



# Distributional Conflict Between Powerful States and International Treaty Ratification<sup>1</sup>

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Why do states ratify international treaties? While previous research has emphasized domestic political factors, we focus on power politics in situations in which powerful states disagree on the merits of a treaty. We argue that states supporting the status quo should discourage third parties from ratifying the treaty, whereas challenger states should entice them to do so. Based on this theory, we expect third parties' ratification decisions to be influenced by their dependence on the conflicting states. To test the theory, we use data on the conflict between the United States and the European Union over the regulation of trade in genetically modified organisms. The European Union created a new treaty, the Cartagena Protocol, to enhance biosafety regulation and propagate the "precautionary principle" over the "sound science principle" defended by the United States. Our quantitative analysis shows that ratification decisions of third parties were influenced by relations to and dependence on the clashing giants.

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Two elephants are fighting—the United States and Europe—and it is Africa that is suffering.<sup>2</sup>

Growing interdependence between states has increased the demand for international rules and standards that regulate state behavior. Such rules and standards are promulgated by international institutions or regimes which may induce change in domestic policies and practices, coordinate foreign policies, reduce transaction costs, promote norms and world views, and pool resources. International institutions can only be effective, however, when states agree to implement the treaty provisions domestically and comply with the regulations. Ratification of the treaty is therefore a crucial step toward active participation in international institutions.<sup>3</sup> Much research effort has gone into explaining why states ratify treaties. Building on the notion of hegemonic stability, several scholars have emphasized the role of the United States (US). According to these studies, the United States has been a relatively benign hegemon that has created institutions for cooperation with other states after World War II (Lake 1993; Ikenberry 2000; Simmons and Elkins 2004). The main focus of current research on treaty ratification, however, has been the influence of domestic political factors, largely because they vary considerably across

institutions and countries (Mansfield and Pevehouse 2006; Vreeland 2008; Simmons 2009).

Whereas American hegemony characterized the decades following World War II, the prominence of other major powers—China, India, and the European Union (EU)—has increased in many issue areas. They often disagree with the United States on the appropriate rules of the game. The European Union has become the front-runner in environmental regulations and created new regimes, often without US approval or even against explicit US interests (Vogel 2003). The Kyoto Protocol, for example, was signed and ratified by many countries despite the Bush Administration's efforts to undermine it (Eckersley 2007). Along similar lines, many developing countries have criticized the International Monetary Fund (IMF)—and the neoliberal policies promoted by the United States—because the interests of newly powerful states, such as China, are not adequately represented in the Board of Governors (Stone 2011).

In a multipolar world, treaty ratification cannot be understood without reference to power politics (Kelley 2007; Nooruddin and Payton 2010). When powerful states disagree on the merits of a treaty, they may put competing pressures on the ratification decisions of other states. If these external pressures are severe enough to influence domestic preference formation, they may mediate or reduce the effect of domestic politics and institutions. If one powerful state supports a treaty, and thus wants others to ratify it, while another powerful state opposes the treaty, and thus regards ratification as a hostile act, how are third parties to make the ratification decision? In general, how does distributional conflict between powerful states influence third-party decisions to join treaties?<sup>4</sup>

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<sup>1</sup> Author's note: We thank the anonymous reviewers, the editors of *International Studies Quarterly*, Abraham Newman, Michael Doyle, Robert O. Keohane, Soo Yeon Kim, Barbara Koremenos, Mark Pollack, Gabriele Ruoff, Branislav Slantchev, and Randy Stone for helpful comments on previous versions of this paper. The paper was presented at the annual meeting of the American Political Science Association in 2010. A Stata replication package can be found in the ISQ data archive.

<sup>2</sup> Interview with Darin Makinde, University of Venda (South Africa). *New York Times*, May 14, 2003, "U.S. Contests Europe's Ban on Some Food."

<sup>3</sup> Due to enforcement problems, ratification does not automatically imply compliance (Hathaway 2002). Yet the fact remains that ratification, in contrast to signing a treaty, is a necessary condition for compliance (Hafteil 2010).

<sup>4</sup> By a third party, we refer to a state that is not powerful enough to actively influence global ratification dynamics.

We argue that if powerful states disagree on the merits of a treaty, they compete to influence ratification by third parties. If a powerful state wants to challenge the currently dominant rules and standards, it can do so by inviting third parties to join a treaty that promotes a different set of rules and standards.<sup>5</sup> The more countries join the treaty, the greater influence the treaty will exert on policy formation and coordination. At the same time, a status quo power—such as the current hegemon—has incentives to discourage third parties from joining the new regime. In other words, the challenger and the defender will try to coax and coerce third parties to seek or forgo, respectively, treaty ratification. Our theory predicts that under distributional conflict between powerful states, ratification decisions should be influenced by third parties' dependence on powerful states with interests for or against ratification.

To test the theoretical implications, we examine decisions to ratify the Cartagena Protocol to the Convention on Biological Diversity. The Cartagena Protocol was negotiated in 2000 at the insistence of the European Union against vigorous resistance by the United States. It enhances the regulatory sovereignty of importers and endorses the "precautionary principle" rejected by the World Trade Organization (WTO), so it is a challenge to current international trade law in the field of biosafety regulation. It was an attempt by the European Union to get states to accept a new principle of biosafety regulation and implement the relevant domestic standards. Our quantitative analysis shows that state decisions to ratify the Cartagena Protocol depended not only on their domestic preferences and relationship to the hegemonic United States, but also on their relationship to the European Union.

Our findings contribute to the broader literature on international politics in several ways. First, we add a new dimension to the burgeoning literature on participation in international institutions. While this literature has mostly emphasized hegemonic pressures (Kindleberger 1986; Lake 1993; Ikenberry 2000; Kelley 2007) and domestic politics (Neumayer 2008; Simmons 2009), our results show that in a multipolar world, distributional conflict between powerful states puts competing pressures on third parties. Second, we contribute to the rapidly growing literature on how major powers influence the domestic and foreign policies of other states through carrots and sticks by analyzing their ability to influence participation decisions in international institutions (Kuziemko and Werker 2006; Bueno de Mesquita and Smith 2009). Finally, we contribute to the emerging literature on regime complexity. Previous research has recognized the problems and opportunities that overlapping institutions create (Raustiala and Victor 2004; Busch 2007). Our findings suggest that distributional conflict between powerful states can increase regime complexity through institutional proliferation.

### The Politics of Treaty Ratification

International institutions are collections of rules and standards that define and govern state behavior in an issue area. They are often codified in formal treaties. Ratification of such treaties is an important step toward participa-

tion in and compliance with an international institution. While signature is a symbolic and legally non-binding act, ratification imposes a legal obligation on a state to comply with the treaty provisions (Haftel 2010). By ratifying a treaty, governments accept a set of rules and subject themselves to the monitoring and sanctioning mechanisms of an international institution.

Given the importance of the ratification decision for the impact of a treaty on domestic policy formation, scholars have put much effort into explaining why treaties exist and why states ratify them. Two main arguments exist. The first strand of the literature explains treaty ratification as a top-down process, whereby a hegemon or a powerful state, in order to promote its own goals, first builds a regime and then induces third parties to participate in the regime. This hegemonic stability school of international institutions has emphasized the primacy of the United States (Kindleberger 1986; Lake 1993; Ikenberry 2000; Simmons and Elkins 2004; Kelley 2007). Indeed, much of the global governance system since World War II—the United Nations (UN), the Bretton Woods institutions, the General Agreement on Tariffs and Trade (GATT), and North Atlantic Treaty Organization (NATO) among others—has been created and promoted by the United States. These institutions have served to promote liberal economic and political ideas embraced by the United States.<sup>6</sup>

Since this theory predicts that treaty ratification is always influenced by the most powerful state in the system, it is not surprising that the empirical literature on treaty ratification has focused on other factors. Specifically, the second strand of the literature explains treaty ratification as a bottom-up process, whereby states compare the domestic costs and benefits of ratifying a given treaty. This simple insight has spawned a voluminous literature on the covariates of this domestic cost-benefit calculus. Domestic explanations for treaty ratification include credible commitment to policy reform (Moravcsik 2000; Mansfield and Pevehouse 2006), domestic political institutions and incentives (Neumayer 2008; Vreeland 2008; Simmons 2009), domestic ratification constraints (Hug and König 2002; Von Stein 2008), and the preferences of domestic business groups (Bernhagen 2008; Urpelainen 2010). Empirical analyses range from human rights treaties (Neumayer 2002; Hathaway 2007) to environmental agreements (Bechtel and Tosun 2009; Bernauer, Kalbhenn, Koubi, and Spilker 2010).

Domestic factors are doubtlessly important determinants of treaty ratification, but current trends in world politics may have again brought power considerations to the forefront of ratification decisions. Most importantly, recent decades have witnessed the economic and political rise of China and India. In addition, regionalization led to the emergence of more or less integrated groups of states such as the European Union or the Group of 77. With increasing political, economic, and military capabilities, these new powerful actors have become more assertive on the international level. Whereas their interests sometimes accord with those of the United States, this is often not the case, as the examples cited in the introduction show.

The emergence of new powerful states has important implications for treaty ratification. Hegemonic pressures

<sup>5</sup> Notably, accession to a new international institution usually does not require states to exit existing international institutions even if they have overlapping or conflicting policies.

<sup>6</sup> Despite the focus on US hegemony, scholars have also analyzed hegemonic theory with an application to the Soviet Union and the European Union (Lake 1996; McLean and Stone 2012).

for or against treaty ratification are unidirectional. Multipolarity, on the other hand, implies that powerful states may enact countervailing pressures on third parties. Some powerful states may support treaty ratification, promising rewards for it and threatening recalcitrant states with punitive consequences. But others may oppose treaty ratification, conditioning rewards on ratification failure and threatening ratifying states with less cooperation. Such competing pressures may well mediate the effects of unilateral pressures as well as domestic political factors. When third parties consider their options, any preferences that arise from domestic economic or political characteristics are mediated through credible threats and promises made by powerful states advocating the ratification of a treaty. For example, whereas countries with a strong affinity against environmental regulation have been less likely to ratify the Kyoto Protocol, domestic factors that influence such preferences may become less important in the government's calculus if domestic interest groups that fear exclusion from political and economic benefits that arise from good relations with the EU lobby governments in favor of ratification. If not only one, but two or more powerful states use promises and threats to achieve conflicting goals, then governments have to carefully weigh the competing international pressures. For example, when the United States threatened with military sanctions to get members of the International Criminal Court (ICC) to sign agreements not to surrender US soldiers to the Court, countries did not face any pressure from the European Union despite its support for the ICC and the opposition to such agreements (Kelley 2007). However, if the European Union had threatened with sanctions or promised rewards for not signing these agreements, strong dependence on the United States could have been insufficient for at least those countries that also are very dependent on economic and political ties with the European Union.

In the following section, we propose a theory that explains how distributional conflict between powerful states may influence ratification decisions. To develop our theory, we can draw on previous studies focusing on how powerful states use external influence to promote their foreign policy interests. These studies mostly omit treaties, but they are relevant to our theoretical argument because they provide a foundation for investigating the channels through which powerful states can influence treaty ratification (Hirschman 1945; Stein 1980; Baldwin 1986; Davis 2004; Henry and Sundstrom 2007; Kelley 2007; Stone 2008; Bueno de Mesquita and Smith 2009; Nooruddin and Payton 2010). For example, Bueno de Mesquita and Smith (2009) argue that donors use foreign aid as a side payment for policy concessions, while Kuziemko and Werker (2006) show that permanent members of the UN Security Council use foreign aid to buy votes from the temporary members. These studies offer a theoretical foundation for great power influence which we can use to explain treaty ratification decisions if distributional conflict between powerful states prevails.

### Theory

Our theoretical argument is aimed at answering the following question: How does distributional conflict between powerful states over international rules and standards influence treaty ratification by third parties? We present our theoretical argument in the following fashion. First, we discuss the *scope conditions* of our theory to provide

a clear characterization of the conditions under which our theoretical argument can (and cannot) be applied. Second, we present our *main premises* and derive testable *empirical implications* from them. In sum, we argue that not only domestic factors—such as political institutions, wealth, or economic structure—but also international factors—such as foreign aid, trade relations, or military alliances—influence domestic preference aggregation. International factors change the cost-benefit calculus for governments because threats and promises made by powerful states will pressure third-party governments either directly or indirectly through their impact on the welfare of domestic constituencies. Accordingly, if powerful states disagree over an international treaty, then treaty ratification patterns will depend, *ceteris paribus*, on the third parties' relative dependence on the two competing powers.

Our theory is based on the assumption that at least two powerful states exist and strategically promote their interests. They do not have to be equally powerful, but each must be able to use international institutions to promote their interests. This assumption is particularly relevant in the present situation due to the rise of China and other rapidly industrializing developing countries as well as the increasing assertiveness of regional groups or state coalitions such as the European Union or the Group of 77. Powerful states (or state coalitions) must disagree on the merits of various international rules and standards. Distributional conflict often follows the changes in the international environment. Although states design international institutions to reflect their underlying bargaining capabilities, changes in the international environment have distributional consequences and may provoke demands by discontented states for change. For example, globalization has made it easier for firms to copy innovations, so the United States has pursued stronger international regulations to secure intellectual property rights. Thus, at any given time, it is possible that some powerful states are dissatisfied with the currently focal rules and standards.

Finally, the dissatisfied state should benefit from the proliferation of a new international treaty that promotes its preferred rules and standards. This implies that powerful states cannot solve distributional conflict within the existing institutional framework and that the new institution creates a direct conflict between existing and new rules. Most international institutions provide mechanisms for reform, so dissatisfied states could try to induce change within them through conventional bargaining. But given the sticky nature of institutions, the requisite changes may be difficult to implement (March and Olsen 1998). This problem may be particularly severe when the dissatisfied state is an emerging power. The UN Security Council, for example, rests on the international power structure of 1945 and emerging powers such as Brazil or India have still not been given a seat. Along similar lines, the IMF has been resistant to changes in the voting quotas, and this has led to a loss of legitimacy among developing countries (Stone 2011). The unanimous voting rules that many international institutions use to implement major policy reforms further impede change. It therefore appears plausible that a dissatisfied state grows frustrated and uses outside options that promise results with less delay. Additionally, institutional bargaining can fail for various reasons: incomplete information, commitment problems, and indivisible issues (Fearon 1995).<sup>7</sup>

<sup>7</sup> A challenger could also engage in forum shopping if there are salient alternative fora susceptible to challenger (but not to status quo power) influence (Busch 2007).

Even if institutional reforms fail, conflict between existing and new rules does not necessarily have to arise. Two conditions for conflict to occur appear particularly important. To begin with, the expected payoff from global membership should be high. For example, the convergence of telecommunication and Internet standards have been tremendously beneficial for all states, and the benefits of multilateral environmental regulation depend on global participation. Similarly, the cost of agreeing to disagree through the establishment of isolated spheres of influence should be high. This condition seems particularly plausible under economic interdependence, as both the value of the global market is substantial and the opportunity cost of isolation is high. By contrast, if the powerful states are primarily interested in consolidating political power in their sphere of influence and the threat of costly territorial conflict is present, then rule competition might be less severe. In the aftermath of the Second World War, for example, the United States and the Soviet Union established separate spheres of influence that did not interact much.

Given these scope conditions, we now turn to analyzing the effect of distributional conflict between powerful states on third parties' ratification decisions. We argue that such ratification decisions tend to be influenced by a "tug of war" between powerful states. A powerful state that is dissatisfied with the status quo (the challenger) will attempt to entice third parties to join its preferred treaty, whereas another powerful state with the opposite preferences (the defender) attempts to prevent them from doing so.

Let us first consider the challenger's strategy. It is dissatisfied with the status quo and wants to create a new international treaty with rules and standards that challenge the status quo. Such a treaty can effectively promote new rules and standards when it is accepted and implemented by a critical mass of concerned states (Hart 1961; Schelling 1978; North 1990; Finnemore and Sikkink 1998). If the challenger secures enough support for a collection of rules and standards, it can credibly influence outcomes and policy formation within the relevant issue area. First, treaty ratification carries the legal obligation to comply with the rules and standards in it. Second, such "interaction through commitment" may even influence the preferences of a country toward the currently focal institution (Oberthür and Gehring 2006:6). If the policies promoted by a new institution are popular enough, many states would oppose policies that are hostile to the popular new policies and potentially even create pressure on non-participants to implement the new rules.

Consequently, the challenger's success of promoting conflicting rules crucially depends on widespread participation by third parties. Besides leaving the decision to third parties' preferences toward the new treaty, it should have strong incentives to induce additional ratification, particularly for states that appear, based on domestic economic and political characteristics, opposed or uncertain about ratification. The challenger can offer foreign aid (or threaten withdrawal thereof), it can apply trade or military sanctions, use strategic issue linkages, or offer special accession deals to increase third parties' incentives to ratify the treaty. In addition, the challenger also benefits from indirect or passive influence. If a country has close security ties to the United States, or is dependent on US foreign aid, it will be inclined to align with US preferences—depending on the treaty in focus, for or against ratification—because it anticipates that

undermining the US strategy may ultimately have consequences for future US aid allocation decisions. Based on these considerations, we can formulate the following hypothesis:

**Hypothesis 1:** *As the third party's dependence on the challenger increases, the probability that it ratifies a treaty promoting new rules and standards in conflict with the status quo increases, ceteris paribus.*

The strategy of the defender is similar. It supports the status quo, but compromise with the challenger has proven elusive within the extant institutional framework. Thus, the defender must prepare for exerting influence on ratification decisions, so as to prevent an increase in the popularity and reach of the treaty in focus, which would undermine the status quo. Given that the defender is also a powerful state, it can rely on similar strategies as the challenger. These strategies comprise direct influence through threats and promises, but they also include indirect influence through dependence relations. The following hypothesis captures these dynamics:

**Hypothesis 2:** *As the third party's dependence on the defender increases, the probability that it ratifies a treaty promoting new rules and standards in conflict with the status quo decreases, ceteris paribus.*

In sum, if distributional conflict arises between two or more powerful states about international rules and standards and if the dissatisfied states promote their policies by creating new treaties, then we should experience a "tug of war" in which third-party decisions to ratify these treaties not only depend on domestic economic and political factors, but also on their relative economic or political dependence on the challenger and the defender.

### Biosafety, Distributional Conflict, and the Cartagena Protocol

We empirically test the effect of competition between powerful states on treaty ratification in the case of the Cartagena Protocol on Biosafety. The Cartagena Protocol is a good application of our theory because the scope conditions are generally met and we can focus on directly testing the causal relationship that we proposed in the theory. In addition, we can draw from valuable insights of qualitative research that has been conducted in this area (Bernauer 2003; Drezner 2007; Pollack and Shaffer 2009). We begin by presenting a qualitative case study of the Cartagena Protocol. In addition to providing background information, it provides evidence that our scope conditions apply. We show that, first, the case was characterized by distributional conflict between the United States and the European Union over the regulation of trade with genetically modified organisms (GMOs). Second, the United States and European Union failed to settle the conflict within the WTO and other existing regimes. Third, the European Union chose the outside option and promoted the Cartagena Protocol as a means to increase the global reach of the precautionary principle. Finally, broad ratification was essential since the Cartagena Protocol is a treaty that enshrines a general regulatory principle. Based on these scope conditions, we will test our hypotheses in a quantitative empirical model in the subsequent section.

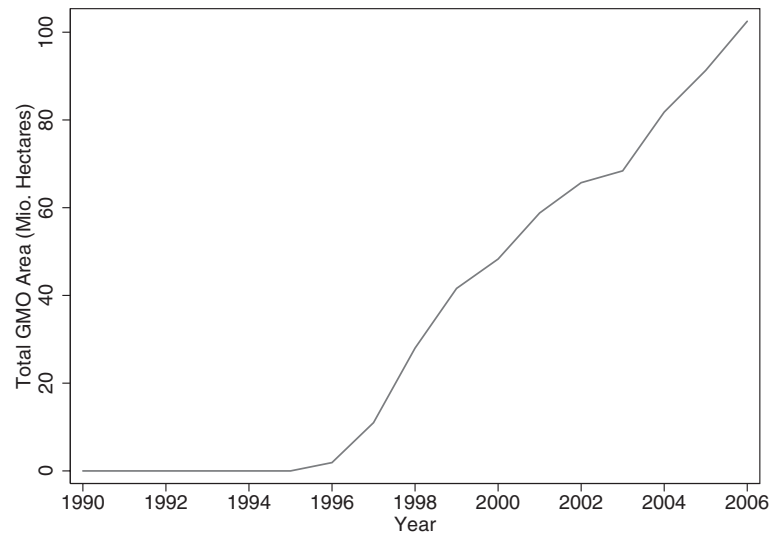


FIG 1. Size of Global GMO Area in Millions of Hectares (Source: GMO Compass)

Over the last decade, many major agricultural exporters have turned to GMO products, and as a consequence, the global area on which GMOs are grown has increased to almost 100 million hectares (Figure 1). While many governments hailed the expansion of GMO agriculture as a solution to the global food crisis, it also triggered increasing concerns about biosafety. Under domestic pressure, some states demanded stricter regulation of GMO trade including provisions for import bans. Under EU leadership, these states began to promote a new “precautionary principle” that legitimizes biosafety regulation under uncertainty which stands in contrast to the existing “sound science principle” that rejects biosafety regulation without compelling scientific evidence (Pollack and Shaffer 2009).<sup>8</sup> Indeed, the European Commission had begun to regulate biosafety already in the early 1990s, and by the end of the decade, both public opinion and the agricultural lobby strongly favored extensive regulation (Oberthür and Gehring 2006).

To solve this conflict, the European Union and the United States repeatedly negotiated within the WTO. However, both bilateral negotiations and various working groups comprising scientific experts were “considered disappointing by both sides” (Shaffer and Pollack 2004:20). Whereas the European Union justified the restriction on GMOs as important step toward consumer protection, the United States argued that the precautionary principle was a strategy to cover up EU protectionist policies against US agricultural imports (especially since there was no scientific evidence that GM products are hazardous). Given the prevailing WTO rules on environmental regulation, it is unsurprising that the United States worried about the possible implications of the precautionary principle. Article XX of the GATT on General Exceptions allows states to use regulations “necessary to protect human, animal or plant life or health.” Accepting the precautionary principle as a legal principle would greatly undermine legal challenges to environmental and agricultural regulations, such as stringent restrictions on GM food. While the sound science principle proscribes regulations that do not have a scientific basis, the precau-

tionary principle explicitly allows them unless they can be proven redundant. In recent years, the WTO has been very careful not to invalidate environmental regulations without very strong legal grounds, and it appears plausible that replacing the sound science principle with a precautionary principle would leave GMO exporters with few options to mount a legal challenge to protectionist market restrictions (DeSombre and Barkin 2002).

The United States therefore consistently rejected European efforts to institutionalize the precautionary principle in the WTO and in the *Codex Alimentarius* Commission of the United Nations, an intergovernmental body recognized by the WTO as the official authority for food-safety standards (Pollack and Shaffer 2009). Failure to settle the dispute within these fora exhausted the available options for compromise. The result has been “a rival standards outcome. The lack of a bargaining core has created an intense competition between the two great powers to bolster their position in friendly international fora, and to recruit as many allies from among the smaller states as possible” (Drezner 2007:150). The United States refused to compromise not only because the farm lobby opposed the precautionary principle, but also because the United States saw the sound science principle as the gold standard for biosafety regulation (Shaffer and Pollack 2004:20). It expected that the dispute would ultimately be resolved to its favor through the WTO Dispute Settlement Mechanism (Falkner 2000). Observers predicted that “outcomes will most likely equate with the opponent’s position and the European Union will have little bargaining power” (Rhinard and Kaeding 2006:1038). As late as in 1998, the United States simply refused to approve an EU proposal to discuss GMO policies for the WTO in the *Codex Alimentarius*, testifying to how confident the US government was that they would be able to sustain the status quo (Drezner 2007:163). At the time, there were good reasons to adopt this view. The European Union had to navigate the complicated decision-making process to find a common position of its 15 member states. Members were largely divided over GMO policies, and the Commission’s first negotiation mandate in 1995 required it to consult back with member representatives and to continue finding a solution in other international fora (Rhinard and Kaeding 2006:1035).

<sup>8</sup> We do not aim to adjudicate the normative merits of the competing principles.

Finally, the United States maintained strong and close strategic ties to many third-world countries, and many developing countries were highly dependent on US food aid provided through the World Food Program.

The European Union, nonetheless, found an internal consensus and was therefore able to negotiate from a position of strength. The strengthening of the pro-bio-safety coalition among EU members was caused by the 1995 accession of Austria, Sweden, and Finland, an overall change in public opinion, and changes in governmental coalitions throughout the European Union (that is, the conservative German government was replaced by a red-green coalition and France saw the arrival of a Green minister for environmental policy [Rhinard and Kaeding 2006]). The negotiations toward such a treaty proved difficult, however, since they were open to supporters and opponents of a precautionary principle. Even though the US efforts to reduce the probability that the Cartagena Protocol undermines international trade law were partially successful, as the treaty explicitly states that it will not challenge existing international agreements, the final text largely reflects EU interests. It was not subordinated to the WTO, required that GMO exports to a country be subject to advance informed consent (Article 8 and 9), and endorsed the precautionary principle (Article 1). To secure support for the Cartagena Protocol among developing countries, the treaty emphasizes the importance of capacity building and financial assistance. The European negotiation effort was ultimately so successful that “[i]n the final text ... the EU achieved virtually all of its aims” (Rhinard and Kaeding 2006:1042).

In sum, the history of the Cartagena Protocol provides evidence that our scope conditions are met. The European Union and the United States were unable to solve their distributional conflict within the existing institutional context, so the European Union finally decided to promote its policies through a new international treaty. Although the Cartagena Protocol was officially adopted in 2000, its fate remained uncertain for years and the United States had reasons to believe that it could prevent widespread acceptance of the precautionary principle. Based on our theoretical premises, we would therefore expect that the United States was using promises and threats to influence the ratification decisions of third parties. Third-party dependency on the United States and the European Union should therefore explain decisions to ratify the Cartagena Protocol.

Since the Cartagena Protocol entered into force in 2003, its membership has grown rapidly and there are

now more than 150 parties to it. Figure 2 shows a world map indicating the countries that have ratified (black), signatories that have not ratified (light gray), and those that have neither signed nor ratified (dark gray) as of 2009. Given these developments, it is not clear what the United States would have gained from undermining ratification once a critical mass was reached. Whereas the uncertainty surrounding the adoption of the Protocol in the first few years increased the incentives to lobby for or against ratification on both sides, the ability to at least delay it for many other states should have been also an important factor in the US calculus. Unilateral regulation of GMOs in the European Union has led to a decline of American GM corn imports from about \$211 million in 1997 to merely \$0.5 million in 2005. Similarly, GM soybean exports fell from \$2.3 billion in 1997 to \$0.51 billion in 2005 (Peterson 2009). Consequently, US farmers have been experiencing large economic losses each year due to the increasing import restrictions on GM food.

### A Quantitative Test

This section provides a quantitative test of our theoretical hypotheses. We compiled a data set with observations for 182 states and the years (2000–2006). The level of analysis is the country-year. For the countries in the data set, we can analyze the factors that influenced their decision to ratify the Cartagena Protocol as well as the timing of ratification. Most importantly, we expect that dependency of and ties to the European Union increase the probability of ratification, while dependency of and ties to the United States reduce it.

#### *Dependent Variable and Model Specification*

In our empirical analysis, we focus on analyzing the factors determining ratifying rather than signing the Cartagena Protocol because treaty signature does not bind a sovereign state under international law, but rather serves as a symbolic act. Ratification, on the other hand, creates a binding obligation and thus carries material consequences for concerned domestic groups. Many states have signed, but never ratified, international treaties. Both domestic and international actors should therefore have the greatest incentives to lobby for or against an international treaty in the ratification stage.

Figure 3 graphs the Kaplan–Meier “failure” function using monthly observations. The Kaplan–Meier function measures the fraction of states that have signed the Proto-

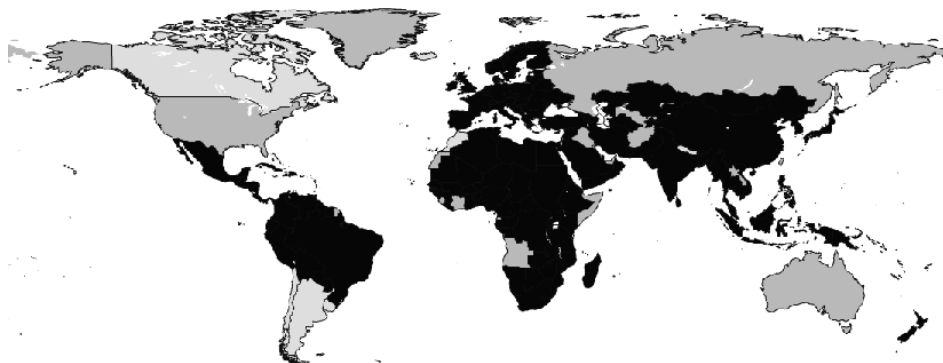


FIG. 2. Ratification Status of the Cartagena Protocol in 2009 (Source: DIY Map). [Black: Ratifiers; Light Gray: Signatories; Dark Gray: Non-signatories]

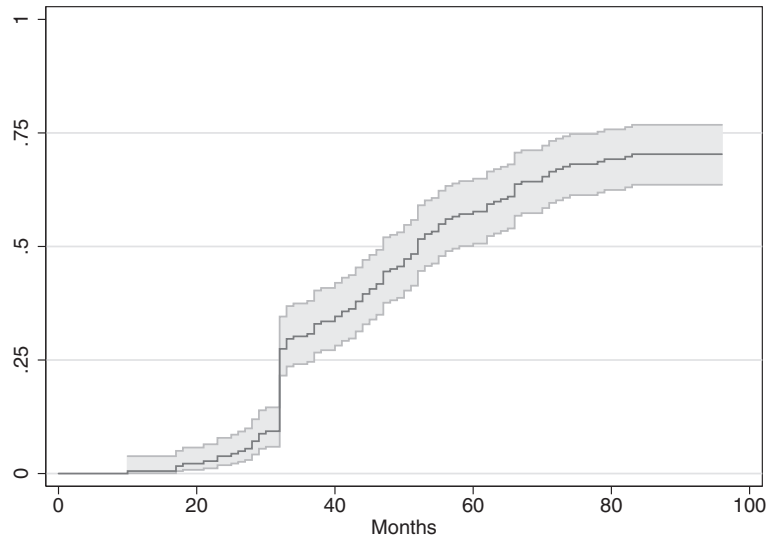


FIG 3. Kaplan–Meier Function for Cartagena Protocol Ratification

col in a particular month. For completeness, we include the 95% confidence interval. The graph shows that the likelihood of ratification has significantly increased over the years. Most importantly, the probability of ratification was not constant over time. We take this increasing risk of ratification into account by conducting a survival analysis, which estimates a country’s “spell” (in months) to ratification. Our main dependent variable with annual observations from 2000 to 2006 is calculated as the number of months without ratification. The base year is 2000, the year that the negotiations were concluded. Accordingly, for a state that ratified the Protocol in May 2001, our variable would indicate 12 months without ratification in 2000 and 17 months in 2001. A list of signatories and dates of ratification can be found on the official web site of the Cartagena Protocol.<sup>9</sup>

A complication in coding our ratification variable for EU member states is to determine whether to use the EU ratification date or the national ratification dates. Although all current members have ratified the Cartagena Protocol domestically, in practice EU ratification in 2002 made it impossible not to ratify, as the instrument of ratification by the European Union was accompanied by a declaration that it binds all member states. To account for this lack of choice, we set the date of ratification for the 27 EU members to August 27, 2002. Since this choice requires subjective judgment, we replace it with national ratification dates in the robustness section.

The most common survival estimator is the semiparametric Cox proportional hazard model. This specification is popular because it does not assume a specific parametric form of the survival function. However, it assumes that the base hazard increases or decreases with observed variables by a constant proportional amount. We used Schoenfeld residuals to reject the proportionality assumption. To avoid misspecification, we apply a non-proportional Cox hazard model (Box-Steffensmeier and Zorn 2001). It allows the impact of the independent variables to vary over time by interacting them with a log

function of time. The hazard rate for the non-proportional Cox hazard model is

$$h(t) = h_0(t)e^{[\beta_k X_i + \gamma_k X_i \ln(t)]} \quad (1)$$

where  $h_0(t)$  is the unspecified baseline hazard function,  $t$  is time,  $\beta_k$  is the vector of coefficients, and  $X_i$  is the vector of country-level variables following our hypotheses. An alternative approach is to use a binary time-series cross-sectional (BTSCS) design to test whether a country ratified the Protocol in a given year or not. We use the survival model because it gives us more variation across countries: We estimate the time until ratification rather than simply whether a country has ratified or not. The robustness section will demonstrate that our results are robust to using a logit model with cubical splines as well as the proportional Cox hazard model (Beck, Katz, and Tucker 1998).

DFbeta values and residual plots show that Jordan is a consistent outlier across variables and models. Since the country has considerable leverage on US strategic variables, we exclude Jordan from the main analysis and provide an in-depth case study of Jordan’s decision. It will illuminate how domestic politics influenced Jordan’s decision to ratify early despite being a major US ally.

#### *Independent Variables*

A central element of our theory is that third parties should align with the challenger if the latter can credibly threaten to impose severe sanctions or promise lucrative rewards (Hypothesis 1). At the same time, they should be more likely to align with the defender if the latter can credibly threaten to impose severe sanctions or promise lucrative rewards (Hypothesis 2). Such threats or promises do not have to be explicit, but third parties that are dependent on a powerful state and benefit from massive aid inflows, preferential trade relations, and security cooperation might fear a deterioration of relations if they choose to go against the powerful state in important issues.

To test Hypotheses 1 and 2, we employ several variables that capture the relative importance of the United States and the European Union for third parties. Bilateral for-

<sup>9</sup> See <http://www.cbd.int/biosafety>. (Accessed January 24, 2010).

foreign aid is commonly used to measure the strategic interests of a donor as well as the importance of that donor for the recipient (Stone 2002, 2004, 2008; Lancaster 2007; Bueno de Mesquita and Smith 2009). It is also an effective proxy for the ability to threaten or reward a country. *P.C. EU Multilateral Aid* measures *per capita* inflows of multilateral aid from the European Union in current (2000) US\$, while *P.C. US Foreign Aid* measures *per capita* inflows from the United States in current (2000) US dollars.<sup>10</sup> We lag both variables by 1 year. Data are from the OECD Development Statistics.

We expect military alliances to have similar effects. Although international security cooperation is not directly relevant to biosafety, the literature on American foreign policy highlights the importance of military alliances as determinants of foreign aid and other valuable privileges that US allies enjoy, such as limited enforcement of conditionalities imposed by the IMF or neglect of human rights violations during the Cold War (Thacker 1999; Dunning 2004; Stone 2008). If military alliances are indicative of a strategic partnership between the United States and another country, they should also lead the government of a country to refrain from ratification, so as to avoid upsetting an important ally. To test for this effect, it is not appropriate to include NATO members because all members are also partners with the European Union. Accordingly, we only include other major allies of the United States. We use a dummy variable *Major US non-NATO Alliance*. Since the European Union does not form military alliances, we cannot offer a corresponding test for it. Using proxies, such as past colonial relationships, is also not possible because most developing countries were European colonies.

In addition to foreign aid flows and military alliances, we present alternative measures, such as common membership in preferential trade agreements (PTAs) or export dependencies in the robustness section. We chose non-trade-related variables for our main models to ensure a clear distinction between the effects of purely domestic factors (countries that generally export more might be more supportive of the scientific principle, whereas countries that import a lot of food products might be more supportive about the precautionary principle) and the effects of third-party dependence. Using foreign aid and alliance data provides the toughest test case because it is least likely to pick up effects of domestic characteristics. Testing for economic dependence in the robustness section then allows us to provide additional evidence for our argument, particularly for third parties that are not as dependent on foreign aid. *PTA (USA)* and *PTA (EU)* are dummy variables that indicate that a country has a PTA with either of the two actors. In addition, we use variables that measure overall exports to the United States and the European Union, respectively, as percentage of GDP.<sup>11</sup> Data are from the IMF Direction of Trade Statistics.

<sup>10</sup> The findings are substantially the same if we use aid flows as percentage of a recipient's GDP. *P.C. EU Multilateral Aid* takes into account all foreign aid that is channeled through the European Union. We exclude bilateral foreign aid from EU countries because the Cartagena Protocol was negotiated by the European Union. Bilateral aid remains under state control and cannot be used for the EU's strategic purposes. Nevertheless, we estimated the regressions using total EU member bilateral aid and find a (expectedly smaller) positive and significant effect.

<sup>11</sup> A more appropriate measure would be to use agricultural exports and imports, but unfortunately the Food and Agricultural Organization does not provide directional data on food exports and imports by country. We multiplied the export variables by a factor of 100 for ease of interpretation (the numbers are generally small and linear transformation provides a more realistic interpretation of the strength of the effect).

We include several control variables to ensure that our results are not biased by omitted variables. In choosing control variables, we follow the existing empirical literature on treaty ratification. Most importantly, we test whether third parties ratify the treaty if the new rule produces larger domestic benefits for them than the existing standard. Countries should be clearly divided between major GMO producers which lose potential export markets under the precautionary principle and others. *Total GMO Area* is a variable that measures in million hectares the area on which genetically engineered crops are grown.<sup>12</sup> Most countries do not grow GM crops. The United States, Argentina, Brazil, Canada, India, and China are the leading producers of GM products. Paraguay, South Africa, Uruguay, and Australia have recently started to grow considerable amounts of GM crops. Data are available from the GMO Compass web site.<sup>13</sup> In addition, we control for EU membership, logged total population, regime type, and *per capita* GDP in current (2000) US dollars. All economic data are from the World Bank Development Indicators and the democracy data are from Polity IV. In the robustness section, we include additional control variables such as a dummy for a military executive, a dummy for a conservative executive, and a dummy for presidential systems. The data are from the Database of Political Institutions. We also control for global norm diffusion by measuring the percentage of countries that have already ratified the Protocol in a given year, *Universal Ratification*. To check whether the signatories have driven the ratification process, we include a dummy variable for signatories to the Protocol, *Signatory*. Finally, we include a *NATO* dummy variable. Descriptive statistics for all variables are presented in Table 1.

#### Empirical Findings

Before presenting the statistical results, we provide some qualitative evidence for our theoretical argument by comparing the relevant information for the group of countries that ratified the Protocol by the end of 2002 (we may call them early ratifiers) and the group of countries that have not ratified the Protocol by February 2011 (we may call them potential non-ratifiers). Table 2 lists all countries that fall in these two categories. It also presents information on the average (2000–2006) *per capita* foreign aid from the European Union and the United States, the entry into force of a PTA by the time of ratification, a possible non-NATO alliance relationship with the United States, and the GMO cultivation area in the year 2000.<sup>14</sup> We also examine the ratio of foreign aid receipts in order to account for the fact that many countries receive aid from both the European Union and the United States. If the ratio exceeds two-to-one in favor of a major power, we interpret it as evidence of strong ties to it. PTAs and military alliances are also interpreted as ties, and each tie is given equal weight. Except for GMO producers, which are all expected to ratify late or not at all, we code a case as correctly predicted whenever one major power has

<sup>12</sup> With many zeros in the variable, we cannot use the logged value of the variable. However, the results are substantively the same if we use a dummy variable for major GMO exporters or if we use GMO area as percentage of overall agricultural area.

<sup>13</sup> See <http://www.gmo-compass.org>. (Accessed January 24, 2010).

<sup>14</sup> We exclude countries with less than one million inhabitants and countries that obtain less than one dollar *per capita* from at least one major power. For countries that obtain less than that, foreign aid is not very important for their national income and thus hardly an important influence on treaty ratification.



TABLE 1. Descriptive Statistics

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Time to ratification	543	31.60	15.56	10.00	72.00
P.C. US foreign aid	543	5.26	14.50	0.00	171.99
P.C. EU multilateral aid	543	4.95	9.98	0.00	108.60
Major US non-NATO ally	543	0.08	0.27	0.00	1.00
Total GMO area	543	0.22	1.40	0.00	16.2
EU member state	543	0.07	0.25	0.00	1.00
Population (log)	543	16.17	1.48	13.18	20.98
Level of democracy	543	6.46	3.27	0.00	10.00
P.C. GDP (log)	543	7.45	1.56	4.70	10.55
PTA (USA)	543	0.03	0.18	0.00	1.00
PTA (EU)	543	0.06	0.24	0.00	1.00
Export (US)	543	0.53	0.87	0.01	5.89
Export (EU)	543	0.24	0.43	0.00	2.92
Signatory	543	0.56	0.50	0.00	1.00
Universal ratification	543	21.88	20.82	0.52	56.77
Military executive	543	0.17	0.38	0.00	1.00
Conservative executive	543	0.13	0.33	0.00	1.00
Presidential system	543	0.74	0.44	0.00	1.00
EU applicant	543	0.07	0.25	0.00	1.00
NATO member	543	0.08	0.28	0.00	1.00

more ties to a third party. Incorrectly predicted cases are coded similarly, except that the reverse of the theoretical expectation occurs.

The data are consistent with our theoretical argument. For potential non-ratifiers, our main variables appear strongly associated in 14 of 21 cases. In addition to GMO cultivation, a PTA or a military alliance with the United States is commonly associated with non-ratification. High levels of US foreign aid are also associated with ratification failure, at least so far. Of the remaining cases, Iraq (US occupation) is fully consistent with our theoretical argument but not captured by our empirical operationalization. Remarkably, not a single case directly contradicts our theoretical expectations. For early ratifiers, the table indicates an association between our main independent variables and early ratification in 8 of 18 cases. Although not captured by our variables, Cuba accords with our expectations given that the United States has imposed extensive trade sanctions against it. The Cartagena Protocol was opened for ratification in Nairobi, so Kenya may have had particularly strong reputational reasons to ratify early. Only Bolivia, Mexico, and Nicaragua seem inconsistent with our theoretical argument. Qualitative evidence indicates that Mexico's ratification followed a scandal involving "alleged transgene ingression into indigenous maize varieties in the Chiapas region" that drew worldwide attention after a study in the science journal *Nature* (Gupta and Falkner 2006:33). In Nicaragua, a scandal involving the contamination of imported food with GMO which was only approved for animal feed preceded ratification (Clapp 2006:7). Finally, Bolivia ratified the Cartagena Protocol only a year after Argentina pressured it to revoke a national ban on GMOs, which suggests a regional dynamic.

We now turn to the findings of the statistical analysis. Table 3 presents the results of our main models. Model 1 includes the full sample, Model 2 excludes all high-income countries (IMF criteria), and Model 3 excludes all EU members and applicant states. Our tables report the hazard ratio instead of the coefficients to ease interpretation. Hazard ratios display predicted hazard for dif-

TABLE 2. Potential Non-ratifiers and Early Ratifiers (emboldened entries indicate cases that support our hypotheses)

<i>Country</i>	<i>Ratification</i>	<i>EU aid</i>	<i>US aid</i>	<i>EU PTA</i>	<i>US PTA</i>	<i>US ally</i>	<i>GMO</i>
Potential non-ratifiers							
<b>Argentina</b>	–	0.6	0.7	No	No	No	14.4
<b>Australia</b>	–	0.0	0.0	No	2005	Yes	0.2
<b>Bahrain</b>	–	0.0	0.0	No	2006	Yes	0
<b>Canada</b>	–	0.0	0.0	No	1994	No	4.5
Chile	–	0.5	0.1	2003	2004	No	0
Cote D'Ivoire	–	3	1.8	No	No	No	0
<b>Haiti</b>	–	6.4	11.3	No	No	No	0
Iraq	–	0.35	0.0	No	No	No	0
<b>Israel</b>	–	0.72	88.9	2000	1985	YES	0
Jamaica	–	13.6	9.6	No	No	No	0
<b>Kuwait</b>	–	0.0	0.0	No	No	Yes	0
Lebanon	–	12.8	9.9	2003	No	No	0
Morocco	–	8.5	0.8	2000	2006	Yes	0
<b>Nepal</b>	–	0.5	1.4	No	No	No	0
<b>Russia</b>	–	0.7	5.7	No	No	No	0
Sierra Leone	–	11.9	8.4	No	No	No	0
<b>Singapore</b>	–	0.0	0.0	No	2004	No	0
<b>United Arab Emirates</b>	–	0	0.5	No	No	Yes	0
<b>United States</b>	–	0	0	No	–	–	42.8
<b>Uruguay</b>	–	1.4	0.2	No	No	No	0.2
<b>Uzbekistan</b>	–	0.2	2.3	No	No	No	0
Early ratifiers							
Belarus	2002	0.4	0.9	No	No	No	0
Bolivia	2002	3.9	19.6	No	No	No	0
<b>Botswana</b>	2002	12.5	6.5	No	No	No	0
<b>Croatia</b>	2002	28.7	7.4	2005	No	No	0
Cuba	2002	0.7	0.5	No	No	No	0
Kenya	2002	3.2	3.3	No	No	No	0
<b>Lesotho</b>	2001	10.5	1.6	No	No	No	0
Liberia	2002	7.8	14.3	No	No	No	0
<b>Mali</b>	2002	9.0	4.0	No	No	No	0
Mexico	2002	0.1	0.8	2000	1994	No	0.1
<b>Mozambique</b>	2002	8.4	4.9	No	No	No	0
Nicaragua	2002	7.3	15.9	No	No	No	0
<b>Norway</b>	2001	0.0	0.0	1973	No	No	0
Panama	2002	3.4	5.2	No	No	No	0
<b>Switzerland</b>	2002	0.0	0.0	1973	No	No	0
<b>Trinidad and Tobago</b>	2000	6.1	0.6	No	No	No	0
Uganda	2001	3.8	4.8	No	No	No	0
Venezuela	2002	0.4	0.6	No	No	No	0

ferent groups, such as US allies versus other states. Values greater than one yield an increased risk of ratification. For example, a hazard ratio of 1.4 means that countries have a 40% higher hazard to sign the Protocol. Values smaller than one, on the other hand, yield a decreased risk of ratification. For example, a hazard ratio of 0.2 means that countries have an 80% smaller hazard of ratifying the Protocol. We report robust standard errors that are clustered within countries.

The models fit the data very well and strongly support our hypotheses. In line with the treaty ratification literature, we find that major GMO producers are significantly less likely to ratify. Increasing the GMO cultivation area by one million hectares reduces the likelihood of ratification by more than seven percent. This is a large effect given that the GMO cultivation area in India has increased by more than two million hectares in 1 year and the GMO cultivation area in Argentina has increased

TABLE 3. Distributional Conflict and Third-Party Ratification of the Cartagena Protocol

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
P.C. US foreign aid (lag)	0.989 (0.005)**	0.990 (0.005)*	0.987 (0.007)*
P.C. EU multilateral aid (lag)	1.006 (0.002)**	1.007 (0.002)**	1.009 (0.004)**
Major US non-NATO ally	0.791 (0.085)**	0.768 (0.087)**	0.793 (0.088)**
Total GMO area	0.929 (0.033)**	0.962 (0.018)**	0.928 (0.033)**
EU member state	1.470 (0.159)**	2.065 (0.330)**	
Population (ln)	1.056 (0.023)**	1.066 (0.024)**	1.068 (0.026)**
Level of democracy (0–10)	1.032 (0.010)**	1.030 (0.010)**	1.030 (0.011)**
P.C. GDP (ln)	0.979 (0.025)	0.968 (0.026)	0.978 (0.026)
Sample	All	No high-income	No EU
Observations	641	557	563
Wald $\chi^2$	97.37**	70.35**	28.72**

(Notes. Non-proportional Cox hazard models.

Robust standard errors in parentheses.

\*\* $p < 0.05$ , \* $p < 0.10$ ).

by 18 million hectares in a decade. Indeed, the hostile Argentinian position about the Cartagena Protocol, and biosafety regulations more generally, was directly influenced by concerns regarding soybean exports and retaining the policy alliance with the United States in the context of biosafety regulations (Vara 2005).

Yet, GMO production is not the only important determinant of ratification. EU aid dependency significantly increases the probability of ratification (Hypothesis 1). A *per capita* increase of one US dollar in EU aid increases the ratification likelihood by 0.6%, so a country that receives US\$100 more aid is 60% more likely to ratify the Protocol. The European Union spends up to US\$300 on *per capita* foreign aid in some countries, so differences of US\$100 across recipients are likely to occur. Countries that received US\$100 more from the United States in foreign aid, on the other hand, were 11% less likely to ratify and major non-NATO alliances were 21% less likely to ratify (Hypothesis 2).

The statistical results are in line with the actual strategies that we could observe during the negotiations. For example, the US Agency for International Development (USAID) has funded non-governmental organizations and scientific research supporting GMO production in Kenya, particularly in the case of cassava and sweet potato (Kameri-Mbote 2005:38). Similarly, the African Centre for Biosafety in South Africa has criticized USAID for strategically influencing “policy decisions on biotechnology by African nations, that resistance to GMOs will be lowered, and that weak biosafety regimes will be put in place” (Wolson 2004:28). Developing countries also have expressed concerns about US pressure. As the United States filed a WTO complaint against the European Union on GMOs, the Director General of the Ethiopian Environmental Protection Authority, Dr. Tewolde Berhan Gebre Egziabher, stated that “we ... feel that US actions are intended to send a strong and aggressive message to us: that should we choose to implement the Protocol and reject the import of GM foods, we may also face the possibility of a WTO challenge. We cannot help but perceive that US actions are a pre-emptive strike on the Biosafety Protocol and developing country interests.”<sup>15</sup> The European Union pursued similar policies to increase the chances of widespread ratification. Over the years, the

European Union had built important trade relationships with third parties through the establishment of preferential trade agreements, investment treaties, and association agreements. The Cotonou Agreement, for example, is a comprehensive partnership program between almost 80 countries from Africa, the Caribbean, and the Pacific including preferential access to European markets and aid. These countries were also specifically important for future GMO regulation, since most of them did not have any national biosafety regulation. Indeed, the European Union used its preferential trading scheme, the Generalized System of Preferences (GSP), to lure countries into ratifying the Cartagena Protocol. One requirement of the GSP+, which offers additional tariff reductions, is the ratification of a number of international treaties related to human rights, core labor standards, sustainable development, and good governance. The Cartagena Protocol is one of these treaties.<sup>16</sup> Between 2009 and 2011, 16 developing countries that had previously ratified the Cartagena Protocol benefited from the scheme.

The comparison between Models 1–3 is interesting as well. While being slightly more pronounced if high-income countries are excluded, the effects persist across samples. Excluding EU members and applicants in Model 3 even amplifies the effect of EU aid on ratification. In line with the ratification literature discussed above, democracy and a large population significantly increase the risk of ratification. However, GDP has no effect. We also find that EU members were significantly more likely to ratify the protocol than non-EU members. The effect is more pronounced in Model 2 because it includes only those EU members that acceded to the European Union in 2004 and 2007 and were still in transition.

#### Robustness Checks

The results of our main empirical analysis lend support to our argument. The fact that the ratification process was largely determined by the ties between the signatories and the two superpowers provides evidence for the existence of a ratification contest. Whereas the European Union lured countries to ratify, the United States had strong incentives to counter these attempts. However, statistical results are oftentimes fragile to changes in model

<sup>15</sup> Statement issued on September 4, 2003. Available at <http://www.pacificecologist.org/archive/africafoodsecurity.html>. (Accessed March 8, 2011).

<sup>16</sup> See <http://ec.europa.eu/trade/wider-agenda/development/generalised-system-of-preferences/>. (Accessed March 1, 2010).

TABLE 4. Robustness I: Additional Control Variables

	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
P.C. US foreign aid (lag)			0.990 (0.005)**	0.988 (0.006)**
P.C. EU multilateral aid (lag)			1.006 (0.002)**	1.005 (0.002)**
Major US non-NATO ally	0.792 (0.076)**	0.642 (0.124)**	0.796 (0.085)**	0.770 (0.087)**
Total GMO area	0.950 (0.021)**	0.935 (0.037)**	0.927 (0.033)**	0.941 (0.035)
EU member state	1.367 (0.155)**	1.076 (0.141)	1.448 (0.163)**	1.333 (0.212)*
Population (ln)	1.048 (0.020)**	1.054 (0.024)**	1.055 (0.023)**	1.052 (0.027)**
Level of democracy (0–10)	1.031 (0.010)**	1.044 (0.012)**	1.031 (0.010)**	1.040 (0.012)**
P.C. GDP (ln)	0.998 (0.026)	1.018 (0.032)	0.981 (0.025)	0.986 (0.030)
PTA (USA)	0.685 (0.135)*			
PTA (EU)	1.202 (0.104)**			
Export (US)		0.818 (0.084)**		
Export (EU)		1.097 (0.041)**		
Signatory			1.036 (0.066)	
Universal ratification			0.998 (0.006)	
Europe				0.991 (0.143)
South and North America				0.844 (0.109)
Africa				0.960 (0.090)
Asia				0.922 (0.080)
Observations	641	549	641	641
Wald $\chi^2$	86.07**	70.94**	97.99**	99.97**

(Notes. Non-proportional Cox hazard models.

Robust standard errors in parentheses.

\*\* $p < 0.05$ , \* $p < 0.10$ ).

TABLE 5. Robustness II: Additional Control Variables

	<i>Model 8</i>	<i>Model 9</i>	<i>Model 10</i>
P.C. US foreign aid (lag)	0.991 (0.005)*	0.989 (0.006)*	0.989 (0.005)**
P.C. EU multilateral aid (lag)	1.004 (0.002)**	1.006 (0.002)**	1.006 (0.002)**
Major US non-NATO ally	0.799 (0.086)**	0.760 (0.082)**	0.795 (0.086)**
Total GMO area	0.933 (0.032)**	0.925 (0.039)*	0.925 (0.035)**
EU member state	1.548 (0.187)**	1.371 (0.161)**	1.416 (0.164)**
Population (ln)	1.054 (0.022)**	1.051 (0.024)**	1.055 (0.023)**
Level of democracy (0–10)	1.030 (0.010)**	1.036 (0.011)**	1.032 (0.010)**
P.C. GDP (ln)	0.974 (0.025)	0.974 (0.027)	0.978 (0.025)
Military executive		1.045 (0.087)	
Conservative executive		0.889 (0.072)	
Presidential system		0.898 (0.060)	
EU applicant	1.250 (0.170)		
NATO member			1.059 (0.085)
Observations	641	630	641
Wald $\chi^2$	96.60**	87.44**	100.8**

(Notes. Non-proportional Cox hazard models.

Robust standard errors in parentheses.

\*\* $p < 0.05$ , \* $p < 0.10$ ).

specification. This section investigates the robustness of our main model.

We started by adding further control variables to the main model (Model 1 in Table 3). Tables 4 and 5 present the results. Model 4 replaces *US Foreign Aid* and *EU Multilateral Aid* with the PTA variables. Countries with a US PTA have a 31% lower ratification probability, whereas countries with an EU PTA have a 20% higher ratification probability. Besides providing additional support to our main hypotheses, the results show that dependence is not only important for developing countries. This resembles our qualitative findings in the WTO case against an EU moratorium on GMO imports. In addition to the United States, as well as Canada and Argentina, nine additional developing countries challenged the EU

moratorium in May 2003. As *The Economist* noted, “[s]ome of these countries, probably not coincidentally, are keen to negotiate bilateral trade agreements with the United States.”<sup>17</sup> The country to leave the coalition at the last moment, Egypt, was soon informed that trade talks with the United States would not continue.<sup>18</sup> Model 5 shows a very similar relationship for export dependencies and the decision to ratify Cartagena. A 0.01% increase in exports to the European Union increases the likelihood of ratification by almost 10%. A 0.01% increase in exports to the United States, on the other hand,

<sup>17</sup> “Finance and Economics: The GM Gamble.” *The Economist*, May 17, 2003.

<sup>18</sup> “US Beats Egypt with Trade Stick.” *Financial Times* June 30, 2003.

reduces the likelihood of ratification by 18% (mean exports to the United States as percentage of GDP is 0.25% and to the European Union is 0.66%). Model 6 controls for signatory status and the percentage of countries that have already ratified the Protocol. Signing the Protocol generally has a positive but insignificant impact on ratification. In addition, the insignificant coefficient of *Universal Ratification* does not support the argument that countries became more likely to ratify the Protocol as an increasing number of countries supported it. Model 7 includes regional dummies, Model 8 a dummy variable for EU applicants (positive but not significant), Model 9 the political control variables, and Model 10 a dummy variable for NATO members (insignificant). None of these specifications substantively change the main effects.

We also estimated the main model using alternative model specifications. Model 11 in Table 6 presents the results of a proportional Cox hazard model. The basic findings are the same, but the substantive impacts are greater in the proportional model than in the non-proportional model. Model 12 shows that our results are robust to using the alternative operationalization of our dependent variable for EU members and applicants. Finally, Model 13 presents the BTSCS specification with four cubic splines. The results are remarkably robust to the results of the Cox hazard model.

Finally, we conducted a number of outlier tests using DFbeta plots.<sup>19</sup> Our tests show that Jordan is an important outlier in respect to *US Foreign Aid* and *Major US non-NATO Ally*. Model 14 in Table 7 illustrates that including Jordan in the sample renders the effect of both variables statistically insignificant (the direction of the effect is as expected). Jordan is a major US ally, yet it ratified the Cartagena Protocol already on November 11, 2003. This early ratification stands in contrast to our expectations, so it warrants a detailed analysis. The two other important allies and potential outliers, Israel and Egypt, do not influence our results (Models 15 and 16). Thus, it is essential to examine qualitatively why Jordan's ratification decision was so different from other countries' choices.

We found four reasons why Jordan ratified the Cartagena Protocol despite its close ties to the United States. First, for a developing country, Jordan has an unusually active history of international environmental cooperation. Jordan was among the original group of thirty countries that supported the World Conservation Strategy of the International Union for Conservation of Nature, and it was among the first countries to sign and ratify the UN Convention on Biological Diversity, the convention to which the Cartagena Protocol was officially negotiated (Jordan 2001:8).<sup>20</sup> It has also ratified many other major multilateral environmental agreements, such as the Convention to Combat Desertification, the Ramsar Convention for the Protection of Wetlands, and the Kyoto Protocol. Second, Jordan formed a PTA with the European Union in 2002, only 1 year before it ratified the Cartagena Protocol.<sup>21</sup> This agreement has an important agricultural component because it promotes the abolishment of any customs duties and charges, and the harmonization of sanitary and phyto-sanitary rules with EU standards.<sup>22</sup> Third, Jordan imports almost all of the food that it consumes. Between 1998 and 2000, cereal imports and food aid constituted 97% of all food consumed in the country. By contrast, the average for the Middle East and North Africa is 39%. Thus, Jordan has an unusually strong interest in developing regulatory capabilities for food imports. Finally, Jordan was upgrading her Ministry for the Environment during the ratification decision which included an assignment of priority to capacity building (Jordan 2009:32). Since the implementation of the Cartagena Protocol involves substantial capacity building by the Global Environment Facility and donors such as the European Union, Jordan benefited greatly from additional support.

#### *The Cartagena Protocol and Domestic Policy Formation*

The empirical analysis provides substantial support for our theory: Ratification decisions were influenced by economic and political dependence of third-party countries on the conflicting powerful states, as well as domestic characteristics. But have the EU efforts influenced actual state behavior? Although our theory focuses on treaty ratification, it is nonetheless useful to briefly examine how the Cartagena Protocol has influenced policy formation among its member states.

The first important fact to note is that almost 80% of states in the world have ratified the Cartagena Protocol and thereby accepted to adopt national biosafety policies to account for the precautionary principle. Specifically, the UN Environment Programme has been notified of 111 National Biosafety Frameworks (NBFs) for developing countries that have ratified the Cartagena Protocol.<sup>23</sup> Given that an NBF is the basis of biosafety regulation in any country, and the Cartagena Protocol has functioned as the focal point for policy development and coordination, it appears improbable that these rapid developments would have been possible without the new regime. Indeed, most of the expenses of capacity building were multilaterally funded by the Global Environment Facility, so that each participating developing country only paid approximately a third of the developing costs.<sup>24</sup> Thus, most member states have implemented regulations that stand in contrast to the policies promoted by the United States in the WTO, with negative consequences for the export markets for US GM products. Many countries have simply chosen not to approve any GMO imports, including food aid, to avoid problems with their European partners (Paarlberg 2003:89). Consequently, the United States has lost much of its share of global agricultural exports over the last decade (Wisner 2003; Peterson 2009).

Whereas the impact of the Cartagena Protocol on domestic regulations has been substantial, its impact on international trade law remains uncertain—not enough time has passed to evaluate the effect. In 2006, the WTO ruled that the European Union violated international trade law between 1999 and 2003 by imposing a moratorium on approvals of GMO imports. Disappointing the United States, the panel nevertheless “decided not to

<sup>19</sup> DFbeta values show how much a coefficient will change when an observation (a country) is omitted. Graphical presentations of the results are available upon request from the authors.

<sup>20</sup> See <http://www.cbd.int/convention/parties/list>. (Accessed February 1, 2010).

<sup>21</sup> See [ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/jordan](http://ec.europa.eu/trade/creating-opportunities/bilateral-relations/countries/jordan). (Accessed February 1, 2010).

<sup>22</sup> “European Neighbourhood Policy: Jordan.” EUROPA Press Release, MEMO/09/186, April 23, 2009.

<sup>23</sup> “National Biosafety Frameworks.” [<http://www.unep.org/Biosafety/>]. (Accessed March 8, 2010).

<sup>24</sup> See <http://www.unep.org/biosafety/files/UNEPGEFstudyVersion170605.pdf>. (Accessed March 8, 2010).

TABLE 6. Robustness III: Alternative Model Specifications

	<i>Model 11</i>	<i>Model 12</i>	<i>Model 13</i>
P.C. US foreign aid (lag)	0.957 (0.020)**	0.991 (0.005)*	-0.072 (0.028)**
P.C. EU multilateral aid (lag)	1.020 (0.006)**	1.004 (0.001)**	0.049 (0.013)**
Major US non-NATO ally	0.386 (0.167)**	0.799 (0.087)**	-1.173 (0.604)*
Total GMO area	0.748 (0.109)**	0.935 (0.031)**	-0.368 (0.223)*
EU member state	3.164 (1.319)**	1.304 (0.153)**	1.861 (0.565)**
Population (ln)	1.183 (0.095)**	1.060 (0.022)**	0.246 (0.101)**
Level of democracy (0–10)	1.137 (0.043)**	1.03 (0.010)**	0.178 (0.047)**
P.C. GDP (ln)	0.941 (0.091)	0.965 (0.025)	-0.033 (0.112)
Constant			-9.049 (2.068)**
Specification	PHM	NPHM	BTSCR
Observations	641	664	641
Wald $\chi^2$	88.97**	76.86**	147.42**

(Notes. Models 11 and 12 report hazard rates; Model 13 reports coefficients.

Robust standard errors in parentheses.

Cubic splines in Model 12 omitted.

\*\* $p < 0.05$ , \* $p < 0.10$ ).

TABLE 7. Robustness IV: Outlier Analysis

	<i>Model 14</i>	<i>Model 15</i>	<i>Model 16</i>
P.C. US foreign aid (lag)	0.995 (0.006)	0.989 (0.006)**	0.987 (0.006)**
P.C. EU multilateral aid (lag)	1.006 (0.001)**	1.006 (0.002)**	1.006 (0.002)**
Major US non-NATO ally	0.844 (0.090)	0.799 (0.086)**	0.747 (0.079)**
Total GMO area	0.933 (0.031)**	0.929 (0.033)**	0.928 (0.034)**
EU member state	1.507 (0.165)**	1.467 (0.159)**	1.451 (0.159)**
Population (ln)	1.060 (0.023)**	1.056 (0.023)**	1.054 (0.023)**
Level of democracy (0–10)	1.028 (0.010)**	1.032 (0.010)**	1.035 (0.010)**
P.C. GDP (ln)	0.982 (0.024)	0.980 (0.025)	0.979 (0.025)
Excluded	None	Jordan and Israel	Jordan and Egypt
Observations	645	635	637
Wald $\chi^2$	93.24	96.78	102.45

(Notes. Non-proportional Cox hazard models.

Robust standard errors in parentheses.

\*\* $p < 0.05$ , \* $p < 0.10$ ).

decide” by not invalidating the stringent European bio-safety regulations (Pollack and Shaffer 2009:187). It also refused to adopt a position on the validity of the precautionary principle and emphasized that all countries can freely choose any level of regulatory stringency, much as the 1998 ruling on the beef hormones dispute previously did (Kerr and Hobbs 2002). While such decisions depart somewhat from the previous emphasis on supporting scientific evidence, it is too early to tell what their long-run effect is.

### Conclusion

In this paper, we analyzed treaty ratification by third parties under distributional conflict between powerful states. If a treaty emerges from distributional conflict between powerful states, then ratification decisions are likely to be influenced by a “tug of war” between the defender and the challenger. Whereas domestic preferences play a role in the decision about whether to ratify the treaty, their importance is partially mitigated by the third parties’ dependence on the two conflicting powers. We theoretically derived empirical implications about the scope conditions for our theory and explicated the importance of power relations for third-party ratifications. We tested the model against data on the transatlantic competition over

international trade law on biosafety regulation and found strong support for the idea that the United States and the European Union engaged in a membership contest over political support to the Cartagena Protocol among third parties.

Our findings support existing theories on the domestic determinants of ratification, and at the same time, they add a new dimension—the effect of distributional conflict between powerful states over international policies and standards on the ratification decisions of third parties—to this literature. Whereas our paper provides some first support for our theoretical argument, there are at least two important venues for future research. First, our paper discusses alternative strategies to resolve distributional conflict between powerful states, but it focuses on the ensuing ratification contest. We hope that future research will shed more light on the conditions under which countries choose different options. Second, empirical research on ratification decisions should take into account that distributional conflict between powerful states could potentially mediate purely domestic factors if our scope conditions hold. Although the Cartagena Protocol is probably the most salient example of such membership contests, we believe that the argument can be applied more generally.

In the field of international environmental cooperation, the Kyoto Protocol is maybe the most prominent

example of distributional conflict between two powerful actors. The European Union has been the frontrunner in the fight against climate change, whereas the United States was trying to prevent states from signing the treaty. We would expect that ratification decisions should not only depend on a third party's dependence on the European Union (McLean and Stone 2012), but also on the ability of the United States to use threats and promises. The newest series of Wikileaks documents revealed that the United States used spying, as well as threats and promises, to garner support for the Copenhagen Accord in 2009, especially from countries that are particularly vulnerable to climate change and fought for more binding commitments than the Copenhagen Accord was offering.<sup>25</sup> In addition, the Asia-Pacific Partnership on Clean Development and Climate served as an international treaty to support anti-Kyoto policies. Orchestrated by the Bush administration, this climate policy initiative emphasized technology collaboration and voluntary emissions reductions as an alternative to the legally binding commitments underpinning the Kyoto Protocol.

Perhaps a more successful example is the Bamako Convention (1998), a regional treaty created by African states to influence the global Basel Convention on the Transboundary Movement of Hazardous Wastes (1992). Indeed, the Bamako Convention was created because the Basel Convention had failed to prevent hazardous waste exports from industrialized to developing countries. The "Bamako Convention contributed to a rule change of the global Basel Convention." The latter subsequently "helped implement the Bamako Convention, because it restricted the exports of such wastes from industrialized countries to non-OECD countries" (Gehring and Obertür 2009:1128).

Outside the environmental realm, the ratification of the International Criminal Court (ICC) and the signing of non-surrender agreements are other possible extensions. Whereas many European countries have promoted the ICC, the United States has worried that it may subject American citizens to adjudication. This case illustrates a variant of our argument wherein the Europeans have a strong interest in global rule creation but the United States is mostly interested in remaining outside the sphere of influence. Indeed, Kelley (2007) argues that the United States has focused on promoting non-surrender agreements with third parties, instead of actively undermining the ICC. Another possible application is the United Nations Educational, Scientific and Cultural Organization (UNESCO) Cultural Diversity Convention, a treaty that was adopted with the support of 148 of 154 UNESCO members in 2005, with the United States and Israel in opposition. According to the US Ambassador to UNESCO, the "text could be misused to legitimize actions by governments to deny human rights and fundamental freedoms."<sup>26</sup> By contrast, the European Union ratified the treaty already in December 2006.

While we focused on treaty ratification, the effects of distributional conflict between powerful states on international cooperation are probably broader. In addition to promoting or impeding treaty ratification, powerful states could adopt alternate strategies to support or undermine treaties. One example is Japan's strategy to buy votes in the International Whaling Commission (Miller and Dol-

sak 2007). The relative effectiveness of various strategies opens exciting opportunities for future empirical and theoretical research. One plausible conjecture is that the choice between various strategies depends on the nature of treaty in focus. The Cartagena Protocol may give rise to ratification competitions because it enshrines a general principle, while the International Whaling Commission may induce vote buying because it produces concrete decisions over time but does not codify the foundational principles of the whale protection regime.

On a final note, there are good reasons to believe that distributional conflict between powerful states will become increasingly important for global governance. During the Cold War, the United States and the Soviet Union engaged in limited interactions within most international institutions. Within the Western coalition, US hegemony and transatlantic agreement facilitated the development of an international order. However, our results paint a less rosy picture for the future. With the rise of China and India, as well as other rapidly industrializing countries, powerful states will hold increasingly heterogeneous preferences. This should increase the frequency of distributional conflicts about international cooperation.

## References

- BALDWIN, DAVID A. (1986) *Economic Statecraft*. Princeton, NJ: Princeton University Press.
- BECHTEL, MICHAEL M., AND JALE TOSUN. (2009) Changing Economic Openness for Policy Convergence: When Can Trade Agreements Induce Convergence of Environmental Regulation? *International Studies Quarterly* 53 (4): 931–953.
- BECK, NATHANIEL, JONATHAN N. KATZ, AND RICHARD TUCKER. (1998) Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable. *American Journal of Political Science* 42 (4): 1260–1288.
- BERNAUER, THOMAS. (2003) *Genes, Trade, and Regulation: The Seeds of Conflict in Food Biotechnology*. Princeton, NJ: Princeton University Press.
- BERNAUER, THOMAS, ANNA KALBHENN, VALLY KOUBI, AND GABRIELE SPILKER. (2010) A Comparison of International and Domestic Sources of Global Governance Dynamics. *British Journal of Political Science* 40 (3): 509–538.
- BERNHAGEN, PATRICK. (2008) Business and International Environmental Agreements: Domestic Sources of Participation and Compliance by Advanced Industrialized Democracies. *Global Environmental Politics* 8 (1): 78–110.
- BOX-STEFFENSMEIER, JANET M., AND CHRISTOPHER ZORN. (2001) Duration Models and Proportional Hazards in Political Science. *American Journal of Political Science* 45 (3): 951–967.
- BUENO DE MESQUITA, BRUCE, AND ALASTAIR SMITH. (2009) A Political Economy of Aid. *International Organization* 63 (2): 309–340.
- BUSCH, MARC L. (2007) Overlapping Institutions, Forum Shopping, and Dispute Settlement in International Trade. *International Organization* 61 (4): 735–761.
- CLAPP, JENNIFER. (2006) Unplanned Exposure to Genetically Modified Organisms: Divergent Responses in the Global South. *Journal of Environment and Development* 15 (1): 3–21.
- DAVIS, CHRISTINA. (2004) International Institutions and Issue Linkage: Building Support for Agricultural Trade Liberalization. *American Political Science Review* 98 (1): 153–170.
- DESOMBRE, ELIZABETH R., AND J. SAMUEL BARKIN. (2002) Turtles and Trade: The WTO's Acceptance of Environmental Trade Restrictions. *Global Environmental Politics* 2 (1): 12–18.
- DREZNER, DANIEL W. (2007) *All Politics Is Global: Explaining International Regulatory Regimes*. Princeton, NJ: Princeton University Press.
- DUNNING, THAD. (2004) Conditioning the Effects of Aid: Cold War Politics, Donor Credibility, and Democracy in Africa. *International Organization* 58 (2): 409–423.
- ECKERSLEY, ROBYN. (2007) Ambushed: The Kyoto Protocol, the Bush Administration's Climate Policy, and the Erosion of Legitimacy. *International Politics* 44 (2–3): 306–324.

<sup>25</sup> *Guardian*, December 3, 2010, "WikiLeaks Cables Reveal How US Manipulated Climate Accord."

<sup>26</sup> Statement by Louise V. Oliver, US Ambassador to UNESCO. October 20, 2005. Paris, France.

- FALKNER, ROBERT. (2000) Regulating Biotech Trade: The Cartagena Protocol for Biosafety. *International Affairs* 76 (2): 299–313.
- FEARON, JAMES D. (1995) Rationalist Explanations of War. *International Organization* 49 (3): 379–414.
- FINNEMORE, MARTHA, AND KATHRYN SIKKINK. (1998) International Norm Dynamics and Political Change. *International Organization* 52 (4): 887–917.
- GEHRING, THOMAS, AND SEBASTIAN OBERTÜR. (2009) The Causal Mechanisms of Interaction between International Institutions. *European Journal of International Relations* 15 (1): 125–156.
- GUPTA, AARTI, AND ROBERT FALKNER. (2006) The Influence of the Cartagena Protocol on Biosafety: Comparing Mexico, China, and South Africa. *Global Environmental Politics* 6 (4): 23–55.
- HAFTEL, YORAM Z. (2010) Ratification Counts: US Investment Treaties and FDI Flows into Developing Countries. *Review of International Political Economy* 17 (2): 348–377.
- HART, H. L. A. (1961) *The Concept of Law*. Oxford, UK: Clarendon Press.
- HATHAWAY, OONA A. (2002) Do Human Rights Treaties Make a Difference? *Yale Law Journal* 111 (8): 1935–2042.
- HATHAWAY, OONA A. (2007) Why Do Countries Commit to Human Rights Treaties? *Journal of Conflict Resolution* 51 (4): 588–621.
- HENRY, LAURA A., AND LISA MCINTOSH SUNDSTROM. (2007) Russia and the Kyoto Protocol: Seeking an Alignment of Interests and Image. *Global Environmental Politics* 7 (4): 47–69.
- HIRSCHMAN, ALBERT O. (1945) *National Power and the Structure of Foreign Trade*. Berkeley, CA: University of California Press.
- HUG, SIMON, AND THOMAS KÖNIG. (2002) In View of Ratification: Governmental Preferences and Domestic Constraints at the Amsterdam Intergovernmental Conference. *International Organization* 56 (2): 447–476.
- IKENBERRY, G. JOHN. (2000) *After Victory*. Princeton, NJ: Princeton University Press.
- JORDAN. (2001) *First National Report of the Hashemite Kingdom of Jordan on the Implementation of Article 6 of the Convention on Biological Diversity*. Amman: General Corporation for the Environment Protection.
- JORDAN. (2009) *Fourth National Report on Implementation of the Convention on Biological Diversity*. Amman: Jordanian Ministry of Environment.
- KAMERI-MBOTE, PATRICIA. (2005) Regulation of GMO Crops and Foods: Kenya Case Study. New York University, May.
- KELLEY, JUDITH. (2007) Who Keeps International Commitments and Why? The International Criminal Court and Bilateral Nonsurrender Agreements. *American Political Science Review* 101 (3): 573–589.
- KERR, WILLIAM A., AND JILL E. HOBBS. (2002) The North American-European Dispute Over Beef Produced Using Growth Hormones: A Major Test for the International Trade Regime. *World Economy* 25 (2): 283–296.
- KINDLEBERGER, CHARLES P. (1986) *The World in Depression, 1929–1939*. Berkeley, CA: University of California Press.
- KUZIEMKO, ILYANA, AND ERIC WERKER. (2006) How Much Is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations. *Journal of Political Economy* 114 (5): 905–930.
- LAKE, DAVID A. (1993) Leadership, Hegemony, and the International Economy: Naked Emperor or Tattered Monarch with Potential? *International Studies Quarterly* 37 (4): 459–489.
- LAKE, DAVID A. (1996) Anarchy, Hierarchy, and the Variety of International Relations. *International Organization* 50 (1): 1–34.
- LANCASTER, CAROL. (2007) *Foreign Aid: Diplomacy, Development, Domestic Politics*. Chicago: University of Chicago Press.
- MANSFIELD, EDWARD D., AND JON C. PEVEHOUSE. (2006) Democratization and International Organizations. *International Organization* 60 (1): 137–167.
- MARCH, JAMES G., AND JOHAN P. OLSEN. (1998) The Institutional Dynamics of International Political Orders. *International Organization* 52 (4): 943–969.
- MCLEAN, ELENA V., AND RANDALL W. STONE. (2012) The Kyoto Protocol: Two-Level Bargaining and European Integration. *International Studies Quarterly* 56 (1): 99–113.
- MILLER, ANDREW R., AND NIVES DOLSAK. (2007) Issue Linkages in International Environmental Policy: The International Whaling Commission and Japanese Development Aid. *Global Environmental Politics* 7 (1): 69–96.
- MORAVCSIK, ANDREW. (2000) The Origins of Human Rights Regimes: Democratic Delegation in Postwar Europe. *International Organization* 54 (2): 217–252.
- NEUMAYER, ERIC. (2002) Do Democracies Exhibit Stronger International Environmental Commitment? A Cross-Country Analysis. *Journal of Peace Research* 39 (2): 139–164.
- NEUMAYER, ERIC. (2008) Death Penalty Abolition and the Ratification of the Second Optional Protocol. *International Journal of Human Rights* 12 (1): 3–21.
- NOORUDDIN, IRFAN, AND AUTUMN LOCKWOOD PAYTON. (2010) Dynamics of Influence in International Politics: The ICC, BIAs, and Economic Sanctions. *Journal of Peace Research* 47 (6): 711–721.
- NORTH, DOUGLASS C. (1990) *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.
- OBERTHÜR, SEBASTIAN, AND THOMAS GEHRING. (2006) Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organization. *Global Environmental Politics* 6 (2): 1–31.
- PAARLBERG, ROBERT. (2003) Reinvigorating Genetically Modified Crops. *Issues in Science and Technology* 19 (3): 86–92.
- PETERSON, M. J. (2009) The EU-US Dispute over Genetically Modified Organisms, Plants, Feeds, and Foods – Case Summary. International Dimensions of Ethics Education in Science and Engineering Case Study Series.
- POLLACK, MARK A., AND GREGORY C. SHAFFER. (2009) *When Cooperation Fails: The International Law and Politics of Genetically Modified Foods*. New York: Oxford University Press.
- RAUSTIALA, KAL, AND DAVID G. VICTOR. (2004) The Regime Complex for Plant Genetic Resources. *International Organization* 58 (2): 277–309.
- RHINARD, MARK, AND MICHAEL KAEDING. (2006) The International Bargaining Power of the European Union in “Mixed” Competence Negotiations: The Case of the 2000 Cartagena Protocol on Biosafety. *Journal of Common Market Studies* 44 (5): 1024–1050.
- SCHELLING, THOMAS C. (1978) *Micromotives and Macrobehavior*. New York: Norton.
- SHAFFER, GREGORY C., AND MARK A. POLLACK. (2004) Reconciling (or Failing to Reconcile) Regulatory Differences: The Ongoing Transatlantic Dispute over the Regulation of Biotechnology. Unpublished working paper.
- SIMMONS, BETH A. (2009) *Mobilizing for Human Rights: International Law in Domestic Politics*. Cambridge, UK: Cambridge University Press.
- SIMMONS, BETH A., AND ZACHARY ELKINS. (2004) The Globalization of Liberalization: Policy Diffusion in the International Political Economy. *American Political Science Review* 98 (1): 171–189.
- STEIN, ARTHUR A. (1980) The Politics of Linkage. *World Politics* 33 (1): 62–81.
- STONE, RANDALL W. (2002) *Lending Credibility: The International Monetary Fund and the Post-Communist Transition*. Princeton, NJ: Princeton University Press.
- STONE, RANDALL W. (2004) The Political Economy of IMF Lending in Africa. *American Political Science Review* 98 (4): 577–591.
- STONE, RANDALL W. (2008) The Scope of IMF Conditionality. *International Organization* 62 (4): 589–620.
- STONE, RANDALL W. (2011) *Controlling Institutions: International Organizations and the Global Economy*. New York: Cambridge University Press.
- THACKER, STROM C. (1999) The High Politics of IMF Lending. *World Politics* 52 (1): 38–75.
- URPELAINEN, JOHANNES. (2010) Regulation under Economic Globalization. *International Studies Quarterly* 54 (4): 1099–1121.
- VARA, ANA MARIA. (2005) Argentina, GM Nation: Chances and Choices in Uncertain Times. New York University, September.
- VOGEL, DAVID. (2003) The Hare and the Tortoise Revisited: The New Politics of Consumer and Environmental Regulation in Europe. *British Journal of Political Science* 33 (4): 557–580.
- VON STEIN, JANA. (2008) The International Law and Politics of Climate Change. *Journal of Conflict Resolution* 52 (2): 243–268.
- VREELAND, JAMES. (2008) Political Institutions and Human Rights: Why Dictatorships Enter into the United Nations Convention Against Torture. *International Organization* 62 (1): 65–101.
- WISNER, ROBERT. (2003) GMO Spring Wheat: Its Potential Short-Term Impacts on U.S. Wheat Export Markets and Prices. Unpublished working paper.
- WOLSON, ROSEMARY. (2004) Country Study: South Africa. New York University, August 2004.