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Global Value Chains as a Constraint on Sovereignty: Evidence from Investor–State Dispute Settlement

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That economic integration constrains state sovereignty has been a longstanding concern and the subject of much study. We assess the validity of this concern in the context of two very particular components of contemporary economic globalization: global value chain (GVC) integration and Investor–State Dispute Settlement (ISDS). First, we document that host states have abandoned nearly 24 percent of regulations disputed by private investors in ISDS between 1987 and 2017. This behavior is puzzling because ISDS only requires host states to provide monetary compensation to investor-claimants and not the abandonment of disputed regulations. We theorize that host states are more likely to abandon a disputed regulation when the claimant has a greater potential to disrupt GVCs in the host economy. We then employ the non-parametric difference-in-differences estimator by Imai, Kim, and Wang (2021) and find that ISDS filings cause substantial decreases in GVC trade. Following this result, we provide descriptive statistics and qualitative evidence that support our core theoretical proposition that multinational corporations (MNCs) with the potential to disrupt GVC integration are more likely to see host states changing regulations in their favor. Our argument and evidence suggest that GVC integration can grow an MNC's power to such an extent that the host state abandons a regulation that the MNC disputes.

El hecho de que la integración económica limite la soberanía de los Estados es una preocupación arraigada y objeto de numerosos estudios. Evaluamos la validez de esta preocupación en el contexto de dos componentes muy concretos de la globalización económica contemporánea: la integración de la cadena de valor mundial (CVM) y el arbitraje de diferencias estado-inversor (ISDS, por sus siglas en inglés). En primer lugar, documentamos que los Estados anfitriones han abandonado casi el 24 percent de las regulaciones impugnadas por inversores privados en materia de ISDS entre 1987 y 2017. Este comportamiento es intrigante porque el ISDS solo exige a los Estados anfitriones que proporcionen una compensación monetaria a los inversores demandantes y no el abandono de las regulaciones en litigio. Teorizamos que es más probable que los Estados anfitriones abandonen una regulación controvertida cuando el demandante tiene un mayor potencial para perturbar las CGM en la economía anfitriona. A continuación, empleamos un estimador no paramétrico de diferencias en diferencias de Imai, Kim, y Wang (2021) y descubrimos que las solicitudes de ISDS provocan disminuciones sustanciales en el comercio de las CGM. A partir de este resultado, proporcionamos estadísticas descriptivas y pruebas cualitativas que respaldan nuestra proposición teórica central de que las empresas multinacionales (EMN) con potencial para perturbar la integración de las CVM tienen más probabilidades de que los Estados anfitriones modifiquen las regulaciones a su favor. Nuestros argumentos y pruebas sugieren que la integración de las CVM puede hacer crecer el poder de una EMN hasta tal punto que el Estado anfitrión abandone una regulación que la EMN cuestione.

Le fait que l'intégration économique restreint la souveraineté des États inquiète depuis longtemps et a fait l'objet de nombre d'études. Nous analysons la validité de cette inquiétude vis-à-vis de deux composantes très spécifiques de la mondialisation économique contemporaine : l'intégration à la chaîne de valeur mondiale (CVM) et le règlement des différends entre investisseurs et États (RDIE). D'abord, nous documentons le fait que les États hôtes ont abandonné près de 24% des réglementations remises en cause par les investisseurs privés dans des RDIE entre 1987 et 2017. Ce comportement étonne, car les RDIE requièrent uniquement que les États hôtes fournissent une compensation financière aux demandeurs-investisseurs, et non qu'ils abandonnent les réglementations visées par un différend. Nous théorisons que les États hôtes sont davantage susceptibles d'abandonner une réglementation visée par un différend quand le demandeur est en mesure de perturber grandement les CVM de l'économie hôte. Nous employons ensuite l'estimateur des doubles différences non paramétrique de Imai, Kim,

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et Wang (2021) et observons que le dépôt de RDIE entraîne une diminution significative du commerce au sein de la CVM. Ce résultat nous pousse à fournir des statistiques descriptives et des preuves qualitatives pour étayer notre proposition théorique essentielle : les corporations multinationales (CMN) à la capacité de perturber l'intégration à la CVM ont plus de chances d'observer un changement de réglementations en leur faveur par les États hôtes. Notre argumentation et nos preuves suggèrent que l'intégration à la CVM peut renforcer la puissance d'une CMN dans une telle mesure que l'État hôte abandonnerait une réglementation remise en question par la CMN.

Introduction

Power concerns the capacity to influence the behavior of others. Led by the pioneering work of Susan Strange, many scholars see multinational corporations (MNCs) as a key locus of power, able to influence the behavior of governments not just at home, but also in the host states in which they invest (Strange 1983). A priority in contemporary political science research is to understand the extent to which MNCs are in fact forcing a "retreat of the state" (Strange 1996). This article explores the conditions under which foreign, private market actors shape regulatory policy in host states under contemporary economic globalization. We focus on two phenomena core to the status quo of foreign direct investment (FDI), MNC activities, and host state choices over economic openness: global value chain (GVC) integration, and the ability of foreign investors to sue host states under treaty-based Investor–State Dispute Settlement (ISDS), as facilitated by thousands of international investment agreements (IIAs). Our argument and evidence suggest that these phenomena can generate both direct and indirect advantages for MNCs. It follows that choosing economic openness in the current era may lead to a particular kind of exposition to constraints on sovereignty consistent with the retreat of the state.

The first of these contemporary phenomena is GVC integration, the increasingly dominant choice of MNCs to fragment production across host states via subsidiaries and/or subcontractors (Kim and Rosendorff 2021), which accounts for some 70 percent of international trade (OECD 2021). GVC integration plays a role in nearly all globalized industries because it involves trade in services and not only in physical goods (Weymouth 2017). For host states, GVC integration is associated with increased productivity, employment, living standards, and economic diversification; according to the World Bank, it provides states "the opportunity to leap-frog their development process". (World Bank 2021). It follows that both developed and developing host states value GVC integration as a (if not the) key benefit of economic globalization.

The second phenomenon is treaty-based ISDS, the controversial face of international investment law. ISDS gives foreign investors standing to sue host states for alleged property rights violations in ad hoc arbitration, as facilitated by thousands of decentralized bilateral and regional IIAs.[1] Treaty-based ISDS arbitrations have skyrocketed in the 2010s, and developing host states have borne the brunt of ISDS costs as respondents, although developed ones have increasingly joined those ranks (Moehlecke and Wellhausen 2022). Respondent host states that lose at arbitration have to pay monetary compensation to the claimant investor, often on the order of USD millions (Peinhardt and Wellhausen 2016; Thompson, Broude, and Haftel 2019).

Taken together, these phenomena create a status quo in which states seek to grow their role as suppliers of intermediate goods and services via GVC integration, and have made legal commitments to ISDS (Cutler and Lark 2020). The first phenomenon suggests that a host state would set policies advantageous to MNCs that account for GVC integration (Johns and Wellhausen 2016). The second phenomenon suggests that, should such a GVC-enabling MNC sue a host state in ISDS over a given policy, the host government has incentives to resolve the dispute to protect GVC integration directly with that MNC, and to avoid spillover effects if and when the dispute would disrupt other MNCs' GVC integration. The definition of resolution has been touted as a key upside of ISDS design. Specifically, respondent host states have a legal commitment to provide compensation to the claimant foreign investor in the event of adverse rulings. But there is no requirement that respondent states abandon the disputed policy,[2] making ISDS a "breach and pay" system that stands out in international economic law (Pelc and Urpelainen 2015; Wellhausen 2019). Moreover, there is no norm that respondent states change the policy; ISDS reform has focused on preserving host states' sovereign authority to maintain policies even if they have adverse consequences for foreign investors (Haftel and Thompson 2018). Our question is whether the power of GVC-enabling MNCs incentivizes the host government to go beyond its treaty commitments. We intuit that the respondent host government is more likely to abandon the policy when the foreign claimant is key to GVC integration. The implication is that contemporary economic globalization facilitates conditions that force the "retreat of the state," even in ways that sovereign states have explicitly excluded from their legal commitments to private market actors.

To probe these expectations, we first generate the dependent variable: variation in the post-ISDS filing status of regulations disputed in ISDS. Among ISDS arbitrations triggered by a specific regulation, we find that respondent host states abandoned some 24 percent of disputed regulations, resulting in policy environments closer to claimant preferences (ISDS filed 1987–2017, assessed as of 2018). In twenty instances, the state abandoned the regulation *despite winning the ISDS arbitration*. Following the identification of this puzzling phenomenon, we theorize that host states are more likely to abandon a disputed regulation when the MNC-claimant has a greater potential to disrupt GVCs in the host economy.

Then, using the non-parametric difference-in-differences estimator by Imai, Kim, and Wang (2021), we find that ISDS reduces GVC trade, especially in the claimant's specific industry. This causally identified finding indicates that costly regulations to MNCs affect their activities to the point of disrupting GVC ties in the host economy. The question left unanswered then is whether higher GVC integration—and

[1] Standing to sue is reserved to private foreign investors only. Domestic investors and host governments cannot file for arbitration under ISDS.

[2] We use the term *abandoned regulation* to indicate that the regulatory environment has changed in a pro-claimant direction, regardless of how that change was made by the host state.

thus higher potential of disruption—is indeed associated with regulatory abandonment. Given selection effects and peculiarities of both legal and investment data, we pursue creative empirical strategies to get at this core observable implication of our argument. We present descriptive statistics consistent with our theory and one illustrative proof-of-concept to show that an MNC's potential to disrupt GVC in the host suggests an ability to change the regulatory framework toward its preferences. We believe both our novel data and empirical strategies have great potential to further evaluate the starkest normative concerns about market-generated constraints on sovereign states' regulatory policy-making.

MNC Leverage, Regulatory Change, and ISDS Arbitration

A vast scholarship indicates that MNCs exert power over host states through various channels. Indirectly, MNCs lean on diplomatic support from their home governments when embroiled in conflict in a host state (Wellhausen 2015b; Gertz, Jandhyala, and Poulsen 2018; Gertz 2018). MNCs influence their home governments in international negotiations, shaping the priorities and content of international agreements with host states (Sell and Prakash 2004). MNCs further indirectly influence host states when they invest in private governance, third-party monitoring, and other substitutes for traditional state-led regulation of their activities (Markus 2012; Locke 2013; Distelhorst and Locke 2018; Malesky and Mosley 2018). Directly, MNCs have shaped international regime complexes around climate change and other issues (Raustiala and Victor 2004; Vogel 2008; Keohane and Victor 2011). Treaty shopping provides advantages to foreign—and not domestic—market actors (Busch 2007; Arel-Bundock 2017; Thrall 2021). Foreign MNCs have also found success directly lobbying governments in host states (Mitchell, Hansen, and Jepsen 1997; Hansen and Mitchell 2000; Weymouth 2012). Finally, structural issues in the host economy can weaken less-competitive domestic firms' attempts to counter such efforts by foreign MNCs (Salamon and Siegfried 1977; Bauerle Danzman 2019; Johns, Thrall, and Wellhausen 2020).

None of these channels of influence require the legal institution of treaty-based ISDS arbitrations. However, ISDS arbitration today is the face of outsized MNC power relative to that of host states, encountering near-universal popular and practitioner backlash. Being sued under ISDS generates costs for respondent host states, whether monetary, diplomatic, or reputational (Allee and Peinhardt 2011; Gertz, Jandhyala, and Poulsen 2018; Franck 2019). Costs also increase as evolving legal standards across ad hoc tribunals broaden what host states had originally expected to be more limited IIA commitments (Poulsen and Aisbett 2013; Schultz and Dupont 2014; Pelc 2017). Leaders of reform efforts contend that the decentralized and overlapping set of host state IIA commitments to ISDS, plus the design choices of ISDS adjudication itself, push host governments to choose between sovereignty and foreign investors' preferences.[3]

Several scholars have taken up the task of explaining variation in ISDS constraints on host state autonomy (Waibel et al. 2010; Van Harten 2012; Milner 2014; Van Harten and Malysheuski 2022). Arguments about "regulatory chill" raise the specter that ISDS deters host states from fully exercising their sovereignty. Specifically, if a host state expects that enacting a potentially investor-unfriendly regulation risks ISDS, it may be "chilled" so that it chooses not to enact that regulation (Simmons 2014). Careful research indicates that "regulatory chill" is bounded, even in most-likely cases, which tempers the direst normative concerns (Moehlecke 2020). Still, should a host state enact a disputed regulation, and be sued in ISDS for doing so, its choice to later abandon the regulation is consistent with being belatedly "chilled."[4] Our data collection effort involves finding the set of such instances, and then exploring whether they are consistent with a regulatory chill triggered by threats to GVC-integration.

ISDS is an important topic of study itself, but more crucially, it has a key characteristic that rules out important alternative hypotheses for explaining host government (in)actions: ISDS does not require the respondent host state sued in arbitration to change the regulation(s) the claimant foreign investor disputes. Rather, the host state meets its obligations when it pays the award (if any) that results from adjudication by the tribunal as compensation for the host state's property rights violation.[5] Further, there is no established norm that a respondent host state should abandon a disputed regulation. Rather, the dominant norm among states and international organizations is that ISDS should not infringe on states' sovereignty.[6]

Absent a legal obligation or norm to abandon regulations disputed in ISDS, we expect the behavior of highly integrated foreign, private market actors to be a key explanation for why host governments sometimes abandon regulations. Before presenting our theory, we introduce our novel data documenting the existence and trends in our dependent variable.

Data: ISDS Arbitrations and Specific Disputed Regulations

We start by examining whether respondent host states have abandoned specific regulations disputed by foreign claimants. Given that states sometimes make such changes—without a legal or norm-driven reason behind them – we see a clear puzzle to be explained.

Our starting point is the United Nations Conference on Trade and Development (UNCTAD) dataset of treaty-based ISDS arbitrations, covering 809 cases filed from 1987–2017. This is a non-random sample of the true population, due to variation in rules and norms regarding public disclosure of treaty-based ISDS; nonetheless, this standard dataset is appropriate for our setting, as undisclosed arbitrations cannot reasonably transmit information to the market actors involved in GVC integration.[7] Our first tasks were to identify if there is a specific underlying regulation disputed by the

[3] Not every IIA contains ISDS provisions (St John 2018), but ISDS clauses in direct foreign investor–host state contracts are standard and some states incorporate ISDS in domestic law. Thus, states worldwide have some exposure to ISDS.

[4] Host states might gain enough benefits from this course of action such that it is actually what is known as efficient breach (Pelc and Urpelainen 2015). However, recent evidence suggests that only perhaps 31 percent of post-ISDS investment outcomes conform to efficient breach logic (Wellhausen 2019).

[5] In a small number of cases, tribunals have reached a pro-investor ruling, but awarded zero monetary compensation. Another point of controversy has been "preestablishment" treaty protections that award compensation for future lost profits because of the host state's action. Revisions to North American Free Trade Agreement (NAFTA) Chapter 11 in the USMCA, and other modern IIAs, attach some limits to such bases for compensation.

[6] See e.g., UNCTAD (2018).

[7] As of June 2021 (several years after our study period), UNCTAD counts 1,104 treaty-based ISDS arbitrations; a private service of investigative journalism (Investment Arbitration [IA] Reporter) has found 1,127.

claimant, and if so, its characteristics.[8] Our coding of "regulation" is based on the dictionary definition of any "rule or directive made and maintained by an authority."[9] Coding relied primarily on case documents and, secondarily, on academic case notes and other reliable sources.[10] To qualify as a disputed regulation for our purposes, the rule or directive had to be "on the books." For example, in 2012, Swedish energy firm Vattenfall filed for ISDS arbitration against Germany, disputing the on-the-books law requiring the phase-out of all nuclear plants in the country by 2022 (*Vattenfall v. Germany II*, ICSID ARB/12/12).[11]

We confirm a specific, disputed host state regulation for nearly 46 percent of ISDS filings (371 of 809). The primary reason this is far from 100 percent is that many claimants sue for issues other than an allegedly unlawful regulation. Specifically, we do not code instances in which the claimant accuses the host state of breaking its own regulation, as this does not represent the claimant disagreeing with the regulation's content. For example, in *Allard v. Barbados*, the claimant alleged that the government of Barbados breached several of its own domestic environmental regulations in violation of the Canada–Barbados BIT.[12] Additionally, ISDS arbitrations alleging covert or extralegal government actions are not coded, as they suggest risks to foreign investors beyond adverse regulation. Lastly, we do not code ISDS arbitrations alleging contract violations by the host state, as these disputes concern enforcement of something that is not a regulatory policy. Another reason why the percentage is far from 100 percent is that claimants sometimes do not specify the exact regulation that triggered the dispute, as they can keep the content of ISDS arbitration confidential (Hafner-Burton, Steinert-Threlkeld, and Victor 2016). We do not attempt to infer which regulation(s) might be applicable when compelling documentation is unavailable. Thus, we bias toward undercounting specific regulations disputed in ISDS.

Regulatory disputes that play out via ISDS arbitration reflect the extreme heterogeneity in the content and context of business–government relations. Sometimes disputed regulations have first-order effects on FDI. For example, in *Champion Trading and Ameritrade v. Egypt* (ICSID ARB/02/9), the claimants argued that in the process of liberalizing the cotton sector, Egypt enacted regulations that discriminated against foreign cotton producers in favor of domestic.

Sometimes effects on FDI are second-order. Our data include challenges to regulations that prima facie intend to accomplish a variety of governance functions, such as meet the terms of European Union (EU) accession; enact austerity measures in the midst of financial crisis; and adopt WHO best practices.[13] Some challenged regulations appear to have inadvertently exposed the host state to ISDS arbitration; e.g., a subnational regulation by the city of Vilnius regarding parking meters triggered a claim under the Norway–Lithuania BIT.[14] These sorts of heterogeneity in our observed sample reinforce the importance of learning whether and how a public, legalized dispute per se affects host state regulatory autonomy.

Our next step was to code whether the host state abandoned the disputed regulation at any point from the ISDS filing through the end of the study period (2018). In sum, we find the host state made a pro-claimant change to the disputed regulation in 88 of the 371 ISDS arbitrations in which a specific regulation is disputed (23.7 percent).[15] This gives us prima facie corroboration that ISDS is sometimes associated with regulatory convergence toward the claimant's preferences.[16] We confirm that the disputed regulation was not changed in 45 percent of applicable cases (167 of 371). We are unable to find conclusive evidence that a regulation had either changed or not since ISDS filing in 31.3 percent of applicable cases (116 of 371). We chose to code conservatively to make it more difficult to establish that there is indeed variation in our dependent variable.[17]

Then, we operationalize change dichotomously: Cases are coded 1 if the regulation is "abandoned," a catch-all term meaning there is a pro-claimant change in a disputed regulation at any point since ISDS filing.[18] We code abandonment whenever we found evidence in governmental and/or specialized news sources that the disputed regulation had been amended, repealed, replaced, expired, or annulled/overruled by the domestic judiciary. One example is *IMFA v. Indonesia*, filed in 2015 under the India–Indonesia BIT (PCA Case No. 2015-40). IMFA sought USD 600 million in compensation, as the mining permits it had obtained overlapped with seven other permits granted to other firms. This issue referred to a 2009 Indonesian law that did not require the various permit-issuing agencies to use a harmonized map when drawing permit boundaries. After the ISDS filing, Indonesia abandoned the previous regulation and replaced it with Regulation 43/2015, which then established criteria for the resolution of overlapping permits.[19]

We code 0 if we could find definitive evidence that the regulation was not substantively altered since ISDS filing. We also code 0 if the regulation has been changed, but not toward the claimant's preferences. One example of this coding decision is in *GAMI v. Mexico*, filed in 2002 under NAFTA. GAMI held shares of a Mexican holding company that owned five sugar mills in the country. GAMI disputed a decree issued by the Mexican government that expropriated sugar mills owned by local subsidiaries, which aimed at revitalizing the Mexican sugar industry. Since ISDS filing, the applicable Mexican Expropriation Law has been amended several times. However, none of the amendments have addressed the core issue disputed by the investor.[20]

Although, there is no requirement or norm that the host state abandon the disputed regulation whatever the outcome of the arbitration, Table 1 addresses whether ISDS

[8] If an investor cites multiple regulations in a single case, then we examine all disputed regulations; this is an empirically rare event.

[9] Google Dictionary.

[10] Academic case notes are published in journals like *The ICSID Review*. Other news sources include IA Reporter, business and legal news sources, and memos released by claimant firms and their legal representation.

[11] The Bundestag approved the law with over 80 percent of the votes. Vattenfall alleged the law breached Germany's obligations under the Energy Charter Treaty, an energy industry-specific, multilateral IIA with ISDS access.

[12] Allard, who purchased land to develop an eco-tourism project, claimed that government violations of its own regulations caused environmental damage that diminished his investment's value (PCA Case No. 2012-06).

[13] Inter alia: *Electrabel S.A. v. Hungary* (ICSID ARB/01/19); *Eiser v. Spain* (ICSID ARB/13/36); *Philip Morris v. Uruguay* (ICSID ARB/10/7).

[14] *Parkerings-Compagniet AS v. Lithuania* (ICSID ARB/05/8).

[15] This is 10.8 percent of all 809 ISDS arbitrations, including those in which no specific regulation is publicly disputed.

[16] We are careful to label this a pro-claimant and not a pro-FDI change, as we cannot assume foreign investors' preferences are homogeneous (Bauerle Danzman 2020; Gulotty 2020)

[17] For more information, see the codebook and replication data. We aim at being exceedingly transparent to make these materials helpful to others.

[18] In the rare event a claimant disputes multiple specific regulations, we code 1 if any of those have been abandoned.

[19] Although this seems at first blush an obvious correction to an erroneous policy, recall that Indonesia only made this change *after it had been sued* in ISDS; policy change is not costless.

[20] For more information, see the Mexican Expropriation Law at http://www.diputados.gob.mx/LeyesBiblio/pdf/35.pdf.

Table 1. ISDS outcomes and abandoned regulations (1987–2017, assessed 2018).

ISDS outcome	*Case count*	*Abandoned*	*Percent*
Investor win	113	39	34.5
Settled	28	10	35.7
State win	98	20	20.4
Discontinued	14	3	21.4
Pending	111	14	12.6
Total	371	88	23.7

Notably, host states have abandoned disputed regulations even after winning the related ISDS arbitration and while the case is still pending.

outcomes are sufficient to account for patterns of abandonment. When the investor won or settled before a ruling, the host state abandoned the disputed regulation in (only) around one-third of applicable cases. What is surprising is that the host state abandoned regulations in about 20 percent of applicable cases that the state, in fact, won. That is, the state went through formal ISDS procedures, was ruled not to be liable for compensation to the claimant investor, and abandoned the underlying disputed regulation anyway. Moreover, the host state had already abandoned the disputed regulation in about 12 percent of applicable pending cases at the end of the study period. These descriptive patterns cast doubt on the notion that ISDS outcomes are the key driver of patterns in the dependent variable, although we revisit their potential influence in our empirical analyses.

In Online appendix 1, we provide further descriptive statistics summarizing variation in the eighty-eight ISDS arbitrations associated with abandoned regulations. Disputed regulations include laws passed by the legislative branch, executive decrees, judicial rulings, or some combination of these (Online appendix table A-1). The most common method of regulation abandonment is expiration, but judicial and legislative actions also show up (Online appendix table A-2). Although the lion's share of abandoned regulations is in ISDS filings by US investors, claimants have come from twenty-two other home states (Online appendix table A-3). Additionally, while the modal claimant is in utilities, there are claimants from several other industries (Online appendix table A-4). Twenty-eight host states have abandoned disputed regulations, including not only developing countries, but also developed countries, such as the United States (Online appendix table A-5). Finally, it is not the case that arbitrations heard early in the study period have disproportionately high rates of regulatory abandonment by the end of it (Online appendix figure A-1). Nevertheless, the 2002 Emergency Law in Argentina triggered thirty-two ISDS filings in the dataset. As that law expired in 2018, these arbitrations play an important role in the data. While these data points fit the criteria for inclusion, our results are robust to their exclusion (Online Appendix 2.5). Overall, the heterogeneity we find in the eighty-eight cases of regulatory abandonment made visible by ISDS arbitrations raises a puzzle to be explained.

Theory: Abandoning Regulations to Avoid GVC Disruption

We use our novel ISDS data to examine the conditions under which foreign, private market actors influence regulatory policy in the host states in which they invest. If the host state sets a regulation that an MNC considers to have violated its property rights, and the MNC sues under ISDS, then under what conditions is the host state more likely to abandon the disputed regulation? Our expectation is that the host state is more likely to abandon the regulation, and thus move toward the claimant's preferences, if maintaining the regulation imposes sufficient costs on the host state. The question then becomes under what conditions does a host state face expected or realized costs that are sufficient for it to abandon its regulation.

The status quo in international investment law allows us to rule out several potential sources of costs. First, we can discard any legal obligation; ISDS treaty commitments do not require policy change. Second, we can dismiss norm-driven pressure on host states to abandon regulations; rather, norms in civil society, at international institutions, and even within the US government reinforce host states' sovereignty. For example, US Trade Representative in the Trump administration Robert Lighthizer testified that ISDS has "sovereignty issues...I'm always troubled by the fact that non-elected, non-Americans can make a decision that a United States law is invalid...I find that offensive." The Director of the Board of Investment in Sri Lanka criticized "bitter lessons from international arbitrations and the tendency for BITs to constrain domestic policy space." In advocating for reform, the UN Conference on Trade and Development writes that "broad and vague formulations...have enabled investors to challenge core domestic policy decisions – for instance, in environmental, financial, energy, and health policies."[21]

Another alternative is that losing at ISDS arbitration motivates the host state to abandon the disputed policy to avoid future litigation costs. It is true that the probability of future ISDS arbitrations over the same disputed regulation is not zero, given the absence of "double jeopardy" and related constraints in decentralized international investment law. However, there is also a weak role of precedent (Johns, Pelc, and Wellhausen 2019). Hence, the outcome of the first arbitration over a disputed regulation is not a perfect predictor of the outcome of the second should it exist, as host states like the Czech Republic and Argentina have experienced (Wellhausen 2016). That future litigation can occur whatever the ISDS outcome is consistent with the descriptive patterns reported in Table 1. Regulatory abandonment occurs following not only host state losses, but also wins.

Our explanation for variation in regulatory change around ISDS derives from a feature and not a bug of contemporary economic globalization: integration via GVCs. The global movement of intermediate goods and services used as inputs in firms' design, branding, manufacturing, distribution, customer support, and after-sale activities has spread deeply and widely, and makes up the bulk of contemporary global trade (Kim and Rosendorff 2021). GVCs are what allow intermediate raw materials, equipment, and services to move across states with each production stage adding value to generate finished products. A result of trade, FDI, and sub-contracting activities, GVC integration carries notable host state benefits, as domestic entrepreneurs find opportunities to become suppliers along the GVC and greater access to finance

[21] USTR Lighthizer testified to Senate Finance Committee members in response to Sen. Sherrod Brown's (D-Ohio) question on whether ISDS will be removed from NAFTA (21 June 2017). Champika Malagoda, Director of Research and Policy Advocacy Department, Board of Investment of Sri Lanka (16 October 2014). UNCTAD, "Chapter 3: Recent Policy Developments and Key Issues," World Investment Report 2017: Investment and the Digital Economy (9 May 2017). All quotations sourced from Public Citizen (2018).

(Bauerle Danzman 2020).[22] On the flip side, the greater dependence of GVC-linked domestic firms on foreign investors—often their monopsony buyers—raises the stakes of any disruption to that integration to host states. Indeed, Johns and Wellhausen (2016) argue that the politically salient hardships stemming from disrupting GVC-integrated domestic firms incentivize host states to do more to mitigate political risks to the foreign investor. Given that the literature on GVC integration often uses data on trade in intermediate-level goods and services to measure the phenomenon (Antràs and Chor 2022), we propose: *The more an ISDS claimant can provoke negative shocks to trade in intermediate goods and services, the more likely the host state is to abandon the disputed regulation and move the regulatory environment in a pro-claimant direction.*

Our proposition's key mechanism is that a given MNC might choose to reduce or even shut down its activities in the host government because of the costly regulation it disputes. If this MNC performs an important role in the host's GVCs, then its choice for reducing its presence or exiting the host altogether will reduce trade in intermediates. We are agnostic as to what the specific channel for reducing trade in intermediates is, as we identify several plausible possibilities. First, an MNC impaired by a host state's regulation might reduce its intra-firm imports from its headquarters and/or from other foreign subsidiaries within the same corporate structure, consistent with the relevance of intra-firm trade in GVCs (Antràs 2020). Second, other firms along the host's GVCs might also be directly or indirectly harmed by the regulation disputed by the MNC-claimant and reduce their activities in the host as well. This reduction in firm activity in the host will then weaken trade in intermediates as well. This expected consequence is in line with the importance of inter-firm trade in GVCs (Yeung 2014). Finally, the disputed regulation might be as disruptive as to encourage the MNC-claimant and/or other affected foreign firms along the value chain from divesting or exiting the host country altogether, which will manifest in the form of reduced FDI inflows to the host (Jung, Owen, and Park 2022). In sum, there are multiple channels through which a MNC aggrieved by a host state's regulation generates negative shocks to trade in intermediates.

We further highlight several important takeaways from our theory's contribution. First, a key observable implication is that final-goods trade might not be as important to MNC leverage over host-state regulations as trade in intermediates. This is because disruption to final-goods trade can carry benefits for domestic producers, as disruption can increase the price-competitiveness and domestic market share of domestic producers.[23] If there are not any domestic firms in the same industry or product space that compete with the MNCs' exported final-goods, then disruption of final-goods exported by the MNC to the host state could certainly hurt consumers in the host state market. However, disruption in such a case would generate fewer spillovers to the host's economy, as domestic firms would not be as negatively impacted as they would if they relied on imported intermediates from the aggrieved MNC.

Second, the mechanism implied by our theory is different from the one that says well-integrated MNCs transmit regulations across borders via their supply chain connections (Schiller 2018). In our theory, the GVC-integrated ISDS claimant does not use its domestic suppliers to build coalitions, facilitate learning-based diffusion, or otherwise influence the host state's choice over whether and how to regulate. Rather, the host state is influenced by the costs to its domestic economy implied by an adverse policy environment for MNCs driving GVC integration.[24]

Third, globalization-linked regulatory constraints are typically theorized to hold for net-capital-importing developing states, and are tested on the sub-sample of developing states. In contrast, our theory does not reference the development level of the host state. Instead, we argue only that MNCs' ability to exert leverage over host state regulations is a function of the host state's integration into GVCs. This is a meaningful distinction, as GVC integration is not solely an emerging market strategy; e.g., as less developed states may seek to integrate upstream as suppliers of basic inputs, more developed states may position themselves as sites for high-tech (and high value-added) assembly of those inputs.[25] Thus, a key strength of our theory is that it applies to states across the development spectrum—particularly given that developed host states are increasingly on the receiving end of treaty-based ISDS claims (Moehlecke and Wellhausen 2022).

Is This out of Equilibrium Behavior?

A natural concern about our theory is that this is host states' out-of-equilibrium behavior. Why would states enact regulations that provoke ISDS arbitration and disrupt GVC integration?[26] One possibility is that host states engage in "efficient breach," meaning they find it sufficiently advantageous to knowingly set and commit to an unlawful regulation, and accept the costs incurred by being sued and providing compensation when the regulation is ruled a treaty violation (Pelc and Urpelainen 2015; Wellhausen 2019). From this perspective, too, observing abandoned regulations is puzzling.

An argument that host states are boundedly rational would help explain observed host state actions, and these theories have gained prominence regarding IIAs and ISDS (e.g., Poulsen and Aisbett 2013; Poulsen 2015). However, this type of outcome can occur in equilibrium, even without appealing to bounded rationality. Consider a simple model of a host state's decision on whether to enact a given regulation. The host state enacts the regulation when

$$\mathbb{E}\left[B^{p}\right] > \mathbb{E}\left[R^{p} + \tau\left(R^{p} + X\right)\right], \tag{1}$$

where B^{p} is the expected benefit of the regulation[27], and R^{p} is the expected direct cost of any arbitration the regulation provokes.[28] The term $\tau\left(R^{p} + X\right)$ is the expected cost of GVC

[22] For more benefits, see UNCTAD (2013).

[23] Indeed, this was the result of tariffs that President Trump continually trumpeted in his public comments (i.e., tweets).

[24] Note that our theory is agnostic as to the identities of the sub-national domestic actors who sound the alarm about the potential costs of GVC disruption and campaign for regulatory abandonment; trade and investment lawyers, trade and finance ministry officials, and other policy area-specific bureaucrats are all likely suspects.

[25] The World Trade Organization (WTO) acknowledges the importance of GVCs and of its measure in the form of trade in intermediates to both developed and developing countries (WTO 2022).

[26] Because we do not capture regulations that might have been changed in association with negotiations undertaken before the claimant formally invoked ISDS, we undercount potential instances in which the host state may be "chilled" due to the dispute.

[27] Expected benefits of the regulation include any welfare maximization that stems from public policy. As examples of regulations on the third section indicate, these refer to issues as varied as public health measures and development policy.

[28] Direct costs include the monetary costs incurred in the arbitration process and compensation award, if any, as well as broader reputational or other costs caused by ISDS arbitration over the regulation.

disruption, which is a function of changed investment decisions following ISDS filing, as well as other factors X.[29] A rational host state would implement a regulation if the benefit of doing so is greater than its costs. What is key is that $B^{\prime}$, $R^{\prime}$, and $\tau(R^{\prime} + X)$ are random variables with distributions. After enacting a regulation, draws from each of these distributions are realized, and the state retains the regulation when

$$B_i^{\prime} > R_i^{\prime} + \tau(R_i^{\prime} + X_i). \quad (2)$$

Even in a world where states are not boundedly rational, and can correctly determine the costs and benefits in expectation, the inequality in Equation (2) is not necessarily satisfied merely because the inequality in Equation (1) is. This is because the distributions of the random variables may be high-variance, such that (for example) $\mathrm{E}[R^{\prime}] = 0$ but in the observed draw $R_i^{\prime} >> 0$. There are many reasons to suspect that each of the distributions has substantial variance. For example, the benefits of a regulation ($B^{\prime}$) may depend on how well it is implemented, which policymakers may not perfectly control. For one thing, consider that regulations implemented by sub-national governments can trigger treaty claims.[30] Additionally, regulations designed and implemented by a previous government may be viewed as less beneficial by the present government; variation in how different elected officials assess the benefits of a regulation also increases the variance of $B^{\prime}$.

Additionally, the potential costs of ISDS ($R^{\prime}$) could fluctuate with the latent litigiousness of the state's foreign investors.[31] It could be argued that states should be well-informed about the potential costs of ISDS before passing a potentially controversial regulation, because investors would communicate to the host government their intention to file a case, if the regulation were implemented. However, threatening to sue is a costless action for firms ("cheap talk"); if threatening to file for ISDS arbitration reduces the probability that a regulation is passed, then firms will have incentives to make such threats even in response to regulations that they would not be willing to sue over. Therefore, investors' threats to file cases in the future do not resolve information asymmetries about the costs that governments will pay for implementing a given regulation.

In sum, while it is reasonable to expect that host states choose to implement regulations based on their estimations of the average cost–benefit ratio, their choice to keep the regulations is based on *observed* costs and benefits. Differences between expected and observed outcomes are not necessarily evidence of bounded rationality by host states. They are just as easily explained by the fact that both costs and benefits are random variables with non-zero variances.

Research Design

Recall our theory: Host governments will be more likely to abandon disputed regulations when they believe that failure to do so would jeopardize their economy's integration into GVCs. The implication in our setting is that when a host state is sued in ISDS, and the claimant can generate costly disruptions to GVCs, the host state is more likely to abandon the regulation. Ideally, we would be able to perform a direct quantitative test of this theory by regressing regulatory abandonment on measures of GVC integration at the ISDS case-level. Unfortunately, this approach is untenable in our setting due to the problem of selection: The regulations that are challenged by investors from highly GVC-integrated home states and sectors are likely to be systematically different from those challenged by investors from minimally integrated states and sectors. First, highly integrated investors are likely to be more ambitious than minimally integrated investors, challenging regulations that are simply more difficult to change. Additionally, knowing that they lack substantial leverage against the host state, minimally GVC-integrated investors may pick their battles by disputing only regulations that they know to be deeply flawed and for which abandonment is more likely. Both of these issues might result in comparable rates of regulatory abandonment across all challenges, which would lead us to (incorrectly) conclude that GVC integration has no effect on regulatory abandonment

Therefore, our research design focuses on creative ways to provide direct and indirect evidence to support our theory. What we can quantitatively test is a key premise of our argument, that ISDS arbitrations disrupt host states' positions in GVCs. Given quantitative evidence in support of our premise, we provide qualitative evidence consistent with the main thrust of our theory. To do so, we analyze descriptive patterns in the data via medium-n analysis, focusing on evidence of predicted correlations while taking into account alternative explanations. We complement this with a detailed proof-of-concept in an unlikely case.

Operationalizing GVC Disruption

Empirically, GVC disruption manifests as lowered levels of trade in intermediate goods and services. Our main theoretical proposition is agnostic about the mechanism(s) by which an ISDS claim could reduce trade in intermediates. Indeed, a vast literature has examined a variety of mechanisms through which foreign investor–host state disputes could impact cross-border economic activity, well beyond the choices of the aggrieved investor itself (Wellhausen 2015a; Graham, Johnston, and Kingsley 2018; Haftel and Thompson 2018; Betz and Pond 2019; Kim et al. 2019; Arel-Bundock, Peinhardt, and Pond 2020). The benefit of our theory's agnosticism is that we can consider mechanisms derived from this literature; evidence that these mechanisms impact related dependent variables imply that one or more of them should impact our dependent variable. If none of the mechanisms stemming from the literature meaningfully connect observed ISDS filings (of whatever type) and the level of trade in intermediates, then we would be skeptical of the validity of our broader theory.

First, we consider a mechanism *at the national-level*, which is consistent with influential scholarship that links ISDS to aggregate, national-level FDI flows (Allee and Peinhardt 2011; Aisbett, Busse, and Nunnenkamp 2018; Kerner and Pelc 2021). Next, we draw on the fast-growing literature theorizing around heterogeneous effects. Following Jung, Owen, and Shim (2021), we consider heterogeneous effects *across industries*, based on the mechanism that an ISDS claimant would be most likely to disrupt trade in intermediates in its own industry. In fact, our setting matches the

[29] For example, reduced trade and/or divestment following arbitration could generate losses in tariff/VAT revenue.

[30] Sub-national (in)action was a key trigger for the wave of ISDS arbitrations filed in the wake of Argentina's 2001/2002 peso devaluation and financial crisis (see Online Appendix 2.5).

[31] Our theory implies that, all else equal, large GVC-linked foreign investors would be more likely to file for ISDS, although research design constraints mean we cannot test this implication. In general, large MNCs account for a disproportionate amount of public ISDS filings (Van Harten and Malysheuski 2022). It is also the case that a bias toward large MNCs fits with the considerable expense of arbitration (and thus higher $R^{\prime}$ in expectation) (Franck 2019).

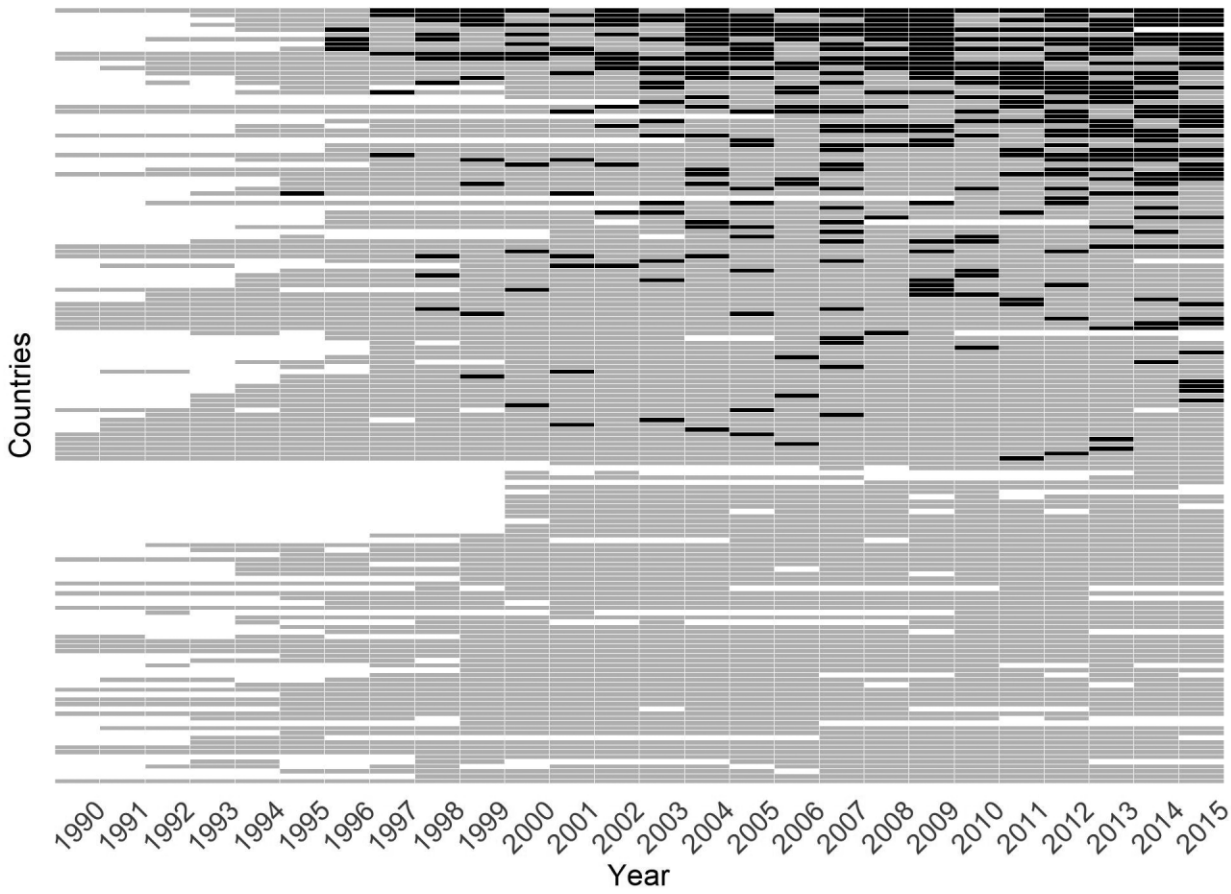

Figure 1. Distribution of ISDS cases across host states and time. Each row is a host state and each column is a year. White cells indicate the state-year observation is missing in our full dataset; grey cells indicate the host state was observed that year, but was not filed against in ISDS; and black cells indicate the host state was observed that year and it was filed against.

theory in Jung, Owen, and Shim (2021) quite well. The authors establish that risks to one MNC imply risks to co-industrial MNCs conditional on the industry having low fixed asset intensity. We expect that the activities captured by trade in intermediates have, by the nature of GVC integration, low fixed asset intensity. Last, we explore the potential for shared risks and thus heterogeneous effects of GVC disruption *across investor nationalities* (Wellhausen 2015b; Gertz, Jandhyala, and Poulsen 2018; Cruz and Graham 2021). However, we are more skeptical of the relevance of this mechanism; it is not obvious how a typical on-the-books regulation would generate risks for one but not another group of co-national investors. We design tests based on *national-level, industry-level, and nationality-level* mechanisms.[32]

Quantitative Evidence

We examine trade in intermediate goods and services as our outcome variable, a standard measure of GVC activity (Antràs and Chor 2022). We begin by assembling panel datasets of states' intermediate imports. Intermediate imports are typically inputs into domestically manufactured goods. We focus on the host state's intermediate imports, rather than exports, because ISDS cases reveal information about the business environment in the host state, and this information should have the greatest impact on business activity that takes place within the host state. Our expectation is that foreign upstream suppliers would rationally reduce their exports of intermediate goods to the host state if and when they intend to reduce the extent to which their value chain relies on business conducted in the host state.[33]

Our key independent variable is an indicator of ISDS arbitrations initiated against a host state in a given year. Our final sample has 169 states, observed annually between 1990 and 2015. Figure 1 plots the distribution of ISDS arbitrations in our sample across host states and time. Our quantitative tests cover the full set of ISDS arbitrations in Figure 1, and not the subset of arbitrations in which a specific regulation was disputed. Why? Our task is to establish that ISDS arbitrations are associated with decreases in trade in intermediates, whatever the underlying nature of the dispute. We do not have compelling priors on what relationship, if any, exists between filed ISDS arbitrations and the likelihood that a specific regulation is in dispute. Nor do our data suggest obvious empirical patterns (see Online appendix 1). Thus, it would be unconvincing to make an inferential leap from patterns in the subset of regulation-triggered ISDS arbitrations to the set of ISDS arbitrations as a whole.

As previously explained, we examine trade in intermediates *in total*, *disaggregated by industry*, and *disaggregated by*

[32] Heterogeneous effects *at the firm-level* would be consistent with the finding that firm-level characteristics influence ISDS claimant's future investment decisions (Wellhausen 2019). In our theory, the total costs facing a host state are most relevant, so we focus our (scarce) research resources on aggregate measures that combine direct and indirect costs, without attention to heterogeneity in proportions.

[33] This expectation holds whether or not suppliers and buyers are part of the same business unit.

nationality (investor home state). The outcome variable at the *host state-year* level is the logged value of the host state's imports of intermediates, drawn from the OECD's trade data, and the key independent variable is a binary indicator of whether an ISDS arbitration was filed against the host state in that year. Our second unit of analysis is at the *host state-claimant industry-year* level. Here, we examine thirty-three distinct industries as defined by two-digit International Standard Industrial Classification (ISIC) codes. The full set of industries (see Online appendix table A-6) speaks to the broad importance of trade in intermediate goods and services, the latter becoming an increasingly important feature of global trade (Baccini, Osgood, and Weymouth 2019). The key independent variable is a binary indicator of whether an ISDS arbitration was filed against a host state in a given industry in a given year. To create this variable, we first isolate each industry (at the ISIC two-digit level) that UNCTAD lists as associated with each ISDS arbitration. While most cases are associated with a single industry, some are associated with and thus coded as occurring in as many as four. Our third panel dataset is coded at the *host state-claimant home-year* level. While, most cases are filed under treaty protections based on a single home state, some are associated with and thus coded as occurring in more than one unit.

Estimation Strategy

Recent studies have shown that two-way fixed effects models perform poorly in settings where treatment is applied to different units at different times, and in settings where treatment "turns off" and back on again over time (Callaway and Sant'Anna 2020; Goodman-Bacon 2021). In brief, they generate inappropriate comparisons: Units treated at time $t-1$ serve as the comparison group for units treated at time t, resulting in an estimate that does not map to any desired estimand. As our treatment—ISDS arbitration—is applied to different units at different times, and turns on and off again for the same units over time, standard fixed effects estimators are not appropriate.

Instead, we use the non-parametric estimator developed by (Imai, Kim, and Wang 2021, hereafter IKW). The IKW estimator involves three main steps: first, each treated observation it is matched with a set of other observations M_{it} that had the same treatment history for the previous L time periods, but did *not* receive treatment at time t. Next, the set is "refined" to ensure that the counterfactual observations are similar to the treated observations regarding their covariate and outcome variable histories. The refinement can be done using either inverse propensity score weighting (which upweights more similar counterfactual observations) or Malahanobis distance-based matching procedures (which exclude poor matches from the matched set). Finally, the counterfactual sets for each treated observation are inserted into the following non-parametric difference-in-differences estimator:

$$\hat{\delta}(F,L) = \frac{1}{\sum_{i=1}^{N}\sum_{t=L+1}^{T-F} D_{it}} \sum_{i=1}^{N}\sum_{t=L+1}^{T-F} D_{it}\Big\{(Y_{i,t+F} - Y_{i,t-1}) - \sum_{i' \in M_{it}} w_{it}^{i'}(Y_{i',t+F} - Y_{i',t-1})\Big\}. \quad (3)$$

The intuition behind the IKW estimator is that each treated observation is matched with a set of other observations (which are highly comparable on past treatment, outcome, and covariate histories) that serve as counterfactuals. The term in curly brackets represents the difference-in-differences estimate calculated for each treated unit by comparing its pre- and post-treatment outcomes with those of the counterfactuals;[34] the estimated quantity, $\hat{\delta}$, is simply the average of the individual diff-in-diff estimates and can be interpreted as a weighted average treatment effect on the treated (ATT). L is the researcher-determined length of the treatment history, and F is the researcher-determined number of time periods post-treatment at which the outcome is measured. We set $L = 4$ and report estimates of $\hat{\delta}$ in the year the ISDS case was filed as well as the four subsequent years. We also report the results for both the matching-based refinement and the inverse propensity score-weighting refinement.[35] Standard errors are calculated by a block bootstrapping procedure with 1,000 iterations. All analyses were implemented using IKW's `PanelMatch` `R` package.

The IKW estimator is ideal for our setting, as it avoids inappropriate comparisons while being tolerant of missing data and allowing for covariate adjustment. Though the estimator is non-parametric, we still adjust for confounders: Gross Domestic Product (GDP) growth and GDP per capita (from the World Bank's World Development Indicators), Regime type (measured by V-Dem's additive polyarchy index), FDI stocks (from UNCTAD), the number of bilateral investment treaties to which the state is party (logged, from UNCTAD), and general economic openness (measured by the KOF Overall Globalization index).

Results

Figure 2 displays results. The right panel reports results based on the *host state-year* level of analysis. The plot shows the effect of receiving an ISDS claim on a state's (logged) total intermediate imports across all industries. In this specification, we do not find support for our premise: ISDS arbitration has no statistically distinguishable effect on host states' overall intermediate imports. This is regardless of whether the matched sets are refined via inverse propensity score weighting or Mahalanobis distance matching. These null results place an important upper bound on ISDS arbitration's ability to disrupt GVCs.

Null results at the *host state-year* level of aggregation are not entirely surprising, as past work has found that investors react much more strongly to disputes occurring within their own industry (Jung, Owen, and Shim 2021). To this point, the left panel reports results at the *host state-industry-year* level of analysis. The plot shows the effect of receiving an ISDS claim on the host state's (logged) intermediate imports in the industry of the claimant that filed the dispute.[36] Here, receiving an ISDS claim does have a negative and significant impact on GVC trade within the industries involved in the dispute. Regardless of whether the weighting or matching-based refinement is used, the estimated ATT of ISDS arbitration on industry-specific imports is negative and significant in the year after the case was filed. The effect size is also substantively meaningful, constituting a reduction in imports of approximately 12 percent after 1 year. Further, there is evidence that the disruption is not short-lived: Even 4 years

[34] If the inverse propensity score weighting refinement is used, then $w_{it}^{i'}$ represents the non-negative weight given to each observation in the matched set. If the matching-based refinement is used, then all observations in the matched set are weighted equally, thus $w_{it}^{i'} = \frac{1}{|M_{it}|}$.

[35] Online appendix figure A-2 demonstrates how these refinements create covariate balance across treated and non-treated units.

[36] Results cover multiple industries and multiple claimants as appropriate; see previous discussion of coding.

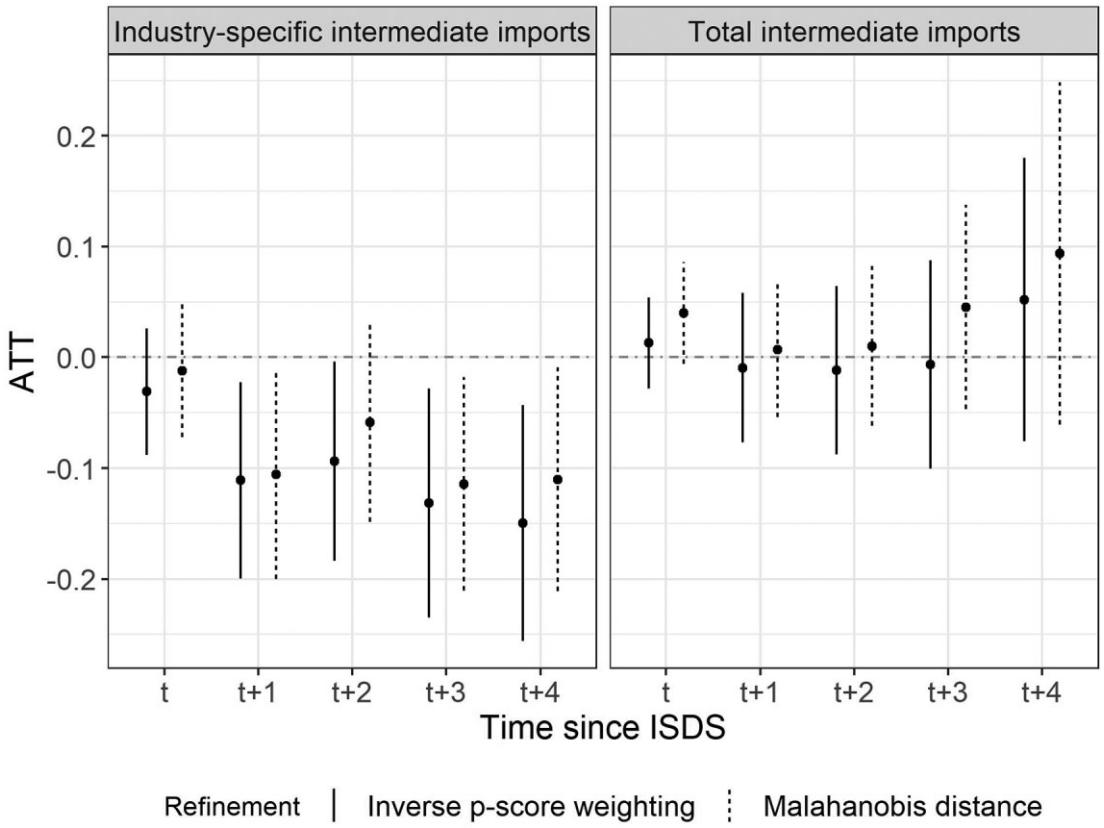

Figure 2. ISDS disrupts global value chains in the associated industries, but not in the economy overall. ATTs estimated via Equation (3) and presented alongside 95 percent confidence intervals. Results can be found in tabular form in Online appendix tables A-7 and A-8.

after the ISDS case was initiated, the negative effect on intermediate imports in the relevant industr(ies) remains significant and of similar magnitude. Results on the *nationality-level* mechanism are reported in Online appendix figure A-6. We find that ISDS filings may have some negative effect on bilateral trade in intermediates, but it is sensitive to model specification. Thus, the industry-level mechanism is our most important quantitative evidence, which establishes the credibility of our theory by substantiating a key observable implication.

Robustness

Does ISDS arbitration specifically disrupt imports of intermediates at the industry level, or does it simply disrupt all trade in that industry? If intermediate imports are merely proxying for total imports, then the effect that we find may not be one of GVC disruption and may be spurious. As a placebo test, we re-estimate the previous analyses taking as our outcome variable the host state's (logged) imports of final goods rather than of intermediates. Final goods are typically imported for domestic consumption, meaning that exporters of final goods should be more interested in their trade partners' consumer markets than their property rights protections. Thus, if we find that ISDS arbitration negatively affects host state imports of final goods as well, it would cast doubt on our proposed mechanism. The results, presented in Figure 3, provide some reassurance: Unlike the results for industry-specific intermediate trade, receiving an ISDS claim seems to have no significant negative relationship with the host state's imports of final goods in the affected industry or overall. These null results indicate that ISDS leads upstream suppliers in a given industry to divert their GVCs away from the host state, rather than simply depressing trade flows (of whatever type) in the aggregate.

Specialists might worry that the many ISDS cases filed against Argentina triggered by the 2001 Emergency Law expired in 2018 and coded as 1 for an abandoned regulation could be driving our results. In Online Appendix 2.5, we show our results are robust to excluding Argentina. Nevertheless, those cases belong in the sample: While numerous, they are not qualitatively different, and we should therefore expect them to have the same average effect on GVC trade.

Overall, our results corroborate previous findings that a firm's mode of integration with the global economy shapes its preferences. As Kim et al. (2019) show, MNCs and exporters deeply integrated into GVCs are much more concerned about investment protection than exporters of finished goods and domestic firms.[37] Our findings indicate that the importance that highly-integrated firms grant to investment protection may also be associated with their ability to disrupt trade in intermediates in the host state, especially at the industry-level.

Qualitative Evidence

We now provide evidence to support our core argument that threats to GVC integration are associated with a

[37] Highly-integrated firms themselves acknowledge an important connection between GVCs and investment protection. As a United States Council for International Business (USCIB) document from 2014 states: "A key message is that in this increasingly GVC-driven world, effective investment protection and promotion is a vital enabling framework." (USCIB 2014).

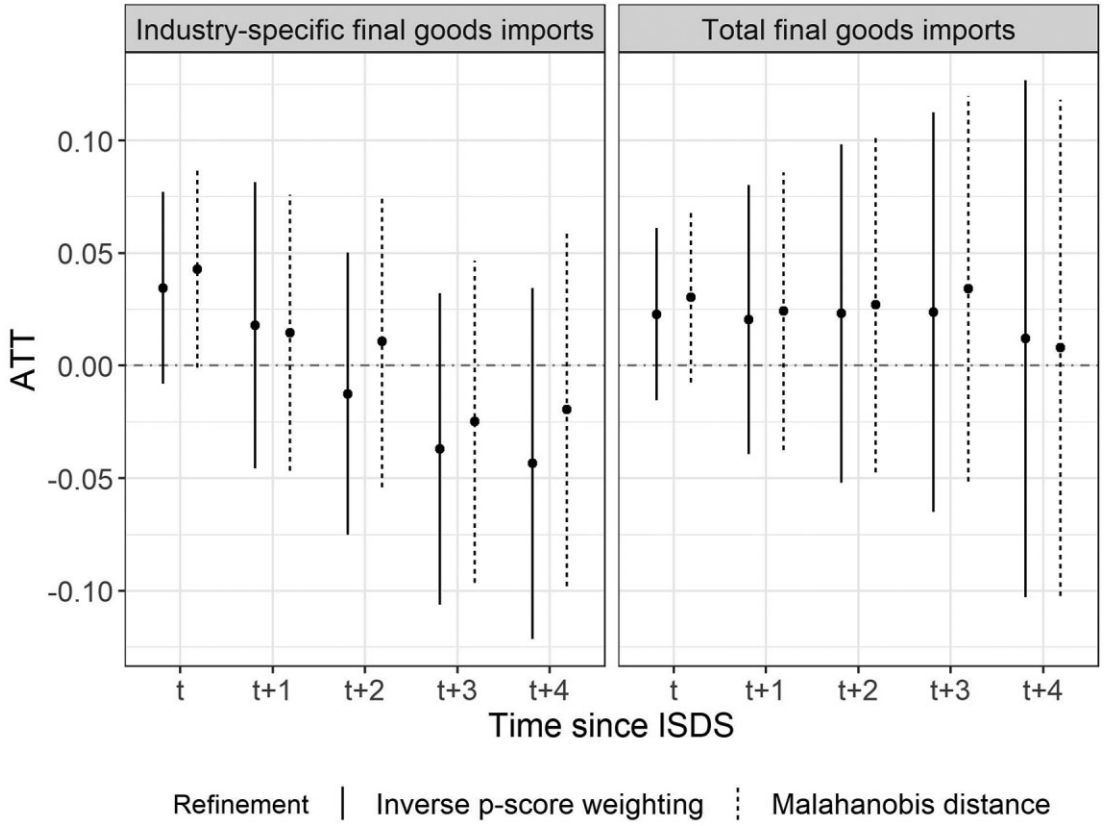

Figure 3. ISDS has no effect on total or industry-specific trade in final goods. ATTs estimated via Equation (3) and presented alongside 95 percent confidence intervals. Results can be found in tabular form in Online appendix tables A-11 and A-12.

Table 2. Pro-state ruling + abandoned regulation: description and (count).

Host state	*Home state*	*Industry*	*Filing Year*
Argentina (4)	Belgium (1)	Agriculture, forestry, and fishing (2)	1992 (1)
Canada (3)	Canada (3)	Finance and insurance (3)	1995 (1)
Egypt (1)	Chile (1)	Information and communication (1)	1999 (2)
Ghana (1)	Croatia (1)	Manufacturing (4)	2000 (1)
Hungary (1)	Germany (2)	Mining and quarrying (1)	2002 (1)
Moldova (1)	Greece (1)	Professional and administrative services (1)	2003 (1)
Malaysia (1)	Luxembourg (1)	Transportation and storage (1)	2004 (1)
Saint Kitts and Nevis (1)	Netherlands (1)	Utilities (6)	2005 (3)
Slovenia (1)	Poland (1)	Wholesale and retail trade (1)	2006 (1)
Spain (1)	United Kingdom (2)		2007 (1)
Turkey (2)	United States (6)		2008 (2)
United States (3)			2009 (1)
			2011 (1)
			2012 (2)
			2013 (1)

higher likelihood of pro-claimant regulatory change by the host state. We employ a medium-*n* analysis, in which we consider whether descriptive statistics in our data are consistent with observable implications of our argument, followed by the presentation of a proof-of-concept case.

In 20 instances (20.4 percent of applicable cases), the host state abandoned the disputed regulation despite having won at ISDS. This outcome is especially surprising, given the absence of legal requirements, contrary international norms, and the common-sense notion that winners are vindicated.[38] We examine the parties in these abandonment-despite-winning cases to consider whether patterns in their observable characteristics are so stark as to point to an alternative key explanation for variation. Table 2 demonstrates heterogeneity that strongly suggests that explanations based on host state, home state, industry, and/or timing are insufficient. The twelve host states include nine OECD states, such that abandonment-despite-winning is not obviously

[38] It is more common for host states to abandon the regulation when they lose (34.5 percent of applicable cases; chi-squared test p-value = 0.03). See again Table 1.

correlated with more economically vulnerable hosts. Heterogeneity across home states suggests that this is not only a story of US investors' leverage. Cases occur in the primary, secondary, and tertiary sectors, weakening an explanation based on investor mobility.[39] Lastly, arbitrations were filed throughout the study period, such that learning (by claimants or host states) or other time effects are also not an obvious explanation.

There is also substantial heterogeneity concerning the kinds of regulations that are disputed by MNC-claimants and then abandoned by host states after pro-state rulings. These disputed regulations come from the Executive, the Legislative, and the Judicial powers in the multiple host states. Further, host states abandon such regulations through amendments, repeals, replacements, expirations, and court actions. For instance, consider cases as diverse as *Eli Lilly v. Canada* (ICSID UNCT/14/2) and *Cementownia v. Turkey I* (ICSID Case No. ARB(AF)/06/2). In the former, the American pharmaceutical company used protections under NAFTA to argue that the doctrine adopted by Canadian Federal courts regarding patent law was at odds with that in foreign jurisdictions and with Canadian law itself. Following a pro-state ruling in 2017, the Canadian Supreme Court overturned the disputed precedent, effectively making it easier for pharmaceutical companies to obtain certain patents. In the latter, Polish investors activated the ISDS clause under the Energy Charter Treaty to sue Turkey for the allegedly unlawful termination of concession agreements of two hydroelectric plants. The case was dismissed by the tribunal in 2009. In 2013, the Turkish legislature amended the originally disputed law by the investor toward a pro-market direction. In summary, we see enough variation to exclude several plausible alternative explanations for regulatory abandonment precisely in our most puzzling subset of cases (Table 2).

Can our arguments about threats to GVC trade better explain the outcomes of these otherwise surprising cases? Data constraints and inferential limitations due to selection processes mean that we cannot model the causes of individual abandoned regulations. Nonetheless, correlational relationships are suggestive of the importance of GVC trade. Online appendix 3 presents evidence that intra-industry GVC trade is highest in the subset of abandonment-despite-winning cases (Online appendix figure A-5). Additionally, Online appendix 3 shows that correlations are consistent with a home state-level and a national-level mechanism.

To provide the most compelling, direct evidence of our theory in action, we present a proof of concept using one of the most-unlikely cases from Table 2—filed by a foreign investor with limited asset mobility, against an OECD host state, and resolved in 2016, near the end of our study period: *Mesa Power v. Canada*. The choice for this case thus provides a hard test for our theory. In its October 2011 filing, the American firm Mesa Power alleged that three specific components of Ontario's Feed-In-Tariff (FIT) program, pursuant to its Green Energy Act of 2009 (GEA), unlawfully harmed its wind farm investments initiated in 2008: (1) the January 2010 contract between Ontario and a consortium led by Samsung C&T that granted this group of Korean firms preferential access to the province's grid; (2) the June 2011 "sudden and discriminatory" regulatory changes that allowed competitors to jump ahead of Mesa Power's projects; and (3) and the upcoming January 2012 increase in local content requirements (Nelson 2013).[40] Although Canada won in March 2016, Ontario had already abandoned parts of the disputed regulations before 2016; in 2017 Ontario's energy minister gave a public "mea culpa" admitting mistakes in the GEA (Hill 2017); and Ontario fully repealed the GEA in January 2019.

We find strong evidence that wind energy *industry-level* threats to considerable GVC integration were a key motivation for Ontario to abandon the disputed regulations. More than sixty-five industries are involved in wind energy GVCs, including thirty-seven industries manufacturing the more than 150 components and 8,000 individual parts of a single wind turbine, as well as firms dedicated to non-manufacturing activities, like project development and construction.[41] Ontario's 2009 GEA legislation had a specific goal of deepening local GVC integration in the wind energy sector. This status quo was consistent with the worldwide trend that GVCs in renewable energy and wind in particular are highly internationalized and verticalized (Meckling and Hughes 2017; Nahm 2017). By 2015, the province had witnessed the creation of nearly 12,000 jobs in the sector, expanded local manufacturing capacity, and reduced import dependence (Brown and Shourthouse 2017, 44).

More specifically, according to a 2017 report commissioned by the Canadian Wind Energy Association, Ontario officials prioritized adverse consequences for the aforementioned existing and future GVC integration in their regulatory decision-making (Brown and Shourthouse 2017). Given that disrupting wind farm investments like Mesa Power's could cause cascading disruptions to upstream and downstream firms' commercial interests, it follows that Ontario would abandon regulations that credibly threatened its industrial policy goals irrespective of their status under international law. Indeed, outside of a legal setting, other wind farm investors disapproved of GEA regulations as they allowed Ontario to arbitrarily dictate the form, pricing, and criteria for approving projects (Holburn, Lui, and Morand 2010, 471–73). Even the Samsung C&T-led Korean consortium, whose preferential treatment was part of Mesa Power's claims, was frustrated: Samsung's vice-president compared Ontario's level of regulatory uncertainty to that in developing countries (Hamilton 2011).

One very precise threat in this context was potential disruption to the supply chain for turbine nacelles manufacturing, a component for which Ontario remained wholly dependent on imports (Brown and Shourthouse 2017, 43). In May 2014, the German Siemens and the Korean consortium signed onto Ontario's massive K2 Wind Project[42], which extended the kinds of local manufacturing and production requirements "hard-wired" into the Korean consortium's contract to Siemens as well (Holburn 2012, 644). The K2 Wind contract established that turbine nacelles would be imported from a Siemens' factory in the United States (WPED 2014). If Mesa Power and other investors in wind farms like K2 and others pulled investments because the government did not abandon the disputed regulations, then demand for blades, towers, and other equipment manufactured locally by Siemens and others would decline. Ultimately, disruptions could cascade to the imports of nacelle components, for which no immediate substitute existed. The July 2017 closure of one of Siemens' local

[39] In order to facilitate visualization, we aggregate MNC-claimants' industries following the aggregation system provided by the ISIC guidebook (The Department of Economic and Social Affairs of the United Nations Secretariat 2008, p. 43).

[40] See case's notice of arbitration in: https://www.italaw.com/sites/default/files/case-documents/italaw1203.pdf.

[41] At the six-digit North American Industry Classification System (NAICS) level (Brown and Shourthouse 2017).

[42] https://k2wind.ca/.

turbine manufacturing plants is precisely the kind of event that could have heightened policymakers' concerns about GVC disruption (The Postmedia News 2017).

Now, one plausible alternative explanation is that Canada's obligations under international trade law and not pressure from the market is the proximate cause of Ontario's abandonment-despite-winning. Ontario's renewable energy legislation triggered Japan to sue Canada at the WTO (DS412) in September 2010, a year before Mesa Power's ISDS filing, followed by the EU in September 2011 (DS426), one month before Mesa Power's ISDS filing. In December 2012, the WTO panel ruled against Canada; in May 2013, the ruling survived Canada's appeal; and in June 2014 Canada confirmed that Ontario, and thus Canada was in compliance.[43] Both Japan and the EU disputed the local content requirement that was one part of Mesa Power's claim, calling it an unlawful trade-related investment measure (Timmins, Wagner, and Sahadev 2013). Lauding the WTO ruling and in support of the Japanese and the EU's demands, the global wind industry trade association specifically referenced GVCs, citing the economic inefficiencies "of the local content requirement rules in a world where supply chains are globalized" (Global Wind Energy Council 2013, 6).[44] However, while compliance in ISDS requires only compensation, compliance with WTO rules requires abandonment of the disputed regulation. Additionally, international norms coincide with WTO compliance, and Canada's loss fits the common-sense norm that losers are not vindicated. As such, the three factors that aid us in isolating the GVC mechanism for abandoning-despite-winning at ISDS are not applicable in the context of these WTO disputes.

Nevertheless, even assuming that Canada's loss at the WTO fully explains Ontario's 2014 abandonment of the local content requirement, the ruling is not sufficient in itself to explain why Ontario went on to abandon the full set of regulations disputed by Mesa Power. Recall the timeline: After Canada's compliance with the WTO ruling, Ontario went on to amend the FIT program[45] in ways consistent with Mesa Power's preferences (both before and after Canada's 2016 ISDS win). Then, Ontario offered its "mea culpa" for the GEA as a whole in 2017, and fully repealed it in 2019. That these actions were not required by the WTO suggests that the binding WTO legal requirements or related norms are not in themselves sufficient to explain Ontario's full set of regulatory abandonment-despite-winning at ISDS. Rather, the events made visible by the *Mesa Power v. Canada* ISDS arbitration are fully consistent with our core argument that potential threats to GVC integration influence host governments to abandon their chosen policies, especially given the fact that the full set of disputed regulations applies to MNCs engaging in FDI (like Mesa Power, but also Siemens and Samsung), and not only to foreign firms engaging in trade.[46]

Conclusions

This article examines the effects of GVC integration on domestic regulatory policy, using ISDS as a setting to identify controversial regulations and their MNC challengers. When faced with ISDS arbitration, we argue that host states weigh the cost of forgoing their chosen regulatory policy against the potential cost of GVC disruption. Quantitatively, we find support for a key premise of our theory: that ISDS arbitrations disrupt GVC integration in the host economy. The effect is substantial at the level of the claimant's industry, as we find a 12 percent reduction in imports of intermediates one year after the ISDS claim is filed.

Our qualitative medium-*n* analysis yields evidence consistent with observable implications of the core argument. The most puzzling cases in our dataset—those in which the host state abandons a regulation even when winning the ISDS arbitration—are those correlated with the highest levels of GVC integration. These also display significant heterogeneity across other more obvious explanations. This is further supported by our proof-of-concept using the *Mesa Power v. Canada* ISDS arbitration. Taken together, the evidence supports the article's claim that a MNC that can credibly disrupt GVC integration in the host state has more leverage to get the host state to abandon what it sees as an unwelcome regulation.

GVC integration has incredible potential to spur economic growth and development in host states. Benefits include resources to upgrade production processes; reliable long-term partners; increased employment both directly and through spillover effects; technology transfer; opportunities to move up the supply chain; economic diversification with the promise of reliable export markets; access to finance; and more. It follows that GVC integration has been a particularly sought-after goal of host states choosing economic openness. Yet, our findings imply that states benefiting from this kind of integration are those especially vulnerable to MNCs' power.

The ISDS setting has characteristics that could mitigate the dynamic of an integration-sovereignty trade-off. In ISDS, both claimant MNCs and respondent host states have agreed *ex ante* to third-party arbitration. The burden is on claimants to prove that a disputed regulation violates their property rights or constitutes an unlawful action by the host state under the applicable treaty. Host states can be found "innocent," such that the regulation is not ruled illegitimate. Host states can be found "guilty," meaning they are required to pay compensation to the claimant for costs associated with the unlawful regulation. Crucially, even when found "guilty," host states have no legal obligation to abandon the disputed regulation. Furthermore, although international organizations and non-market actors have found much to criticize about ISDS, those same actors encourage host states not to abandon disputed regulations. Despite all this, we document that a wide swath of host states sued in ISDS—found "innocent," "guilty," or even before any resolution is reached—have abandoned the disputed regulation. Neither law nor norms can explain this. Thus, our novel data alone helps identify those cases in which this touted benefit of ISDS design proved irrelevant.

One way to look at our findings is to imagine a bright side for international coordination. If deep GVC integration can push international regulatory coordination, then it may provide a structural counterweight to contemporary challenges to the legitimacy of international coordination (Johns, Pelc, and Wellhausen 2019). Threats to maintaining heterogeneous regulations could push host states to instead

[43] See Communication from Canada to the WTO at https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/412-19.pdf&Open=True.

[44] Two exporters of turbine nacelles components to Ontario (other than Siemens), the American General Electric and the Danish Vestas (David and Fravel 2012), had criticized the local content requirement since at least the time of Mesa Power's ISDS filing (Romano 2011).

[45] For an overview of the FIT program, see https://www.ieso.ca/en/Sector-Participants/Feed-in-Tariff-Program/FIT-Archive.

[46] Our findings in this section are also consistent with Moehlecke (2020)'s, which establishes that it is an error to assume that governments chill all regulatory policy in a sector in response to precise legal challenges to individual regulations in that sector.

choose regulations that improve international public goods provision. Whether GVC-integrated MNC claimants do such public-good-enhancing work as they sue states is, we believe, far from obvious. A different normative take on our findings is that deep economic integration risks sovereignty erosion in ways not in the interests of aggregate welfare. From that perspective, the growing scholarship finding that economic integration is consistent with sovereignty could be summarized as a literature focused on "loopholes." The term "loophole" need not be flippant: Surely, documenting, and explaining the savvy means by which states maintain autonomy despite the constraints of economic globalization are important in understanding outcomes in the international political economy. Still, there remains the nagging adage that the exception(s) prove the rule.

Finally, our results highlight the challenges ahead of states in a global economy fraught with threats to further integration. Since the end of our sample period, a variety of regulations have generated high profile foreign investor claims in ISDS. For example, Huawei filed against Sweden over its national security regulations.[47] TC Energy filed against the United States for USD 15 billion in compensation for the (re)canceled Keystone pipeline, and Alberta filed for USD 1 billion in its status as an investor in the project.[48] Foreign investors are filing claims over regulations undertaken in the context of the COVID-19 pandemic.[49] Ukraine's legislature voted unanimously to expropriate Russian-owned property, a regulation that under the pre-invasion status quo would certainly have been disputed at ISDS arbitration facilitated by the Ukraine–Russia BIT.[50] At the same time as this swell of controversial ISDS filings and threats, the COVID-19 pandemic and the Russian invasion of Ukraine have catalyzed home government efforts to bring production structures back from overseas, highlighting that integration can be seen as economically and politically costly by powerful home states (Gilpin 1975). Also, firms and financial markets are reconsidering the net benefits of highly internationalized production processes, as states' increasingly explore the asymmetric structure of private economic networks to their own benefit (Farrell and Newman 2019), although not without limitations (Gjesvik 2022). Sovereignty would face a perfect storm if and when interests on the part of home governments and MNCs in GVC integration diminish, the competition for GVC-enabling investment intensifies, and foreign investors' claims in ISDS challenge governments' keystone regulations.

Supplementary Information

The replication code and data underlying this article are available in the *International Studies Quarterly* data archive.

[47] *Huawei v. Sweden* (ICSID ARB/22/2).

[48] *TC Energy and Transcanada v. United States* (ICSID ARB/21/63). "Keystone XL trade challenge: Minister Savage." Alberta Government press release, 9 February 2022. https://www.alberta.ca/release.cfm?xID=81862B613462A-FE6C-F515-ABFDDD9B2520DC66. Transcanada had previously settled a claim filed in 2016, after the Trump administration approved the project (ICSID Case No. ARB/16/21). On climate change regulations, see inter alia *RWE v. Netherlands* (ICSID ARB/21/4).

[49] Inter alia: *COVINCA v. Peru* (ICSID ARB/21/45); *Vinci Highways v. Peru* (ICSID ARB/21/60); *ADP and Vinci Airports v. Chile* (ICSID ARB/21/40); *Loftleidir CV v. Cabo Verde* (ICC proceeding). See IAReporter.com for more information.

[50] The law states that property is to be seized "without any compensation for its value." 10 March 2022. Ukrainian investors have filed claims resulting from Russia's 2014 annexation of Crimea, and tribunals have ruled that the Ukraine–Russia BIT applies with Russia as the host state. On FDI in the context of territorial disputes, see Carter, Wellhausen, and Huth (2019).

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