative) convergence levels, intra-FTA trade has significant positive effects on MFN tariff changes. FTA members with divergent comparative advantages thus reduce tariffs more slowly than do other members and nonmembers of FTAs.

To interpret these results substantively, I use the average of the two convergence measures. This yields trade share coefficients of 0.009 at the low convergence level and − 0.007 at the high convergence level. A coefficient of 0.009 indicates that a one percentage point increase in FTA trade share increases final tariffs, and hence

[8] Cook–Weisberg tests reveal no heteroskedasticity. Multicollinearity is also low, with average variance inflation factors of 1.55 and 1.54 for the RCA and EXIMP models, respectively.

[9] As the estimated model is Δln (*Tariff*) = β_1*FTA Trade Share* + β_2 *Convergence* + β_3 (*FTA Trade Share* × *Convergence*), the conditional impact of FTA trade shares is given by (β_1 + β_3*Convergence*).

TABLE 3. Conditional Effects of FTAs on MFN Tariff Changes

	Convergence Measure	
Convergence Value	*RCA*	*EXIMP*
Bottom quartile average	0.009* (0.003)	0.010** (0.003)
Mean	− 0.002 (0.002)	− 0.002 (0.002)
Top quartile average	− 0.006** (0.002)	− 0.007** (0.002)

Dependent Variable = $\Delta \ln (Tariff_i)$.
*$p < .05$, **$p < .01$.
Standard errors in parentheses.

reduces the rate of tariff liberalization, by exp (0.009). Hence, at the low convergence level, a one percentage point increase in intra-FTA trade reduces the rate of tariff liberalization by 0.9 percent. A coefficient of − 0.007 indicates that a one percentage point increase in FTA trade share reduces final tariffs, and increases the rate of tariff liberalization by exp (− 0.007). Hence, at the high convergence level, a one percentage point increase in intra-FTA trade increases the rate of tariff liberalization by 0.7 percent. To see what this means in practice, consider that the average FTA trade share in my sample is 36 percent. At the low convergence level, participation in such an FTA would cause tariff reductions to be 32 percent smaller than they otherwise would. At the high convergence level, participation in such an FTA would cause tariff reductions to be 25 percent larger than they otherwise would. FTAs thus have substantively important as well as statistically significant conditional effects on multilateral trade liberalization.

Robustness Checks

As noted earlier, my results are robust to the addition and subtraction of many controls. They also hold up when I employ import weighted and output weighted instead of simple mean MFN tariffs. Finally, although I was able to calculate output-weighted convergence scores only at the three-digit ISIC level, I have performed the analysis with unweighted RCA convergence scores at the much less aggregated three-digit SITC level and obtained very similar results. In short, my results do not appear to reflect either omitted-variable bias or measurement error. Several concerns remain, however: my small sample size, the possible endogeneity of FTAs, and the possibility that governments compensate for tariff reductions by increasing nontariff barrier (NTB) protection.

My sample raises two concerns. First, because the sample composition reflects data availability, and because data may not be missing at random, the sample may be unrepresentative of the global population. Although I cannot dismiss this possibility, it is worth noting that the sample exhibits considerable variation on several important dimensions. It contains both very rich and very poor countries, both democratic and nondemocratic countries, and both high-tariff and low-tariff countries. The sample thus exhibits no obvious biases that might affect my conclusions. It is also worth noting that the countries in my sample together accounted for 87 percent of world trade during the period under study. Trade policies within this sample thus have global importance regardless of the generalizability of my findings.

Second, because my sample is small, my results could reflect influential observations. I address this concern in two ways. First, I calculate DFBETAs to determine each case's impact on the $FTA\ Trade\ Share_i \times Convergence_i$ coefficient and classify cases as outliers if $|\text{DFBETA}| > 2/\sqrt{n}$.[10] I then reestimate the models with outliers

[10] This is a conservative test proposed by Belsley, Kuh, and Welsch (1980).

TABLE 4. Weighted and Instrumental-Variables Regressions

	Robust Estimates		*2SLS Estimates*	
	Convergence Measure		*Convergence Measure*	
Explanatory Variable	*RCA*	*EXIMP*	*RCA*	*EXIMP*
ln(*Initial Tariff*$_i$)	− 0.639** (0.075)	− 0.670** (0.096)	− 0.693** (0.106)	− 0.713** (0.094)
ln(*Income*$_i$)	− 0.170** (0.037)	− 0.205** (0.048)	− 0.198** (0.053)	− 0.211** (0.048)
FTA Trade Share$_i$	− 0.004** (0.001)	− 0.001 (0.002)	− 0.003 (0.002)	− 0.002 (0.002)
Convergence$_i$	0.080 (0.096)	− 0.037 (0.119)	0.124 (0.135)	− 0.039 (0.120)
FTA Trade Share$_i$ × *Convergence*$_i$	− 0.014** (0.003)	− 0.017** (0.004)	− 0.021** (0.007)	− 0.020** (0.0036)
Constant	2.84** (0.475)	3.25** (0.609)	3.22** (0.674)	3.39** (0.599)
Observations	30	29	30	29
$p>F$	0.0000	0.0000	0.0000	0.0000
R^2			0.71	0.77

Instrumented (2SLS): *FTA Trade Share*$_i$ × *Convergence*$_i$.
Instruments (2SLS): *XIC Ratio*$_i$ and explanatory variables.
Dependent Variable = Δln (*Tariff*$_i$).
*$p<.05$, **$p<.01$.
Standard errors in parentheses.

omitted and obtain qualitatively identical results. Second, I reestimate the models using a robust estimator that downweights influential observations. The robust procedure first estimates an OLS regression to identify and eliminate gross outliers, then performs an iteratively reweighted (Huber and Biweight) least squares regression in which each case's weight is inverse to its Cook's distance, a measure of its influence on coefficient estimates.[11] Results are shown in Table 4.

As the first two columns of Table 4 indicate, the use of robust estimators does not change my results. The above tests thus indicate that my results do not reflect influential observations.

Another possible concern is that FTA characteristics may be endogenous to factors that determine subsequent multilateral trade policies. In this case, FTA participation might be related to such policies, not because the former causes the latter, but because both are caused by these (omitted) factors. I address this concern with two-stage least squares (2SLS) regressions. I instrument the interaction term with *XIC Ratio*$_i$, the ratio of country i's output in exporting sectors to its output in import-competing sectors before FTA formation. Theoretically, the XIC ratio at time t is more likely to affect FTA formation—a trade-policy decision at time t—than it is to cause changes in trade policy over subsequent years. Empirically, this ratio is a good instrument, in that it is strongly correlated with the instrumented variable ($r = .63$ and .68 for the RCA and EXIMP measures, respectively) but weakly correlated with both the dependent variable ($r = -.10$) and the error terms ($r = -.20$ and $-.08$ for the RCA and EXIMP regressions, respectively). The 2SLS results are shown in the last two columns of Table 4. Note simply that my results hold up even after controlling for the endogeneity of FTA characteristics.

A final concern is that governments may offset tariff reductions by employing NTBs such as import licenses, voluntary export restraints, antidumping duties, and the like. If this is true, then my tariff analysis may not accurately convey the effects of convergent FTAs. I address this concern by repeating my analysis with Δln(*NTB Coverage*$_i$), the change in country i's logged NTB coverage ratio, as my dependent variable. The sample is slightly different due to differences in data availability: FTA

[11] For a discussion of robust estimators see Berk (1990). Observations are gross outliers if Cook's Distance >1.

TABLE 5. Conditional Effects of FTAs on NTB Changes

	Convergence Measure	
Convergence Value	*RCA*	*EXIMP*
Bottom quartile average	0.002 (0.010)	0.002 (0.010)
Mean	− 0.009 (0.005)	− 0.011 (0.006)
Top quartile average	− 0.012* (0.005)	− 0.014* (0.007)
Observations	34	33
$p>F$	0.0000	0.0000
R^2	0.50	0.50

Dependent Variable = Δln (*NTB Coverage*$_i$).
*$p<.05$, **$p<.01$.
Robust standard errors in parentheses.

members Colombia, Thailand, and the Czech Republic have been dropped, while Hungary (Europe Agreement) and the Philippines (AFTA) have been added. Among non-FTA members, Austria, Finland, Morocco, Sri Lanka, and Sweden have been dropped, while Algeria, Bangladesh, China, Nepal, Oman, Paraguay, Saudi Arabia, South Africa, Tunisia, and Uruguay have been added.

To facilitate comparison, I estimate the same model as before.[12] To save space, I present only the conditional FTA trade share coefficients of interest in Table 5.

The effects of FTAs on NTBs are similar, though not identical, to their effects on tariffs. Results are very similar at the high convergence level—where FTAs lead to significantly larger NTB reductions—and at the mean convergence level, where FTAs again have insignificant liberalizing effects. The high- and mean-convergence NTB results thus mirror the tariff results. The NTB and tariff results are less similar at the low convergence level, in that divergent FTAs have no significant effects on NTB changes. However, although the low-convergence NTB results do not reinforce the tariff analysis, neither do they contradict it: members of divergent FTAs do not offset tariff increases by lowering NTBs. Overall, the conditional NTB results thus reinforce the conclusions drawn from the tariff analysis.

I present the NTB results solely as a robustness check because the NTB measure, unlike MFN tariffs, incorporates policies toward other FTA members and is thus not unambiguously "multilateral." Although the NTB analysis thus cannot provide conclusive support for my hypotheses, it, like the other robustness checks, strengthens my conclusions.

Conclusion

FTAs have proliferated in recent years. Some observers welcome them as the building blocks of global free trade; others condemn them as stumbling blocks likely to obstruct broader trade liberalization. I find that both sides in this debate overstate their case. FTAs have no significant aggregate effects on multilateral trade liberalization. However, they do have important conditional effects: they promote MFN tariff reduction in members with convergent comparative advantages but obstruct it in members with divergent comparative advantages. The insignificant aggregate result thus does not mean that FTAs are unimportant. Rather, they have important but contradictory effects on individual members.

My analysis could be supplemented and extended in several ways. First, it would be useful to show that the effects of FTAs on trade policies reflect hypothesized causal processes. To demonstrate this, I would need to show that (1) FTAs have the

[12] I employ White-corrected standard errors due to the presence of significant heteroskedasticity.

hypothesized conditional effects on sectoral output, and (2) these changes in sectoral output lead to the expected changes in political influence. Such an analysis would strengthen our confidence that not only my predictions but also my explanation for observed outcomes is correct.

Second, my analysis of policy outcomes leaves open the question of how the observed changes in trade policy actually affect trade. This question is important because trade openness reflects not only trade policies but also other factors such as geographic location, the size of the economy, and so on. A tariff cut in an economy that is "closed" for these other reasons might have less effect than an identical tariff cut in an economy that would, but for tariffs, be open. Because a given policy change may have different effects on trade in different contexts, it would be useful to examine the effects of FTA-induced policy changes on external trade flows. We cannot do this simply by examining the effects of FTAs on external trade, however, because, as mentioned earlier, these effects reflect both external policy changes and trade diversion. Instead, we must first measure the impact of FTAs on external policies, then estimate the effects of these policy changes on trade flows. Such an analysis, though challenging, would enable us to distinguish the effects of external policy changes from the purely economic effects of trade diversion.

Third, it would be interesting to see whether FTAs' effects on external policies offset or exacerbate the effects of trade diversion. Theoretically, the former outcome seems likely. Because countries with convergent comparative advantages import similar goods from FTA partners and nonpartners, they should experience considerable trade diversion as imports from FTA partners displace imports from the rest of the world. In contrast, because countries with divergent comparative advantages import different goods from FTA partners and nonpartners, they should experience little trade diversion. FTAs should thus have offsetting economic and political effects: convergent FTAs should cause not only more trade diversion but also more external liberalization, while divergent FTAs should cause less of both. This hypothesis, if true, would force us to rethink the implications of Grossman and Helpman's (1995) model of FTA formation. Grossman and Helpman conclude that the most politically feasible FTAs are those that divert the most trade. This conclusion seems pessimistic, in that it predicts the proliferation of trade-diverting FTAs. However, if highly trade-diverting FTAs also promote external liberalization, the latter effect could offset the former. Consideration of the dynamic political effects of FTAs thus suggests a more optimistic scenario than Grossman and Helpman surmise.

Fourth, my argument has important implications for the political dynamics of customs unions. As Table 1 makes clear, different members of the same customs union may exhibit different degrees of convergence. Within MERCOSUR, for example, Argentina has a high convergence score while Brazil has a low one. MERCOSUR should thus affect the two members differently: it should strengthen the pro-multilateralism lobby in Argentina but weaken it in Brazil. Because the two countries share a common external trade policy, it is not clear whether these conflicting domestic developments will lead to more or less multilateral liberalization. It is clear, however, that they should lead to greater conflict over the common external tariff, as Argentina becomes more liberal and Brazil more protectionist over time. Customs unions that contain both convergent and divergent members may thus sow the seeds of their own demise by causing member preferences to diverge over time. In contrast, customs unions that contain only convergent or only divergent members should be more harmonious because members' policy preferences will converge over time. My theory could thus explain why some customs unions, such as MERCOSUR, have been more conflictual than others, such as the EU.

Finally, the logic of my argument also applies to nontrade arrangements. Regional currency unions, regional environmental agreements, bilateral investment treaties, and other minilateral arrangements all create domestic winners and losers.

These winners and losers typically have preferences for or against cooperation with nonmembers of the minilateral bloc. These nontrade agreements should thus also affect the relative strength of pro- and anti-multilateralism forces. For example, a regional fixed-exchange rate regime may help export-oriented sectors but hurt producers of nontradables and import-competing goods (Frieden 1991). If so, then establishment of such a regime should lead to a shift in investment from the latter sectors to the former. The consequent rise of export-oriented sectors should make governments in the currency regime more willing to engage in broader exchange-rate cooperation. It should also increase their support for broader trade liberalization, which highlights an important point: a minilateral agreement in a particular issue area should affect subsequent multilateral cooperation, not only in that issue area but also in other issue areas. It would thus be useful, in future research, to explore the relationship between minilateral cooperation in one issue area and multilateral cooperation in others.

References

Aitken, Norman D. (1973) The Effect of the EEC and EFTA on European Trade: A Temporal Cross-Section Analysis. *American Economic Review* 63:881–892.

Bailey, Michael A., Judith Goldstein, and Barry R. Weingast. (1997) The Institutional Roots of American Trade Policy. *World Politics* 49:309–338.

Baldwin, Richard E. (1994) *Towards an Integrated Europe*. London: Centre for Economic Policy Research.

Belsley, David A., Edwin Kuh, and Roy E. Welsch. (1980) *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity*. New York: Wiley.

Berk, Richard A. (1990) A Primer on Robust Regression. In *Modern Methods of Data Analysis*, edited by John Fox and J. Scott Long. Newbury Park: Sage Publications.

Bhagwati, Jagdish. (1993) Regionalism and Multilateralism: An Overview. In *New Dimensions in Regional Integration*, edited by Jaime de Melo and Arvind Panagariya. New York: Cambridge University Press.

Brainard, S. Lael, and Thierry Verdier. (1993) The Political Economy of Declining Industries: Senescent Industry Collapse Revisited. NBER Working Paper 4606.

Choi, Jay Pil. (2001) Protectionist Response to Import Competition in Declining Industries Reconsidered. *European Journal of Political Economy* 17:193–201.

Davis, Christina L. (2004) International Institutions and Issue Linkage: Building Support for Agricultural Trade Liberalization. *American Political Science Review* 98:153–170.

Downs, George W., David M. Rocke, and Peter N. Barsoom. (1998) Managing the Evolution of Multilateralism. *International Organization* 52:397–419.

Feenstra, Robert C. (2000) *World Trade Flows, 1980–1997*. CD-ROM. Davis: Institute of Governmental Affairs.

Foroutan, Faezeh. (1998) Does Membership in a Regional Preferential Trade Arrangement Make a Country More or Less Protectionist? World Bank Working Paper 1898.

Frankel, Jeffrey A. (1997) *Regional Trading Blocs in the World Economic System*. Washington, DC: Institute for International Economics.

Frankel, Jeffrey A., and Shang-Jin Wei. (1998) Regionalization of World Trade and Currencies: Economics and Politics. In *The Regionalization of the World Economy*, edited by Jeffrey A. Frankel. Chicago: University of Chicago Press.

Frieden, Jeffry A. (1991) Invested Interests: The Politics of National Economic Policies in a World of Global Finance. *International Organization* 45:425–451.

Gilligan, Michael J. (1997) *Empowering Exporters: Delegation, Reciprocity and Collective Action in Twentieth Century American Trade Policy*. Ann Arbor: University of Michigan Press.

Gilligan, Michael J. (2004) Is There a Broader–Deeper Trade-Off in International Multilateral Agreements? *International Organization* 58:459–484.

Grossman, Gene M., and Elhanan Helpman. (1995) The Politics of Free-Trade Agreements. *American Economic Review* 85:667–690.

Kahler, Miles. (1992) Multilateralism with Small and Large Numbers. *International Organization* 46:681–708.

KAM, CINDY D., AND ROBERT J. FRANZESE JR. (2007) *Modeling and Interpreting Interaction Hypotheses in Regression Analysis*. Ann Arbor: University of Michigan Press.

KRISHNA, PRAVIN. (1998) Regionalism and Multilateralism: A Political Economy Approach. *Quarterly Journal of Economics* 113:227–251.

LAZER, DAVID. (1999) The Free Trade Epidemic of the 1860s and Other Outbreaks of Economic Discrimination. *World Politics* 51:447–483.

LEE, JONG-WHA, AND PHILLIP SWAGEL. (1997) Trade Barriers and Trade Flows Across Countries and Industries. *Review of Economics and Statistics* 79:372–382.

LEVY, PHILIP I. (1997a) A Political–Economic Analysis of Free-Trade Agreements. *American Economic Review* 87:506–519.

LEVY, PHILIP I. (1997b) Free Trade Agreements and Inter-Bloc Tariffs. Working Paper.

MANSFIELD, EDWARD D., HELEN V. MILNER, AND PETER ROSENDORFF. (2002) Why Democracies Cooperate More: Electoral Control and International Trade Agreements. *International Organization* 56:477–514.

MARTIN, LISA L. (1992) Interests, Power, and Multilateralism. *International Organization* 46:765–792.

MCGILLIVRAY, FIONA. (1997) Party Discipline as a Determinant of the Endogenous Formation of Tariffs. *American Journal of Political Science* 41:584–607.

MCLAREN, JOHN. (2002) A Theory of Insidious Regionalism. *Quarterly Journal of Economics* CXVII: 571–608.

ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD). (1997) Indicators of Tariff & Non-Tariff Trade Barriers CD-ROM.

OYE, KENNETH A. (1985) Explaining Cooperation Under Anarchy: Hypotheses and Strategies. *World Politics* 38:1–24.

OYE, KENNETH A. (1992) *Economic Discrimination and Political Exchange: World Political Economy in the 1930s and 1980s*. Princeton: Princeton University Press.

PAHRE, ROBERT. (1994) Multilateral Cooperation in an Iterated Prisoner's Dilemma. *Journal of Conflict Resolution* 38:326–352.

PANAGARIYA, ARVIND, AND RONALD FINDLAY. (1996) A Political–Economy Analysis of Free-Trade Areas and Customs Unions. In *The Political Economy of Trade Policy: Papers in Honor of Jagdish Bhagwati*, edited by Robert C. Feenstra, Gene M. Grossman, and Douglas A. Irwin. Cambridge: MIT Press.

RICHARDSON, MARTIN. (1990) Trade Diversion and Endogenous Tariff Formation. Working Paper 90–2, Department of Economics, Georgetown University.

RICHARDSON, MARTIN. (1993) Endogenous Protection and Trade Diversion. *Journal of International Economics* 34:309–324.

SAPIR, ANDRE. (1992) Regional Integration in Europe. *The Economic Journal* 102:1491–1506.

SOLOAGA, ISIDRO, AND L.ALAN WINTERS. (1999) Regionalism in the Nineties: What Effect on Trade? Working Paper 2156. Washington, DC: World Bank.

TREFLER, DANIEL. (1993) Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of U.S. Import Policy. *The Journal of Political Economy* 101(1):138–160.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD). Trade Analysis and Information System CD-ROM, versions 3.0 and 6.0.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO). (2001) Industrial Statistics Database CD-ROM.

VINER, JACOB. (1950) *The Customs Union Issue*. New York: Carnegie Endowment for International Peace.

WEI, SHANG-JIN, AND JEFFREY A. FRANKEL. (1998) Open Regionalism in a World of Continental Trade Blocs. IMF Staff Papers 45.

WESTHOFF, FRANK H., BETH V. Y. YARBROUGH, AND ROBERT M. YARBROUGH. (1994) Preferential Trade Agreements and the GATT: Can Bilateralism and Multilateralism Coexist? *Kyklos* 47:179–196.

WINTERS, L. ALAN. (1999) Regionalism vs. Multilateralism. In *Market Integration, Regionalism and the Global Economy*, edited by R. E. Baldwin, D. Cohen, A. Sapir and A. Venables. Cambridge: Cambridge University Press.

YEATS, ALEXANDER. (1997) Does Mercosur's Trade Performance Raise Concerns About the Effects of Regional Trade Arrangements? Working Paper 1729. Washington, DC: World Bank.