

What Can Financial Markets Tell Us About International Courts and Deterrence?

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Abstract

Can international courts deter? Much scholarship relies on the answer being yes. In this view, the rulings of international courts are thought to have effects beyond a given case, changing global expectations over the measures ruled on and making further violations less likely. Yet public international law explicitly denies the possibility of such deterrence. Little empirical work assesses these competing claims. In this chapter we describe the novel approach we have taken in our recent work, by looking to financial markets reactions' to World Trade Organization (WTO) rulings. We ask whether investors downgrade a firm when a policy similar to the one it benefits from has been found in violation in *another country*. Using a quantitative case study of rulings against Canada's support of its solar industry, we find measured empirical support for such a deterrent effect. Yet a caveat is in order: the Appellate Body's rulings appear to exert a greater deterrent effect than *ad hoc* panelists. The debate over the deterrence effects of courts remains open. Yet our findings suggest that financial markets appear willing to bet on courts deterring similar violations in countries not party to a dispute.

1 Introduction

Can international courts deter? Much of the international law literature relies on the answer being yes. Students of human rights, for instance, have long wagered that the effects of courts are not limited to the actual prosecutions they successfully bring about. Each such trial is said to change the expectations surrounding the measures at issue. For example, Kim and Sikkink (2010) argue that international criminal prosecutions increase the perceived odds of enforcement, and thus change the calculations of other foreign leaders.¹ They posit a “deterrence across borders” effect,

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¹Gilligan (2006) has argued that the International Criminal Court can lead to deterrence at the margins through a more subtle mechanism, by changing the incentives of asylum providers.

whereby proceedings against a former head of state like Pinochet have effects beyond the confines of Chile on the calculations of neighboring leaders. Yet not everyone agrees that such spillovers occur. Many observers maintain that given the nature of international law, such hopes are “fanciful” and amount to a “cruel joke” (Bolton, 2001, 176). Even international criminal prosecutors themselves have described the prospect of deterrence as “hopelessly idealistic”.²

In this context, we understand the concept of deterrence in its broadest sense: a ruling is said to have a deterrent effect whenever policies similar to those being adjudicated become less likely elsewhere—whether or not those similar policies were already implemented elsewhere at the time of the ruling. In other words, we are interested both in the way rulings of international courts can help strike down existing policies elsewhere and with how rulings can make such policies less likely to arise elsewhere in the first place. However, we have generally limited our empirical examination to the former type, given the analytical difficulty of reliably observing the “policies that would have been”.

The question of deterrence matters. As Wippman (1999, 474) claims in the context of the international criminal regime, deterrence is the central goal of the legal system—more so than “considerations of justice, respect for international law, retribution, [and] avoidance of personal vengeance.” In fact, deterrence is arguably the unstated motive of most international courts. Scholars have amply demonstrated the extent to which litigation and prosecution are inefficient means of resolving conflict. A well-functioning court cannot limit itself to resolving individual disagreements (Hudec, 1993; Kucik and Pelc, 2015). The aspiration is for courts to also clarify the meaning of the rules, to converge expectations on what behavior is proscribed, and to convey that enforcement is likely when violations occur. In fact, one reading of the literature suggests that the *main* benefit of legal rulings may rest in their spillovers beyond the case at hand, rather than in their direct effect on the particular matter being ruled on.

At the international level, however, the wish to imbue court rulings with any deterrence power runs into considerable resistance. In fact, deterrence is, strictly speaking, all but written out of international rules. This is no coincidence. When negotiating and committing to international treaties, countries have worked hard to ensure that rulings within the enforcement mechanism they

²ICTY Prosecutor Richard Goldstone, Letter to the Editor, Wall St. J., July 7, 2000, at A13.

agree to occur in isolation one from another. States generally fear that they stand to lose control of the regime if rulings are allowed to have effects beyond the case at hand. Designing courts such that they have the power to deter other violations sounds like a desirable aim, yet it implies an unprecedented level of delegation: if courts are swayed by other verdicts on similar matters, then the drafters of these verdicts accrue considerable power to shape how rules are interpreted in the future. Exercising this power amounts to courts “making law”, a prospect that has risen to a taboo in international governance.

The result of these competing considerations is ambiguous. On the one hand, students of courts, especially in normatively charged areas such as human rights and international criminal law, claim that the deterrence power of courts is their very *raison d'être*. On the other hand, a strict reading of international law, and states' own incentives as designers of treaties, suggests otherwise. The question is, how can we evaluate the deterrence effect of international courts? In recent work, we have looked at a related question, over international courts' spillover effects (Kucik and Pelc, 2016*b*). Here, we review these and other findings and discuss what they can tell us about the deterrence power of courts. In so doing, we also make a methodological claim. One way of testing the existence of a social phenomenon is to look for its expected reflections in the behavior of others. In this way, rather than looking for direct examples of foreign governments being deterred in particular cases, we have asked whether a distinct set of actors—in this case, financial markets—have sufficiently internalized the odds of deterrence to behave “as if” courts had this power.

A legal setting that allows for this approach is the international trade regime. The World Trade Organization's (WTO) dispute settlement understanding is widely considered the backbone of the institution. It allows states to bring trade conflicts before a panel of judges who rule on the legality of the defendant's policy in view of WTO law. Because of the way the institution has evolved, its fundamentally diplomatic character giving way to an increasingly legal character,³ the question of deterrence is at the center of an intense debate over the legal status of rulings of its dispute settlement body.

There exists some evidence that when countries choose to initiate a dispute, they are often

³For a summary of this transition, see Busch and Pelc (2015).

not only targeting the policy at issue, but may also have in mind other policies elsewhere.⁴ Firms demanding legal action from their governments thus often seem to have something akin to deterrence in mind. Davis and Shirato (2007) note how Japanese steelmakers viewed a series of steel disputes launched by Japan as a means of preventing “other countries” from putting up similar trade barriers in the future. During interviews with the Japanese Ministry of Economy, Trade and Industry (METI), officials even went so far as to say that a Japanese dispute against Ukraine was meant as a signal to “all emerging economies”.⁵ More generally, Blonigen and Bown (2003) find that countries that are frequent dispute initiators are also less frequent targets of antidumping duties; the implication being that other countries are deterred from enacting a policy that is likely to be challenged. Yet the same authors are quick to caveat these claims. Davis (2012) herself also acknowledges that “WTO members are not obligated to change policies in light of new information from a ruling against another country.” In fact, the WTO’s texts largely echo the International Court of Justice (ICJ) Statute in this respect, noting that “recommendations and rulings [...] cannot add to or diminish the rights and obligations provided in the covered agreements.”⁶ In other words, formally speaking, WTO rulings are not allowed to affect countries’ commitments beyond the confines of the case. We are thus faced with the same question that comes up in international law more broadly: should we expect international courts to be able to deter violations elsewhere through their rulings on particular cases?

An ideal research design testing deterrence would consider every foreign measure related to every WTO ruling, and test whether a finding of violation makes measures similar to the one found at fault more likely to be removed, or less likely to appear. Of course, no such data exist. We do have anecdotal evidence suggesting governments can be deterred by verdicts against others: when the WTO denounced the practice of “zeroing”—a murky means of calculating dumping margins—by the US, both the EU and Canada changed their domestic policies and ceased relying on zeroing themselves. Yet such anecdotal evidence is by itself unsatisfactory. First, reform is more observable than the absence of expected reform, leading to potential bias. Secondly, isolated examples offer no means of answering the question, do rulings have deterrent effects on average?

⁴For a discussion of analogous behavior in the investor-state regime, see (Pelc, 2017).

⁵Interview on file with Authors. Tokyo, November 2013.

⁶WTO DSU Article 3.2.

The solution we have opted for in our work is to search for clues in the behavior of financial markets (Kucik and Pelc, 2016*b*). While the individual investors that constitute markets have no reason to be swayed by trade lawyers' views over the legal status of WTO rulings, by their investment decisions they end up taking sides in the debate that interests us. They must necessarily interpret the meaning of events like judicial rulings for the future prospects of firms. Our approach of looking to financial markets for clues about courts' deterrence power is premised on the fact that protectionist policies ultimately benefit real import-competing firms. Whenever a ruling by a court makes such protection less likely, rational investors should be affected in their investment decisions. If an import ban that is found in violation in another country becomes more likely to be taken down as a result of that ruling, then the market valuation of the firms affected should go down with it.

Our approach has been to rely on event studies, a widely used method in the field of financial econometrics, to isolate the market reaction to verdicts. Here we review some of the findings from our examination of one dispute, pitting Japan and the EU against Canada's measures to promote solar energy manufacturing through a "feed-in tariff". As it happens, the Indian government has in place a similar feed-in tariff as a means of spurring on its own solar industry. The question we are interested in is, would the market valuation of Indian firms be affected downwards by a finding against Canada on the same measure?

We also examine another dispute, over US cotton subsidies, with highly similar results. A key requirement in financial event studies is that the events being examined be unexpected. Indeed, any expected event is likely to be entirely internalized by the market. If this happens, market valuations should not show the type of sudden change we rely on to test whether markets react to a piece of news. The dispute against Canada is apt in this case, as there is a strong claim to be made that because of the complexity of the underlying legal issues, and the fact that many of these were being ruled for the first time, the final verdict and the legal reasoning therein could not have been foreseen. The exact date of WTO rulings, moreover, is not disclosed in advance.

To verify the soundness of our method, we began by examining the effect of the verdict on Canadian solar firms in Ontario, who stand to lose most directly from a ruling that finds the

measures they benefit from to be in violation of WTO rules. We then reran the same exercise on solar firms in a “bystander” country, the United States. While US solar firms might be thought to gain simply because competing firms in Canada lose, one would expect this positive effect to be far more attenuated than in the case of Canadian firms. Finally, we addressed our central question of deterrence by turning to Indian solar firms, and measuring the reaction of their share prices to the announcement of the rulings against Canada.

Overall, our findings offer support for the view that markets behave as if courts had the power to deter. Upon seeing a ruling against a feed-in tariff designed to shelter the Canadian solar industry, financial markets reason that “India may be next,” and they act accordingly. Yet this reaction is not a uniform one. Indeed, in this case, the panel ruling do not lead to observable financial market reactions; only the AB rulings does. This pattern, which is repeated in the other quantitative case study we conducted, accords with the prevalent view according to which AB rulings are more likely to affect jurisprudence in a lasting fashion. As a result, whatever deterrent power courts may have in the trade regime may be concentrated in the AB. This holds implications for courts in other international regimes.

2 Can International Courts Deter?

Considerable attention has been devoted to the question of deterrence. This is especially true for the study of courts in normatively charged areas, such as human rights and international criminal law. As Kim and Sikkink (2010) claim in reference to prosecutions of leaders on human rights grounds, “the purpose [of trials] has not been only to punish perpetrators, but also to use accountability to deter future violations.” In view of this objective, their findings are bracing. Kim and Sikkink (2010) find that human rights prosecutions have both material and normative deterrent effects, and most interesting of all, that these effects can be felt across borders. Borrowing from the diffusion literature, they find that even a country with no prosecution activity of its own can be deterred from repression if neighboring countries have prosecuted leaders. The European context has similarly led scholars to pose the question of deterrence. Schäfer (2012) assumes that the ECJ exerts a deterrence effect, and asks whether the possibility of suing for damages would increase or decrease

deterrence. Closer to our own work, Helfer and Voeten (2014) examine whether judgements of the European Court of Human Rights expanding gay rights have an effect on domestic legislation in other ECHR-member countries. They find some evidence for such an effect: ECHR judgements against one country seem to increase the odds of national policy change elsewhere, especially in countries where national courts can rely on ECHR precedent to invalidate domestic law.

Others disagree. Writing about the international criminal regime, Bolton (2001) claims that “the most basic error is the belief that the ICC will have a substantial, indeed decisive, deterrent effect against the possible perpetration of heinous crimes against humanity.” A more measured appraisal is found in Damaska (2008, 339): “In the adolescence of ad hoc tribunals, the cardinal importance of general deterrence was frequently invoked. The exaltation of this goal flowed from the hope that the mere threat of punishment would produce a moderating effect on the brutalities of conflicts. But as the threat failed to prevent horrendous atrocities, initial optimism surrounding this objective abated. Despite this disappointment, however, general deterrence, along with retribution, is still assigned a prominent place in discussions about the goals of international punishment.” Even scholars less skeptical of international law’s hold over states claim that “actual experience with efforts at deterrence is not encouraging” (Wippman, 1999).

A third camp has highlighted concerns about whether prosecutions, far from having a deterrence effect, may actually exacerbate violations. In the human rights context, the question is whether leaders are more likely to hang on to power knowing that the cost of losing power has gone up with the prospect of prosecution. In the trade context, the idea may be that governments might opt for every murkier protection (Kono 2008) as the odds of legal challenge increases. These scholars agree that courts are powerful, and affect behavior. Yet they worry, instead, that this power may have unintended consequences. Our analysis allows us to speak to this concern only insofar as it captures the direction of the deterrent effect.

Beyond the empirical record, existing theory should lead to caution over the likelihood of courts having deterrent effects. Governments are wary of delegating power to international organizations, and the courts within them (Simmons, 2009; Simmons and Danner, 2010; Elsig, 2013). The notion of rulings deterring similar violations elsewhere would seem benign. Yet from the point of view of

governments, such deterrence power necessarily implies that courts find themselves rewriting the meaning of the rules. A safeguard now requires the demonstration of “unforeseen developments”, and states relying on the escape clause in the absence of such conditions can expect to have their resort to the safeguard be invalidated.⁷ Distinct “physical characteristics” are no longer enough to defend a higher tariff on alcohol produced elsewhere, and a defendant must now also demonstrate that the two goods do not compete against one another, raising the bar for the protection of domestic alcohol producers.⁸ The characteristic of such rulings is that they not only affect the policy at issue, but also actual and potential policies by other member-states. In these rulings, the court also finds itself deciding on matters which could have been agreed on by states during negotiations. States may fear that such “interstitial legislating” encroaches on their traditionally held prerogative to write the rules that bind them (Ragosta, Joneja and Zeldovich, 2003).⁹

Little wonder, then, that the drafters of treaties have all but written deterrence out of international rules. Article 59 of the International Court of Justice (ICJ) Statute, which is often quoted in this respect, best encapsulates the view: “a decision of the ICJ has no binding force except between the parties and in respect of the particular case.” Both WTO judges and litigants refer this text.

Yet much as in the case of human rights law, the actors who actually engage in trade litigation often seem to act on the premise that WTO rulings *do* have effects beyond a given case. Davis and Shirato (2007) show evidence suggesting that were it not for a belief in the indirect effects of litigation related to “deterrence of future protectionism”, Japan may not have filed some of its recent disputes. Even when Japan lost a case, government lawyers claimed that because judges upheld parts of the complainant’s claims, this could still have an effect on other countries’ policies.¹⁰

Similarly, when the WTO sided with the US in a challenge against Japan’s ban on apples in 2003, the ruling was seen as having effects far beyond Japan. A number of countries were using a measure similar to Japan’s, a health standard that claimed to prevent the contagion of a fruit disease called fire blight, to ban foreign apples. That measure was found in violation, and countries

⁷See *Korea—Dairy* and *Argentina—Footwear*, and discussion in Pelc (2009).

⁸See *Japan—Alcohol II*

⁹This matters: evidence suggests that governments “overcommitting” to international institutions can make subsequent backtracking more likely (Kucik and Pelc, 2016*a*).

¹⁰*ibid*

like New Zealand, whose apple exports were also being blocked from other countries by these standards, celebrated the ruling. As New Zealand's Trade and Agriculture Minister, Jim Sutton, claimed, "We will also be looking for better access to other markets, such as South Korea, which also restricts access because of fire blight." In fact, New Zealand hoped the spillover effect of the ruling against Japan would be so strong that no further litigation would be needed to make other countries repeal their own bans. In the same statement, Sutton said that "there was no need to take a dispute case against Australia [...] as the WTO had already ruled comprehensively on the issue in a case between Japan and the United States."¹¹ Reasonable as it sounded, the trade minister's claim was at odds with international law. Indeed, even amidst this optimistic public sentiment, apple producers themselves were acutely aware of the limits of deterrence under international law: as the chairman of Pipfruit, a major New Zealand apple producer, conceded, "It's a great pity that this decision is not binding on other countries such as Australia."¹²

In sum, there remains ambiguity over whether rulings deter. The formal rules deny that rulings can have any deterrence effect, since they are one-off decisions. This is hardly surprising, given sovereign countries' fears that allowing rulings to have spillover effects might lead to a loss of control over one's own international obligations. And yet, there also exists a prevalent belief that the actors involved in international litigation think in terms of deterrence, and behave accordingly. How might one measure the net effect of courts in deterring other violations?

2.1 The Channels of Deterrence

What does it mean to say that a legal ruling has a deterrent effect? Most plainly, deterrence means that a government is less likely to enact or maintain a measure if a similar measure is ruled against elsewhere. At issue might be a policy of government repression, as in the case of human rights prosecutions, or a ban on apples, as in the aforementioned WTO example. In either case, deterrence means that, on observing a finding of violation, even those countries not directly involved in the dispute become less likely to enact or maintain similar policies: rulings can thus reach "across

¹¹New Zealand Government Press Release, Office of the Ministry of Agriculture, *Work Continuing on Apple Access*, 15 July, 2005. Last accessed October 31st, 2014. <http://www.beehive.govt.nz/node/23833>.

¹²"Reaction to Japan Apple Access Announcement", Friday, 2 September 2005, Scoop Independent News, <http://www.scoop.co.nz/stories/BU0509/S00025/reaction-to-japan-apple-access-announcement.htm>.

borders” Kim and Sikkink (2010). The effect is an intuitive one. The sight of a policeman handing a speeding ticket to one driver on the highway may lead other passing cars to slow down. The policeman would be said to exert a deterrent effect beyond the one car being singled out for a speeding ticket.

But how might deterrence actually operate in the international realm? We can outline two related channels through which rulings might deter: domestic mobilization and updated beliefs about subsequent legal outcomes. We then distinguish these from a third mechanism, which relies on updated beliefs about a given country’s willingness to file (costly) legal challenges, rather than the deterrence power of courts.

DOMESTIC MOBILIZATION

Trade policies have distributional consequences. A safeguard on steel imports may protect the steel industry, but it will increase the costs of auto manufacturers. A finding of violation against a similar safeguard elsewhere may then embolden the domestic group that stands to gain from compliance—in this example, auto manufacturers. This is the story often told in the case of human rights, where a finding of violation by a court can embolden a group affected by a similar measure to challenge it in turn (Simmons, 2009). This may be why, even in legal settings devoid of *stare decisis*, actors not directly concerned by a dispute often have strong feelings about the outcome (Johnstone, 2003; Pelc, 2014), since rulings can upset the domestic political power balance. Given the sharp distributional implications of trade policy, it may be that this domestic mobilization story is especially likely in the WTO.

While rulings can thus lead to mobilization on the part of a pro-compliance constituency on the potential respondent side, rulings can also lead to mobilization within potential complainant states. Indeed, although there is no private standing in the international trade regime, and industries cannot themselves challenge foreign governments’ policies, it is widely believed that most disputes are responses to petitions by industry (Davis, 2011). And the greater the legal merit of a case, the more likely mobilization among export-oriented groups becomes. Davis (2012) spells this point out explicitly: “[a]s the strength of the legal case against a measure improves on the basis of past

precedent, governments on the complainant side will be more likely to go forward with the case.”

The aforementioned case of Japan’s ban on apples is again an apt illustration. The ruling against Japan provided a political opportunity for the political opposition in New Zealand to demand action from the Labour government: as the Foreign Affairs and Trade spokesman for the opposition party called out, “Labour has no more excuses for failing to get action on apple access to Australia after the WTO ruling on the case between the United States and Japan... Labour owes it to our apple growers.”¹³ This call for action was effective. New-Zealand finally challenged the Australian ban, strongly emphasizing the finding against Japan when it did so. Yet the point is that New-Zealand did have to initiate the dispute—Australia did not take down its ban merely as a result of the finding against Japan. The mechanism of mobilization operates when one ruling spurs demands by domestic groups to obtain similar legal outcomes in the matter that concerns them. Yet for this to happen, past rulings must affect current expectations: domestic groups must have something to mobilize around. Next, we outline a distinct possible effect on expectations.

UPDATED BELIEFS ABOUT SUBSEQUENT RULINGS

International law is often ambiguous. The result of this ambiguity is uncertainty over the likely direction of rulings. In this context, observing one ruling might lead observers to update their priors on what a subsequent ruling may look like, even if these are not causally related. At times, such ambiguity exists by design, serving as a second-best solution in a situation where the designers are either unable to agree on specific language, or wary of imposing overly rigid rules on a rapidly changing area of law.¹⁴ Fears over judicial lawmaking notwithstanding, in some cases government may want to delegate sensitive decisions to judges, rather than spend political capital reaching a compromise. As Trachtman (1999, 3) puts it, “We must also recognize that today dispute resolution often works in tandem with legislation in that dispute resolution tribunals function in part as agents of legislatures.”

The potential that rulings can lead to governments updating their priors grows more likely if we give credence to the recent literature on binding precedent, or what is known as *stare decisis*.

¹³No More Apple Excuses For Labour, Friday, 24 June 2005, Scoop Independent News, <http://www.scoop.co.nz/stories/PA0506/S00612/no-more-apple-excuses-for-labour.htm>.

¹⁴See Pelc (2016).

Despite the lack of formal *stare decisis* in public international law, scholars generally maintain that something akin to binding precedent nonetheless operates in the trade regime (Bhala, 1998-1999; Pelc, 2014). Precedential reasoning might be such an inherent part of legal reasoning (Kratochwil, 1991) that it is likely to operate in international law despite the denial of its formal authority. Insofar as there is reason to believe that judges' training leads them to be constrained by prior rulings, then governments may re-evaluate the odds of a trade measure being found in violation strictly based on the constraining effect of a recent ruling.

In sum, updated beliefs about the likely outcome of a similar subsequent case are a likely source of deterrence power. This is what human rights scholars hope for when they argue that ICC prosecution increases the expected cost of repression by dictators. This belief also receives anecdotal support in the trade regime. When the WTO Appellate Body ruled against the practice of zeroing in the calculation of dumping margins, both the EU and Canada reigned in their own antidumping bureaucracies to get rid of the practice. Two potential explanations obtain. These countries may have been genuinely unclear on the legality of the practice, and reigned in their policies when the court clarified the legal status of zeroing. Or else they thought that the new precedent made it likely that their own measure could now be more easily condemned in court.

CREDIBILITY OF ENFORCEMENT

It is worth distinguishing the two channels outlined above—domestic mobilization and updated beliefs—from a third mechanism, which which deterrence is often identified. In this third view, litigation may increase the perceived odds of subsequent legal challenges being filed in the first place. Indeed, international disputes are costly affairs, in both financial and political terms. Violators may thus have reason to doubt whether enforcement is forthcoming. This is sometimes offered as the reason for a 'culture of impunity' facing the human rights regime.

If such a credibility problem exists, then disputes can exert deterrent effects by confirming actors' willingness to file challenges in the first place.¹⁵ The key point is that in a decentralized enforcement system such as the WTO, this credibility problem affects potential complainants,

¹⁵See Pelc (2017) for a discussion of the analogous effect in the investor-state regime.

rather than the court.¹⁶ Countries eager to deter violations that affect them may face a credibility problem if they cannot demonstrate the willingness to take on the costs of litigation. This reasoning mirrors the literature on reputation and credibility in the study of militarized interstate disputes (Schultz, 2001).

These credibility problems frequently arise in the WTO. As was reported in the run-up to the dispute over the EU’s ban on seal products from Canada, “sources have questioned how committed Canada is to bringing an expensive WTO legal case on behalf of the relatively small sealing industry.”¹⁷ As Canada did take on these costs and file the seals case, observers may now have less reason to question Canada’s commitment to upholding its rights to cultural protection—an effect that may well explain Canada’s decision to file the dispute in the first place.¹⁸ Effects on countries’ perceived resolve may also be the best reading of the finding in Blonigen and Bown (2003), where countries that frequently challenge antidumping remedies are shown to be less likely of being targeted by them in the first place. Similarly, it is one way of interpreting Japan’s motivation in targeting Ukraine as a way of warning all emerging economies: the deterrent effect may rest in Japan’s signaling its willingness to take on these emerging economies in the future. When Davis and Shirato (2007) note how Japanese steelmakers viewed a series of disputes launched by Japan as a means of deterring “other countries” from putting up future trade barriers, the implication is that Japan meant to convey its resolve to go after violations that affected it. In contrast, when they later add that the Japanese saw even a failed case as successful, on account of how the one claim upheld by the court had a deterrent effect on other countries, we are back to the type of legal deterrence discussed above.

While the language of deterrence is employed in all these instances, the distinction is important: when deterrence operates through domestic mobilization and updated beliefs about subsequent rulings, it is attached to a resolution of the legal issue by the court; when it operates by increasing

¹⁶One can imagine this “deterrence by credibility” mechanism working in the case of centralized enforcement. The ICC has long faced this issue: for a long time, it remained an open question whether the court would dare to threaten state sovereignty by going after sitting heads of state. Consistent with the high hopes for the deterrence power of courts, this was thought to perpetuate a “culture of impunity” among dictators. When the ICC confounded these beliefs by issuing an arrest warrant in 2009 for Omar al-Bashir, the first sitting head of state to be indicted, this may have led other leaders to update their priors about the likelihood of similar challenges against them in turn.

¹⁷*Inside U.S. Trade*, May 8 2009.

¹⁸The commercial interests represented by seal products exports were dwarfed by the legal costs, not to mention the political costs of antagonizing the EU at a time when a Canadian European Trade Agreement was being negotiated.

the credibility of a challenge, its effect is attached to the challenging country. In both our theory and our empirics, we are concerned with the former.

2.2 Looking for Signs of Deterrence in Financial Market Behavior

The optimal research design for testing the deterrence power of courts is straightforward. Ideally, this question would be answered by focusing on the actor being deterred, namely, governments. One would consider every potential or actual foreign measure analogous to the one being challenged in a given dispute, and see whether a finding of violation renders these measures less likely. Yet this data gathering exercise is impractical. The decentralized enforcement design of the DSU is itself a testament to the difficulty, even for a dedicated centralized body, of detecting violations.

The one article that tries to get around this difficulty in another fashion is Davis (2012). Davis premises her research design on the idea that effective deterrence implies that fewer subsequent disputes would be filed over time in a given legal area: “As more complaints are filed, the enforcement mechanism gains credibility so that it should hold more deterrent value over time.” If judges’ rulings truly exert a deterrent effect, then other countries should grow less likely of maintaining or erecting measures similar to the one found at fault, and the motives for legal challenges should decrease in turn. If, on seeing a policeman hand out a ticket to a speeding driver, every other driver slows down, then fewer tickets need to be written. As Davis shows, there does seem to be some reduction in the frequency of disputes within most of the WTO’s legal issues. The number of disputes alleging violations of both new agreements covering areas like intellectual property and agreements covering standards appears to decrease somewhat over time.

And while this is as close as trade scholars have come to testing the legal deterrence hypothesis, it is also imperfect, as Davis readily admits. Filing frequency is a blunt measure, and given the small number of cases in any given legal issue, it is difficult to distinguish the effect of past cases from exogenous factors. Moreover, one prevalent view of the WTO claims that governments may rely on unfavorable rulings for political cover, as a means of decreasing the political costs of denying protection to powerful interest groups. In such a case, disputes may still need to be fought, and lost, before governments comply. Therefore, successful deterrence need not entail a decrease in

the frequency of litigation. The case of apples and fire blight is illustrative: after all, despite the unambiguous ruling against an identical measure, Australia did not voluntarily take down its ban: New Zealand had to take the matter to court. The panel ruled in its favor on all claims, relying heavily on precedent from the case against Japan.

Given the impracticality of collating data on all similar measures across the membership, and given the issues involved with detecting deterrence by counting disputes, our work turns to an alternative approach (Kucik and Pelc, 2016*b*). There, our premise has been that one means of identifying a social phenomenon is to look not for its direct occurrence, but for its consequences on the behavior of other actors. This amounts to asking, do these other actors behave ‘as if’ this social phenomenon were real? The case becomes stronger when these actors have a strong incentive to detect the phenomenon in question and behave accordingly. Our claim is that financial markets are such an actor.

WTO disputes have real consequences for the fates of private firms, many of which are publicly traded. The measures at issue in trade disputes are usually designed to protect these firms; it follows that if they are removed, these firms will suffer, in a way that should register on their market valuation. In an extreme case, a firm may be uncompetitive absent protection—indeed, that is often the political justification used to support trade protection. While the individual investors that constitute markets have no reason to be swayed by trade lawyers’ views over the legal status of WTO rulings, by their investment decisions they end up taking sides in the debate that interests us. They must necessarily interpret the meaning of events like judicial rulings for the future prospects of firms.

If courts have deterrence power—that is, if their ruling against one country makes similar measures less likely elsewhere, then markets should take notice of rulings. These should lead them to adjust their expectations of governments’ treatment of these firms elsewhere. A legal loss might be seen as endangering a type of protection used by other WTO members, and thus the firms that benefit from this protection elsewhere. Similarly, a legal victory upholding the legality of a particular trade standard, for instance, might vindicate similar policies in other members, and remove uncertainty over their continued existence, spurring further investment in the firms

benefiting from these standards. But if courts lack any deterrence power, then markets should only register direct effects in the defendant country. Rulings should then have no effect beyond that country, since other governments would remain undeterred from putting up similar measures until they themselves were taken to task.

In this way, our approach is not so different from a survey. This amounts to a survey of a multitude of individual investors each weighing the likely deterrent effect of a given ruling, and investing their money accordingly. Given the ambiguity of deterrence from a legal standpoint, our tests ask: do markets behave *as if* there were a deterrence effect? If so, then we can conclude that in considering the sum total of international law, judicial behavior, and domestic mobilization, a majority of global investors perceive the deterrent effect as weighing more heavily than the forces that would impede it. The Keynesian “beauty contest” aspect of financial markets, whereby investors are thought to act not on their own beliefs, but on their sense of others’ beliefs, is actually a boon for our analysis. We know that individuals are often more accurate in their survey of reality when asked about others’ behavior than about their own, since the former is less prone to personal biases.¹⁹ In this case, investors effectively ask themselves what the average investor thinks, and behave accordingly, all of which matches well with the aim of our research design.

A QUANTITATIVE CASE STUDY: SOLAR ENERGY AT THE WTO

In August 2011, Japan challenged Canada’s domestic content requirements program, as implemented by the province of Ontario. It charged that Ontario’s “feed-in tariff” (FiT) program unfairly discriminated against foreign providers and offered a WTO-illegal subsidy to attract investment and protect domestic firms.²⁰ The EU later also joined the dispute as a co-complainant.

Under the FiT program, solar energy producers were able to sell their electricity into the Ontario grid at up to six times the price of conventional energy.²¹ Deterrence seemed to be a part of the motivation from the start. In fact, industry sources suggested that in filing its complaint, Japan was driven not only by the desire to take down Ontario’s solar program, “but also by the worry

¹⁹See, e.g. Rothschild and Wolfers (2010). For a recent example, see “Scotland’s ‘No’ Vote: A Loss for Pollsters and a Win for Betting Markets?”. Justin Wolfers. New York Times. Sept 19, 2014.

²⁰See *Canada—Renewable Energy* (DS412) and *Canada—Feed-In Tariff Program* (DS426).

²¹USTR Cautious On Japan’s WTO Challenge Of Canadian Green Energy Law. Inside US Trade. June 24, 2011.

that similar measures that condition renewable energy incentives on the use of domestic content are proliferating around the world.”²²

India’s solar energy program is among the world’s most ambitious. Its support scheme, which also relied on a FiT, was highly similar to Ontario’s. It, too, put in a content requirement, and it provided subsidies through guaranteed prices on condition of meeting those requirements. Foreign firms viewed both programs in a similar fashion. They considered investing and setting up in the country to benefit from the national schemes. As a lawyer representing US Solar companies claimed, “some U.S. solar companies may be willing to modify their business plans to tap the Indian market, as they have in Ontario, Canada, which has similar domestic manufacturing requirements.”²³ The salience of the Indian solar industry, and the extent to which the Indian measures resembled the Canadian support scheme, made it an ideal case on which to test our expectations in Kucik and Pelc (2016b).

The first ruling took place in December 2012. There were two main sets of claims, over (i) the content requirement, and (ii) the government subsidy. The panel found the content requirement in violation of Canada’s WTO obligations, and it refused to rule on the EU’s claim that Ontario’s subsidy provided a “benefit” within the meaning of the Agreement on Subsidies. The ruling came as a surprise. The case was perceived as a complex one. In a rare conclusion, the panel found itself unable to rule on the question of “benefit”, since it reasoned there was no true market price for energy against which to base a calculation of whether a benefit was conferred. As evidence for the fact that judges could well have ruled differently, one of the three panelists issued a dissenting opinion, a rare outcome in the WTO, occurring in about one percent of cases. This is relevant for our analysis. For financial event studies to gain traction, the event being studied needs to have been unexpected. Otherwise, markets will internalize any shifts before they take place, and no reaction will be observable when these shifts actually occur. In reprise our prior example, if the ruling against Japan on Apples meant that a finding of violation was very likely against Australia, then the actual announcement of that ruling should have little effect on the market valuation of

²²ibid, emphasis added. As Japan noted in the press release announcing the start of litigation, “Japan is seriously concerned about possible proliferation of such protectionist measures all over the world.” (Request for the establishment of a Panel on Certain Measures Affecting the Renewable Energy Generation Sector in Ontario, Canada. METI Press Release. June 1, 2011. Available at http://www.meti.go.jp/english/press/2011/0601_01.html).

²³India’s Local Manufacturing Rule Causes U.S. Solar Firms To Think Twice. Inside US Trade. February 25, 2011

Australian apple producers: the markets would have already internalized the odds, and the ruling would lead to no updating. By comparison, the ruling against Canada was real news; the underlying legal issues were sufficiently new that there was considerable uncertainty over the likely direction of the ruling and the reasoning offered. The issuing of a dissenting opinion further confirmed this. In short, markets would have been unable to foresee the likely direction of the ruling ahead of its announcement.

The case was appealed, and the AB ruled in May 2013. It upheld the panel's finding against Ontario's content requirement, though it reversed some of the reasoning. It also reversed the panel's reasoning on the subsidy claim, finding that the panel's decision not to reach a conclusion on the question of "benefit conferred" was unjustified. Yet the AB found itself similarly unable to arrive at a ruling, given its lack of fact-finding ability. In sum, net of appeal, Ontario's program was ruled illegal on the basis of its content requirement. Canada stated it was disappointed with the result, but pledged to amend its solar program and come into compliance.

Thus we arrive at our main question. When the WTO declared Canada's solar FiT program in violation of multilateral trade rules, did this act as a deterrent against similar rules in other countries? Did it make equivalent subsidy schemes less likely elsewhere? Indian financial markets had a big stake in answering this question, given the extent to which domestic Indian firms benefited from governmental support. The media were quick to suggest that the ruling in Canada might embolden other countries to follow suit. As the *Financial Post* put it, "Canada's defeat may spur more WTO disputes by countries which are desperate for economic growth and suspect their firms are being illegally locked out of infrastructure projects abroad."²⁴ The initial ruling against Canada also spurred mobilization among solar firms in the US. The US Department of Commerce began fielding petitions for enforcement of similar programs elsewhere. In fact, in February 2013, in the wake of the panel ruling against Canada, the US initiated a dispute against India's solar program.

²⁴ "Canada loses WTO appeal over Ontario's green incentives that discriminate against foreign firms". *Financial Post*. May 6, 2013. Available at: http://business.financialpost.com/2013/05/06/canada-loses-wto-appeal-over-ontarios-green-incentives-that-discriminate-against-foreign-firms/?_lsa=8ac1-381d.

3 Empirical Analysis

The idea behind event studies is to look for abnormality. The task of the analyst is to predict as accurately as possible what the price of a firm would have been absent an event—in our case, the two WTO rulings against Canada—and then compare this with the actual price of the firm following that event. The first task, which amounts to constructing a counterfactual, is done by relying on macroeconomic indicators. To do this, we used the stock market indices of the solar firms we are interested in—the Toronto Stock Exchange (TSX) for Canada; the New York Stock Exchange (NYSE) or National Association of Securities Dealers Automated Quotations (NASDAQ) for the US; and the Bombay Stock Exchange (BSE) for India. We estimated the relationship of each individual firm to its respective index during a period preceding the event—called the estimation window—and used this relationship to extrapolate and predict what the price would have been in the days following the event. To render our prediction more accurate, we also relied on the relationship between each firm’s price and the price of oil, as well as fluctuations in the national currency. In the final step, we measured the difference between the expected price (absent the event) and the actual, observed price (following the event). If this difference was statistically significantly negative, then the price would be said to be “abnormally low”: we would conclude that markets reacted by selling off shares in the firms whose government support was now threatened by a ruling against another country.

Did we observe such devaluation by the market? It is useful to compare markets’ reactions in three different countries to calibrate our expectations. First, we can ask what the reaction was in Canada. Here, the expectation is most straightforward: Canada vowed to amend its support scheme in the wake of the ruling, and thus we would expect the markets to sell off shares of the companies that were benefiting from this support.

Secondly, we also considered the market valuations of solar firms in the United States. US firms are as close to a control group as one could hope for. These firms do not benefit from support in the form of a FiT (although critics have observed that the US support these firms in other ways—the relevant point for our analysis is whether these means of support are close enough to the FiT to be threatened by a precedent set against Ontario; they are not). It could be said that

US firms would gain indirectly because of support being taken away from competitors in Ontario. While this is plausible, these gains are likely to be highly diffuse, since they would accrue evenly to solar producers in Europe, Japan, and every other WTO member. Moreover, it is likely that the true price competitors of US solar firms are Chinese solar firms, and the finding against the Canadian FiT would thus have little practical impact. In short, our expectation is that US firms should register little to no reaction.

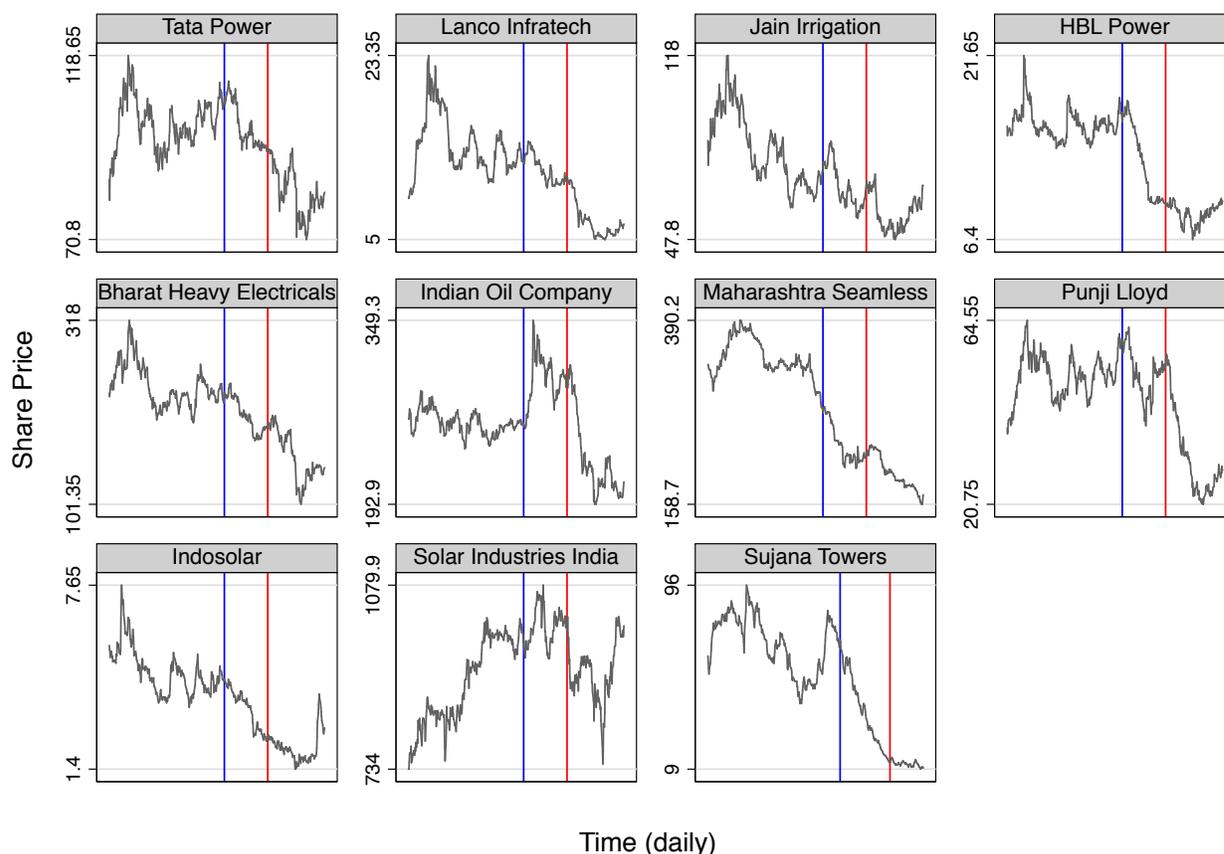
Finally, the test of our deterrence hypothesis focuses on Indian firms. Here, we identify 11 solar firms that were later singled out in WTO documents as gaining from the Indian FiT.²⁵ If WTO rulings deter violations elsewhere, we would expect these firms to register stock market losses following the rulings against Canada.

What did we observe? The overall results offered support for the deterrence hypothesis. The rulings against Canada led to sudden drops in market prices of Indian solar firms. Figure 1 shows changes in the market prices of Indian solar firms following the panel and AB ruling against Canada. Yet looking at these prices alone is not enough to answer our question. What we need to know is, how did these prices compare with expectations absent the rulings? And how did these reactions in India compare with the reactions in Canada, the defendant country, and the United States, the “control” country?

First, we observed a consistent variation between the effects of the panel and the AB. Among Canadian firms, the panel ruling led to an abnormal decline in prices. And while the AB report also led to a decline on average, this fell short of statistical significance. Meanwhile, in the Indian case, we observed the opposite pattern. The panel led to a decline in prices, but not a statistically significant one, while the AB findings led to a significant downward reaction. This is our main finding, and it is illustrated in Figure 2. There, we normalize the expected price for every firm to 0 on the horizontal axis. As one can see, all but one of the 11 Indian firms’ stock market prices were below this expectation following the AB ruling. But more importantly from our standpoint, the industry average of these firms’ prices, demarcated by the dashed line, is well below the expected price. In other words, the industry registered abnormally low market prices.

²⁵See the US request for consultations in its dispute against India, which provided a list of firms that benefited from the measures at issue. We included all publicly traded companies on that list.

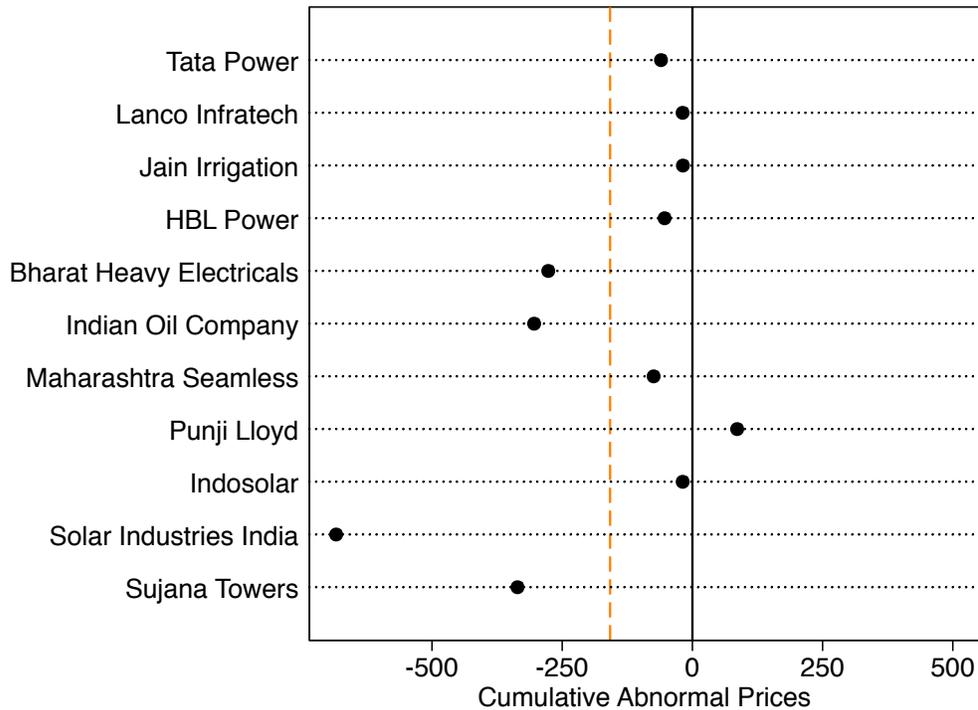
Figure 1: Indian Solar Firm Prices after Panel and Appellate Ruling



One additional reason to think the difference in the observed effects of the panel vs. the AB rulings is not happenstance is that we observed the same pattern in the second quantitative case study we conducted, on *US—Cotton*. There, we examined whether the finding against US cotton subsidies affected the price of wheat, which benefits from similar subsidies. And there too, we found that the panel ruling had the stronger effect on the commodity at issue (cotton), while the AB ruling had the stronger effect on the commodity benefiting from similar measures (wheat).

How might we explain this pattern? Note that in both cases, the AB upheld the thrust of the panel’s findings, and did not reverse the direction of the panel’s rulings. It may thus be that the panel ruling has an immediate effect on financial markets in the defendant country. If the AB ruling does not overturn this ruling, then there is no reason for markets to update their priors, and the

Figure 2: Indian Solar Firm Prices after Appellate Ruling



AB ruling has a negligible additional effect on market valuation. By contrast, panel reports may have limited effects beyond a given case. It is widely acknowledged that the precedential effects of lower courts in all legal regimes are smaller than the precedential effects of higher courts. In this context, and given how frequently the AB overturns panel reports, it may be that financial markets abroad derive little information from the panel ruling, and wait until the AB ruling to update their expectations over the likely fate of these foreign firms. Whatever the explanation may be, this variation introduces an important caveat in our results: the panel report, perhaps because of its acknowledged smaller impact on jurisprudence, seems to lack the deterrence power of the AB. This has consequences for the WTO itself—complainants seeking to deter other countries may appeal even favorable findings in order to inscribe them more forcefully in WTO jurisprudence. It also holds implications for other courts: deterrence power may rely on permanent courts that are likely to be further bound by their own past rulings, and aim at further coherence. By comparison, courts formed of *ad hoc* judges (as one finds in all investment, and most human rights tribunals, for instance) may be less able to deter further violations.

How did our “control country” behave? As expected, neither the panel rulings nor the AB ruling against Canada registered on US solar firms. In this respect, this should increase our confidence that the abnormal effects we do observe in the Canadian and Indian context are indeed abnormal, and due to the announcement of the WTO rulings.

It is worth stressing the length of our event window. We observed the potential market reaction during a short period following the event, using either a 1 or 10 day event window. We favor the estimates that use the 10 day window, given the complexity of the information relayed in a WTO ruling, and the likely time it would take for this information to be fully processed by markets. Nonetheless, keeping these event windows short makes us more confident that what we are observing is the impact of the rulings, rather than firm-specific or industry-wide shocks that have nothing to do with the WTO.

4 Implications

The promise of international courts depends in large measure on their ability to have effects beyond a given case and the parties to it. This hope is visible in much of the international legal literature. Human rights scholars, especially, have championed the creation in recent decades of a number of international courts prosecuting human rights violations. The premise is that such courts can not only provide retribution in the cases they prosecute, but also go some way in preventing subsequent violations from occurring. The question we ask is, can courts deter?

We have examined this question in the issue-area of international trade. It goes without saying that the trade regime and the human rights regime are different in a number of ways. Yet they are similar in one central aspect: they both formally deny that rulings have deterrence power. They both draw on Article 59 of the ICJ Statute to say that all rulings and prosecutions are independent events. This is not coincidence: in both cases, countries wary of delegating too much control to unelected judges over the meaning of international law have consciously sought to limit the reach of verdicts. Yet in the case of both regimes, there is anecdotal evidence that rulings affect expectations, norms, and behavior in a way that might amount to deterrence. The result, looking at formal rules, is considerable ambiguity over whether courts have any means of deterring

violations beyond the case at hand. Against this context, our findings confirm that courts may exert deterrent effects that go beyond a given case and the parties to it, even when the rules explicitly deny such power.

The context of trade also presents unique empirical tractability. It allows us to rely on an empirical approach that looks not for direct evidence of governments being deterred, but for evidence of other actors behaving in accordance with such deterrence effects.

We looked for signs of the deterrent effects of rulings in a dispute targeting government support schemes of solar energy projects in Canada. We found that financial markets in India, where solar firms benefit from a support scheme highly similar to Canada's, sold off shares of these firms when the WTO found the Canadian support scheme to be noncompliant. In other words, Indian markets bet on the WTO ruling against Canada jeopardizing government support offered to firms in India.

Our findings revealed a different effect for the higher and lower courts. In both the solar energy and the second quantitative case study examined in Kucik and Pelc (2016*b*), AB rulings showed stronger deterrent effects than panel rulings. This may carry implications both for the behavior of complainants in the WTO, and, more broadly, for the scope conditions for deterrence. The unique feature of the AB is that it is a standing body of judges, similar to a domestic supreme court. This differs from human rights courts, and especially investment tribunals, which tend to be far more *ad hoc*. The findings thus suggests caution in readily applying the lessons from trade directly to other regimes, and suggest the type of reform that may increase courts' power to deter.

Deterrence works through expectations: if, upon observing a ruling, all actors concerned update their priors about the odds of a challenge, and the odds of its eventual success, then courts may be said to have deterrence power. Our work aims to show that financial markets, at least, seem to be ready to bet on this deterrent effect affecting government behavior.

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