On The Use of Efficient Breach in International Agreements*

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Abstract

What determines how international institutions treat non-compliance by member states? In some legal regimes, fully compensating parties affected by a violation of the rules renders that violation permissible, while in others, compensation serves at most an interim function, with full compliance the only satisfactory outcome. While allowing breaches that leave all parties better off would appear to be a Pareto optimal solution, institutions vary a great deal in the extent to which they tolerate such "efficient breach". We account for this by looking at the domestic distributional consequences of violations. Specifically, when the benefits from violations accrue mainly to government itself, then the option of efficient breach leaves government at least as well off as it would be in its absence. Conversely, when governments benefit from violations only indirectly, through the political support offered by interest groups who are the direct beneficiaries of non-compliance, the possibility of efficient breach effectively increases the payoffs from mobilization. In those cases, allowing for efficient breach strengthens the domestic opposition to the very liberalization pursued by the treaty. We go on to show how such domestic political concerns can explain why efficient breach plays a trivial role in international trade agreements, while it is at the very basis of the international investment regime. In sum, the debate over efficient breach has thus far failed to endogenize the behavior of domestic interest groups. Once we correct for this oversight, the true costs and benefits of breach-and-pay schemes become apparent.

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1 Introduction

International rules result from bargaining between sovereign states over mutually beneficial constraints on behavior. As such, rules reflect state interests at a given point in time. State interests, however, are prone to change. Were it not for the considerable transaction costs involved, countries might engage in continuous renegotiations over their obligations (Jönsson and Tallberg, 1998; Koremenos, 2001).

Formal renegotiations and flexibility provisions, however, are not countries' only means of reacting to sudden increases in the costs of compliance. A subset of the law-and-economics literature has argued that if countries value a violation so strongly that they are willing to weather the punitive consequences of non-compliance, the legal system enforcing the laws should facilitate the violation, and offset its negative impact by having the violator compensate the affected countries. If such a transfer can render the affected parties "whole", and still leave the violator better off, then the breach is said to be "efficient", since it leaves all parties at least as well off as if the violation had not occurred (Rosendorff and Milner 2001, Herzing 2005, Schwartz and Sykes 2002; Bello 1996).[1]

International legal regimes, therefore, need not prevent all breaches but merely enforce the compensatory transfers that render such breaches efficient. In this way, Rosendorff (2005) claims a state could breach a World Trade Organization (WTO) rule, "willingly" submit to dispute settlement, and accept retaliation by its trade partners. Or it could provide compensatory concessions on some other products (Bello, 1996). Or a state could flout a bilateral investment treaty by expropriating the assets of a foreign company, but offset the action by paying the foreign company a sum equivalent to the value of the seized assets (Pauwelyn, 2006). Compensatory damages would thus seem to strike a balance between exercising a state's sovereignty through willful breach and international commitments.

While the logic of efficient breach has intuitive appeal, the question is when do we actually observe it? In this article, we ask what role efficient breach plays in international economic law,

[1]For the seminal formulation of efficient breach of contract theory, see Holmes (1920): "The only universal consequence of a legally binding promise is that the law makes the promisor pay damages if the promised event does not come to pass. In every case it leaves him free from interference until the time for fulfillment has gone by, and therefore free to break his contract if he chooses."

and under what circumstances do countries create rules that facilitate efficient breach in the first place. Do states make it easier for themselves to escape whenever they want, by allowing one another to "buy out" of violations? Is efficient breach a bad word, as some normative legal scholars believe, or is it an expected consequence of treaties struck among sovereigns, and therefore universally accepted practice? We show that even within international economic law, there is considerable variation in the prevalence of efficient breach across different regimes.

To explain this variation, we argue that whether a given regime allows for efficient breach or not hinges on the domestic politics of its member states. Specifically, when the benefits from violations accrue mainly to government itself, then the option of efficient breach leaves government at least as well off as it would be in its absence. Conversely, when government benefits from violations only indirectly, through the rents offered by interest groups who are the direct beneficiaries, the possibility of efficient breach empowers these groups to the detriment of government, effectively increasing the payoff from mobilization. All things equal, efficient breach in these cases increases the pressure against the very liberalization pursued in signing the treaty. In sum, the literature advocating efficient breach has failed to endogenize the behavior of domestic interest groups.[2] When we correct for this oversight, the true cost of breach-and-pay schemes become apparent.

Our formal model holds opposite testable implications for two major international economic regimes. On the one hand, trade agreements are often described as hand-tying mechanisms, because of how leaders sign onto them to lower the domestic political costs of denying socially suboptimal protection (Hudec 1987; Staiger and Tabellini 1987). Indeed, private industry regularly lobbies for governmental actions amounting to violations of the agreement, be it in the form of illegal subsidies or trade barriers. As our model demonstrates, allowing for efficient breach in such circumstances effectively "unties" the hands of government, reducing their bargaining power vis-à-vis domestic groups, and rendering it an unlikely design feature of trade agreements. On the other hand, investment treaties are signed with only one audience in mind: international investors. When

[2]Simmons (2009) argues that human rights treaties can be effective when they mobilize domestic victims of repression, but she does not explore how this mechanism shapes the rational design of these treaties. Goldstein and Martin (2000) argue that strengthening trade dispute resolution mechanisms may impede liberalization due to perverse domestic incentives, but they do not address any particular institutional design feature or outline the conditions under which additional "legalization" can be expected to produce net benefits for governments.

governments decide to violate investment treaties, they do so as a means of boosting government revenue in the short term and gaining greater autonomy to pursue their own objectives (Quan Li 2006), rather than as a means of paying off domestic industries. As a result, even as the literature on efficient breach has for the most part ignored the investment regime, our model implies that agreements such as bilateral investment treaties (BITs) should be as close an example of efficient breach as can be found in international economic law.

A detailed examination of the rules in both regimes, as well as archival evidence from negotiations among state actors over those rules, offer strong support for our expectations. Efficient breach is neither a feature of state behavior nor of legal doctrine in international trade, where compensation is never regarded as a substitute for compliance. This is not happenstance. We show Members to trade agreements repeatedly rejecting even modest proposals for efficient breach or mechanisms reminiscent of it throughout GATT/WTO history. Conversely, we show that the investment regime and the customary international law it rests on are fundamentally vested in the concept of efficient breach, and that compensation does invariably function as a substitute for compliance across all investment agreements we examine, going as far back as the beginning of the 20th century.

Legal realists are thus not wrong to think that states will react forcefully when their interests suddenly diverge from the rules they have committed to. But the way they do so is qualified by features of institutional design, which in turn are driven by the distributional effects of breaching the agreement. Ours is the first attempt at offering a general account of when efficient breach is likely to be part of economic agreements, and when it is not.

2 The Puzzle

International agreements are incomplete contracts. Faced with the impossibility of foreseeing and planning for all possible states of the world, designers of treaties must find ways of allowing states to adjust their obligations to suit changing circumstances, while preserving the legitimacy of the

agreement.[3] Consequently, renegotiation clauses are pervasive in international treaties.[4]

Yet the occurrence of renegotiations is rare. This should come as no surprise, given how these lead to almost insurmountable transaction costs (Friedmann 1989), especially when any change to a country's rights and obligations automatically applies to all Members of a multilateral institution, as it does through the Most Favored Nation (MFN) principle in international trade. One way to avoid those renegotiation costs is by agreeing ex-ante to tolerate violations to the rules subject to the payment of some pre-determined compensation amount, effectively removing the consent of affected parties as a requirement to breach in any given instance. This is the case made by advocates of the efficient breach: the very institutions enforcing rules should facilitate violations of those rules when such violations are Pareto improving.

While avoiding renegotiation costs through predetermined compensation is intuitively appealing, it is not a universal feature of agreements. Consider the case of NAFTA, which is unique insofar as it constitutes a trade agreement that also contains detailed investment provisions, and thus makes for an ideal comparison of institutional design between two regimes. NAFTA's Chapter 11, which covers investment, explicitly allows for full compensation as an adequate remedy to violations of investment rules. So long as countries pay for the privilege of violation, e.g., expropriating foreign assets, they are not in breach (Pauwelyn 2007, 75). NAFTA's own trade rules, however, differ markedly on this point. There, nothing short of compliance constitutes a satisfactory outcome; compensation and retaliation play, at most, an interim function.[5] Why such a difference in the institutional design of two issue-areas under the *same* agreement?

The fundamental premise of our argument is that the dependent variable – whether an international legal regime allows for efficient breach – is the result of rational decisions by state actors bargaining over institutional design. The (im)possibility of efficient breach should thus be treated as a property of regimes akin to an institution's voting scheme, or the degree of precision of countries' obligations.[6] Since states are the shapers not only of the content, but also of the form that

[3]Hence, while the fundamental premise of international law is found in the phrase *pacta sunt servanda* ("agreements must be kept", see the Vienna Convention on the Law of Treaties, Art. 26), international lawyers have long cited this maxim alongside another: *rebus sic stantibus* ("things thus standing").

[4]see supra fn.2

[5]See NAFTA Article 20.

[6]For the seminal work on institutional design in IR, see the *International Organization* 2001 special issue, 55(4).

international agreements take, we should expect that the design of agreements proceed from state interests.

In operationalizing our dependent variable, we rely on two requirements for a regime to be considered as exhibiting efficient breach. The first is the existence of some compensation of affected parties, which is proportional to the harm caused (as opposed to, say, the benefit incurred).[7] The second requirement is the existence of some distinction between those (compensated) breaches that are considered efficient, and those that are not. The underlying paradox is that breaches that are "facilitated" by an institution are, so to speak, at once legal and not. They break a country's obligations, but in a way that the agreement has allowed for ex-ante. For our purposes, efficient breach schemes must designate those breaches that leave all parties better off as something less than an outright violation.

The counterfactual to efficient breach regimes falls into two categories. The first is made up of rigid agreements, where compliance is always required, and all breaches are treated equally, whatever the circumstances leading to them. Owing to the essentially voluntary aspect of international law, and to the "incomplete contract" nature of international agreements, few contemporary economic agreements fall under this category: states will not make meaningful commitments unless the agreement they enter into contains some form of insurance policy against unexpected events (Svolik 2006, Rosendorff and Milner 2001; Bagwell and Staiger 2001, Kucik and Reinhardt 2008, Koremenos 2001, Lipson and Snidal 2001).

If agreements allow for some flexibility, but do not make it contingent on the payment of compensation, then they must employ some other means that differentiate between violations that are allowed for under a flexibility provision, and those that are not. Otherwise, the agreement is rendered meaningless (Pelc 2009). A typical way to do this is by distinguishing between the circumstances that lead to the breach. Market reactions provide an indication of the type of circumstances that are perceived as rendering violations permissible: Tomz (2007), for instance,

[7] Friedmann (1989, 4) offers a convincing critique of Posner's (1986) characterization of efficient breach, where it is argued that the compensatory transfers to parties affected by a willful breach should be equal to the gains flowing from the breach, which Friedmann argues is "diametrically opposed to the efficient breach theory, the essence of which is that the promisor should be allowed or even encouraged to commit a breach whenever his gains exceed the promisee's loss."

finds that bond markets are sensitive to context. When default occurs during unexpected hard times, then markets do not raise risk premia on debtors. Conversely, when defaults occur during good times, risk premia rise accordingly. In institutional settings with many states interacting repeatedly, requirements for exogenous circumstances may guard against spirals of defection. If justificatory circumstances cannot be affected by states themselves, then the potential for allowable breaches snowballing into more breaches is interrupted. From this logic, we derive the expectation that economic agreements that do not allow for efficient breach will make legal derogations from the rules of the agreement contingent on some predefined feature of the circumstances leading up to the agreement.

Legal scholars, who have arguably generated the most enlightened work on efficient breach, differentiate between international law protected by a property rule, where no breach is tolerated absent the consent of all parties, from international law protected by a liability rule, where unilateral breaches are condoned so long as they are compensated. To our knowledge, no prior work explicitly considers the variation in the treatment of efficient breach within international economic agreements, with a few notable exceptions. Pauwelyn (2007) briefly notes the same disparity we identify above, between NAFTA's treatment of investment and its treatment of trade, identifying the former as protected by a liability rule, and the latter as protected by a property rule. As Pauwelyn claims, NAFTA Members, much as within the WTO, are obliged to comply with rules or obtain the consent, through formal renegotiation provisions, of trade partners to deviate from their obligations. "They cannot unilaterally take these entitlements, pay compensation for them, and thereby end the matter" (Pauwelyn 2007, 73). On the other hand, "non-discriminatory expropriations [of foreign investments] for a public purpose are not even breach of treaty [under NAFTA] for as long as full compensation is paid."

Pauwelyn, along with others in the legal literature (e.g. Friedmann 1989), accounts for the existence of an efficient breach option within regimes by focusing on transaction costs. According to this view, the main impediment to the occurrence of efficient breach is the difficulty of establishing the "appropriate" amount of compensation, and the possibility of hold-outs by affected parties. States harmed by a violation have an incentive to over-value the extent to which they have been

harmed, in the hope of gaining greater compensatory payments. According to Pauwelyn, investment agreements avoid this issue, since they allow for the "collective valuation" of the injury caused. Because a compulsory third party dispute settlement system under NAFTA Chapter 11 sets the value of the harm caused by the violation, the risk of hold-outs is limited, and mistakes in collective valuation become less likely. Along the same lines, investment covers goods that are fungible, and have a corresponding market value, thus making the valuation of compensation easier. Since investors have private standing at NAFTA, and other investment tribunals, this value can be transferred directly to affected parties. For these reasons, the investment regime features efficient breach mechanisms, and by extension, the trade regime does not.

Yet trade agreements have dedicated third-party bodies that have the same function of collective valuation as do investment tribunals. Just as is the case with NAFTA, under WTO Article 22.6, the dispute settlement body or an appointed arbitrator set the amount of "nullification or impairment", which corresponds to the maximum amount for which a complainant can "suspend concessions" (i.e. retaliate) in the case of noncompliance following a panel ruling. That the trigger on retaliation is almost never pulled, and that retaliation does not constitute a true balancing mechanism (Hudec 1987) does not take away from the fact that the WTO is demonstrably capable of ascertaining the amount of harm caused by a violation in a way that avoids hold-outs by affected parties. And while firms do not have private standing under trade agreements, initiatives to allow for monetary compensation in trade disputes have been regularly rejected by the WTO Membership.

The transaction costs argument thus amounts to an empirical claim. The existence of transaction costs could ostensibly tell us why efficient breach appears underused in a given issue-area, but it cannot tell us why Members insist on barring it outright as an option to states. More generally, relying on transaction costs as an explanation for the presence or absence of efficient breach merely defers the causal question. Since transaction costs can be decreased through institutional mechanisms — that is, indeed, the commonly touted function of institutions in international relations (Keohane 1984, North 1990, Greif 2006) — this amounts to the claim that an institutional design feature can be explained by another institutional design feature. The question then becomes: why have parties to investment treaties taken the necessary steps — private standing, monetary

compensation — to facilitate efficient breach, while the same cannot be said of the trade regime?

Sykes (2005) effectively addresses the very causal question that Pauwelyn defers: if efficient breach is explained by variation in private standing, then what explains the latter? As such, the argument is relevant to our puzzle, especially since Sykes considers the two issue-areas of inerest to us. The question asked is why the investment regime systematically allows private standing, whereby firms can bring suit against a country which has flouted its obligations, while the same is not true of any trade agreement. The proposed answer is that private standing in investment agreements allows for insurance against expropriation, benefiting host governments looking to reduce the cost of capital, while this motive is absent in trade. There, the claim is that governments will benefit from interposing themselves as "political filters", choosing which enforcement actions are pursued. Specifically, governments will be better off if they can collude with trade partners to avoid enforcing violations that only harm a trade partner's politically weak industries.[8] Thus, Sykes assumes that governments incur no cost from distortionary barriers beyond the discontent of export-oriented industries: "importing nations would gladly reintroduce their dismantled barriers to imports if they could do so without suffering any retaliation or punishment by foreign governments" (Sykes, 2005, 647).[9]

Yet while this assumption may allow for an explanation of why private standing is not a feature of the trade regime, it cannot account for the absence of efficient breach. Suppose, indeed, that the Sykes model correctly captures the political economy of international trade: governments collude with each other to favor politically powerful industries at the expense of the weaker ones. In such circumstances, the incentive to allow efficient breach is maximized: the very basis of collusion between governments – political filters – is that they should be able to violate trade rules for mutual gain. And this, argue Bello (1996) and Rosendorff (2005), is what precisely efficient breach achieves.

[8] "The political costs in each state from foregone enforcement on behalf of export industries under such an arrangement can be far out-weighed by the political gains from foregone enforcement in politically powerful import-competing industries" (Sykes, 2005, 649).

[9] This assumption is in and of itself problematic. Most trade models portray governments as losing votes when distortionary policies lead to poor economic performance; political leaders are left trying to balance the health of the economy with rents from special interests: a major motive for joining trade agreements in the first place is not only to seek reciprocal concessions from trade partners, but also to reduce the political costs of denying such distortionary barriers to domestic groups (Hudec 1987; Staiger and Tabellini 1987). Trade barriers not only harm exporters who are wary of incurring retaliatory tariffs abroad; they also harm a domestic economy where capital is misallocated to inefficient, but protected, industries.

Sykes (2005) may have a case against direct *monetary* compensation relying on the existence of private standing, but his analysis cannot be extended to an explanation of efficient breach more broadly.

If variation in the existence of efficient breach across economic regimes cannot be explained by the transaction costs, or concerns over compliance, or collusion among states, what accounts for it? The answer lies in states' domestic interests.

3 A Theory of Efficient Breach

We argue that whether or not governments allow for efficient breach in a given regime is contingent on the distributional consequences of a violation. If the benefits from violating the agreement fall predominantly on domestic interest groups, then allowing for efficient breach will lead to the greater mobilization of these groups, thus increasing pressure against liberalization. In other words, it risks "untying the hands" of governments vis-à-vis interest groups, in a way that runs counter to the reasons for making international commitments to begin with. Conversely, when the actor that decides on whether or not to violate an agreement is also the main actor benefiting from such a violation, the option of efficient breach will leave such an actor better off.

As we formalize this argument, we rely on two assumptions. First, we assume that governments are concerned with maximizing political support. They do so by balancing, on the one hand, overall economic welfare, and on the other, the rents they collect from private industry, either in the form of support at the polls (Busch and Reinhardt, 2000), or campaign donations (Grossman and Helpman, 1994). In this way, governments may maximize their odds of retaining power by "selling" protection to politically influential interest groups (Grossman and Helpman, 1994), despite the market distortions entailed, if the rents from the private sector are greater, in terms of political support, than the negative implications for the economy. Second, we assume that industries behave strategically. They face a collective action problem in lobbying government for favorable policy, and such mobilization is thus likely to occur only if the expected value of affecting policy in their favor is greater than the costs entailed in mobilizing. For example, this assumption has been previously used by Rodrik (1986) who shows that governments may prefer tariffs to subsidies, despite the

greater static inefficiencies of the former, because the latter endow industries with stronger lobbying incentives. We find that endogenous mobilization will also hold important implications for the use of efficient breach in international agreements.

Much of the literature on efficient breach has focused on the international level. Legal scholars, especially, have spoken of the effect of allowing efficient breach on the compliance rate of other countries (Mercurio, 2009). In this telling, states may resist efficient breach because of the fear that it would lead to "abuse" by trading partners. Below, we discuss why such alternative views fall short of a satisfactory explanation. By contrast, we demonstrate how explanations for states' preferences over efficient breach can be derived entirely from domestic politics. Ours is thus a single-country model. To maximize the accessibility of our formal analysis, we develop our theoretical argument using a very simple game-theoretic model. In the mathematical appendix, we demonstrate that our main results are robust to various plausible extensions.

3.1 Model

In the model, a *government* must decide on non-compliance, such as protectionism or tantamount expropriation, potentially at the expense of the rest of the society. In the beginning of the game, the government decides whether the international institution will allow or proscribe efficient breach. Next, a potentially affected *industry* may attempt to mobilize in view of engaging in bargaining with the government over the spoils of non-compliance.

Game tree. Formally, the government and the industry play the game shown in Figure 1. First, the government decides on the institution of efficient breach, $B \in \{0, 1\}$. If the government rejects efficient breach, $B^* = 0$, the game ends. If the government accepts efficient breach, $B^* = 1$, the industry must decide on mobilization, $M \in \{0, 1\}$. When the industry fails to mobilize, $M^* = 0$, the government decides unilaterally on non-compliance. When the industry mobilizes, a bargaining game is played (see below).

[Figure 1 about here.]

Payoff without efficient breach. Now consider the payoffs. To begin with, we assume that in the absence of efficient breach, $B^* = 0$, the government cannot violate the treaty, and

thus obtains a payoff normalized to zero. Similarly, we assume that the payoff to the industry is zero. The counterfactual to compensated violation is of a fully rigid agreement, as per Rosendorff (2005). Later, we relax this assumption to take into account our expectations about other means of differentiating between valid and invalid use of flexibility. For now, this serves as a useful premise that allows us to focus on the fundamental question: assuming perfect enforcement, would we expect states to allow efficient breach if the alternative is a fully rigid agreement?

Mobilization cost for the industry. A central premise of our model is that mobilization is costly to the industry. Thus, if the industry mobilizes, $M^* = 1$, the industry must pay a cost $C > 0$, which can be thought of as the price of engaging in collective action for political lobbying. The mobilization cost C will play a central role in our formal analysis of the costs and benefits of efficient breach. Following theories of collective action, this cost can be thought of as negatively associated with the degree to which treaty non-compliance increases the economic payoff to organized special interests (Mitra, 1999; Olson, 1965).

Non-compliance without mobilization. What about non-compliance? Let us suppose, first, that the industry has not mobilized, $M^* = 0$. Under efficient breach, $B^* = 1$, the government creates, without loss of generality, a political surplus worth 1 to itself. However, it must offer a proportion $\lambda \in (0, 1)$ as compensation to foreign victims of protection, so the total surplus from efficient breach to the government is $1-\lambda$. The gross surplus to the industry is also normalized to 1, so that the industry benefits from non-compliance under efficient breach. Given the compensation requirement, the total payoff to the industry is therefore $1 - \lambda$. Given that the industry has not mobilized, bargaining does not follow.

Non-compliance with mobilization. Suppose next that the government chose efficient breach, $B^* = 1$, and the industry mobilized, $M^* = 1$. Now bargaining takes place. We model bargaining using the generalized Nash Bargaining Solution. Thus, the payoffs from bargaining depend on the disagreement point, the total political surplus from agreement, and the relative bargaining powers of the two actors. Specifically, if the government and the industry agree on collaboration, the government violates the treaty in exchange for political support, such as campaign contributions, from the mobilized industry. They then distribute the surplus from this interaction

through bargaining. The mathematical details can be found in the appendix.

The disagreement point is premised on two facts. First, the government does not violate the treaty. Second, the industry withholds political support from the government. In this case, the payoff to the industry continues to be zero, as it does not acquire any protection. However, since the industry has mobilized to form a lobby, the payoff to the government is *less* than in the absence of mobilization. Intuitively, failure to promote the interests of an organized lobby carries a higher cost than failure to help an unorganized industry. Let $-d < 0$ denote the disagreement payoff to the government. Importantly, this assumption is *not* a feature of standard models of lobbying by special interests: conventional theories are based on the assumption that the government always benefits from political interactions with lobbies (Grossman and Helpman, 1994; Maggi and Rodríguez-Clare, 1998). By contrast, our model allows the industry to mobilize against the incumbent, perhaps by supporting a political challenger who promises to enact public policies that benefit the industry.

If the government and the mobilized industry agree to violate the treaty, the governments offers protection in exchange for the industry's offering political support. In this case, we assume that the size of the 'political pie' to be distributed is $V > 0$. The scalar V consists of social welfare effects, the value of campaign contributions, the net value of non-compliance to the industry, and so on. Following the literature on special interests and efficient breach, we assume that this value is higher than the total value of non-compliance in the absence of industry mobilization, $V > 2$, so that government-industry collusion is potentially profitable. Recall, however, that λ percent of the total bargaining surplus must be transferred to parties affected by the violation. Given that the disagreement payoffs are $-d$ for the government and zero for the industry, what remains to be distributed between the government and the mobilized industry is $(1 - \lambda)(V - d)$.

It remains to introduce the relative bargaining powers of the two actors. Here, we follow Maggi and Rodríguez-Clare (1998). Let $\sigma \in (0, 1)$ be the relative bargaining power of the government, and $1-\sigma$ be the bargaining power of the industry. As σ increases, the government obtains a larger share of the surplus from collusion with the industry. While we do not fully endogenize bargaining power in this article, it may depend on such factors as the length of the time horizon of the government (relative to the industry). In bargaining models, impatient players usually obtain a worse deal than

patient players because the former cannot credibly threaten to delay agreement (Rubinstein, 1982; Binmore, Rubinstein, and Wolinsky, 1986). As the parameter σ increases, the government's time horizon lengthens while the industry becomes increasingly impatient.

Expected bargaining payoffs. We are now in the position to summarize the bargaining payoffs upon mobilization. For the government, the bargaining payoff is

$$-d + \sigma(1-\lambda)(V-d). \tag{1}$$

This expression states that the government obtains the value of its disagreement point, $-d$, and a proportion σ of the surplus from bargaining, which is $(1-\lambda)(V-d)$. Clearly, the payoff to the government increases as its (i) disagreement payoff improves or (ii) bargaining power grows.

The mobilization cost notwithstanding, the bargaining payoff to the industry is

$$(1-\sigma)(1-\lambda)(V-d). \tag{2}$$

This expression says that the industry obtains its disagreement payoff, which is zero, and a proportion $1-\sigma$ of the available bargaining surplus, $(1-\lambda)(V-d)$.

In sum, the model captures the following sequential choice. First, should the government institutionalize efficient breach or select a less flexible regime? In making this choice, the government internalizes both the resulting odds of industry mobilization and the likely result of bargaining with the industry if the latter does mobilize. Second, if the government selects efficient breach, will the industry mobilize? The choices of the government and the industry jointly determine whether (i) non-compliance is possible and, if so, (ii) how the spoils will be distributed between the government and the industry.

3.2 Equilibrium

This is a game of complete information, so the appropriate solution concept is the subgame-perfect equilibrium. An equilibrium characterizes the government's regime choice B^* and the industry's mobilization decision M^*, as well as the outcome of the bargaining game. We solve the bargaining

game in the appendix. The government's regime choice B^* must be optimal given the mobilization decision M^* and the outcome of the game, while the industry's mobilization decision M^* must be optimal given the bargaining outcome characterized in the appendix.

The first possible scenario is that the government chose efficient breach, yet the industry did not mobilize. The government violates the treaty to obtain the payoff $1 - \lambda$, and the industry also obtains a payoff $1 - \lambda$. The game ends.

What if the industry has mobilized? In the presence of efficient breach, $B^* = 1$, the surplus from bargaining is positive, as we assumed that $V > 0 > -d$. Thus, with efficient breach and industry mobilization, a bargain is struck between the government and the industry. The payoffs to the government and the industry, respectively, are given in expressions (1) and (2).

What about the prior mobilization decision, given that the government selects efficient breach? Paying the cost C is worthwhile for the industry if and only if

$$(1 - \sigma)(1 - \lambda)(V - d) - C > 1 - \lambda. \tag{3}$$

This condition simply says that the bargaining payoff to the mobilized industry, including the cost of mobilization (left hand side), must exceed the payoff without mobilization (right hand side).

In this instance, our model differs from conventional treatments (Staiger and Tabellini, 1987; Grossman and Helpman, 1994; Maggi and Rodríguez-Clare, 1998). Instead of assuming that the government's disagreement point is immutable, such as free trade or investment, we allow the industry to endogenously worsen the government's position through political mobilization against it. Thus, political mobilization brings two benefits for the industry. First, it increases the value of the political support that the industry offers to the government upon collusion. Second, it weakens the government's political standing in the case of disagreement.

In the end, should the government allow efficient breach or not? In the absence of efficient breach, the payoff to the government is zero. This payoff can be thought of as the payoff from free trade or a liberal regime for foreign direct investment. By rejecting efficient breach, the government avoids dealing with the industry, as it has no choice but to comply.

Under efficient breach, bargaining follows assuming the industry mobilizes (otherwise the payoff

to the government is unchanged by mobilization). Given mobilization, the payoff to the government is given in expression (1), so the government allows efficient breach if and only if

$$-d + \sigma(1-\lambda)(V-d) > 0. \tag{4}$$

But if the industry will not mobilize, the payoff to the government under efficient breach is $1-\lambda$.

To understand the choice of efficient breach, we therefore need to consider two cases. First, suppose efficient breach does not induce the industry to mobilize. In this case, the government obtains an expected payoff $1-\lambda > 0$ under efficient breach, so it obviously allows efficient breach. This finding is in line with previous research: assuming that the government benefits from political support, efficient breach is a highly desirable way to enhance the flexibility of international economic agreements. By allowing efficient breach, the government creates a contracting opportunity with special interests (Rosendorff and Milner, 2001; Rosendorff, 2005).

Second, suppose efficient breach induces the industry to mobilize, as the mobilization condition (3) holds. In this case, condition (4) determines whether the government allows efficient breach. By allowing efficient breach, the government pays a cost d, as industry mobilization harms it when the industry subsequently withholds its political support to the government. But it also benefits from bargaining surplus worth $\sigma(1-\lambda)(V-d)$. If the increase in the bargaining surplus is large enough to outweigh the worsening of the disagreement payoff, the government prefers efficient breach even though it expects industry mobilization.

We now have a full characterization of the unique equilibrium of the game.

Proposition 1. In the unique equilibrium of the game, the following hold.

1. The government selects efficient breach, $B^* = 1$, if and only if [i] mobilization does not follow (condition 3 fails to hold) or [ii] mobilization follows but the detrimental effect on the government's bargaining power is limited (conditions 3 and 4 hold simultaneously).

2. The industry mobilizes, $M^* = 1$, if and only if efficient breach is allowed, $B^* = 1$, and the mobilization condition (3) holds.

3. If the government allows efficient breach, $B^* = 1$, and the industry mobilizes, $M^* = 1$, the government's share of bargaining surplus is σ while the industry's share is $1 - \sigma$.

Proof. For the final bargaining stage, see the mathematical appendix. For all prior decisions, the proof is by backward induction as shown in the main text. ■

This proposition states that the government's choice of efficient breach depends on two factors: potential industry mobilization and the implications thereof for bargaining. If industry mobilization is not forthcoming, then efficient breach is unambiguously beneficial, as the government simply creates political surplus that it can capture by violating the international treaty. If industry mobilization follows efficient breach, the value of efficient breach to the government depends on the cost-benefit ratio of industry mobilization. The cost is that the industry forms a lobby that may demand concessions from the government, while the benefit is that collusion with a mobilized industry could sometimes create more political surplus than in the absence of mobilization.

Our most important empirical finding, therefore, is that efficient breach is generally an equilibrium outcome when the mobilization cost C is high. This condition implies that empirically, governments may refrain from efficient breach whenever the prospect of bargaining induces powerful industries to mobilize politically, so as to force the government to offer protection. As we explain in greater detail below, the mobilization cost C depends, first and foremost, on the distributional consequences of efficient breach (or lack thereof). *When non-compliance directly benefits concentrated special interests, governments refrain from efficient breach to avoid increasing the payoffs to industry from political mobilization.*

This proposition provides a possible explanation for the prevalence of efficient breach in the BITs regime, and its negligible role in the WTO regime and other trade agreements. As we demonstrate below, trading industries under import competition are generally able to mobilize politically for protection because they have a relatively strong common interest in discrimination against foreign producers. It is precisely in such circumstances that the government benefits from a credible commitment to free trade. By contrast, the support for FDI expropriation is more diffuse, and so political mobilization is relatively more costly for potential domestic beneficiaries. In this case, the

government need not tie its hands vis-à-vis its domestic constituents, and can freely decide whether to exploit efficient breach for political gain or not; it internalizes most of the costs and benefits of the institutional design decision.

3.3 Additional Empirical Implications

The model has several additional empirical implications. We summarize these here. First, suppose that efficient breach does modify domestic industry incentives and increase political mobilization. Is it possible, nonetheless, that governments may sometimes prefer efficient breach?

Proposition 2. Suppose the industry mobilization cost C is low enough for condition (3) to hold, so that the industry mobilizes when efficient breach is allowed. The government allows efficient breach, $B^* = 1$, if and only if mobilization has a limited effect on its payoff from the disagreement point, so that d is low enough.

Proof. By Proposition 1, the government allows efficient breach, $B^* = 1$, if and only if condition (4) holds. Varying the value of d, the claim follows. ■

This proposition says that if mobilization has little effect on the government's political standing when the organized lobby withdraws political support from the government, efficient breach is useful even if mobilization is forthcoming. In these cases, political mobilization increases the value of collusion, leaving both parties better off.

Finally, let us consider how the government's bargaining power σ influences the probability of efficient breach.

Proposition 3. Suppose C is so low that condition (3) holds, so that the industry mobilizes when efficient breach is allowed. As the government's bargaining power σ increases, its payoff from efficient breach increases while the payoff without efficient breach remains unchanged.

Proof. Differentiate both sides of condition (4) with respect to σ. The derivative on the left side, under efficient breach, is $\sigma(1-\lambda)(V-d) > 0$. The derivative on the right side, without efficient breach, is zero. ■

This proposition shows that if the government is in a weak bargaining position to begin with, regardless of the value of the disagreement point, perhaps due to short time horizons, it has greater incentives to reject efficient breach. The only benefit from efficient breach is the creation of joint political surplus, and relative bargaining powers determine the allocation of this surplus. Thus, if the government expects not to be able to obtain much of the surplus, the benefits of efficient breach are very limited. This can be best seen by considering the extreme case of $\sigma \to 0$, so that the government expects not to reap any surplus from bargaining. In this case, it is clear that efficient breach is harmful for the government, as any increases in the joint surplus from political mobilization are ultimately captured by the organized lobby and the payoff to the government is approximately $-d$. Thus, the government prefers to avoid efficient breach.

These observations help situate our argument in the efficient literature. We have found that when a government is in a very strong and secure bargaining position, endogenous mobilization is not an issue: it will simply create new special interests with whom the government can collude. For such a government, efficient breach is a win-win institutional design: in addition to the efficiency benefits of optimal breach, the government creates new special interests from whom it can demand political contributions.

3.4 Model Extensions

To maximize the accessibility of our theoretical analysis, we opted for a basic bargaining model. It turns out, however, that our findings are robust to plausible extensions of the model. While we scrutinize the model's robustness in the mathematical appendix, here we offer an informal summary of these findings.

First, a key feature of efficient breach is incomplete information. States need efficient breach because unforeseen contingencies may render treaty violation the politically Pareto-efficient strat-

egy. In our model, however, we have assumed that states will always exploit the possibility of non-compliance when it becomes available. This assumption turns out to be unnecessary: our results hold under incomplete information. Even if the government expects non-compliance to be potentially expedient with some probability $\rho \in (0, 1)$, our main results continue to hold. The fact that efficient breach may not be needed does not imply that the government will not prepare for the contingency in which it is valuable.

Second, our theory is based on a single-country model that treats foreign countries as automata which demand some compensation for treaty violations. This assumption can also be relaxed, and the model extended to a two-state system where both states face similar domestic constraints. Even if a foreign country can also engage in efficient breach, and the domestic government obtains some compensation from this foreign country for this efficient breach, our results continue to hold.

Third, our simple Nash Bargaining Solution may be criticized as overly restrictive. To this end, we demonstrate that all our results continue to hold for more general bargaining protocols. First, whenever the industry fails to mobilize, so that the government obtains at the very least the status quo payoff, efficient breach is a weakly dominant strategy. Second, whenever the industry mobilizes, the government chooses efficient breach if and only if the negative effects of industry mobilization are outweighed by the expansion of political surplus.

Fourth, we have sharpened our focus on politics by abstracting away from standard economic adjustment issues (Maggi and Rodríguez-Clare, 1998; Staiger and Tabellini, 1999). We can show that while economic adjustments weaken the case against efficient breach by increasing the value of credible commitment to rigid liberalization, our main results remain unchanged: controlling for such economic adjustment effects, the incentive to adopt efficient breach is always there in the absence of industry mobilization, whereas if the government expects industry mobilization, it may oppose efficient breach.

Fifth, we have treated unconditional liberalization as the primary institutional alternative to efficient breach. But as we note in the literature review, a more realistic alternative is that governments fall back on alternative flexibility provisions that condition temporary violations on some pre-determined exceptional circumstances. We show that the model can be easily extended to com-

pare the government's choice between flexibility provisions contingent on some set of circumstances and efficient breach. Our main result continues to hold: the likelihood of efficient breach remains dependent on industry mobilization.

Finally, we have simplified the analysis by assuming that the mobilization cost C is exogenous. In the appendix, we show how the mobilization cost can be derived as a function of the number of concerned actors. Specifically, we assume that industry collective action requires that individuals within the industry be punished for free riding. We then show that as the number of concerned individuals increases, the punishment needed to sustain collective action increases. To the extent that devising such a punishment is costly, this implies that the industry's mobilization cost increases.

4 Efficient Breach in Practice

The determining factor accounting for the choice within a given regime to allow for efficient breach or not is found in the distributional consequences of violations within that regime: when treaty violations produce concentrated benefits for a given industry, the industry's mobilization cost C is low. Unless the government is in a very strong bargaining position, it prefers to tie its hands by disallowing efficient breach. But if the benefits of efficient breach are not concentrated, the industry's mobilization cost C is high. Thus, the industry will not mobilize in response to the institutionalization of efficient breach, and the government can expects substantial benefits from efficient breach.

We test our argument on two different international economic regimes. The first is the international trade regime, represented by multilateral organizations such as the GATT/WTO, regional organizations such as NAFTA and APEC, and bilateral treaties consisting of preferential trade agreements. The second is the international investment regime, consisting for the most part of bilateral investment treaties (BITs), and including investment provisions in agreements such as NAFTA and the Energy Charter Treaty (ECT). These two regimes differ markedly in the distributional effects of violations of their rules, which is another way of saying that states join them for different reasons.

Our theoretical argument implies that efficient breach will be rare in the multilateral trade

regime: trade protection allows concentrated sectoral interests to reap substantial benefits, so their mobilization cost C is low. International trade institutions are borne of a paradox: free trade is widely seen as beneficial to the domestic economy, yet states by themselves are unable to achieve it. This is because entrenched domestic import-competing groups stand to lose from liberalization, and will lobby intensely to prevent it from taking place. And because these groups tend to be more concentrated than the winners, represented by consumers and export-oriented industries, and more easily mobilized (Martin and Goldstein 2000), governments find themselves unable to unilaterally bring about liberalizing reforms, despite it being a Pareto optimal move. Moreover, unilateral efforts in this direction are time-inconsistent: even leaders recognizing the optimality of free trade will subsequently profit from giving into demands from import-competing groups that can help them retain office (Hudec 1987; Staiger and Tabellini 1987). The resulting long-run market distortion entails costs that go beyond the rents that leaders extract from protected interest groups, owing to over-investment in protected sectors under cross-sectoral capital mobility (Maggi and Rodriguez-Clare 2007).

The critical feature of the trade regime, for our purposes, is that the benefits that leaders derive from violating a trade agreement are necessarily indirect: leaders only profit from trade barriers through the resulting support of interest groups.[10] Downs and Rocke (1995: 88) go even further, claiming that from the point of view of state leaders, the uncertainty about future circumstances in trade agreements that renders the contract incomplete is "uncertainty about the future demands of interest groups".

In response to domestic constraints imposed by import-competing groups, trade agreements harness the interests of exporter-oriented industries, thanks to the reciprocal nature of trade concessions, and allow leaders to tie their hands vis-à-vis import-competing groups, through agreements' credible enforcement mechanisms. Countries exchange mutually-beneficial trade concessions, and commit to these under binding rules. To the domestic costs flowing from distortionary policies,

[10] Although tariffs do contribute to government revenues, and such revenue plays a non-trivial role especially in the case of developing countries, violations of trade agreements rarely, if ever, take place through the raising of tariffs above bound rates. Usually, the means taken to provide protection are costly to governments in and of themselves. Consider illegal subsidies, the costly investigations required for the exercise of any remedies, or the imposition of discriminatory standards.

trade agreements thus add the reputational and material consequences of breaching international rules.

Investment treaties, in turn, emerge to resolve a very different credibility problem. Even as leaders may have no intention of expropriating foreign assets, they are unable to credibly convey this to foreign investors, who under-invest as a result. States seeking to attract foreign capital thus enter investment treaties as a means of credibly conveying their intent not to seize foreign assets (Li and Resnick 2003). As Busch and Tobin (2010) put it, "multinationals want protection against (uncompensated) expropriation"; BITs provide such assurance.

Leaders thus enter investment agreements to tie their hands against none other than themselves. This is because as opposed to international trade, where leaders incur the benefits of breaching the treaty only indirectly, government is the prime beneficiary of violations in investment treaties. Expropriation represents greater autonomy to pursue specific governmental objectives (Li 2006), and more importantly, seized assets swell state coffers, offering an immediate increase of government revenue. Domestic interests may well profit, but only indirectly: speaking of the political benefits of expropriation, Jensen (2003, 595) says as much: "political leaders may use the assets or income streams form policy changes to essentially 'buy off' key support groups. The point being that domestic groups benefit form expropriation just as they would form any other external government revenue increase. As a result, the domestic groups that could potentially mobilize to demand their share of the spoils of breach are diffused across society — all domestic groups can at least lay claim to additional tax revenue — so the mobilization cost C is high. In this respect, the benefits from expropriation resemble those resulting from the pursuit of inflationary policies. Both offer an immediate windfall for governments, which can be used to retain power at least in the short term. And the existence of such incentives leads to uncertainty from the point of view of investors, who cannot be sure of how governments will behave, and thus demand a risk premium, which results in suboptimal investment from the point of view of governments who had no intention of either expropriating or pursuing inflationary policies. In both cases, institutional arrangements can serve to decrease such uncertainty, either through commitments under BITs or, in the case of inflationary policies, the establishment of a central bank.

This is not to say that other domestic actors do not profit from expropriation at all. Much as in the case of inflationary policies, expropriation creates domestic winners and losers. Yet in the case of investment, most domestic winners benefit indirectly, and thus appear unlikely to lobby the government to engage in expropriation, or any acts tantamount to it. In our model, this amounts to a high mobilization cost C. Indeed, reviewing the scholarly work on BITs, the main motive behind breaches of investment law, beyond increasing government revenue, seems to be the appeasement of "populist demand for national pride and radical social change" (e.g. Li 2006). Indeed, it is often the case that anti-foreigner actions can be used to rile up nationalist beliefs which may help leaders at the polls. While in these cases governments violate an agreement on account of domestic constituents, it would be a stretch to consider the latter the direct beneficiaries of such a violation.

These beliefs about the differences between both regimes are further reflected in the way in which the respective literatures predict where and when we are most likely to see the rules being breached. In the case of trade, scholars expect violations to occur more frequently when domestic institutions make leaders more accountable to interest groups, through the existence of "access points" to policymaking (Ehrlich 2009), as well as in tough economic times, when demands for protection from domestic interest groups peak. These expectations reflect the broad view that in the case of trade, protection is a demand-driven phenomenon. Violations become more likely as demands from interest groups rise, or as the costs from formulating those demands decrease, either because of high industrial and geographic concentration (McGillivray, Busch 1999), or because of domestic institutions that allow easier access to policymaking. In sum, if interest groups do not lobby for it, trade protection is unlikely to occur. Conversely, domestic demands, outside of populist attitudes among voters, seemingly factor little into leaders' decisions to expropriate foreign assets. Indeed, scholars examining investment treaties explain violations through such factors as governments' time horizons: leaders with shorter time horizons will find the immediate windfall from seizing foreign assets more appealing than those with longer term horizons (Li 2009).[11] The likelihood of violations in the investment regime is thus explained neither at the demand nor the

[11]Incidentally, our model implies that if the governments had to bargain with interest groups over this windfall, the positive association between short time horizons and expropriation might disappear because impatience sets the government at a bargaining disadvantage.

supply side, since the government itself is the locus of all cost-benefit calculations that determine the decision to flout the agreement or not.

In sum, owing to the differences in the distributional effects of violations under the investment regime versus the trade regime, we expect that state actors will seek to block the possibility of efficient breach in the latter, while allowing for it in the former. These choices flow not from fears of abuse by trading partners, but rather from domestic concerns. Having uncovered the values of our key independent variable, the industry mobilization cost C, we now examine the institutional designs of the multilateral trade regime and the BITs network.

4.1 The Case of the International Trade Regime

Does the trade regime exhibit efficient breach, or mechanisms reminiscent of it? Here we take a long view, examining the trade regime's evolution from the beginnings of the GATT in 1947 to current WTO rules, to assess whether either the rules, or country behavior within the regime, entail either de jure or de facto efficient breach. We then go through a similar exercise in the case of investment, looking for instances of efficient breach in both the rules and their application by states over the last century.

Several parts of GATT/WTO law would seem *a priori* likely to exhibit mechanisms reminiscent of efficient breach. In particular, some scholars have suggested that the GATT/WTO's escape clause, embodied in GATT Article XIX, and its WTO successor, the Agreement on Safeguards, function as an efficient breach mechanism (Rosendorff and Milner, 2001). Members can violate the agreement by invoking an escape clause, so long as they provide some "optimal compensation" that signals their intent to return to compliance in the next round, and compensates the parties that are negatively affected. This view was more recently echoed by Bagwell and Staiger (2005), who have suggested that compensation need not take the form of market access provided on some other product, but could also take the form of cash payments. Although they acknowledge that these have not been employed at the GATT/WTO, they put it forward as "a possible direction for improvement of the design of the GATT/WTO escape clause."[12] Bello (1996) goes further,

[12] Bagwell and Staiger 2005, 475.

suggesting that the invocation of the safeguard may be unnecessary in the first place, so long as countries either provide compensation following a violation, or accept the likelihood of retaliation by their trading partners.

Others have viewed the use of voluntary export restraints (VERs) and other "managed trade" instruments along similar lines (Sykes 1991, 290; Rosendorff 1996). Indeed, while VERs are incontestably a protectionist measure, they are preferable to antidumping from the point of view of the target country, since by cutting export volumes, they transfer some of the utility from the barrier to the exporter, in the form of higher prices. Chiefly employed by the US against imports from Japan through the 1970s and 1980s, VERs were tolerated as a "grey-area measure" for some time, since they were the product of some form of agreement between Members. This latter aspect, as well as the way it transferred some of the utility flowing from the breach to the exporter, thus recalls key features of efficient breach.

Finally, some view the entire dispute settlement understanding (DSU) of the WTO as an instrument facilitating efficient breach, reducing it to a price-setting mechanism that sets penalties for violations, ostensibly in the form of allowable retaliation amounts (Rosendorff, 2005). WTO retaliation, indeed, is always set at no more than the level of injury, giving it a balancing, rather than punitive, character. According to this view, all countries thus have an inalienable right to violate their agreements, but their trading partners reserve the option of taking them to dispute settlement, and suspending concessions in retaliation. Implicitly, if the benefits from breaching outweigh the reputational and material costs flowing from the panel proceedings and subsequent retaliatory duties, then that breach is efficient.

All these interpretations of WTO practice are at odds with empirical reality. Compensation following invocation of the safeguard, in the form of GATT Article XIX, fell out of favor by the 1970s, and was formally removed as an option with the inception of Agreement on Safeguards following the conclusion of the Uruguay Round (Pelc, 2009). Countries cannot currently offer compensation during the first three years of a safeguard, the maximum length of which is four years.[13] As a result, no compensation has ever been offered under a WTO safeguard. Moreover, the

[13] Agreement on Safeguards, Article 7:1. An extension may be sought, however, in which case the safeguard measure, in principle, may be in place for up to 8 years (WTO AS, Article 7:1-3). The average length, however, is two years,

invocation of the safeguard flouts the logic of efficient breach, since it is explicitly made contingent on evidence of "unforeseen circumstances" and injury.

VERs are explicitly forbidden under the WTO. Although in many cases they did leave exporting countries better off than when they are targeted by antidumping duties, VERs were prohibited during the Uruguay Round, alongside all other managed trade practices, since they were seen as violating both the word and the spirit of WTO law (Schropp, 2008). Bagwell and Staiger (2005), for their part, readily admit that their expectations about the optimality of efficient breach show "some discord with the proscription of VERs".

Compensation through retaliation is similarly problematic. We have known for some time that the nature of trade retaliation is such that it amounts to shooting oneself in the foot. Since it raises trade barriers against imports, with the consequences on suppliers and consumers this entails, it imposes as many costs on the retaliator as on the country being retaliated against. As Hudec put it, "in economic terms, the balancing rationale for retaliation is a fiction" (Hudec 2000, 22). Scholars are not alone in thinking this: as one WTO Member put it, retaliation at the WTO "does not restore the balance lost, [...] but rather tends to inflict greater injury on the complaining party, as occurred in the banana dispute."[14] For this reason, retaliation occurs in less than one percent of trade disputes. And perhaps most importantly, even in those very rare cases when it does occur, retaliation is only considered an interim measure: tellingly, a dispute remains on the agenda of every meeting of the Dispute Settlement Body until "the issue is resolved" (Pauwelyn 2007, fn 174), meaning the offensive measure is removed.

The greater point is that the dispute settlement process at the WTO is emphatically geared towards settlement, rather than litigation and penalties, and such settlement cannot be in contravention of the rules. The system is constructed in such a way as to push disputes to settle prior to a panel ruling, which is indeed what takes place in a majority of cases (Busch and Reinhardt, 2000). And while it could be thought that the (private) "mutually agreed solutions" [15] that result

and thus does not enter the potential compensation period.

[14]Contribution of Ecuador to the Improvement of the Dispute Settlement System of the WTO, 2002, TN/DS/W/9. The dispute being referred to is *EC—Bananas*, WTO/DS27. In the same series of talks, the EC made a similar pronouncement: "the use of suspension of trade concessions involves a cost not only for the defending party, but also for the economy of the complaining Member." (TN/DS/W/1)

[15]See DSU Article 3.6

from consultations short of a ruling may lead to the type of breach and compensation at issue here, this possibility is explicitly proscribed by the DSU, which states that all solutions must be consistent with countries' obligations.[16] In other words, no country obligations can be added or removed as a result of consultations: by definition, then, no breach can result from settlement during consultations.

Not only does WTO practice provide no evidence of efficient breach, but the WTO texts themselves suggest conscious efforts to avoid it. John Jackson argues that the letter of the law, as represented by the DSU itself, as well as GATT jurisprudence, the WTO Charter, and WTO Appellate Body decisions, all emphasize how the withdrawal of measures in violation of GATT/WTO law is the only satisfactory conclusion to a disagreement among Members. Similarly, Jackson claims that efficient breach would fly in the face of the norm of "security and predictability", a central tenet of the DSU (Jackson 2004, 5). And not only is compliance with a state's obligations seen as the only satisfactory outcome of a dispute, but the DSU in particular emphasizes the "temporary" nature of any compensation offered, and refers to them repeatedly as fallback measures (Jackson 2004, 115). Finally, because most PTAs refer to the WTO as the forum in which to pursue disagreements between the PTA parties, WTO law had an impact beyond the multilateral institution itself. And while NAFTA, which also offers the WTO as a possible venue for dispute resolution (Busch 2007), offers an alternative dispute settlement forum, its Chapter 20 bears strong resemblance to the GATT/WTO's DSU. Compensation is just as much a non-event under NAFTA's trade rules as it is under the WTO, while NAFTA's investment rules under Chapter 11, in turn, view compensation as a condition for the legality of a breach.

There remains the possibility of outright compensation at the WTO in the form of cash transfers, as recommended by Bagwell and Staiger (2005) and Bronckers and Van den Broek (2005). Compensation has only occurred once in all of GATT/WTO history. As Ecuador put it recently, "compensation is simply an embellishment of the system and Members prefer not to apply it because it is not beneficial to any party."[17] Yet, interestingly, there have nonetheless been proposals for modest WTO reforms to allow for its broader use, specifically in the case of purported violations

[16] DSU Article 3.5
[17] WTO, 2002, TN/DS/W/9.

by developed countries against developing countries, as an alternative to unfeasible retaliation.[18] But despite the acknowledged problematic nature of retaliation at the WTO, the attitude of Members towards breach-and-pay was made clear in their reactions to these suggested changes. In 2002, during discussions over reform to the DSU, the EC floated the idea of allowing a non-complying state to take the initiative in coming up with the amount of nullification and impairment to determine the level of concessions to be offered in turn. The proposal was promptly rejected by WTO Members.[19] All other similar proposals met a similar fate.[20]

Another illustration of the argument at work in the case of trade is found in the debate over the US Byrd amendment. Whereas the duties collected through anti-dumping and countervailing actions ordinarily go to Treasury, the Byrd amendment, which passed in 2000 by the US Congress, represented a move to transfer them to the firms affected by the alleged "unfair trade" practices instead. But by increasing the potential payoff from contingent protection, the amendment lowered the bar for mobilization against liberalization. Hence, while it constituted quite a different design feature from efficient breach, the Byrd amendment had a similar effect on the incentives of domestic groups, and it was opposed by the executive and other domestic pro-trade actors for precisely this reason. Whereas the option of efficient breach offers a channel for mobilization for protection where none would otherwise exist, the Byrd amendment increased the expected payoff from successful mobilization. Reynolds (2006) shows how the Byrd amendment alleviated the free-rider problem among import-competing interest groups, resulting in a net increase in anti-liberalization pressure. For this reason, not only were the US' trade partners infuriated by the amendment—so was the American executive. President Clinton was forced to sign it into law together with the agriculture appropriations bill in 2000, but implored Congress to subsequently repeal it (Ikenson 2004). President Bush was able to repeal it only after the amendment was found, on two occasions, in contravention with the US' WTO rules. Just as in the case of the Byrd amendment, the true costs and benefits of efficient breach only become apparent once we endogenize the behavior of domestic interest groups.

[18] See, among others, the Proposal by Least Developing Countries Group (TN/DS/W/17, 4), and the Contribution of Ecuador to the Improvement of the Dispute Settlement System of the WTO, 2002, TN/DS/W/9.

[19] WTO 2003 TN/DS/M/6.

[20] See supra.

The fact that isolated proposals within institutions and domestic initiatives that would have gotten the regime closer to a breach-and-pay system have been floated through the trade regime's history, and systematically rejected, represents a valuable insight from the argument's point of view. Indeed, it undermines the claim that the lack of efficient breach is due to the high transaction costs such a system would entail. If transaction costs were the only obstacle to a breach-and-pay system in trade, then efforts to reduce such costs, through the facilitation of monetary compensation, among other initiatives, would have likely met with greater success. The broader point being that since the design of agreements is endogenous, one cannot explain a feature of design (lack of efficient breach) through another design feature (lack of monetary compensation). Something must be accounting for both.

In sum, efficient breach was never a regular feature of WTO law, and it is even less so today. VERs have been formally proscribed; the WTO escape clause has been reformed in a way that does not allow for unjustified breach, much less for compensation; settlement short of a dispute cannot constitute breach per se; retaliation is effectively a non-event, as is monetary compensation, and few signs point to any changes in this respect. And this, in an institution that explicitly allows for renegotiations, and which would thus seem, were it not for the underlying incentives on the domestic side, to be an ideal candidate for the allowance of efficient breach.

Considering the distributional effects of violations in trade also does a better job of explaining the absence of efficient breach than do other alternative explanations, even those limited to explaining outcomes within the trade regime itself. According to some scholars, allowing for compensation risks becoming a stand-in for compliance (Mercurio 2009; Pauwelyn 2006). Yet the claim that efficient breach does not, or should not, take place because it would lead to greater noncompliance effectively misses the point. Efficient breach theory does not put any value on compliance for the sake of compliance. A higher number of violations under an efficient breach scheme would simply mean that there were many opportunities for mutually advantageous, Pareto-improving violations that were being unnecessarily stifled. Hence, one may either regard efficient breach as beneficial or not—the question we examine here—but accounting for its non-occurrence on the basis of its effect on compliance comes short of a satisfactory explanation.

4.2 The Case of the International Investment Regime

In the investment regime, the legality of expropriation and acts tantamount to it is made contingent on the payment of compensation. This is not a recent feature of the regime; it is a constant running through the last century of investment law, from pre-war customary international law to the bilateral investment treaties (BITs) that have proliferated in the last two decades. The standard of compensation following expropriation is said to have been first formally established in a diplomatic note written by Cordell Hull, then U.S. Secretary of State, over a series of expropriations of American companies' petroleum assets by Mexico in 1936. According to what later came to be known as the "Hull Rule", the note read that "no government is entitled to expropriate private property, for whatever purpose, without provision for prompt, adequate, and effective payment therefor." The nature of the required compensation expressed in the Hull Rule was qualified by the Resolution on Permanent Sovereignty over Natural Resources, a first version of which was signed in 1962, and a second in 1973, giving greater leeway to the host country to set what it deemed to be an "appropriate" amount of compensation following any breach. In 1974, the Charter of Economic Rights and Duties of States emphasized the "right" states had to "nationalize, expropriate, or transfer ownership of foreign property" so long as they provided compensation (Elkins, Guzman and Simmons 2006). Yet the BITs that countries began signing even before the demise of the Hull Rule in the 1970s granted foreign investors *greater* protection, and greater guarantees of compensation in the alternative, than the Hull Rule ever had (Guzman 1997).

The notion of compensation following breach as aiming to render affected parties "whole" explicitly appears in a number of BITs: the China-Sweden BIT signed in 1982, for instance, specifies, in a commonly used turn of phrase, that the purpose of compensation following potential expropriation or tantamount expropriation "shall be to place the investor in the same financial position as that in which the investor would have been if the expropriation or nationalization had not taken place." The international investment regime thus constrains reliance on expropriation not by specifying the restricted criteria under which it can be resorted to, but rather by requiring that any breach of investment rules through expropriation, or any actions tantamount to it, be compensated in full. Effectively, then, BITs, and the customary international law they rest on, facilitate efficient breach

by explicitly making allowances for compensation.

To put it bluntly, "investment treaties condition the lawfulness of expropriation on the payment of compensation" (Ripinsky and Williams, 2008, 83). Matters are complicated, however, by the fact that some courts distinguish between lawful and unlawful compensation, while others do not make this distinction (84). While the legality of expropriation is at the source of much contention between legal scholars (see Amerasinghe 1993, 478), from our point of view, the only relevant fact is that even when courts do make the distinction, the only difference in awards in both cases is the nature of compensation: lawful cases lead to compensation "equivalent to the [market] value of the expropriated investment" (86), whereas unlawful expropriation leads to full reparation, which must "wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed" (85),[21] including any increase in the value of the assets between the time of the expropriation and that of the legal decision. The main difference between the two amounts to lost profits. Since the axiomatic phrasing of the theory of efficient breach fails to specify whether prospective profits should be included in the concept of rendering parties whole, it is difficult to determine which of these two definitions of compensation is a more faithful one. It also means that both easily meet the basic requirements of efficient breach.

It is important to verify that compensation in investment law is not only awarded by investment courts, but corresponds to funds actually transferred to affected parties. Indeed, in the case of the trade regime, authorization for the suspension of concessions is rarely granted by WTO panels, but it is even more rarely exercised. The reason, as mentioned above, is that there is no balancing rationale to retaliation in trade (Hudec 2000, 22). Moreover, state-actors have blocked all attempt at reforms attempting to change this. As it turns out, however, in the case of investment, compensation is not only awarded by courts, it is routinely paid out by states. Exact figures are hard to come by as settlements following arbitration awards often remain confidential, but scholars agree that "almost all" arbitration awards handed down by courts such as ICSID are eventually paid out (Parra 2009). It is telling, moreover, that the notion of compliance under ICSID and BITs is typically discussed

[21]The reference case for unlawful expropriation, which in the absence of any *lex specialis* under a BIT, points to common law over treaty provisions as a source of law (84), is the Chorzow Factory case ruled on by the PCIJ in 1928, from which the above cited classic definition of "full restitution" is taken.

in terms of the payment of compensation subsequent to some expropriatory acts, rather than the occurrence of those expropriatory acts in the first place.

Indeed, the corollary to the fact that the legality of expropriation or acts tantamount to it relies on compensation is that the failure to offer compensation *is* considered a treaty violation. And under the ICSID Convention specifically (which is referred to as a possible legal forum for the hearing of investment disputes under NAFTA Chapter 11, among other investment agreements) the mechanisms for the enforcement of awards are particularly strong, a fact little remarked upon within political science.

In an interesting twist on the notion of sovereignty, the investor's state loses the right of recourse to any diplomatic protection or diplomatic intervention by accepting the jurisdiction of ICSID. Yet that right is reinstated as soon as a host state delays payment of an arbitral award, leaving the state free to intervene in any way on behalf of its domestic firm. Moreover, ICSID's link to the World Bank entails a loss of status under that institution as well, a potentially significant incitement to compliance for country-recipients of World Bank loans. Perhaps most importantly, all states that are party to the ICSID Convention have the obligation to enforce all awards against any other member as though they had been handed down by a domestic court (Schreuer). In other words, a party affected by expropriation, to whom compensation is due, can demand that any other country party of the ICSID Convention, where assets of the debtor country are located, enforce the award by seizing the state's assets (Schreuer 4). Finally, ICSID, as well as most other investment courts and BITs, do not allow for appeals of its legal decisions. And while annulments are possible, courts often require that funds equivalent to the amount of the award be placed in escrow during proceedings, such that they can be disbursed immediately to affected parties if the court rejects a demand for annulment, which it does in a super majority of cases (Simmons 2010, 26). Taken together, these provisions mean that the shadow of the law looms large (Goodman 2007, 468), and as a result, voluntary compensation following arbitral awards is the norm, rather than the exception.

The case of ICSID is not unique among investment courts, though the confidentiality of non-ICSID proceedings tends to be even more closely guarded, to a point where the very existence of a claim is often unknown. Nonetheless, the cases that do come to light tend to support the existence

of de jure and de facto efficient breach, where awards are routinely rendered, and almost always complied with. Consider the case of Telekom Malaysia against the government of Ghana. After the privatization of Ghana Telecom in 1997, Telekom Malaysia's management of the firm become a "thorny issue" domestically, and rose in importance as an electoral issue. When President Kufuor came to power in 2001, he showed a new hostility towards Telekom Malaysia.[22] Ghana eventually defaulted on a contract to sell a further 15 percent stake in Ghana Telecomto the Malaysian firm, leading to a dispute at the Hague under UNCITRAL arbitration rules. Because Ghana's behaviour during the proceedings made headlines in the Netherlands, the final settlement was disclosed, an otherwise unusual event. Ghana agreed to pay a reported $US 50M to Telekom Malaysia over a two-year period, and the case was closed, with both parties declaring themselves satisfied.

In this way, while we find that Rosendorff's contention that the WTO allows countries to "violate the agreement, compensate the losers, and still remain within the community of cooperating nations" does not square with either country behavior in the trade regime, or the letter of WTO law, it is exactly right in the case of investment. While compensation is at most a rare event in the case of trade, it is the norm following violations within the international investment regime, where it marks the end of a dispute. Once payment is made, investors have no further recourse: the matter is closed. As per Pauwelyn, "as long as full compensation is paid", expropriations are not even breach of treaty. Accordingly, the investment regime meets the last requirement of efficient breach theory: violations that are compensated appear at once legal and not: they are breaches *a priori*, yet the subsequent payment of compensation offsets the fault in a way that makes the initial violation permissible. A country engaging in repeated acts tantamount to expropriation, but providing prompt, adequate, and effective compensation, would be considered a treaty signatory in good standing.

5 Conclusion

A burgeoning literature in international relations has started addressing variation in the design of different international institutions. For the most part, these scholars have accounted for such

[22] BBC report

variation by examining the particular cooperation problem a given institution attempts to resolve (Abbott and Snidal, 1998; Keohane, 1984; Koremenos, Lipson, and Snidal, 2001). This article goes a step further. We argue that institutional design may be a function of the way in which design features will have differential effects on the incentives of domestic groups. Under some international rules, domestic interest groups will find it in their interest to mobilize, while under other rules they will not. When such mobilization affects the domestic forces for and against liberalization, governments will be well-advised to choose design features strategically as a way of furthering their economic objectives. While previous scholarship has recognized the effect of international institutions on domestic mobilization incentives, these works fell short of a fully strategic account with empirically falsifiable implications (Goldstein and Martin, 2000; Simmons, 2009). In this article, we suggesst that the variation in the presence of efficient breach across two major economic regimes, trade and investment, can be accounted for by the distributional effects of violations within each regime.

Our emphasis on domestic politics also allows for variation in the preferences over design between states, leading to empirical implications which could be addressed in future work. If the membership of otherwise similar institutions varies, we might expect that the domestic political situation of the member countries might have an observable impact on the design of such institutions. One implication directly flowing from our results is that even in the case of trade, where we argue there should be systematic resistance to efficient breach on the part of member-states, governments may opt for mechanisms reminiscent of efficient breach if they possess considerable bargaining power vis-à-vis domestic industry. In the case of highly centralized unitary states, with few access points to policy-making (Ehrlich 2007), efficient breach thus becomes more likely. A study of different institutions with varying memberships all addressing a similar problem, such as in the case of PTAs, could provide an empirical test of such expectations.

As mentioned at the outset, the theory of efficient breach can be viewed as a means of reconciling the permanent prospect of willful breach on the part of sovereign countries with a belief in the significance of international law. Agreements can weather willful breach if they are able to enforce the transfer of ensuing benefits, as a means of rendering all affected parties whole. Our findings

should not be read as negating this sanguine view of international institutions. If anything, the fact that domestic politics may lead governments to shy away from efficient breach means that countries value the credible commitments that agreements allow them to make domestically so much that they shun otherwise beneficial flexibility schemes to preserve that credibility. States' commitments to international rules, in other words, are likely to hold because governments value not only their international reputation, but also the ties that bind them domestically.

Mathematical Appendix: Nash Bargaining

In this mathematical appendix, we solve the Nash Bargaining game induced by $B^*, M^* = 1$. In the game, two outcomes are possible, disagreement and agreement. In the case of disagreement, the payoff to the government is $-d$. The payoff to the industry is zero. In the case of agreement, the divisible surplus adds up to $(1-\lambda)(V-d)$ given the disagreement payoffs $\{-d, 0\}$ and the fact that a proportion of $1-\lambda$ goes to the foreign victims of efficient breach.

The game is in normal form, so moves are simultaneous. In the game, a *strategy* for the government is a fraction $q^{gov} \in [0,1]$; and a fraction $q^{ind} \in [0,1]$ for the industry. When $q^{gov}+q^{ind} \leq 1$, the payoffs are $-d + q^{gov} \cdot (1-\lambda)(V-d)$ and $q^{ind} \cdot (1-\lambda)(V-d)$. When $q^{gov} + q^{ind} > 1$, the payoffs are $-d, 0$.

The *Nash Bargaining Solution* is a pair q^{gov}, q^{ind} such that $q^{gov} + q^{ind} = 1$ and q^{gov} maximizes

$$(q^{gov}(1-\lambda)(V-d) - d)^{\sigma} \left(q^{ind}(1-\lambda)(V-d)\right)^{1-\sigma}. \tag{5}$$

Differentiating this expression with respect to q^{gov}, we obtain the first-order condition

$$\begin{aligned} &(1-\lambda)(V-d)\sigma \left(q^{gov}(1-\lambda)(V-d) - d\right)^{\sigma-1} \left((1-q^{gov})(1-\lambda)(V-d)\right)^{1-\sigma} - \\ &(1-\lambda)(V-d)(1-\sigma) \left(q^{gov}(1-\lambda)(V-d) - d\right)^{\sigma} \left((1-q^{gov})(1-\lambda)(V-d)\right)^{-\sigma} \quad = \quad 0. \end{aligned} \tag{6}$$

First dividing by

$$(1-\lambda)(V-d) > 0$$

and then multiplying by

$$\left(q^{gov}(1-\lambda)(V-d) - d\right)^{1-\sigma} \left((1-q^{gov})(1-\lambda)(V-d)\right)^{\sigma} > 0,$$

we can further simplify to

$$\begin{aligned} \sigma\left((1-q^{gov})(1-\lambda)(V-d)\right) - & \\ (1-\sigma)\left(q^{gov}(1-\lambda)(V-d)-d\right) &= 0. \end{aligned} \tag{7}$$

This condition can be rewritten as

$$\sigma\left((1-\lambda)(V-d)-d\right) - q^{gov}\left((1-\lambda)(V-d)-d\right) = 0.$$

This condition holds if and only if

$$q^{gov} = \sigma. \tag{8}$$

This division induces equilibrium payoffs $-d+\sigma(1-\lambda)(V-d)$ for the government and $(1-\sigma)(1-\lambda)(V-d)$ for the industry.

Mathematical Appendix: Extensions

In this mathematical appendix, we explore the consequences of relaxing some of the assumption of our model.

Uncertainty of Efficient Breach

Suppose that the value of non-compliance is subject to uncertainty in the beginning of the game. Specifically, assume that with some probability $\rho \in (0,1)$, an opportunity for non-compliance emerges, whereas with probability $1-\rho$, the government does not have any incentive to violate the treaty, and thus obtains a payoff normalized to zero. This state of the world is revealed to all players immediately after the government has decided on efficient breach.

To see that all results continue to hold, note that the payoff to the government without efficient breach, $B^* = 0$, remains exactly at zero. Under efficient breach, $B^* = 1$, the payoff to the government is zero with probability $1-\rho$ and some U with probability ρ, where U is derived in the equilibrium analysis given in the main text: given a state of the world that allows benefits from non-compliance, the subgame under efficient breach, $B^* = 1$, is exactly identical to that in the main text. Now the government selects efficient breach if and only if $\rho U > 0$. With $\rho > 0$, we have $> 0 \Leftrightarrow U > 0$. Thus, the government selects $B^* = 1$ if and only if $U > 0$, and the conditions for $U > 0$ are fully characterized in the main text.

Foreign Countries

Suppose now that the original game is simultaneously played in two countries, indexed by $i = \alpha, \beta$. There are two differences. First, both countries must simultaneously approve of efficient breach, or the status quo with zero payoffs materializes. Thus, non-compliance is possible in each country α, β if and only if $B^*_\alpha = B^*_\beta = 1$. Second, if the government of country i violates the treaty – either unilaterally or after bargaining with the industry – it must fully compensate the foreign country for losses. Let $L^i > 0$ denote the loss to country i when the other country j violates the treaty. Given the principle of compensation, the side payment by the defector, λ^i, is chosen such that the foreign country j is exactly indifferent between efficient breach and absence thereof, $\lambda^i = L^j$.

What are the conditions under which both countries $i = \alpha, \beta$ prefer efficient breach? First, note that with $\lambda^j = L^i$, country i is exactly indifferent between non-compliance and absence thereof in foreign country j. Thus, the payoff to country i depends only on the consequences of allowing efficient breach, $B^*_\alpha = B^*_\beta = 1$, at home. These conditions are fully characterized in the equilibrium analysis of original game in the main text. Thus, country i prefers $B^*_\alpha = B^*_\beta = 1$ if and only if the expected payoff in the efficient breach subgame exceeds zero. As long as this condition holds for both countries, they select efficient breach, $B^*_\alpha = B^*_\beta = 1$.

Bargaining Protocols

In the main model, we used the generalized Nash Bargaining Solution for concreteness. Suppose instead that some other bargaining protocol under complete information, such as Rubinstein repeated offers with an infinite time horizon, is used when (i) efficient breach is allowed and (ii) the industry mobilizes. Assume that the expected payoff to the government from bargaining is denoted by $W^{gov} = W^{gov}(d, V, \sigma)$. Let W^{gov} be strictly decreasing in d and strictly increasing in V, σ. Similarly, let $W^{ind} = W^{ind}(d, V, \sigma)$ be the expected industry payoff. It is strictly increasing in d, V and strictly decreasing in σ.

This game can be solved by backward induction. In this game under efficient breach, $B^* = 1$, the industry mobilizes if and only if W^{ind} exceeds $1 - \lambda$. The government's payoff in the absence of industry mobilization is unchanged, $1 - \lambda > 0$. Thus, the government always selects efficient breach, $B^* = 1$, when $W^{ind} < 0$. Suppose now $W^{ind} \geq 0$, so that the industry mobilizes. Now the government allows efficient breach if and only if $W^{gov} \geq 0$. Given the derivatives of W^{gov} with respect to d, V, σ, all comparative statics results also hold.

Economic Adjustments

Suppose now that after the choice of efficient breach, $B \in \{0, 1\}$, private actors are allowed to engage in economic adjustments. We model these adjustments in reduced form. Without efficient breach, $B^* = 0$, the adjustments improve the static efficiency of the economy worth a payoff bonus $A^0 > 0$ for the government. With efficient breach, $B^* = 0$, the adjustments improve the static

efficiency of the economy worth a payoff bonus $A^1 > 0$ for the government. Given that efficient breach allows treaty non-compliance, we assume that the adjustments are less useful: $A^1 < A^0$. Let $\Delta A = A^1 - A^0 > 0$ denote the value of lost static efficiency to the government from efficient breach.

In these circumstances, the economic adjustments reduce the value of efficient breach by ΔA. If the expected payoff from efficient breach is U (adjustment cost notwithstanding), the government selects efficient breach if and only if $U - \Delta A \geq 0$. Otherwise the government rejects efficient breach. Other than that, the nature of mobilization-bargaining subgame upon efficient breach remains unchanged.

Administrative Procedures versus Efficient Breach

In the main model, the payoff from rejecting efficient breach, $B^* = 0$, is fixed at zero. However, an alternative approach to efficient breach are administrative procedures that condition protection on exogenous circumstances. This can be incorporated in our model as follows. Suppose that with some probability $\theta \in (0, 1)$, the circumstances are such that the government is allowed to adjust domestic policies *without* violating the treaty. This policy must be strictly conditioned on the exogenous conditions, so no bargaining between the government and the industry is possible. With probability $1 - \theta$, the current game is played instead. Again, assume the state of the world is revealed to all players only after the government has decided for or against the possibility of efficient breach, $B^* \in \{0, 1\}$. Let $Q > 0$ denote the government's expected payoff when the commonly known exogenous conditions admit policy adjustments, and suppose the payoff from not adjusting domestic policies in those circumstances is strictly lower than Q, so that the government always adjusts domestic policies.

Note now that with probability θ, the choice for or against efficient breach, B^*, is completely irrelevant. With probability $1 - \theta$, the game after the choice of B^* is played exactly as it would be in the main model. Again, let U denote the expected payoff to the government given efficient breach $B^* = 1$.

The expected payoff from no efficient breach, $B^* = 0$ to the government is now θQ, whereas the

payoff from efficient breach is $\theta Q + (1-\theta)U$. Thus, the government selects efficient breach if and only if $(1-\theta)U \geq 0$, or equivalently $U \geq 0$. This is the same condition as in the original model.

Endogenous Mobilization Cost

In the main model, the industry's mobilization cost C is assumed to be exogenous for simplicity. As we noted, it depends on the the number of concerned actors: number of individuals or average firm size and industry, for example. We now provide microfoundations for this assumption. We assume that the industry comprises N individual actors, such as firms or individuals. For the industry to mobilize, it must secure a contribution from each individual member.

For simplicity, we assume the actors are symmetric. We assume that the cost of a contribution by any individual member is $c > 0$. The individual member only contributes if the net benefits from mobilization, given by $\frac{U}{N} - c$ under symmetry, where U is the industry's aggregate bargaining payoff under efficient breach, exceed the penalty for free riding, $P > 0$. Thus, each individual member contributes if and only if $\frac{U}{N} - c > -P$. The minimal punishment needed is $P^* = c - \frac{U}{N}$, and thus strictly increasing in the number of actors N. Under the assumption that the total cost of committing to a credible punishment P is strictly increasing in P, the claim follows.

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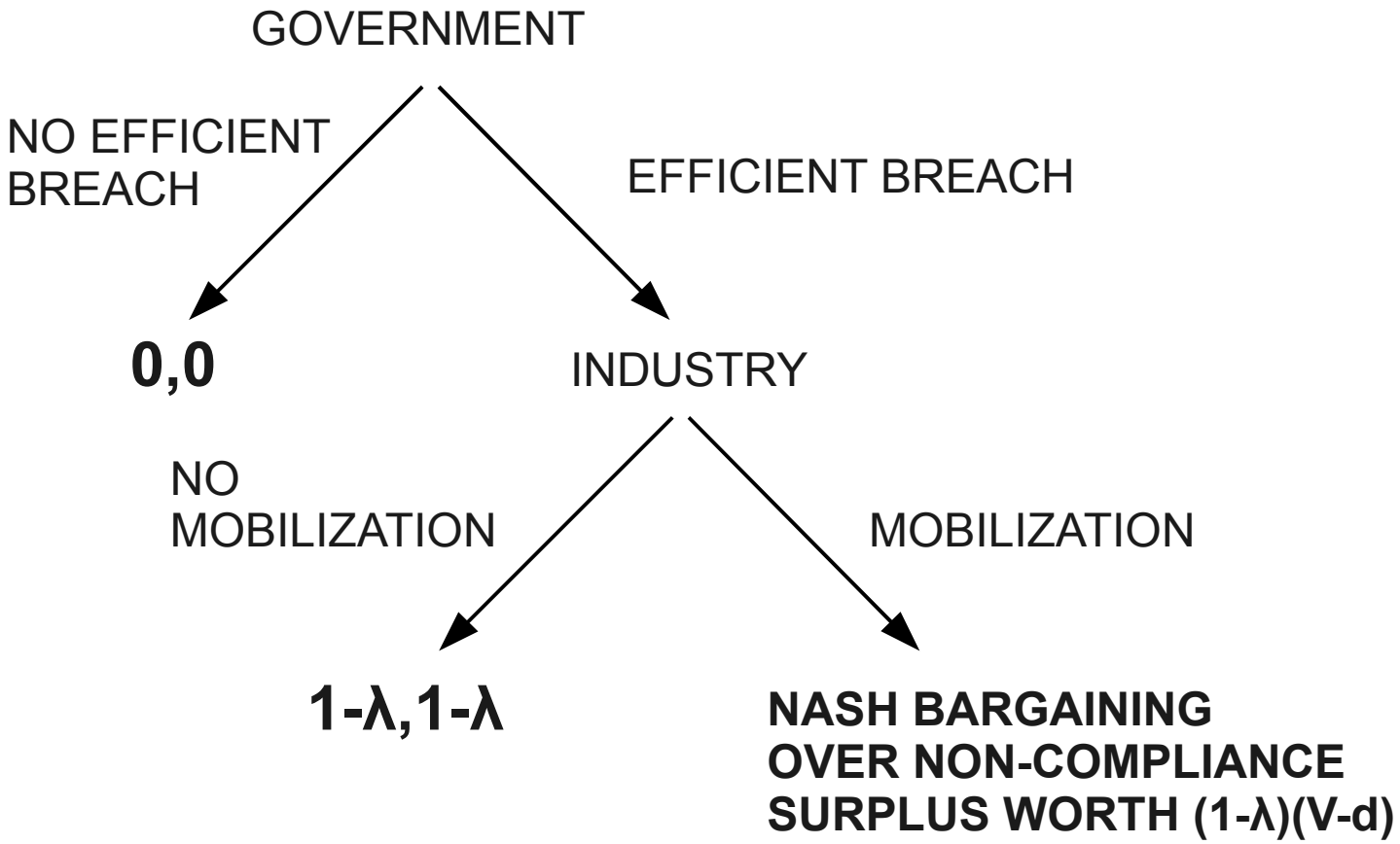

Figure 1: Game tree. For each final node, the first (second) payoff is for the government (industry).