Article


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INTRODUCTION

Tax scholars generally agree that the years since the 2008 financial crisis have seen the emergence of a new international tax order, characterized by an increase in transparency, cooperation, and coordination among countries in matters of international tax policy.1 Such increased cooperation and coordination can be seen, for example, in recent global talks and moves towards agreement on a global minimum tax.2 A central—if not the central—component of this new order is the Organisation for Economic Cooperation and Development (OECD) and G20 Base Erosion and Profits Shifting (BEPS) Project, which was developed starting in 2013, and the BEPS Inclusive Framework, which was established in 2016.3 The BEPS Inclusive Framework is a multilateral agreement through which member countries commit to reforming their domestic tax laws and treaties to reflect the standards and policies articulated by the Framework. Its goal is to curtail tax avoidance, profit shifting, and other harmful behaviors by multinational enterprises (MNEs) that erode domestic tax bases and drain tax revenues. Spearheaded by the OECD at the request of the G20, the BEPS Inclusive Framework is undoubtedly one of the most important recent developments in international taxation.4 It is having clear impacts on domestic and cross-border tax law regimes. The effectiveness and reach of the BEPS Project and Inclusive Framework will impact how much revenue nation states can raise, the global distribution of tax revenues, and the capacity of welfare states around the world.

While the BEPS Project and Inclusive Framework are widely regarded as an important step in preventing harmful tax base erosion and non-taxation of MNE profits, they have also been criticized as failing to prioritize developing-country interests and creating undue costs and burdens for lower-income and developing countries. Yet a large number of such countries have signed on to the BEPS Project by joining the Inclusive Framework. This Article investigates how

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these countries came to join the Inclusive Framework, despite the clear burdens, acknowledged limitations, and questionable benefits that it presents to some countries. It uses event history regression methods to investigate the decisions of these countries to join the Inclusive Framework in order to better understand the mechanisms underlying the proliferation of the new global tax consensus.5

The proliferation of BEPS Inclusive Framework membership through the work of the OECD and G20 might appear to reflect the emergence of a shared “world polity” in global tax matters.6 The world polity theoretical perspective—which derives from neo-institutionalist theory in sociology and organizational studies7—emphasizes how international organizations and non-governmental organizations have come to play an important role in generating blueprints, norms, scripts, and shared global cognitive models that result in the emergence of a shared world culture, despite differences among countries.8 World polity theory interprets global relations and structures as reflective of distinctive world-cultural norms and models that are constituted and shaped by international organizations and nongovernmental organizations (NGOs). This shaping ultimately results in isomorphism in policy adoption even across differently situated countries as they seek legitimacy and credibility.9 The world-polity perspective has been applied to analyze various global phenomena, including the adoption of environmental policies and the proliferation of human rights treaties.10

The world polity analytical perspective should clearly be taken seriously in the international tax case: the OECD has long acted as a de facto “world tax organization,”11 creating policy, providing model treaties, and setting the ground rules for international tax negotiations and policymaking.12 The large number of


countries joining the BEPS Framework reflects a clear case of growing policy convergence and isomorphism facilitated and encouraged by the OECD with the backing of the G20. Moreover, tax scholars have frequently described the OECD’s influence in international taxation in terms of norms, which are important in world polity theory. If the world polity analytical framework does hold power in describing the recent global tax changes, this could have important implications. For example, if countries are agreeing to global tax norms and blueprints primarily to gain legitimacy on the world stage, one might ask whether the new Framework is really in countries’ best interests. It is also possible that a “loose coupling” between the decision to join and subsequent compliance may appear, particularly where the technical implementation of institutionalized rules conflicts with a country’s other goals.

In order to better evaluate the application of world polity theory to global taxation, it is essential to uncover the underlying mechanisms and processes by which global tax norms and blueprints have become institutionalized and adopted. Recent work has taken seriously the task of uncovering such underlying mechanisms in transnational processes. For example, following the delineation of pathways set forth by DiMaggio and Powell, Wotipka and Tsutsui identify and attempt to tease out the specific effects of three distinct pathways—normative, mimetic, and coercive—in nation states’ ratification of human rights treaties. This Article follows this approach to investigating the pathways leading to countries’ decisions to join the BEPS Inclusive Framework, specifically probing whether normative, mimetic, or coercive pathways have driven the unfolding of this world tax polity.

I ultimately find support for the notion that participation in the new tax world polity has occurred through both normative and coercion-based pathways. With respect to normative pathways, I find that participation in prior OECD tax initiatives—in particular, the OECD Global Forum on Transparency and Information Exchange (the OECD Global Forum), a longstanding multilateral OECD initiative to increase tax transparency—was correlated with an increased hazard of subsequently joining the BEPS Inclusive Framework. (Following the nomenclature for event history and survival analysis methods, “hazard” refers to

13. Mason, supra note 1, at 354, 370 (characterizing the OECD BEPS Project as having “reflected and effectuated” a new “full taxation” norm); Hugh J. Ault, Reflections on the Role of the OECD in Developing International Tax Norms, 34 BROOK. J. INT’L L. 757 (2009) (discussing OECD’s work process “as reflected in . . . projects in which the OECD could be said to be developing international tax norms”).

14. Paul J. DiMaggio & Walter W. Powell, The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields, 1983 AM. SOC. REV. 147, 155 (1983); Meyer & Rowan, supra note 7, at 341 (noting how formal organizational structures and actual practices of organizations may be “loosely coupled” from one another in order to maintain “ceremonial conformity”).

15. See generally MARTHA FINNEMORE, NATIONAL INTERESTS IN INTERNATIONAL SOCIETY (1996); THE CULTURE OF NATIONAL SECURITY: NORMS AND IDENTITY IN WORLD POLITICS (Peter J. Katzenstein ed., 1996); Wotipka & Tsutsui, supra note 10.

16. DiMaggio & Powell, supra note 14 (identifying coercive, mimetic, and normative processes leading to institutional isomorphism among organizations); Wotipka & Tsutsui, supra note 10, at 733-38.

the risk of joining the BEPS Inclusive Framework, given that the country has survived up until a specific time point; a country “survives” by not joining the Framework.) To a lesser extent, early adoption of the OECD’s Multilateral Competent Authority Agreement regarding the Common Reporting Standard (CRS MCAA) as of 2014 was also correlated with an increased hazard of joining the Framework.\textsuperscript{18} By contrast, in most models, joining the longstanding OECD Convention on Mutual Administrative Assistance in Tax Matters (MAATM) prior to 2013 did not appear to be correlated with the hazard of Framework membership after controlling for other variables.\textsuperscript{19} Nor was there a significant relationship between the number of bilateral tax treaties that a country had in force (which arguably reflects integration into the world tax treaty network and exposure to existing OECD and other model treaties)\textsuperscript{20} and the hazard of joining the Inclusive Framework in most models. While further investigation is required, these findings point to the relatively recent vintage of the new global tax order and suggest the importance of distinguishing the ways in which various prior OECD initiatives relate differently to the BEPS Project. The Article’s findings also suggest that the adoption of older bilateral forms and models (such as tax treaties) does not necessarily correlate with participation in the new multilateral order. This arguably supports scholars’ observations that that the new international tax order involves a “transformational” move away from bilateralism and towards increased multilateral coordination in tax policy.\textsuperscript{21}

I also find evidence suggesting that coercion-based pathways were important in the proliferation of BEPS Inclusive Framework membership. Inclusion in the contemporaneous European Union tax haven listing process (referred to in further mentions as the scoreboard) and on a related watch list (commonly referred to as the EU greylist)—which were designed to shame countries with harmful tax regimes into correcting problematic features, under threat of sanctions—was significantly correlated with an increased hazard of joining the Inclusive Framework.\textsuperscript{22} This highlights the role played by parallel

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20. My thanks to Yariv Brauner and other attendees of the 2021 Law and Society Association international tax panels for this insight.

21. HUGH J. AULT, TAX COMPETITION AND TAX COOPERATION: A SURVEY AND REASSESSMENT, INTERNATIONAL TAXATION IN A CHANGING LANDSCAPE, § 1.03 (2019) (discussing new institutional mechanisms that facilitate international tax cooperation, including the BEPS Inclusive Framework); Mason, supra note 1.

EU naming and shaming processes in amplifying the proliferation of the OECD/G20 BEPS Project, painting a picture of the emerging world tax polity as reflecting not just normative isomorphism, but also countries’ concerns about the economic and political consequences of EU listing. By contrast, I found no evidence that the receipt of foreign aid significantly affected a country’s hazard of joining the Inclusive Framework, suggesting that the receipt of such aid was not conditioned on BEPS membership. I also found no evidence of imitative processes driving BEPS membership; that is, an increase in the number of countries in the neighboring region or in the world joining the Inclusive Framework did not correlate with an increase a country’s membership hazard.

In short, this Article reveals how international organizations like the OECD can work in tandem with powerful actors like the EU to generate far-reaching scripts, norms, and models that shape global tax institutions and ultimately affect domestic tax regimes around the world. Its findings show how these actors may exert pressure on developing countries to adopt these scripts through a combination of normative and coercion-based processes. These findings also have implications for high-stakes claims frequently made by international tax commentators and policymakers. In particular, the findings about the interplay between EU tax haven listing processes and Inclusive Framework membership provide an important counter-narrative to accounts that have emphasized the increased voice and representation enjoyed by developing countries in the emerging global tax order. While a common and arguably dominant narrative surrounding the BEPS Project is that developing countries are well-represented and willing participants in the project by virtue of the endorsement and presence of the G20 in spearheading it, the apparent role of EU listing processes in


motivating BEPS membership suggests that fears of the economic and political consequences of being listed might to some extent be driving developing country participation, and that this pathway might merit closer scrutiny. If coercion-based pathways are indeed playing a role in motivating Inclusive Framework membership and participation in follow-on initiatives, this implicates the legitimacy and inclusiveness of the BEPS Project and raises questions about its likelihood of success and substantive outcomes (including distribution among countries).

This Article is organized as follows. Part I provides background on the OECD/G20 BEPS Project and the BEPS Inclusive Framework, outlining its core features, the role of the OECD in its establishment, and its application to developing countries. Part II discusses the world polity theoretical framework and its relevance to the BEPS case, using theory, prior research, and factual observation to generate research hypotheses. Part III describes the data analyzed and methods used in this Article. Part IV summarizes the Article’s key findings. Part V discusses the implications of these findings, both with respect to sociological theory and for the future of global tax policymaking.

I. BACKGROUND

A. The New International Tax Order and the BEPS Project

It is widely acknowledged that there has been a fundamental shift in the international tax order over roughly the last decade. Some even characterize this shift as nothing short of a transformation. The shift has occurred both at the nation-state level and at the global and regional levels through the activities of international organizations and blocs such as the G20, OECD, and EU. A number of factors have contributed to these developments, including the insufficiency of public revenues triggered by the 2008 financial downturn; data hacks and leaks of offshore bank account and tax haven corporate registry information, which revealed cross-border tax avoidance and evasion; leaked document troves exposing the potentially problematic tax ruling practices of jurisdictions such as Luxembourg; and increasing press coverage of how MNEs minimize taxes using favorable offshore tax regimes and tax treaties with other countries.

Scholars have identified several key substantive characteristics of this international tax shift. These include moves towards greater cross-border

27. See, e.g., Yariv Brauner, What the BEPS, 16 FLA. TAX REV. 55 (2014).
28. See Mason, supra note 1.
information sharing and transparency and the dismantling of tax havens and bank secrecy; more attention to elimination of MNE base erosion and profits shifting behaviors; and a move beyond unilateral and bilateral country action (for example, through bilateral tax treaties) and toward multilateral tax coordination among countries, including through the OECD/G20 BEPS Project. More recently, the world has also seen emerging fights over how to raise more revenues or generate a fairer allocation of worldwide tax revenues through, for example, digital taxes and initiatives to tax income on the basis of where value is created rather than based on traditional source or residence concepts.

Of these elements, the move towards multilateralism and the role played by the BEPS Project in facilitating it are widely regarded as being of central importance. It is certainly the case that the new international tax order has unfolded through other initiatives, including the OECD Common Reporting Standard (CRS), which has been adopted by a number of countries; the Global Forum on Transparency and Exchange of Information for Tax Purposes; and the further adoption of the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (the Multilateral Instrument) by a number of countries. However, the BEPS Inclusive Framework is widely acknowledged to be the key vehicle through which increased multilateral coordination and cooperation have come into existence.

The basic story of the BEPS Inclusive Framework’s origins and evolution is well known to tax law experts and policymakers. In 2012, in response to revelations about cross-border tax avoidance by MNEs, and recognizing the need for coordinated action among nation states, G20 leaders charged the OECD—an international organization that has played a key role in international tax

30. Ault, supra note 21, § 1.03 (discussing new emerging mechanisms that facilitate international tax cooperation among countries); Arthur J. Cockfield, Protecting Taxpayer Privacy Rights under Enhanced Cross-Border Tax Information Exchange: Toward a Multilateral Taxpayer Bill of Rights, 42 UBC L. Rev. 419 (2010) (discussing need to protect taxpayer privacy in light of increased tax information exchange); Marian, supra note 29 (discussing harmful impacts of Luxembourg tax rulings practices); Oei, supra note 29 (discussing U.S. tax law reforms to address offshore tax evasion); Oei & Ring, supra note 29 (discussed greater attention to offshore tax avoidance and evasion in aftermath of tax leaks); Pasquale Pistone, Coordinating the Action of Regional and Global Players During the Shift from Bilateralism to Multilateralism in International Tax Law, 6 World Tax L.J. 3 (2014).


32. Alongside this new multilateralism, we have also seen diffusion of bilateral agreements concerning transparency, exchange of information, and substantive tax policy matters (for example, FATCA and its network of IGAs in the United States), as well as unilateral initiatives entered into by various nation states (including digital tax legislation and proposals). See Susan C. Morse, Ask for Help, Uncle Sam: The Future of Global Tax Reporting, 57 Vill. L. Rev. 529 (2012); Susan C. Morse, Why FATCA Intergovernmental Agreements Bind the U.S. Government, 70 Tax Notes Int’l 245 (2013).

33. See Sarfo & Soong Johnston, supra note 4, at 976-77 (discussing the history and origins of the BEPS Inclusive Framework).
policy—\textsuperscript{34} with ensuring that MNEs pay their fair share of taxes.\textsuperscript{35} The OECD accordingly created a BEPS Action Plan in 2013, delivering final action recommendations in October 2015.\textsuperscript{36} These recommendations consisted of fifteen Action Items that countries should undertake in confronting MNE base erosion and profit-shifting behaviors.\textsuperscript{37} In 2016, recognizing the need to involve developing countries, the OECD established the BEPS Inclusive Framework, the goal of which was to allow developing countries to participate on an equal footing in the development of standards to combat BEPS behaviors and in the review and monitoring of OECD BEPS implementation.\textsuperscript{38} As of October 2020, a total of 137 countries had joined the BEPS Inclusive Framework. Of these, ninety-four are non-OECD and non-G20 countries that joined the project beginning in 2016, representing roughly fifty-four percent of non-OECD and non-G20 countries and territories eligible to join, and including many developing countries.\textsuperscript{39} In joining the Inclusive Framework, countries must commit to working together to tackle base erosion and profit shifting and to working on implementing fifteen Action Items laid out by the OECD to combat BEPS, among which are four “minimum standards.”\textsuperscript{40} These minimum standards are (1) the assessment of harmful tax practices and engagement in mandatory exchange of tax rulings and practices; (2) the adoption of minimum standards to combat treaty shopping; (3) the adoption of transfer pricing documentation, including a country-by-country (CbC) reporting package to facilitate information reporting by MNEs headquartered in that country; and (4) the adoption of minimum standards for treaty disputes and arbitration.\textsuperscript{41} Thus, joining the

\textsuperscript{34} See Ault, supra note 13; Hugh J. Ault, Some Reflections on the OECD and the Sources of International Tax Principles, 70 TAX NOTES INT’L 1195 (2013); Richard Eccleston & Richard Woodward, Pathologies in International Policy Transfer: The Case of the OECD Tax Transparency Initiative, 16 J. COMP. POL’Y ANALYSIS: RSRCH. & PRAC. 216 (2014). For more background on the OECD, see the discussion in Part II.B.

\textsuperscript{36} G20, G20 LEADERS DECLARATION, ¶ 48 (June 2012); G20, FINAL COMMUNIQUÉ, MEETING OF FINANCE MINISTERS AND CENTRAL BANK GOVERNORS, ¶ 21 (Nov. 2012); ORGANISATION FOR ECON. CO-OPERATION & DEV., ACTION PLAN ON BASE EROSION AND PROFIT SHIFTING (2013), 11, https://www.oecd.org/ctp/BEPSActionPlan.pdf [hereinafter OECD BEPS ACTION PLAN] (“The G20 finance ministers called on the OECD to develop an action plan to address BEPS issues in a co-ordinated and comprehensive manner”).

\textsuperscript{38} OECD BEPS ACTION PLAN, supra note 35; OECD BEPS 2015 FINAL REPORTS, supra note 24.

\textsuperscript{39} OECD BEPS 2015 FINAL REPORTS, supra note 24.


\textsuperscript{41} OECD Hosts First BEPS Inclusive Framework Meeting, TAX ANALYSTS DOC. SERV., Doc. 2016-13481, 2016 WTD 127-022 (June 30, 2016). The other forty-three were OECD and G20 countries that spearheaded the BEPS Project from its inception. List of OECD Member Countries - Ratification of the Convention on the OECD, ORGANISATION FOR ECON. CO-OPERATION & DEV. (last visited Nov. 24, 2021), https://www.oecd.org/about/document/ratification-oecd-convention.htm; About the G20, G20 (last visited Nov. 24, 2021), https://g20.org/about-the-g20/. \textbf{Error! Hyperlink reference not valid.}

\textsuperscript{42} BEPS PROGRESS REPORT 2016-17, supra note 24, at 7-12 (outlining minimum standards).

\textsuperscript{43} These minimum standards refer to actions five, six, thirteen, and fourteen, respectively. OECD BEPS 2015 FINAL REPORTS, supra note 24, at 6, ¶ 11 (discussing minimum standards); see also BEPS PROGRESS REPORT 2016-17, supra note 24, at 7-12 (outlining minimum standards).
Inclusive Framework requires conformity with certain standards and ideals. Joining the Framework is not costless, and it necessitates a degree of convergence and isomorphism across country-level tax policies, with compliance monitored through a system of country “peer reviews.” These required commitments raise a number of issues and concerns, both substantive and procedural, with respect to developing countries.

B. The OECD’s Role in Global Tax Policy

A notable feature of the international tax order described above is the role that the OECD has played in formulating international tax policy and in global tax governance, both before and after the 2008 financial crisis. The OECD is an intergovernmental organization comprising thirty-eight member countries, most of which are higher income developed countries. Formed in 1961, and superseding the 1948 Organisation for European Economic Co-operation, the OECD’s focus is on the development of economic and social policies, with a self-declared goal of “shap[ing] policies that foster prosperity, equality, opportunity and well-being for all.” More concretely, the OECD is involved in gathering statistical data, setting international standards, publishing economic analyses and reports, and making policy recommendations. The organization has performed work on a variety of topics, including corporate governance, gender equality, affordable housing, education policy, and environmental policy.

Among the most important issues with which the OECD has been concerned is tax policy. The OECD has long been the leading international organization involved in making international tax policy. It has played a key role in articulating international tax standards, goals, and policies, and in coordinating bilateral and multilateral initiatives in international tax policy and enforcement. Over the past few decades, the OECD has been at the forefront of articulating normative positions regarding what counts as harmful tax competition, what constitutes a tax haven, which countries should be flagged as “uncooperative” in matters of international tax policy, and what degree of tax transparency and information exchange should exist. The OECD is also

42. OECD BEPS 2015 Final Reports, supra note 24, at 10-11, ¶¶ 28-29 (discussing monitoring and peer review).
45. Id.
48. See Ault, supra note 13; Cockfield, supra note 11.
49. See Ault, supra note 13; Cockfield, supra note 11; Ring, supra note 12.
responsible for creating the influential OECD Model Income Tax Convention, which dates to 1963 and has been revised repeatedly over the years.\textsuperscript{51} The OECD model has been a widely adopted starting point in bilateral tax treaty negotiations between countries, despite the fact that it is known to favor capital-exporting (i.e., developed) countries.

In short, it is impossible to understand the evolution and transformation of global tax norms, policies, institutions without understanding the key role that the OECD has played in constituting such norms, policies, and institutions. But OECD membership mostly consists of developed, wealthier countries, and it has been disparagingly described as “a club of mostly rich countries” that is focused on the concerns of European countries and the developed world.\textsuperscript{52} Such criticism calls the OECD’s legitimacy in global policymaking into question. The OECD has responded by forming partnerships with emerging economies and by increasing engagement with the G20 (a group comprising the world’s major economies, including non-OECD economies) and other forums, programs, and regions.\textsuperscript{53}

With respect to the new global tax order, in particular, the participation of the G20 in the BEPS Project and the establishment of the Inclusive Framework are sometimes pointed to as evidence of the increasing inclusiveness of the OECD tax agenda, in the sense that the viewpoints of emerging economies and developing countries are being represented in an unprecedented way.\textsuperscript{54} Yet as Part I.C describes, concerns remain regarding the application of the BEPS agenda to developing countries and emerging economies.

\textit{C. The BEPS Project and Developing Countries}

Despite the role of the G20 in the OECD/G20 BEPS Project, there remains criticism that the BEPS Project was primarily motivated by developed-country concerns about MNE tax avoidance and the erosion of developed countries’ domestic tax bases. These concerns—at the heart of which lie worries regarding

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53. See Pierros, supra note 52 (discussing OECD partnerships with Brazil, China, India, Indonesia, and South Africa and its engagement with the G20); \textit{The OECD and the G20—An Evolving Relationship}, ORGANISATION FOR ECON. CO-OPERATION & DEV. (Nov. 4, 2009), https://www.oecd.org/corporate/theoecdandtheg20anevolvingrelationship.htm (remarks by OECD Secretary General on the OECD and G20 relationship).

54. See sources cited supra note 24.
}
developed countries’ ongoing capacities to fund welfare states and social safety nets—have resulted in a focus on monitoring and eliminating harmful tax practices, eliminating treaty shopping clauses, and gaining more information about and insights into the transfer pricing practices and other characteristics of MNEs (including activities across jurisdictions). These concerns are reflected in several BEPS Action Items, including, notably, the minimum standards whose adoption is required of all Inclusive Framework members.

Yet it is by no means clear that these priorities will benefit all countries or benefit them all equally. Commentators have recognized that the costs and benefits of joining the Inclusive Framework for developing countries may not be the same as those for developed countries and that the interests of developing and developed countries are not necessarily completely aligned. Some have argued that resource-constrained countries are less likely to be able to benefit from the transparency gains associated with BEPS Project initiatives (such as the ability to access and use the information that has been reported under BEPS country-by-country reporting for tax compliance purposes). Others have voiced substantive objections, arguing that developing-country tax bases benefit less from the BEPS substantive reforms than those of developed countries. For example, Hearson outlines issues raised by developing countries that were not prioritized or considered as part of the BEPS Project, including distributional issues, developing-country tax incentives, lack of transfer pricing comparability

55. See sources cited supra note 41.
56. See sources cited supra note 41.
58. Kiarra Strocko, BEPS 5 Years Later: Tax Transparency as the Global Norm, 2020 TAX NOTES INT’L 192-6 (2020) (discussing lack of developing country access to BEPS Action 13 reporting data); Ryan Finley, Critics Claim CBC Reporting Regime Excludes Developing Countries, 98 TAX NOTES INT’L R39 (2020) (same); see also generally Allison Christians, Global Trends and Constraints on Tax Policy in the Least Developed Countries, 42 UBC L. REV. 239 (2009) (discussing how benchmarks and policy structures imposed by developed countries affect developing countries).
data, capital gains tax avoidance in developing countries, withholding taxes, and the impacts of developed-country tax systems and tax reform on developing countries.60 Rocha specifically identifies arbitration procedures, transfer pricing reforms, hybrid mismatches, the digital economy, and the improper uses of tax treaties as “areas where developing countries should be particularly careful with the obvious solutions presented by the OECD in its BEPS reports,” because these reforms may not be to developing countries’ benefit.61 Some of these areas—specifically, prevention of tax treaty abuse, country-by-country reporting for transfer pricing documentation, and dispute-resolution mechanisms—are part of the four BEPS minimum standards, which Inclusive Framework members must agree to implement.62 Still others have noted that poorer countries may lack the administrative capacity to undertake the BEPS reforms, and that the efforts needed to comply with the BEPS minimum standards may strain developing countries’ resources.63 Such resources might be better spent on other priorities.64

Another line of criticisms speaks to institutional design, questioning the location of the BEPS Project under the auspices of the OECD and its Committee on Fiscal Affairs.65 For example, some scholars, as well as organizations such as Oxfam and the Tax Justice Network, have argued that the OECD, which tends to focus on developed country concerns, is not as well suited as, say, the United Nations Tax Committee to act as a de facto world tax organization.66 Other
commentators have raised procedural objections, arguing that because developing countries were not “at the table” at the outset but were only included in 2016 (once the Inclusive Framework had already been established), OECD countries continue to control the agenda, and BEPS’s claimed inclusiveness is more formal than substantive.\textsuperscript{67} For some, the increased role of the G20 and the after-the-fact establishment of the Inclusive Framework are not sufficient to safeguard the interests of developing countries, or to shift the locus of tax policymaking power away from the developed world.\textsuperscript{68} Despite these concerns, however, a large number of developing countries have joined the BEPS Inclusive Framework.

II. THEORY AND HYPOTHESES

A. The World Polity Theoretical Framework

World polity theory emphasizes how blueprints, norms, scripts, and shared cognitive models proliferate across the globe, such that we see convergence and isomorphism in policies, institutions, and behaviors across differently situated nation states and governments—evidence of a shared world polity.\textsuperscript{69} World polity theorists view international organizations and civil society actors as central figures in the promulgation of such blueprints, norms, scripts, and models and regard them as instrumental in institutionalizing and constructing a shared world culture, which becomes widely adopted by legitimacy-seeking countries.\textsuperscript{70} World polity theory draws from neo-institutionalist thought in organizational sociology, and may therefore be characterized as a constructivist or neo-institutional sociological theory of globalization.\textsuperscript{71}

The world polity analytical perspective should be taken seriously in the international tax case in light of the emergence and proliferation of commonly accepted global tax norms and standards and the important role played by the OECD in such global tax standard setting and policymaking. As described in Part I.B, even prior to the BEPS Project, the role that the OECD has played in


\textsuperscript{69} Boli & Thomas, supra note 8; Meyer, Boli, Thomas & Ramirez, supra note 6.


\textsuperscript{71} DiMaggio & Powell, supra note 14; Meyer & Rowan, supra note 7.
constructing international tax standards, norms, and blueprints that then spread and become influential across countries has been widely recognized. Yet this involvement has scarcely been empirically documented in the tax literature, and little is understood about the underlying mechanisms and pathways through which the OECD exerts its influence on global tax norms and policies.

The existing literature suggests three pathways through which isomorphism and policy convergence across organizations or nation states may occur: normative pathways, mimetic pathways, and coercive pathways.

### i. Normative Pathways

An emergent world polity may proliferate through global normative pressures and standards, which are institutionalized through the work of international organizations like the OECD. The idea is that through the institutionalization of such norms, countries may become “socialized” into accepting certain rules, standards, and policies. Norms may become further strengthened through a process of ongoing involvement and engagement, and the pressure to conform may thus persist or increase.

Scholars working in the world polity tradition have studied the degree of countries’ integration into the norms of the global world polity, using factors such as membership in domestic and international NGOs to operationalize and measure integration and influence. For example, in the context of human rights treaties, it has been shown that membership in international organizations (which reflects exposure to global institutional pressures exerted by those international organizations) may be important in shaping countries’ decisions to ratify human rights treaties. Environmental policy scholars have shown that the number of international NGO chapters in a country—reflecting a country’s integration into global environmental world society—predicts environmental policy adoption rates and pro-environmental reforms. In particular, these types of global

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75. See sources cited supra note 74.

76. Wotipka & Tsutsui, supra note 10.

influences have been shown to be important in motivating domestic environmental organizing in developing countries, supporting the world polity hypothesis.  

Similar types of normative forces could explain the proliferation of BEPS Inclusive Framework membership. In contrast to the environmental context, international NGOs are not numerous in international tax (in the sense that there are not multiple civil society tax NGOs in various countries that can be counted and measured to reflect world polity integration). However, integration into the tax world polity may be indicated by other measures. For example, the number of tax treaties a country has in force may indicate a country’s world polity integration. Countries have traditionally entered into bilateral tax treaties (also known as tax conventions) to mitigate the effects of double taxation, and these treaties are often negotiated based on widely adopted models, perhaps the most prominent and influential of which is the OECD model treaty. Even though the OECD model has been argued to favor developed countries, this has not prevented its widespread adoption as a negotiation baseline by less developed countries (not to mention by developed countries in their tax treaty negotiations with less-developed countries). Another commonly recognized model income tax convention is the model promulgated by the United Nations; however, the OECD model is widely regarded as the leading model.

In short, embeddedness in a robust network of bilateral tax treaties arguably indicates exposure to global models, norms, and blueprints advanced by key international organizations, most notably the OECD. Therefore, it is plausible that a country’s existing bilateral tax treaty network signals a degree of integration into tax world polity norms and increases the hazard of a country joining the OECD/G20 BEPS Framework.

_Hypothesis 1: Countries with a greater number of bilateral tax treaties in force (both in general and with OECD and G20 countries) have a higher hazard of joining the BEPS Inclusive Framework than countries with fewer such treaties._

Integration into the tax world polity may also be measured by a country’s involvement with OECD processes and initiatives prior to the BEPS Project. In particular, three earlier OECD processes are widely regarded as important with


79. To be sure, NGOs such as Oxfam and Tax Justice Network are active in the international tax space. However, these types of tax NGOs are not so numerous that operationalizing world polity integration using a count variable of such NGOs would make sense.


83. See Mason, _supra_ note 1, at 354 (noting that “[f]or a hundred years, international tax has consisted of a collection of isolated national tax regimes, connected on a piecemeal basis by bilateral tax treaties that follow a model drafted by a small set of OECD member countries”).

84. See generally Brauner, _supra_ note 1.
respect to global taxation. The OECD Global Forum on Transparency and Exchange of Information is a longstanding OECD tax initiative, which dates back to 2000 but was significantly restructured in September 2009. The OECD Global Forum opened membership to all interested jurisdictions, including developing countries, to participate on equal footing in the wake of the financial crisis, and it called on countries to actualize and implement its vision of tax-related transparency and information exchange among governments. Like the BEPS Project, it does this through peer review, monitoring, and rating of jurisdictions to ensure compliance with standards that call for the exchange of information automatically and on request. As listed in its 2013 progress report, the OECD Global Forum had 121 members. As of November 2021, it had 163 members, consisting of OECD countries and other jurisdictions, as well as twenty-one observers.

The Convention on Mutual Administrative Assistance in Tax Matters (MAATM) is a multilateral instrument developed jointly by the OECD and the Council of Europe in 1988 and amended by protocol in 2010. The MAATM convention is an agreement among countries to cooperate to tackle tax avoidance and evasion. The convention facilitates administrative cooperation between countries in matters of tax assessment and collection, including through the exchange of information. The number of signatories of the MAATM convention has grown over the years: as of the end of 2013, forty-four countries had ratified either the original 1998 convention or the amended protocol; as of December 2021, there were 144 participating jurisdictions.

A third important initiative is the OECD’s work in the automatic exchange of tax information between countries (as opposed to information exchange on

85. GLOBAL FORUM REPORT 2019, supra note 50.
86. Id.
88. ORGANISATION FOR ECON. CO-OPERATION & DEV., GLOBAL FORUM ON TRANSPARENCY AND EXCHANGE OF INFORMATION FOR TAX PURPOSES: TAX TRANSPARENCY 2013 REPORT ON PROGRESS (2013), https://www.oecd.org/tax/transparency/documents/global-forum-annual-report-2013.pdf; see also ORGANISATION FOR ECON. CO-OPERATION & DEV., THE GLOBAL FORUM ON TRANSPARENCY AND EXCHANGE OF INFORMATION FOR TAX PURPOSES: INFORMATION BRIEF (2013), https://www.oecd.org/tax/transparency/global_forum_background%20brief.pdf (“As of November 2013, there are 121 members. As agreed in 2009, the initial potential members are: all the financial centres which participated in the previous Global Forum; all OECD countries and all G20 economies. After the initial 91 potential members confirmed their membership, in order to maintain a level playing field, the Global Forum invited countries of relevance to its work to join.”).
91. Id.
request). As part of this work, the OECD has developed a Common Reporting Standard (CRS), as well as a CRS Multilateral Competent Authority Agreement, which details what information will be exchanged between countries and under what conditions.\textsuperscript{93} The CRS MCAA is based on Article 6 of the aforementioned MAATM convention, which provides for automatic exchange of information based on agreed upon parameters and procedures.\textsuperscript{94} As of October 2014, fifty-one jurisdictions had signed the CRS MCAA; as of December 2020, there were 110 signatories.\textsuperscript{95}

Countries that have been involved with these important prior OECD tax initiatives—which are generally aimed at increasing tax cooperation and transparency and thus at minimizing the harmful effects of tax avoidance and evasion through base-erosion and other strategies—arguably become integrated into the world of tax cooperation, coordination, and information exchange spearheaded by the OECD. In particular, these countries engage with peer review, compliance, and tax reform processes, thus becoming exposed to the norms, scripts, and blueprints underlying the international tax order, which are similar to those in play in the BEPS Project. World polity theory suggests that this familiarity and acculturation make countries more likely to participate in these types of processes in the future.\textsuperscript{96}

\textit{Hypothesis 2: Countries that have greater involvement in prior OECD tax initiatives—specifically, the OECD Global Forum, the MAATM convention, and the CRS MCAA—will have a higher hazard of joining the BEPS Inclusive Framework than countries with less prior involvement.}

\textit{ii. Coercion-Based Pathways}

The potential role of threats of sanctions or penalties in policy diffusion and convergence is well recognized by scholars operating in the realist tradition in international relations.\textsuperscript{97} These types of explanations—which DiMaggio and Powell refer to as “coercive” pathways—highlight how powerful countries and


\textsuperscript{94} OECD MAATM, supra note 90 (Article 6); DECLARATION, supra note 93.


\textsuperscript{96} See, e.g., Kentikelenis & Seabrooke, supra note 23.

blocs may push policies and ideologies favorable to their interests and may exert pressure on other countries to adopt these policies, potentially using carrots or sticks (incentives or sanctions) to do so.98 Coercive pathways may also harness “softer” norm-generating processes to achieve their ends, including by institutionalizing preferred policies and ideologies in the work of international organizations. Accordingly, it has been recognized that these types of pathways may be in play in the construction of a shared world culture and polity.99

Scholars have studied these types of coercion-based pathways by examining “issue linkages”—that is, the linking or packaging of one issue to another so as to affect the likelihood of success or adoption of a desired policy.100 For example, environmental policy scholars have shown how environmental provisions and clauses in preferential trade agreements have allowed trade agreements to serve as vehicles through which environmental norms diffuse.101 In the context of military alliance negotiations, it has been found that trade cooperation offers can boost the credibility of negotiated military alliance agreements.102 Davis has shown that, in negotiations between the United States, Japan, and the EU, issue linkages between agricultural and industrial issues promoted agricultural liberalization in both Japan and Europe.103

Of particular relevance to the international tax case, scholars have investigated whether grants of foreign aid can be linked to other issues. For example, it has been shown that the United States has been effective in using foreign aid programs to exert pressure and induce foreign policy compliance on important issues, including on voting in the U.N. General Assembly.104 Researchers have also found evidence that International Monetary Fund and World Bank loan programs have a significant impact on some U.N. General Assembly voting patterns.105

With respect to international tax and the BEPS Project, it is plausible that the receipt of economic aid by developing countries is linked to and motivates BEPS Inclusive Framework membership. The OECD itself provides official development assistance to developing countries, defined as “government aid that promotes and specifically targets the economic development and welfare of

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developing countries.” Official development assistance has been regarded by the OECD Development Assistance Committee as the “gold standard” of foreign aid since 1969.

Hypothesis 3: Countries that receive OECD Official Development Assistance are at greater hazard of joining the OECD/G20 BEPS Inclusive Framework than non-recipients.

In addition to issue linkages, the use of threats and shaming to change behaviors is well known in both the tax and non-tax literatures. In particular, the effects of being included on a public list of non-compliant actors has been investigated in various settings. In the environmental context, Cisneros, Zhou, and Börner find evidence that publicly listing districts with high annual forest losses reduces deforestation in Brazil, after controlling for other factors. With respect to tax havens, Kudrle found no consistent evidence that tax haven listing by the OECD impacted banking investment in and out of tax havens. More recently, however, Rusina has shown that inclusion of a jurisdiction on the EU list of non-cooperative tax havens is associated with negative reactions in the stock prices of firms with tax haven subsidiaries, with more tax-aggressive firms facing more negative returns (suggesting that investors expect penalties for past tax avoidance).

This literature on the effects of public shaming and listing on actor behavior may be relevant to the BEPS case. Widely publicized parallel EU processes took place at the same time that the BEPS Project unfolded. Beginning in late 2016, the EU began the process of creating a list of non-cooperative tax jurisdictions (referred to in further mentions as the tax haven list), along with a process for inclusion or removal from that list based on compliance behaviors. In September 2016, the EU released a scoreboard that evaluated 160 “third-country jurisdictions” based on indicators of economic relevance, namely, the strength of their economic ties with the EU, level of financial services activities, and stability. The EU classified eighty-three countries as “economically relevant” and then performed an assessment of the risk indicators for facilitating tax avoidance exhibited by these countries. Based on the scoreboard’s “economic relevance” metric, the EU then screened selected countries to identify whether

107. Id.
112. EU SCOREBOARD, supra note 111.
113. EU SCOREBOARD, supra note 111 (Table I).
they should be listed as non-cooperative jurisdictions. On December 5, 2017, the EU released its tax haven list, which identified seventeen non-EU countries and territories that had made insufficient commitments to improving their transparency and tax standards. In its initial December 5, 2017 tax haven list, the EU specifically called out Bahrain, the Marshall Islands, Namibia, Saint Lucia, and Samoa for not applying the BEPS minimum standards and for not committing to doing so by December 2018, and Mongolia for not committing to doing so by December 2019. Importantly, the EU simultaneously placed forty-seven jurisdictions on a probationary watch list (the so-called EU greylist). Countries on the EU greylist are those flagged as having some harmful tax regime characteristics, and are therefore at risk of being placed on the actual EU tax haven list. Over time, countries have been placed on and removed from the EU greylist and the EU tax haven list based on their tax reform and compliance behaviors and decisions.

Inclusion on the EU tax haven list is not simply an empty threat; it carries the possibility of real economic consequences, such as EU “countermeasures” (including the denial of funding), the reporting of schemes to tax authorities, and potential sanctions by member states. Fear of being greylisted or actually included on the tax haven list may therefore lead countries to join the BEPS Framework if doing so would help them avoid being listed or would lead to their removal from the list. As noted, the impact of such listing processes on country behavior is well recognized in the literature.

In a broader study of the impact of listing on country behavior and tax governance, Collin has shown, using regression discontinuity analysis, that countries included on the EU scoreboard (the screening process for inclusion on the EU tax haven list) were significantly more likely to join the BEPS Inclusive Framework than countries not included on the scoreboard. Though not tested by Collin, it is also possible that, in addition to being included on the scoreboard, being listed on the probationary EU greylist or on the actual EU tax haven list

115. Id. (Annex I).
116. Id.
118. Id.
also affects whether countries join the Inclusive Framework. Therefore:

*Hypothesis 4:* Countries screened on the EU scoreboard, placed on the greylist, or placed on the EU tax haven list are at greater hazard of joining the BEPS Inclusive Framework than countries not screened on the scoreboard (and therefore not included on the EU greylist or tax haven list).

iii. Mimetic Pathways

A third potential pathway via which a shared world polity may proliferate is through imitation of one’s peers.\(^{122}\) That is, countries may copy or imitate the policies adopted by other countries or by economic competitors. If imitative pathways are important, we would expect to see that a country will be more likely to join the BEPS Inclusive Framework if neighboring countries have joined, or if more countries in the world have joined. Therefore:

*Hypothesis 5:* Countries are at greater hazard of joining the BEPS Inclusive Framework if more countries in the country’s region, or more countries in the world, have joined the Inclusive Framework.

B. Other Explanations

The identification of the pathways through which a shared world tax polity might be proliferating holds important implications. For example, if countries are publicly agreeing to institutionalized global tax norms and blueprints primarily to gain legitimacy on the world stage or due to fear of shaming or sanctions, one might wonder whether countries are actually invested in complying with the Inclusive Framework requirements. The world polity perspective predicts that we may see “loose coupling” between the decision to join the Framework and the implementation of its requirements (because the technical implementation of institutionalized rules that were agreed to in the interests of seeking legitimacy may conflict with a country’s welfare-maximizing goals).\(^{123}\) This dynamic has been observed in other contexts, as in the case of human rights treaties.\(^{124}\)

There are, of course, other potential theoretical frameworks through which the emergence of the new world tax order may be analyzed. This Article’s focus on world polity theory does not preclude the application of other theories, which might also hold power in describing the new global tax order. For example, neorealist theories in international relations may point to explanations based on national security, state survival, or competition among states.\(^{125}\)

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122. DiMaggio & Powell, supra note 14; Wotipka & Tsutsui, supra note 10.
123. DiMaggio & Powell, supra note 14, at 155; Meyer & Rowan, supra note 7, at 341.
124. Rob Clark, Technical and Institutional States: Loose Coupling in the Human Rights Sector of the World Polity, 51 SOC. Q. 65 (2010); see also discussion infra accompanying notes 183 and 198; see also Kathleen M. Fallon, Anna-Lisa Aunio & Jessica Kim, Decoupling International Agreements from Domestic Policy: The State and Soft Repression, 40 HUM. RTS. Q. 932 (2018) (discussing how some states use “soft repression” to avoid compliance with human rights treaties that they have signed while also avoiding international condemnation).
125. See, e.g., KENNETH WALTZ, THEORY OF INTERNATIONAL POLITICS (1979); see also Donnelly, supra note 97.
relations theories grounded in neoliberalism might emphasize the functional role institutionalized regimes (such as a global tax order) play in facilitating agreement and cooperation among nation states and in reducing transaction costs.\textsuperscript{126} Materialist-structuralist theories such as world-systems theory might emphasize how the new global tax order reflects core-periphery power relationships inherent in the structure of the broader world-system at the current historical moment.\textsuperscript{127} This Article does not aim to test the fit of these other theoretical frameworks, but it also does not preclude them. It is of course possible that theories other than world polity theory might have relevance. As described in the data and methods section (Part III), this Article includes a number of control variables that may account for possible alternative explanations.

III. DATA AND METHODS

A. Data

i. Dependent Variable

The dependent variable is whether or not a country joins the BEPS Inclusive Framework by October 2020, and in what period and order. Although the OECD publishes an up-to-date list of Inclusive Framework members, joining dates are not listed in a centralized location.\textsuperscript{128} I therefore tracked down the dates on which each country joined the Inclusive Framework based on OECD press releases, accounting firm announcements, country press releases, and other tax news publications (such as Tax Analysts articles).\textsuperscript{129} I divided the period between October 2015 (when the BEPS Final Reports were issued) and October 2020 into sixty-one months. I coded October 2015 as period one and ended my study in October 2020 (period sixty-one). For purposes of the Cox regression, all countries were considered singly right-censored as of October 2020 (period sixty-one, the end of the study). In other words, for countries that had not joined BEPS by time period sixty-one, we only know that their survival time exceeds sixty-one months.\textsuperscript{130} Because my focus is on the decisions of non-OECD and non-G20 countries, I excluded from my analysis countries that were members of the OECD and G20 as of 2016. My final sample consisted of 6854 observations over sixty-one months across 174 non-OECD, non-G20 countries, of which there were ninety-four “failures” (i.e., instances of countries becoming members of the BEPS Inclusive Framework). The number of observations, countries, and failures differed slightly across estimated models due to missing data in some of the independent variables.

\textsuperscript{126} See, e.g., ROBERT O. KEOHANE, AFTER HEGEMONY (2005).
\textsuperscript{127} See, e.g., IMMANUEL WALLERSTEIN, WORLD-SYSTEMS ANALYSIS (2004).
\textsuperscript{129} See generally Tax Notes, TAX ANALYSTS, https://www.taxnotes.com/.
\textsuperscript{130} Note that the membership decisions of four countries (Belarus, Samoa, Togo, and Mauritania) that joined the Framework in 2021 were not included in the study. The decision to terminate the study in October 2020 is in part due to the fact that 2021 data for some independent variables and controls is not yet available.
ii. Independent Variables

Independent variables, controls, and other information are summarized in Table 1. To test normative processes, I included a count variable for the number of treaties a country had in force as of October 2015. I obtained this information based on treaties listed in the International Bureau of Fiscal Documentation (IBFD) tax database. Here again, the information was not publicly gathered in one place, so I hand-counted the number of treaties in force.

I created three separate dummy variables indicating a country’s involvement in three OECD tax forums and initiatives prior to the BEPS Project: (1) membership in the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes (the OECD Global Forum) as of 2013; (2) ratification of the OECD Convention on Mutual Administrative Assistance in Tax Matters by the end of 2013; and (3) signature of the Multilateral Competent Authority Agreement for the Common Reporting Standard as of 2014. I also created a three-level count variable indicating how many of these initiatives a country had joined. I estimated separate models using the three-level count variable as well as the separate indicator dummies.

To test coercion-based pathways, I included a time-varying three-level categorical variable (sixty-one periods each) indicating periods for which a country was not on, was placed on, or was taken off the EU scoreboard (=1), the EU greylist (=2), and the EU list of non-cooperative jurisdictions or tax haven list (=3). Using a three-level categorical variable was more appropriate than using separate and time-varying dummy variables, because inclusion on the greylist and ultimate EU tax haven list is predicated on prior inclusion on the EU scoreboard and connotes increasing magnitudes of noncompliance with EU-envisioned standards, a fact that would not be captured by separate dummies. However, models using separate dummies yielded substantively similar results. I also included a time-varying variable indicating the amount of OECD net official development aid a country received, obtained from the World Bank. In addition, I created a dummy variable indicating whether a country was or was not a recipient of net official development assistance for use in generating Kaplan–Meier curves.

Finally, to test mimetic processes, I included variables reflecting the proportion of countries in the same region as the country in question, and in the world, that had previously joined the BEPS Framework, lagged by four months. Regions are classified in accordance with the World Bank methodology.

Where appropriate, variables were transformed to address skewness, and data was lagged to minimize the risk of reverse causation.

132. I also created variables for the total number of treaties entered into by each country with OECD countries, OECD and G20 countries, and OECD, G20, and EU countries as cross checks.
133. See discussion supra Part II.A.
134. Id.
iii. Controls

I controlled for countries’ GDPs per capita, populations, trade-to-GDP ratios, and stocks of inbound foreign direct investment (FDI) as a percentage of GDP. In some models, I also controlled for taxes as a percentage of the country’s GDP. Substantively, these controls account for countries’ size, wealth, openness to trade, exposure to or reliance on FDI, and for the extent of tax revenue mobilization in each country.

GDP per capita, country population, trade-to-GDP ratio, and a country’s receipt of net official development assistance (as defined by the OECD Development Assistance Committee) were obtained from the World Bank World Development Indicators database and supplemented with data from other sources. Inbound FDI stocks as a percentage of GDP was obtained from the U.N. Taxes-as-a-percentage-of-GDP data—which I use to measure tax mobilization as of 2015—was obtained from the IMF World Revenue Longitudinal Data (WoRLD) database. Where possible, missing values were retrieved from the International Center for Tax and Development (ICTD) government revenue dataset and the OECD Global Revenue Statistics database.

In models not presented here, I also attempted to control for revenue losses from profit shifting using country-level revenue loss estimates by Cobham and Janský. Controlling for revenue losses from profit shifting accounts for different levels of exposure to the harms of tax base erosion due to MNE profit shifting. However, due to missing data, the number of subjects and failures dropped dramatically in all such models I estimated. I do not present these models because revenue losses from profits shifting were not a significant predictor of BEPS membership and did not change my research findings.

iv. Missing Data and Censoring

I used various methods to deal with missing data. These methods, though

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136. I also ran models controlling for inbound FDI flows (as a percentage of GDP). This yielded results consistent with those models controlling for inbound FDI stocks (as a percentage of GDP).
138. UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT FDI DATABASE, https://unctadstat.unctad.org/WSIS/TradeAndFDI/.
139. INTERNATIONAL MONETARY FUND, WORLD REVENUE LONGITUDINAL DATA (WoRLD), https://data.worldbank.org/indicator/SI.POP.STR.VW.DT.ZS.
142. Specifically, data was interpolated, extrapolated, or addressed through listwise deletion. For example, interpolation was performed for GDP per capita figures by examining the U.N. Country GDP
defensible, are imperfect, and the underlying data is likewise imperfect. In particular, variables such as FDI stock and trade-to-GDP ratio may reflect country features (such as tax haven status) other than the extent of foreign investment or trade openness. Moreover, as noted, this study does not take into account countries that joined after October 2020.


144. In other words, the data is right censored as of October 2020.
Table 1: Independent variables and control variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joining dates (time)</td>
<td>Sixty-one months; October 2015 to October 2020</td>
<td>Various sources</td>
</tr>
<tr>
<td>EU listing process</td>
<td>Three-level ordinal variable (included on scoreboard=1; included in greylist=2; included on tax haven list=3) (61 months)</td>
<td>Timeline of EU List evolution from Council of European Union website, supra note 117.</td>
</tr>
<tr>
<td>Signed MAATM convention (as of December 2013)</td>
<td>Dummy variable (1=signed)</td>
<td>OECD list of participating jurisdictions, supra note 92.</td>
</tr>
<tr>
<td>Adopted CRS MCAA (as of October 2014)</td>
<td>Dummy variable (1=signed)</td>
<td>OECD list of signatories as of October 29, 2014, supra note 95.</td>
</tr>
<tr>
<td>Involvement in prior OECD tax initiatives</td>
<td>Three-level count variable</td>
<td>OECD</td>
</tr>
<tr>
<td>Net official development assistance</td>
<td>Time-varying continuous variable; lagged 1 year</td>
<td>World Bank World Development Indicators database, supra note 137.</td>
</tr>
<tr>
<td>Official development assistance recipient</td>
<td>Dummy variable</td>
<td>World Bank World Development Indicators database, supra note 137.</td>
</tr>
<tr>
<td>Number of countries in region and world previously joining BEPS</td>
<td>Time-varying proportion; lagged 4 months</td>
<td>World Bank regional classifications, supra note 135.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>Time-varying continuous variable; lagged 1 year (logged)</td>
<td>World Bank World Development Indicators database, supra note 137; World Population Review, <a href="https://worldpopulationreview.com/">https://worldpopulationreview.com/</a>.</td>
</tr>
<tr>
<td>Trade-to-GDP ratio</td>
<td>Time-varying continuous variable; lagged 1 year (logged)</td>
<td>World Bank World Development Indicators database, supra note 137; Our World In Data, <a href="https://ourworldindata.org/">https://ourworldindata.org/</a>.</td>
</tr>
<tr>
<td>Inbound FDI stocks as percentage of GDP</td>
<td>Time-varying continuous variable; lagged 1 year (61 months; logged)</td>
<td>United Nations Conference on Trade and Development FDI Stocks and Flows Database, supra note 138.</td>
</tr>
</tbody>
</table>
B. Event History Methodology

Event history models are suitable for studying relatively sharp changes occurring at specific time points.\textsuperscript{145} These models can account for explanatory variables that change over time, overcoming a limitation of standard linear regression models.\textsuperscript{146} In the study of international treaties and accords, event history models allow for the estimation of the hazard of a country joining the treaty or accord in light of which countries have already joined the treaty, thus taking into account the effects of time.\textsuperscript{147}

I first estimated the survival and hazard functions of countries in my sample non-parametrically and generated Kaplan-Meier curves for the dummy categorical independent variables.\textsuperscript{148} Such estimation does not control for other variables. Nonetheless, graphing the survival and hazard functions provides a useful descriptive sense of how countries’ Inclusive Framework membership decisions correspond with certain variables and country characteristics.

I then used Cox proportional hazards regression to estimate models describing event occurrence.\textsuperscript{149} The model permits examination of the effects of several variables on the time it takes for an event to occur. The Cox regression model does not require specification of a particular hazard function and looks at only order of occurrences rather than the exact time each event occurs.\textsuperscript{150} I checked for multicollinearity, violations of the proportional hazards assumption, robustness, and model fit in the Cox regression models using the appropriate methods.\textsuperscript{151}

IV. FINDINGS

A. Non-Parametric Survival Analysis

Figure 1a shows the estimated survival function for the countries in my


\textsuperscript{146} These models can also account for censored data.


\textsuperscript{148} Kaplan & Meier, supra note 5.

\textsuperscript{149} Cox, supra note 5. Cox regression is a semiparametric regression method that uses partial-likelihood estimation to analyze survival data.

\textsuperscript{150} After the OECD and G20 countries finalized and adopted the final BEPS reform package in October/November 2015, thirty-three additional countries joined the Framework at an inaugural summit in Kyoto, Japan, on June 30, 2016. First Meeting of the New Inclusive Framework to Tackle Base Erosion and Profit Shifting Marks a New Era in International Tax Co-operation, ORGANISATION FOR ECON. CO-OPERATION & DEV. (June 30, 2016), https://www.oecd.org/tax/beps/first-meeting-of-the-new-inclusive-framework-to-tackle-base-erosion-and-profit-shifting-marks-a-new-era-in-international-tax-co-operation.htm. Thus, my data reflects a significant number of time period ties in June 2016 (month 9). In order to accommodate these ties, I estimated my models using the exact partial likelihood approximation method.

\textsuperscript{151} Namely, I used link test, Schoenfeld residuals, and examined VIF scores. Some of these checks were only available using the Efron approximation. Models estimated using the Efron approximation showed hazard ratios, directions, and significance levels consistent with those estimated using the exact partial likelihood method in terms of significance and direction of the hazard. I also checked model fit by generating Cox-Snell residuals, which are included in the Appendix. I checked for significance of the Kaplan-Meier estimations using log-rank testing, which confirmed robustness.
sample, with ninety-five percent confidence intervals. This visually represents the estimated probability that a country “survives” past specified time points by not joining the BEPS Inclusive Framework. Figure 1b shows the estimated hazard function. This hazard function visually represents the estimated risk of a country in the sample joining the BEPS Framework, given that the country has not already joined.

**Figure 1a. Kaplan-Meier survival function with 95% confidence intervals**

![Kaplan-Meier survival function](image1)

**Figure 1b. Hazard function**

![Hazard function](image2)

Figure 1a shows a sharp step down in the estimated survival function in

152. So $S(t) = P(T > t)$, where S is the survivor function, and T is the time of joining BEPS.

153. So $P(t, s) = P(t < T < s | T \geq t)$, where T is the time of joining BEPS and s is the end of the study period.
month nine (June 2016), the date on which thirty-three additional countries joined the BEPS Framework at the Kyoto summit (on June 30, 2016). After Kyoto, the survival function declines more gradually. Out of 174 countries, ninety-four joined the Inclusive Framework by October 2020.154 So, 45.98 percent “survived” past October 2020 and did not join the Framework. The estimated hazard function in Figure 1b shows an initial increase, then a steep decline, and then a more gradual decline (in which the function flattens out) before declining more steeply again. This means that if a country has survived past around March 2017, its conditional failure rate (or rate of joining the BEPS Framework, given that it has not already joined) becomes lower. The estimate hazard and survival functions suggest that the Inclusive Framework joining process was front-loaded in terms of hazard of joining, with the hazard declining as time went on. Thus, this does not look like an international process in which membership risk of non-OECD, non-G20 countries accelerated over time as more countries joined.

i. Prior OECD Processes

Non-parametric estimation also shows significant relationships between some prior OECD processes and BEPS Inclusive Framework joining decisions. Figure 2 compares estimated survival functions for countries that were and were not members of the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes as of the end of 2013. Visually, it is clear that OECD Global Forum members were more likely than non-members to join the BEPS Inclusive Framework. Figure 3 shows the estimated survival functions for countries that were and were not signatories of the Common Reporting Standard MCAA as of October 2014. Again, it is clear that signatories of the CRS MCAA are more likely to join the Inclusive Framework than non-signatories. Log-rank testing shows that these differences are statistically significant.

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154. As noted, Samoa and Belarus joined in February 2021, Togo joined in August 2021, and Mauritania joined in November 2021.
Figure 2. Kaplan-Meier survival functions of OECD Global Forum members (as of December 2013) and non-members

Figure 3. Kaplan-Meier survival functions of Common Reporting Standard MCAA signatories (as of 2014) and non-signatories

Non-parametric estimation and log-rank tests for equality of survival functions also suggest a statistically significant difference in estimated survival functions between countries signing the MAATM convention as of December 2013 and those that did not, though at a lower confidence level. Countries that signed the MAATM convention were more likely to join the BEPS Inclusive Framework as of some time points. As noted, however, this significant relationship is not reflected in most of the estimated Cox models discussed below.
ii. EU Processes

Non-parametric estimation and accompanying log-rank tests for equality of survival functions also show a statistically significant difference in estimated survival functions of countries that were included on the EU scoreboard in September 2016 (period twelve), denoting economic relevance, and those that were not, and between those placed on the EU greylist at any point during the study period and those that were not. Figure 4 visually depicts how countries placed on the EU scoreboard have a lower probability of survival (i.e., of not joining the Framework) past the specified time points than non-scoreboard countries.\(^\text{155}\)

\[\text{Figure 4. Kaplan-Meier survival functions of countries included on the EU scoreboard}\]

![Kaplan-Meier survival estimates](image)

Figure 5 shows the estimated survival functions for countries placed on the EU greylist at any point during the study period.\(^\text{156}\) Here again, we see how

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155. For Kaplan-Meier purposes, I coded EU scoreboard inclusion as a time-invariant dummy variable. This reflects the intuition that regardless of subsequent EU greylisting and Tax Haven Listing developments, a country flagged on the scoreboard as economically relevant for EU purposes remains so in the future. Note that Figure 4 represents all countries placed on the EU scoreboard, whether or not subsequently greylisted.

156. For Kaplan-Meier purposes, I coded EU greylist inclusion as a time-invariant dummy variable denoting whether a country had been included on the EU greylist at any point during the study period (1=included). There is some loss of information with this approach. Alternatively, it would have been possible to code EU greylist as a time-varying variable, which essentially allows the risk set to change at each time period based on which countries are on the EU greylist in that period. This would be similar to the approach of Simon and Makuch (1984). See Richard Simon and Robert W. Makuch, *A Non-Parametric Graphical Representation of the Relationship between Survival and the Occurrence of an Event: Application to Responder versus Non-Responder Bias*, 3 STAT. IN MED. 35 (1984). However, the interpretation of Figure 5 would be more complicated with a time-varying EU greylist variable, so I chose the former approach. For further discussion, see Steven M. Snappin, Qi Jiang, & Boris Iglewicz, *Illustrating the Impact of a Time-Varying Covariate with an Extended Kaplan-Meier Estimator*, 59 AM. STAT. 301 (2005); Lonni R. Schultz, Edward L. Peterson, & Naomi Breslau, *Graphing Survival Curve Estimates for Time-Dependent Covariates*, 11 INT’L J. METHODS IN PSYCH. RSCH. 68 (2002). Note that dummy value 0 in Figure 5 includes countries that may have been placed on the scoreboard but that were
countries placed on the EU greylist have a lower probability of survival past the specified time points than non-greylisted countries.

**Figure 5. Kaplan-Meier survival functions of countries included on the EU tax haven greylist**

Together, Figures 4 and 5 show how the EU listing process occurred in parallel with BEPS Inclusive Framework membership and seemed to correlate with differences in BEPS participation outcomes, with countries placed on the scoreboard and greylist having a higher probability of joining the Framework as of the specified time points. This observation will be further tested in the Cox regression analysis below, which controls for other variables.

**iii. Foreign Aid and Development**

Figure 6 illustrates the estimated survival functions for countries that are and are not net official development assistance recipients. Visually, we see that net official development assistance recipients have a greater probability of not joining the Framework. Log-rank statistical tests support the observation that there are statistically significant differences between the estimated survival functions of countries that receive net official development assistance and those that do not. These findings suggest that receipt of OECD aid does not appear to increase the likelihood of joining the Inclusive Framework. On the contrary, foreign aid recipients are less likely to join the Inclusive Framework than non-recipients. As further discussed below, Cox regression using continuous net official development aid values shows no significant relationship between receipt of such foreign aid and Inclusive Framework membership.

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not subsequently greylisted.


B. Cox Regression Models

Results of the Cox regressions are shown in Table 2, below. Models 1, 2, and 3 are estimated using a three-level count variable reflecting involvement in the three prior OECD tax processes discussed above (OECD Global Forum membership, MAATM convention signing, and CRS MCAA adoption). Models 4, 5, and 6 are estimated using the separate dummy variables for each of these OECD processes. Models 1, 2, and 3 are useful for reflecting whether participation in a greater number of prior OECD tax initiatives affects the hazard of joining the Inclusive Framework. The separate dummies in Models 4 through 6 provide more information about the relationship between specific OECD processes and Inclusive Framework membership. I present these models, which employ differing numbers of variables and controls, to show robustness of the results across model specifications.  

The confidence intervals provide the range of plausible values for the true hazard ratio in the population, in light of sample variability. The asterisks show whether findings are significant at the ninety-five percent, ninety-nine percent, or 99.9 percent confidence levels. Hazard ratios generally refer to the estimated ratio of the hazard rate between two groups.

Overall, the results show support for the hypothesis that, after controlling for GDP per capita, population size, and other variables in the model, inclusion in EU listing processes (both being screened on the EU scoreboard and being included on the EU greylist) is associated with a higher hazard of joining the Inclusive Framework. This highlights the potential importance of EU-initiated

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157. Note that as more controls are introduced, the number of observations decreases due to missing data.

158. Inclusion on the actual EU Tax Haven List was not a significant predictor of BEPS membership. Most estimations yielded infinitesimally small hazard ratios and confidence intervals with infinite upper bounds. This is likely due to the fact that the number of observations (countries in the sample
shaming and listing processes in shaping the OECD and G20-led international tax accord. For example, in Model 1, after adjusting for the other variables in the model, countries that were included on the EU scoreboard were at a 543 percent greater hazard of joining the Inclusive Framework than countries that were not included in the EU screening processes (i.e., countries that were not included on the EU scoreboard and belong to reference category 0). Countries that were included on the EU greylist were at a 5383 percent greater hazard of joining the Framework than non-scoreboarded countries (again, those in reference category 0), adjusting for the other covariates.\textsuperscript{159} Notably, in some cases, the confidence intervals are quite wide.

By contrast, receipt of foreign aid was not associated with a higher hazard of joining the Inclusive Framework. This is consistent with the non-parametric estimations discussed in Part IV.A above. It should be noted, though, that the non-significance of foreign aid may be due to the fact that many of the countries in the sample are official development assistance recipients.\textsuperscript{160}

With respect to normative pathways, Model 1 shows that involvement in one, two, or three prior OECD initiatives was associated with a greater hazard of joining the Framework compared to not joining any prior initiatives, adjusting for other covariates. Models 2 and 3, which control for inbound FDI stocks and (in the case of Model 2) tax mobilization, show that involvement in one or two prior OECD initiatives was associated with a greater hazard of joining the Framework compared to not joining any prior initiatives, adjusting for other covariates. However, Models 2 and 3 show no significant increase in hazard associated with joining three initiatives, compared to not joining any prior initiatives. In all three models, the increase in hazard associated with joining two prior initiatives was greater than the increase in hazard for countries that were involved in only one prior initiative (again, compared to not joining any initiatives). Thus, in Model 1, prior involvement in one prior OECD tax initiative was, compared to joining zero prior initiatives, associated with a 210 percent increase in the hazard of joining the BEPS Inclusive Framework, and prior involvement in two prior OECD tax initiatives was associated with a 492 percent increase in the hazard of joining the Framework (again, compared to reference category of joining zero prior initiatives).

Models 4 through 6 provide more texture. In these models, which included the OECD tax initiatives dummy variables, membership in the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes was clearly associated with a higher hazard of joining the Framework, and the relationship was statistically significant. For example, in Model 4, countries that were members of the OECD Global Forum as of the end of 2013 were at a 210 percent greater hazard of joining the Inclusive Framework than nonmembers,

\textsuperscript{159} Large hazard ratios are common where the covariate at issue is categorical.

\textsuperscript{160} Out of 174 countries in my sample, the majority (133, or about seventy-six percent) were Official Development Aid recipients.
adjusting for the other covariates. By contrast, joining the MAATM convention and CRS MCAA were not significantly associated with a higher hazard of membership in Models 4, 5, and 6. In some models (not shown here) that were estimated without the OECD Global Forum and MAATM dummy variables, the hazard associated with signing the CRS MCAA became significant. However, even where the OECD Global Forum and CRS MCAA dummies were dropped from the models, the hazard ratio for signing the MAATM convention still did not become significant. This suggests that adopting the CRS MCAA had a stronger correlation with membership in the BEPS Inclusive Framework than signing the MAATM convention, though in most models, the change in hazard associated with CRS MCAA adoption was not significant, either. These findings illustrate the need for more work to tease out the precise normative pathways and specific OECD projects and initiatives through which an international tax world polity has come into existence and where it is centered.

Surprisingly, the number of bilateral tax treaties entered into by a country was also not a significant predictor in most of the models I estimated. In Models 2 and 5, where treaties were found to be significant at the ninety-five percent confidence level, the change in hazard is in the opposite direction from what was hypothesized. In Model 2, for example, a one-unit increase in the number of bilateral tax treaties in force is associated with a roughly two percent decrease in the hazard of joining the BEPS Inclusive Framework, adjusting for the other covariates. Though not presented here, I also separately estimated models based on the number of bilateral tax treaties in force with only OECD countries; with only OECD and G20 countries; and with only OECD, G20, and EU countries. These models also showed no significant increase in the hazard of joining the Inclusive Framework as bilateral tax treaties increase. In those models where the number of treaties was found to be significant, the hazard remained in the opposite direction from what was hypothesized.
Table 2: Cox regression models (exact partial likelihood approximation)

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<td>56.05**</td>
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Exponentiated coefficients; 95% confidence intervals in brackets
*p < 0.05, **p < 0.01, ***p < 0.001

In sum, with respect to normative pathways, I found no evidence that having a greater number of bilateral tax treaties in force (both total treaties and treaties with OECD and G20 countries) increased the hazard of joining the BEPS Inclusive Framework. Thus, Hypothesis 1 is not supported. By contrast, prior involvement in the OECD Global Forum on Tax Transparency, and to some extent, the CRS MCAA, do increase the hazard of joining the BEPS Framework, so Hypothesis 2 is supported with respect to OECD Global Forum involvement and (to some extent) CRS MCAA participation. However, Hypothesis 2 was
generally not supported with respect to the MAATM convention.

With respect to coercion-based pathways, being screened on the EU scoreboard and being included on the EU greylist were both correlated with an increased hazard of joining the BEPS Framework, controlling for the other variables in the models. The effect of being actually listed by the EU as a tax haven was not significant. Thus, Hypothesis 4 was supported with respect to the EU scoreboard and EU greylist, but not with respect to the EU tax haven list. The receipt of foreign aid did not increase the hazard of BEPS Inclusive Framework membership. Thus, Hypothesis 3 is not supported.

Finally, I found no evidence that mimetic pathways influenced the decision to join the Inclusive Framework. Countries’ decisions to join the Framework were unrelated to the proportion of countries in the region or in the world that had previously joined. In some models, the effect of the proportion of countries in the world that had previously joined the Inclusive Framework could not be estimated without violating model assumptions. However, in models where estimation was possible, the hazard was found not to be significant. Thus, Hypothesis 5 is not supported.

Though not the direct focus of this Article, my findings with respect to control variables were also informative. In Models 1, 2, 3, and 5, GDP per capita (logged) was correlated with an increased hazard of joining the Inclusive Framework, but in Models 4 and 6, the correlation was not significant. Population size (logged), by contrast, was significantly and positively correlated with a higher hazard of joining BEPS in all models, which basically means that larger countries were at higher hazard of joining the Framework, controlling for the other covariates. In the models presented, there was no relationship between inbound FDI stocks (logged), trade openness (logged), or tax mobilization and the hazard of joining the Inclusive Framework. The fact that several economic variables were largely nonsignificant arguably strengthens this Article’s conclusions with respect to the importance of world polity processes, by controlling for and to some extent ruling out alternative explanations based on economic factors.

V. DISCUSSION

By focusing on the case of the BEPS Inclusive Framework, this Article has shed light on how interactions among the OECD, EU, G20, and nation states have come to shape the world tax polity that has emerged over the last decade. World polity theory aside, this Article’s findings also hold implications with respect to substantive global tax policymaking and the role that international organizations play in that policymaking.

A. World Polity Implications

My findings support the notion that the new world tax polity has emerged not just through normative but also through coercion-based pathways, thus reinforcing the importance of more scholarly work to tease out the precise pathways through which norms and practices proliferate in the context of
With respect to normative pathways, involvement in and familiarity with the OECD Global Forum on Tax Transparency was a significant and positive predictor of Inclusive Framework Membership. By contrast, the weight of the evidence suggests that signing the MAATM convention was not significantly associated with an increased hazard of Inclusive Framework membership, once other variables are taken into account.\(^{161}\) As described above, the evidence with respect to the CRS MCAA is more mixed. These findings suggest that there are potentially meaningful distinctions to be drawn between the different initiatives, programs, and pathways operating within the OECD. While some non-OECD, non-G20 countries were previously involved with the OECD’s MAATM convention and CRS MCAA initiatives prior to the BEPS Project, for the most part, Inclusive Framework membership is not strongly correlated with these modes of prior involvement. This is perhaps not particularly surprising—fewer than fifty countries were involved with these two prior initiatives prior to the formation of the BEPS Inclusive Framework. Moreover, the CRS MCAA is of relatively recent vintage—the CRS was approved by the OECD Council in July 2014.\(^{162}\) By contrast, the OECD Global Forum, once reorganized, set out to involve “countries of relevance” at an early stage.\(^{163}\) Hence, OECD Global Forum membership is unsurprisingly more significantly correlated with BEPS membership and is a more important precursor in the process by which the new “world tax polity” among nation states has proliferated.

Likewise, and somewhat surprisingly, the extent of country embeddedness in the existing bilateral tax treaty network did not appear related to the decision to join the Inclusive Framework in the hypothesized direction, at least as measured by the number of treaties in force.\(^{164}\) Like the findings regarding prior OECD initiatives and pathways, this finding shows how relationships between prior processes and networks and later-developing ones may be nuanced and unexpected.

With respect to coercion-based pathways, my findings regarding the importance of parallel European Union tax haven listing processes yield important information about the role of EU actions in shaping the trajectory of the OECD- and G20-led BEPS initiative.\(^{165}\) The OECD and EU are separate organizations, and not all EU countries are OECD or G20 members. Yet the EU’s decisions with respect to tax haven naming and shaming—specifically, its designations of countries as economically relevant on the EU scoreboard and its inclusion of countries on the EU greylist—were significantly correlated with an increased hazard of countries joining the BEPS Inclusive Framework, even

\(^{161}\) As noted, the hazard for MAATM convention was not significant even in models that did not include the OECD Global Forum and CRS MCAA dummy variables.


\(^{163}\) See supra notes 87-88 and accompanying discussion.

\(^{164}\) It is possible, of course, that a different measure of influence (such as a network-based measure of a country’s centrality in the treaty network, as opposed to a numerical count of treaties) might yield a different result.

\(^{165}\) See sources cited supra note 22.
controlling for economic and other variables.\footnote{Id.} This suggests that EU initiatives were a potentially powerful parallel force influencing the proliferation of BEPS Inclusive Framework membership. It also raises questions about the extent to which the presence of the G20 and developing countries really signals greater inclusivity, or whether accounts emphasizing the pressures placed on less-developed countries hold more weight.\footnote{See discussion supra Part I.C.}

More pointedly, these findings suggest the possibility of a more critical analysis of the new international tax consensus than the one generally articulated by the OECD itself. While what we have seen in the case of the BEPS Inclusive Framework may look like the emergence of a new set of cooperative and consensus-based world-polity-like norms in international tax cooperation, it is likely that this new world polity has come about not just through consensus-based norm proliferation resulting from the OECD’s work; it has likely also been amplified by parallel naming-and-shaming pressures applied by the powerful EU. Viewed through this lens, the G20’s presence in the BEPS endeavor could potentially be viewed less as a beacon for greater developing country representation and more as a legitimizer of EU power and policy preferences—as expressed through the parallel but nominally separate EU naming-and-shaming tax haven listing process.\footnote{It is worth noting that this characterization of the G20 is consistent with the view of some scholars that expanding the G7 to include the G20 is a purposeful move that has been employed by wealthy developed countries to “co-opt” other countries and form alliances with them in the light of the rise of the BRICs, the growing global middle class of countries, and the decline of US hegemony. See, e.g., Ho-Fung Hung, Recent Trends in Global Economic Inequality, 47 ANN. REV. SOC. 349, 359 (2021) (discussing this phenomenon).} Correspondingly, our new and more inclusive-looking tax world polity and the isomorphism in tax policy that accompanies it seem less steeped in inclusivity, representation, and willing cooperation and more driven by fear of shaming and its economic and political repercussions.

Taking a step back from tax, a broader question is whether similar dynamics to those observed in the case of the BEPS Inclusive Framework might be observed in other contexts. Specifically, are there other situations in which the interplay between powerful organizations or blocs is important in amplifying transnational processes? How commonly is this dynamic observed, and what are its implications? While these questions are beyond the scope of this Article, the extent to which what we see in the BEPS case is distinctive as opposed to an instance of a broader phenomenon is an obvious avenue for future research.

**B. Implications for Global Tax Policy**

World polity theory and processes aside, this study also holds important implications for how we characterize and evaluate the substance of international tax policy. This Article’s research findings tend to support the claims of tax scholars who have criticized the BEPS Inclusive Framework as centered around
EU and other developed country interests. As noted, the importance of parallel EU listing processes provide a counter story to accounts that emphasize the increased voice and representation enjoyed by developing countries by virtue of the presence of the G20’s role in the project and countries’ own “seat at the table” in the Inclusive Framework. While this Article cannot answer the follow-up question of whether actual BEPS standards, policies, and outcomes in fact favor developed as opposed to developing countries, analysis done by others suggests that this is likely the case. This suggests that more attention ought to be paid to the substantive concerns that have been raised by commentators advancing developing country perspectives regarding both the efficacy and the distributive dimensions of the BEPS Project.

Looking ahead, recent developments indicate that the OECD, G20, EU, and the BEPS Inclusive Framework are once again at the forefront of international tax negotiations, including negotiations over a global minimum tax on multinationals. On July 1, 2021, the OECD issued a “Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy,” which essentially outlines its plans for global taxation. The Statement was updated in October 2021, and as of November 4, 2021, 137 countries had agreed to it. This two-pillar solution represents a historic and groundbreaking multilateral agreement with respect to the distribution and allocation of global tax revenues among countries. Commonly referred to as BEPS 2.0, this new phase of the BEPS Project tackles some of the distributional issues left open by the initial OECD/G20 BEPS Inclusive Framework; as such, it is the logical next stage of the BEPS endeavor. The two pillars of BEPS 2.0 address, respectively, the taxation of the digital economy through the imposition

169. Brauner, supra note 67; Christensen et al., supra note 67; Christians, supra note 1; Fung, supra note 67; Herzfeld, supra note 59; Rocha, supra note 57.
171. Christensen et al., supra note 67.
172. See discussion supra Part I.C.
177. Id. at 570.
of a tax on multinational enterprises with global turnover above a certain threshold (Pillar 1) and the institution of a global minimum corporate tax (Pillar 2). BEPS 2.0 is favored by many developed countries, including, it is worth noting, by the powerful G7. By October 2021, the global minimum tax had been formally endorsed by G20 heads of state.179

While important issues have yet to be hammered out, and while success is not guaranteed, the BEPS 2.0 agreement is widely regarded as a major historic event.180 The role played by the initial BEPS Inclusive Framework and project (BEPS 1.0) in setting the stage for potential multilateral agreement on distributional and substantive issues at the BEPS 2.0 stage cannot be overstated. As Ruth Mason has noted, the initial OECD/G20 BEPS Project “built robust institutions of multilateral cooperation, including the cooperation between the OECD and the G20 and the establishment of the inclusive framework,” and it also “marketed to the world the technical prowess of the OECD, which had the right experts and leadership for the moment.”181 Importantly, the 137 countries that have signed off on the July 1, 2021 statement are members of the original BEPS Inclusive Framework, which this Article has studied.182 This means that alongside the OECD and G20 countries, the other BEPS Inclusive Framework countries are continuing to be at the forefront of multilateral attempts to negotiate, articulate, and propose international tax rules and policies, an endeavor that will have important distributional outcomes.

In light of this, it is important to understand how and whether the types of forces that may initially have motivated many countries to join the Inclusive Framework in the first place may be continuing to shape their actions with respect to BEPS 2.0, including countries’ decisions to support a global minimum tax and a tax on in-scope multinationals under the first Pillar of BEPS 2.0. Specifically, this Article’s findings that the EU tax haven listing processes appear to have amplified and motivated the initial Inclusive Framework participation of many countries suggest the importance of investigating whether similar pressures may be driving developing countries’ stated support for a global minimum tax.

The answer to this question could have important implications for the content and legitimacy of any multilateral tax accord. Even setting aside concerns about legitimacy, inclusiveness, and fairness, the answer could also have implications for the implementation and success of any negotiated global

178. See sources cited supra notes 174 and 175.
180. Mason, supra note 176, at 573 (describing Pillar 1’s “new nexus” as “a significant change” and the overall project as “A Really Big Deal”).
181. Id. at 570 (also noting that “[t]he BEPS project built transnational relationships and the infrastructure for resolving the very distributional questions that it highlighted”).
tax deal. For example, if countries are signing on to the two pillars of the OECD plan because they feel like they have no choice (that is, they are agreeing in order to avoid shaming or sanction), then it is possible that such countries may exhibit low levels of compliance with the terms of any such deal, despite prior formal commitment to its terms, or that they may find indirect ways of resisting the implementation of a global deal. If the agreement of Inclusive Framework countries to BEPS 2.0 is found to be primarily a result of coercion or compulsion, then researchers and policymakers might want to remain especially aware of “loose coupling” or “decoupling” of compliance from commitment in the future.\(^{183}\)

**C. Implications for the Location of the BEPS Project under the OECD**

This Article’s findings also hold implications for evaluating the OECD’s role in making international tax policy. Here, there are two main sets of implications.

First, as discussed above, some commentators have criticized the fact that the BEPS Project is located under the OECD, rather than under the U.N. or another international organization.\(^{184}\) The worry is that the OECD’s leadership as a de facto world tax authority is likely to focus more on the interests of developed countries. These types of concerns have led to the formation of initiatives such as the Platform for Collaboration on Taxation, a joint initiative of the IMF, World Bank, U.N., and OECD that focuses on the development of tax capacity in developing countries.\(^{185}\) This Article’s findings give credence to the notion that institutional location of international tax projects may matter. They show how OECD and EU policies, procedures, and actions with respect to international tax policy have interacted to influence the path of international tax consensus over time, and how this likely affects developing countries’ decisions. While it may make the most logistical sense for the OECD to continue to spearhead international tax projects, growing evidence about the nature and sources of OECD power suggest that tax policymakers should be more attuned to how power dynamics may shape outcomes and to ensuring that such outcomes are procedurally and distributively just and are regarded as legitimate.\(^{186}\)

Second, this Article’s findings suggest the need for a deeper understanding of how the OECD itself has functioned as a tax policymaking institution. As discussed, the OECD has long played a role as a de facto world tax organization.\(^{187}\) However, it has both strengths and weaknesses in serving this

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185. *Who We Are, PLATFORM FOR COLLABORATION ON TAX*, https://www.tax-platform.org/.
function. While the OECD may be effective at coordination and compromise between member states and at establishment of international tax norms through "soft power" and setting expectations, it may historically have been less effective at enforcing compliance. Moreover, within the tax space, the OECD has engaged in various initiatives and projects through its Committee on Fiscal Affairs. Distinct OECD documents and directives may also carry different weights in influencing domestic tax reform.

In light of these multiple initiatives, directives, and channels, this Article’s finding that some prior OECD initiatives correlate more strongly with subsequent participation and involvement in the BEPS Project than others is probably not surprising. While the channels investigated in this Article (namely, the OECD Global Forum, the MAATM convention, and the MCAA CRS) are not exhaustive, the Article’s findings suggest that more empirical work illuminating which channels of involvement and norm formation are more influential could yield fruitful insights into the precise OECD initiatives and pathways through which global tax norms develop and proliferate. While the literature on the OECD’s role as global tax policy institution has grown over the years, it remains scarce, particularly with respect to empirical documentation and analysis. In this regard, research using event history models for the study of repeated events over time or models for the study of parallel processes may help shed light on the pathways and mechanisms through which the OECD’s work has taken effect, particularly when paired with qualitative research methods. These types of empirical projects will be the subject of my future work.

D. Limitations

Like all research, this study has limitations, and these limitations suggest important directions for future research. This study only investigates the relationship between the hazard of BEPS Inclusive Framework membership and the independent variables and control variables identified. There may be omitted variables that are not taken into account. Relatedly, the variables used to operationalize this study’s hypotheses may not adequately capture the


189. See, e.g., Ault, supra note 13, at 763, 779 (discussing how the OECD facilitates compromises and establishes international tax norms); Ring supra note 12, at 652 (describing influence exerted by international organizations through “soft power”); Brosens & Bossuyt, supra note 186, at 327 (noting how OECD commentaries and guidelines may set “cognitive expectations”).

190. See, e.g., Christensen & Hearson, supra note 188, at 1073 (noting weakness at establishing enforcement with respect to tax havens).

191. See, e.g., Ault, supra note 13, 760-779 (discussing OECD initiatives with respect to harmful tax competition, dispute resolution, and defining “permanent establishment” for services).

192. See, e.g., Brosens & Bossuyt, supra note 186, at 318-19 (noting differing ability of different OECD documents in influencing domestic tax legislation).

193. See, e.g., Kudral, supra note 72 (discussing how the OECD Global Forum on Transparency and Exchange of Tax Information has roots in the OECD’s 1998 Harmful Tax Practices project).

underlying theory and hypothesized result. For example, the Article finds that covariates reflecting economic self-interest (such as trade openness, tax mobilization, inbound FDI, and revenue losses from profit shifting) are not significant predictors. But it is of course still possible that self-interest—whether driven by politics, economics, or expressive signaling—drives countries to join the Framework, and that this is reflected in indicators other than the obvious ones investigated in my study. As Dean argues, some countries may not prioritize obvious metrics like GDP.195 Relatedly, this study is limited by data imperfections. For example, the extensive literature on FDI highlights many difficulties with accurately measuring and operationalizing FDI.196 As noted, this study is also right censored as of October 2020, and does not take into account membership decisions occurring after that time.

This study also does not examine how the costs of joining compare to the benefits of joining (or to the costs of not joining) the BEPS Inclusive Framework. Comparison of such costs and benefits may provide an alternative theoretical explanation for membership decisions, grounded in functionalism or realism as opposed to constructivism or world polity theory.

Importantly, while I took steps to minimize the risks of reverse causation (including by introducing lags in the independent variables where appropriate), it is possible that these steps were insufficient. Moreover, correlation is obviously not the same as causation, and this study does not necessarily prove that the normative and coercion-based pathways that were investigated directly caused BEPS membership outcomes. However, the findings of this Article do show that the hazard of joining the BEPS Framework was strongly correlated with the timing of inclusion of a country on the EU scoreboard and greylist, pointing to the conclusion that these processes occurred in parallel and that the latter likely affected the former outcome.197

Finally, this research only studies the initial BEPS Inclusive Framework membership decision. It does not examine country compliance and adherence to the BEPS minimum standards in later time periods. It is possible that countries may act in self-interest by joining the Framework but may have no actual intentions to comply with the minimum standards, which remain soft law and may be hard to enforce. Because this study does not consider country compliance behaviors after their initial membership decisions, it cannot answer these follow-up questions, including questions of whether there will be “loose coupling” of membership from compliance in the future.198 In follow-up research, it would also be worth investigating the extent to which and the ways in which the BEPS minimum standards are complied with and enforced.

196. See, e.g., Andrew Kerner, What We Talk About When We Talk About Foreign Direct Investment, 58 INT’L STUDIES Q. 804 (2014); Sutherland & Anderson, supra note 143.
197. And obviously, causation in the opposite direction (i.e., the idea that BEPS Inclusive Framework causes a country to be listed by the EU) makes no sense.
CONCLUSION

More than five years after the creation of the OECD/G20 BEPS Inclusive Framework, there remains limited empirical understanding of which non-OECD and non-G20 countries have and have not joined the BEPS Framework and why. Scholars and policymakers’ understanding of how BEPS unfolded and became a new global tax phenomenon has been mainly derived from qualitative and anecdotal accounts. Moreover, with a few exceptions, the perspectives and interests of developing countries have remained largely underexplored. This Article contributes to the literature by illuminating the mechanisms underlying the emergence of the new shared world polity in tax policymaking using event history analysis. The findings presented here hold important implications for the future of multilateral global tax cooperation and policymaking.

More broadly, this Article also contributes to the literature on international agreements and treaties. Much of the existing literature deals with bilateral treaties in the human rights, environmental, and trade and investment contexts.199 The case of BEPS—a multilateral agreement focusing on economic governance—can help highlight new dynamics in global multilateral policymaking, revealing, for example, whether countries join multilateral economic agreements for the same reasons that drive bilateral treaties and non-economic agreements.

APPENDIX: COX-SNELL RESIDUALS

Model 1

Model 2

Model 3
Article

(Un)stable BITs

Cree Jones† & Weijia Rao††

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INTRODUCTION

In November 2018, after more than a year of negotiations by representatives from Canada, Mexico, and the United States, the United States-Mexico-Canada Agreement (USMCA) was signed by leaders from the three member states, replacing the North American Free Trade Agreement (NAFTA). The Trump Administration viewed the successful renegotiation of NAFTA as one of its signature achievements and argued that the USMCA “solves the many deficiencies and mistakes in NAFTA.” One of the key revisions in the USMCA was the partial removal of investor-state dispute settlement (ISDS), the primary mechanism that had been used to enforce the investor protections guaranteed by NAFTA.

The partial removal of ISDS from the USMCA is just one manifestation of the growing instability of investor protections promulgated under investment chapters in both free trade agreements (FTAs) and bilateral investment treaties (BITs). These protections (and their stability) have important implications for a staggering amount of foreign direct investment; over forty percent ($640 billion) of all FDI in 2020 flowed between countries with either a BIT or an FTA with an investment chapter. These agreements provide substantive standards to protect investors from one contracting state investing in another contracting state. Almost all of these agreements also give foreign investors the right to directly bring arbitration claims against host states for violations of the substantive investment protections in these treaties. Protected investors have


3. See Villareal & Fergusson, supra note 1, at 1. ISDS was only preserved between the United States and Mexico, and only after claims are first fully litigated in domestic courts (that is, after national remedies are exhausted). Id. A few industries are exempt from the exhaustion of national remedies requirement (oil, natural gas, power generation, infrastructure, and telecommunications). Id. Interestingly, ISDS remains available for Canadian investors in Mexico and Mexican investors in Canada through the investment chapter of the Trans-Pacific Partnership (TPP). See TPP Full Text, OFF. OF THE U.S. TRADE REP., Ch. 9, § B. For a detailed discussion of ISDS changes under the USMCA, see U.S. INTERNATIONAL TRADE COMMISSION, U.S.-MEXICO-CANADA TRADE AGREEMENT: LIKELY IMPACT ON THE U.S. ECONOMY AND ON SPECIFIC INDUSTRY SECTORS 194-99 (2019).

4. See U.N. Conf. on Trade and Dev., World Investment Report 2021: Investing in Sustainable Recovery, at 6, U.N. Doc. UNCTAD/WIR/2021 (2021) (reporting total FDI flows). The amount of FDI flowing between countries with either a BIT or FDI was calculated using proprietary bilateral FDI data provided directly to the authors by UNCTAD.


6. Of the 2,574 FTAs and BITs with a public text, 2,440 (94.8 percent) grant investors this right to enforce the treaty through arbitration. See International Investment Agreements Navigator, U.N. Conf. on Trade & Dev., https://investmentpolicy.unctad.org/international-investment-agreements (last visited Feb. 2, 2022) [hereinafter IIA Navigator].
initiated more than 1,100 dispute settlement proceedings under either a BIT or an investment chapter in an FTA; collectively, they have been awarded (through arbitration or settlements) more than $76 billion.\textsuperscript{7} Although BITs have existed for over sixty years and FTAs have existed for over thirty-five years, the growing incidence of ISDS under these agreements is a fairly recent phenomenon.\textsuperscript{8} Seven hundred and thirty-three claims (or sixty-six percent of all claims) have been filed since 2010.\textsuperscript{9}

Anecdotal evidence suggests that at least some, and possibly many, developing countries did not appreciate their potential exposure to arbitration under these treaties when they were initially signed. Evidence also suggests that many developing countries had little input in the drafting of early BITs, the terms of which would later prove costly for many host countries. Most early BITs were concluded between developed and developing countries. The negotiations of these BITs were typically initiated by developed countries, which supplied the treaty templates for negotiation. Some studies have found that some investment treaties very closely follow Western BIT templates, occasionally word for word.\textsuperscript{10} Most developing countries signed off on Western BIT templates without carefully considering the alternatives.\textsuperscript{11} As a result, until they were named as respondents in investment arbitration claims, these developing countries often had little idea what they were getting into, nor did they realize the meaning of the vague treaty terms by which they had committed to be bound.

For example, when Pakistan, which signed the very first BIT (the 1959 Germany-Pakistan BIT), was hit by a multi-million-dollar arbitration claim brought by Swiss investors in 2001, the Attorney General of Pakistan did not even know what a BIT was and had to look it up on Google.\textsuperscript{12} In preparation for the arbitration proceedings, the Attorney General tried to find negotiation records of the Pakistan-Switzerland BIT, but he was unable to trace any records of meaningful negotiations ever taking place.\textsuperscript{13} “The maximum level of input to the negotiations from Pakistan,” commented the Attorney General, “appears to have been proof-reading, and at times, albeit rarely, some not very significant suggestions on the text.”\textsuperscript{14} The Pakistani officials participating in those negotiations mistakenly considered the treaty to simply be a piece of paper that

\begin{itemize}
  \item \textsuperscript{7} About $50 billion were awarded in disputes between former Yukos shareholders and Russia. See Investment Dispute Settlement Navigator, U.N. Conf. on Trade & Dev., https://investmentpolicy.unctad.org/investment-dispute-settlement (last visited Feb. 2, 2022) [hereinafter IDS Navigator].
  \item \textsuperscript{8} The first BIT was signed by Germany and Pakistan in 1959. See IIA Navigator, supra note 6.
  \item \textsuperscript{9} The first FTA was signed by Israel and the United States in 1985. See id.
  \item \textsuperscript{10} See LAUGE N. SKOVGAARD POULSEN, BOUNDED RATIONALITY AND ECONOMIC DIPLOMACY: THE POLITICS OF INVESTMENT TREATIES IN DEVELOPING COUNTRIES 14 (2015).
  \item \textsuperscript{11} See id.
  \item \textsuperscript{13} See id.
  \item \textsuperscript{14} Id.
\end{itemize}
would facilitate good press at home.\textsuperscript{15}

This narrative is not unique to Pakistan. There is evidence suggesting that officials from many developing countries in charge of BIT negotiations often lacked both experience and expertise in the field.\textsuperscript{16} At times, the negotiators from developed countries had to explain the meaning of treaty terms to their developing country counterparts, who often mistook those terms for nonbinding soft law.\textsuperscript{17} These early imbalances in treaty negotiations, combined with the recent surge in ISDS cases initiated by foreign investors, has fueled increasing controversy regarding these investment treaties and their provisions.\textsuperscript{18} Several countries have been on the receiving end of controversial arbitration claims.\textsuperscript{19}

Some of these countries (primarily countries with developing economies) have terminated their BITs en masse, denouncing the system as unjust and biased.\textsuperscript{20} Other countries have chosen to pursue more incremental reforms by renegotiating existing BITs so that they are better tailored to reflect their preferences.\textsuperscript{21} Based on data published in May 2022, of the 2,667 BITs that entered into force on or before December 31, 2020, 165 have been unilaterally terminated, 121 have been renegotiated, fifty-one have been terminated by the consent of both signatories, and fourteen have expired.\textsuperscript{22} The remaining 2,316

15. See id.
16. See Poulson, supra note 10, at 18.
17. See id.
18. For example, at the 2014 World Investment Forum organized by UNCTAD, more than fifty key stakeholders, including chief investment treaty negotiators for several countries, issued statements calling for reforms to investment treaty enforcement and investor-state arbitration. See World Investment Forum 2014: Reforming the International Investment Agreements Regime, U.N. Conf. on Trade & Dev. (Oct. 16, 2014), https://perma.cc/8BWU-MSFR; see also 220+ Law and Economics Professors Sign Letter opposing ISDS in the TPP, Colum. Ctr. on Sustainable Dev. (Sept. 7, 2016), https://perma.cc/SY5X-AG59 (letter signed by more than 220 law and economics professors urging the U.S. Congress to oppose the inclusion of investor-state dispute settlement provisions in two regional trade agreements: the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership).
19. For example, investors have brought claims against host countries alleging that their protected investments have been treated unfairly in violation of the Fair and Equitable Treatment (FET) standard included in almost all investment treaties. See, e.g., Pope & Talbot Inc. v. Government of Canada, Award on Merits of Phase 2, 41 I.L.M. 1347 (2002). Host countries respond to these claims by alleging that the treatment is fair and also by arguing that the FET standard does not guarantee fair treatment as an absolute standard in isolation, but as a standard that conforms to the minimum standard of treatment under customary international law. See, e.g., id. Arbitration tribunals have often sided with investors on this question. See, e.g., id. (extending FET beyond the customary international law minimum standard). Countries have since updated their drafting practices to cabin FET within the standard set by customary international law. See Cree Jones & Weijia Rao, Sticky BITs, 61 Harv. Int’l L.J. 357 (2020) (documenting the innovation and adoption of the customary international law minimum standard limitation within the investment treaty network).
20. Countries that have terminated their BITs en masse include India and Ecuador. See Kavaljit Singh & Burghard Ilge, India Overhauls its Investment Treaty Regime, Fin. Times (Jul. 15, 2016), https://www.ft.com/content/53bd355e-8203-34af-9c27-7bf990a447dc; see also Cecilia Olivet, Why did Ecuador Terminate All Its Bilateral Investment Treaties?, Transnat’l Inst. (May 25, 2017), https://perma.cc/Q7QT-YLS2. Other countries, including South Africa, Bolivia, and Indonesia, have also unilaterally terminated many BITs, though not at the same scale as India and Ecuador. See IIA Navigator, supra note 6.
22. IIA Navigator, supra note 6. These numbers reflect all termination events that occurred on or before December 31, 2020. For consistency, we categorically refer to termination by any of the first three methods as “terminate.” When referring to the specific termination method, we will use “unilaterally
BITs remain stable and have not been terminated.\textsuperscript{23} By contrast, there has been much less turnover among FTAs.\textsuperscript{24} Of the 131 FTAs that have entered into force, two have been replaced by an FTA that covers a larger geographic region,\textsuperscript{25} one (the Jordan-Turkey FTA) has been unilaterally terminated,\textsuperscript{26} and one (NAFTA) has been renegotiated by its original signatories.\textsuperscript{27}

In this paper, we explore why some investment treaties are susceptible to termination (including unilateral termination, bilateral termination, and termination by renegotiation), while other investment treaties remain stable. Specifically, we explore whether the variation in BIT termination events is driven by one or more of the following: (1) an initial imbalance in negotiation input; (2) a change in the relative bargaining position of the signatories after the BIT has entered into force; (3) a delay in forming a preference over BIT provisions; and (4) a subsequent shift in signatories’ preferences over BIT provisions.\textsuperscript{28}

In order to explore the relationship between BIT terminations and these potential factors, we introduce and calculate measures for each of these factors. These measures, critically, turn on a novel method we developed to infer individual countries’ preferences from negotiated instruments. Using these measures and a series of regressions, we find (1) some (although inconsistent) evidence that more negotiation input from the less developed signatory is associated with a lower risk of unilateral termination; (2) consistent evidence that more negotiation input from the less developed signatory is associated with a higher risk of renegotiation; (3) consistent evidence that an increase in the bargaining position of the less developed signatory is associated with a higher risk of unilateral termination; (4) consistent evidence that a delay in preference formation of the less developed signatory is associated with a higher risk of unilateral termination; and (5) consistent evidence that a shift in the less developed signatory’s preferences away from the content of an active BIT is associated with a higher risk of both unilateral termination and renegotiation. We also find some evidence that the lack of negotiation input better explains unilateral termination decisions of incremental terminators which selectively terminated some, but not all of their BITs, while an increase in bargaining position better explains unilateral termination decisions of mass terminators.

\textsuperscript{23} See id.

\textsuperscript{24} See id.

\textsuperscript{25} The Albania-Montenegro-Serbia FTA was terminated on November 22, 2007 and has been replaced by the Central European FTA. Id. The Mexico-Nicaragua FTA was terminated on September 1, 2013 and has been replaced by the Central America-Mexico FTA. Id.

\textsuperscript{26} This treaty was terminated on November 22, 2018. Id.

\textsuperscript{27} See Villarreal & Fergusson, supra note 1. As discussed above, since NAFTA has been replaced by the USMCA, we are able to compare the investment chapters to determine that the renegotiation of the treaty was driven, at least in part, by an updated U.S. preference regarding ISDS provisions in the treaty’s investment chapter. Since the Jordan-Turkey FTA was not replaced by a new treaty, we are not able to determine whether or not the termination decision was driven in part by dissatisfaction with the treaty’s investment chapter, or whether it was driven exclusively by other considerations.

\textsuperscript{28} Because of the low rate of termination of FTAs, our analysis here focuses on survival and termination outcomes of BITs.
(India and Ecuador) which terminated the vast majority of their BITs.

Collectively, these findings suggest that as less developed, capital-importing countries continue to form and update their preferences for BIT protections and obligations and continue to obtain a stronger bargaining position, allowing them to recalibrate these agreements to account for those preferences, one can expect the turnover in the investment treaty network to continue. However, to the extent capital-exporting countries value the investment protections that BITs provide to their investors, this Article’s findings suggest that these countries would do well to pursue a more balanced and equitable approach when negotiating with their capital-importing counterparts, which could reduce the risk of unilateral termination by their cosignatories.

This Article proceeds as follows. The remainder of this Part describes the popular narrative surrounding BIT termination events and identifies how this project augments this narrative. This Part also introduces the method we use to disentangle individual country preferences from negotiated BITs. Part II discusses a series of case studies that illustrate the potential influence that countries’ negotiation input and evolving preferences may have over BIT termination. Part III introduces the data and research design. Part IV presents the empirical findings. Part V concludes.

A. Popular Narrative

Popular narrative attributes BIT terminations to the confluence of two developments.29 The common rationale offered to BIT signatories—that these treaties will help them attract more foreign investments and therefore generate economic growth—is still an open question, despite the existence of substantial scholarship attempting to evaluate it.30 The ability of a BIT to attract foreign


30 Many of these papers find a positive correlation between BITs and bilateral FDI flows. See, e.g., Eric Neumayer & Laura Spess, Do Bilateral Investment Treaties Increase Foreign Direct Investment to Developing Countries?, 33 WORLD DEV. 1567 (2005) (finding a positive, significant, and robust correlation between the number of BITs signed by a developing country and total FDI inflows to that country); see also Matthias Busse, Jens Koniger & Peter Nunnkamp, FDI Promotion through Bilateral Investment Treaties: More than a BIT?, 146 REV. WORLD ECON. 144 (2010) (presenting similar findings using bilateral FDI data and a more sophisticated research design). Other research finds little or no correlation between BITs and FDI. See, e.g., Jason W. Yackee, Do Bits Really Work? Revisiting the Empirical Link between Investment Treaties and Foreign Direct Investment, Univ. of Wisconsin Legal Studies Research Paper, No. 1054 (2007), https://ssrn.com/abstract=1015083. The findings in the literature vary depending on the country pairs included in the sample and the control variables added to the model specification. See The Impact of International Investment Agreements on Foreign Direct Investment: An Overview of Empirical Studies 1998-2014, IIA Issues Note, U.N. CONF. ON TRADE & DEV. (Sept. 2014), https://investmentpolicy.unctad.org/uploaded-files/document/unctad-web-diae-pcb-2014-Sep%2024.pdf (presenting a detailed summary of this empirical literature). Due to data limitations and statistical challenges, it is difficult to draw a causal link between BITs and FDI. See generally BONNITSCHE, POULSEN & WABERL, supra note 5, at 158-66 (summarizing the findings of key empirical studies and discussing the challenges of properly measuring the causal effect of BITs on FDI). One study, leveraging an arbitration decision that unexpectedly expanded investor protections in many (but not all) BITs, uses a difference-in-differences research design to attempt causal estimation. Cree Jones, Do Legal Remedies Promote Investment? New Evidence from a Natural Experiment in the Investment Treaty Network (Dec. 15, 2017) (unpublished manuscript), https://perma.cc/2UE7-CQ3P. That paper presents
investment is, at best, uncertain.

On the other hand, developments in ISDS have made it convincingly clear that the costs of a BIT are not zero and are likely much higher than host countries anticipated when signing these agreements.\[^{31}\] Such costs entail not only the large amount of damages that a respondent country has to pay after losing a case (averaging $545 million),\[^{32}\] but also the high litigation costs governments incur in defending a case (averaging about $5 million).\[^{33}\] In addition, ISDS proceedings, and even the threat of their initiation, constrain host countries’ abilities to regulate protected foreign investments specifically and to regulate commerce more generally.\[^{34}\] The popular narrative thus holds that the imbalance in costs and benefits of BITs have led to the termination of these treaties.\[^{35}\] Although compelling, this popular narrative is incomplete in that it fails to explain why some BITs survive and others succumb to termination—that is, it fails to explain what drives the variation in outcomes across BITs. In particular, some countries, such as India and Ecuador, terminated the vast majority of their BITs. Other countries, such as Indonesia and South Africa, only terminated some, but not all of their BITs. The popular narrative fails to explain the variation within and among countries with respect to BIT outcomes.

Despite the considerable controversy surrounding BIT instability and the important implications thereof, empirical research on this question is thin.\[^{36}\] Important work by Haftel and Thompson and by Haftel, Broude, and Thompson focuses on the relationship between ISDS and one type of BIT termination event: renegotiation. They find that the cosignatories’ tendencies to renegotiate BITs is affected by their previous experiences in ISDS proceedings. This finding is consistent with the popular narrative and helps explain why some but not all BITs are renegotiated.\[^{37}\] This Article builds on this nascent literature by

\[^{31}\] See, e.g., Johnson et al., supra note 29, at 5.
\[^{32}\] See id. at 11.
\[^{34}\] See Johnson et al., supra note 29.
\[^{35}\] See supra note 20.
\[^{37}\] Haftel and Thompson argue that states renegotiate when they learn new information about the consequences of their treaty commitments through investor-state arbitration. Yoram Z. Haftel & Alexander Thompson, When Do States Renegotiate Investment Agreements? The Impact of Arbitration, 13 REV. INT’L ORGS. 25 (2018). They find that states that are jointly involved in more ISDS cases are more likely to renegotiate their BITs, and that states appear unaffected by the ISDS experiences of other countries when they decide to renegotiate BITs. Id. In a follow-up study, these authors find that states that have been involved in more investment disputes are more likely to renegotiate or terminate international
exploring a related but more comprehensive mechanism and how it affects BIT termination events: the evolution of signatory preferences over BIT provisions (and the ability of a signatory to incorporate its preferences into the signed treaty text). 38

A country’s evolving preferences are certainly related to its ISDS experience; increasing experience as a respondent in ISDS cases likely causes many countries to update their preferences regarding BIT provisions, which may then lead to the termination or renegotiation of existing BITs. However, ISDS experience is almost certainly not the sole driver of preference evolution. Other drivers may include, for example, shifts in domestic politics, either in favor of or against FDI, or a repositioning of a country as a capital exporter in addition to being a capital importer. 39 The evolving preferences mechanism is more comprehensive than the ISDS mechanism studied by prior literature, since it is able to capture multiple potential drivers of BIT termination events. It is also more nuanced; it is able to identify which countries are dissatisfied with their current BIT provisions and can be used to estimate the degree of that dissatisfaction.

In addition, the method we develop to disentangle each signatory’s preferences from the negotiated BIT also allows us to measure a signatory’s input in the negotiation of each BIT as well as their evolving bargaining position over time. These measures help explain the important variation within and among countries on BIT outcomes, which is not explained by prior literature.

B. Disentangling Preferences

In any legal instrument, the drafter must make choices, based on its preferences, of what to include and not include in the instrument. For a non-negotiated instrument, the document directly memorializes the preferences of the drafter. By contrast, a negotiated instrument, such as a BIT, is a reflection of each party’s preferences, filtered through the lens of negotiation. 40 For example,

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38. The factors studied in this article may not be the only ones influencing BIT termination. For example, domestic politics may also affect BIT termination events. See e.g., Jide Nzelibe, The Breakdown of International Treaties, 93 NOTRE DAME L. REV. 1173 (2018).

39. Identifying and estimating the drivers of preference evolution in the investment treaty network is an important and distinct question. We therefore explore this question in a separate forthcoming project.

the content of a signed BIT, which is observed, likely reflects the preferences of both signatories, which are often not observed. Disentangling these preferences is one of the primary challenges of studying negotiated instruments, such as BITs. The degree to which the signed BIT reflects a particular country’s preferences depends on the amount of overlap between the two countries’ preferences and the bargaining position of each country relative to its cosignatory. Thus, if it were possible to determine each countries’ preferences, it would be possible to estimate the input of each party to the observed instrument.

In this Article, we develop a method to disentangle each country’s preferences (i.e. which protections and obligations each country would like to include in the treaty) from the negotiated BIT itself. Some countries publish model agreements (a non-negotiated outcome) that memorialize their true preferences over BIT provisions at a particular point in time. Most countries do not publish model agreements and, among the set of countries that do so, only a handful provide information on how preferences are updated over time by publishing more than one model.

In order to identify the evolving preferences of all countries, we consider the drafting history for each country over time. For example, in order to identify whether Germany had a preference in 1990 to include a non-expropriation obligation in its BITs, we examine all BITs signed by Germany prior to 1990 to see whether Germany’s drafting history demonstrated a pattern of including a non-expropriation obligation. If such a pattern exists, we infer from that pattern that Germany had a preference to include this particular provision. Applying this method to all countries and all BIT provisions (118 in total) over time, we are able to estimate a complete set of preferences for each country in each year. We term this set of preferences a “synthetic model” for each country. We use actual model BITs as a quality check on the synthetic models we generate.

This method does not produce a perfect measure of true country preferences. In particular, anecdotal evidence discussed in Part I suggests that the inferred preferences of developing countries may more closely reflect consistency in the preferences of the more developed cosignatories than the true preferences of developing countries, particularly for earlier BITs. Recognizing this shortcoming, this approach remains a good first step at disentangling unobserved preferences from observed negotiated instruments and provides a useful approximation of country preferences. In order to mitigate this shortcoming, this Article’s measures rely primarily on inferred preferences for more developed countries.

Using the estimated preferences of each country, we develop four different measures that may contribute to BIT termination events: (1) initial negotiation

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observed negotiated instruments generally; even less has been done to disentangle unobserved ex ante preferences from observed ex post international agreements. One exception is Jones & Rao, supra note 19. That paper examines the drafting histories of all BIT signatories to identify which countries adopt new treaty provisions in the wake of controversial arbitration decisions. This paper builds on this prior work and introduces a new general methodology to disentangle unobserved preferences that helps to clarify the process that culminates in a negotiated outcome.
input, (2) evolving bargaining position, (3) preference formation, and (4) preference evolution. To measure the negotiation input of the less developed signatory, we compare the signed treaty provisions against its cosignatory’s synthetic model BIT (which reflects the cosignatory’s preferred provisions at the time of the treaty’s signature). Since the more developed signatory is often the party that provides the template that forms the textual basis for negotiation (particularly for earlier BITs), we are particularly interested in the extent to which treaty provisions deviate from the synthetic model BIT of the more developed signatory.\textsuperscript{41} The extent of the deviation indicates the level of negotiation input from the less developed signatory. The less the treaty provisions deviate from the more developed signatory’s preferences (or, equivalently, its synthetic model BIT), the less negotiation input we attribute to the less developed signatory. We expect that such treaties are less stable in the sense that they are more likely to eventually be terminated.

With the initial negotiating input estimates in hand, we are able to construct a measure of the bargaining position of each less developed country by averaging their negotiation input across treaties. We hypothesize that, as the bargaining position of some less developed countries improves over time, BITs signed by these countries are more likely to be terminated or renegotiated as these signatories seek to leverage their improved bargaining position to create more balanced BITs.

Our third measure, preference formation, is also related to negotiation input. Having signed BITs largely based on a developed country’s template, some developing countries may not have developed consistent preferences for BIT provisions at the time they signed a treaty. These treaties may be more susceptible to later changes, as the less developed signatory starts to form its own preferences over BIT provisions. Hence, we calculate the number of missing provisions in the less developed signatory’s synthetic model BIT and use it as a proxy for the level of incompleteness of this signatory’s preferences.\textsuperscript{42} We expect that treaties are less stable when the less developed signatory has more incomplete preferences.

Finally, a country’s BIT preferences may change over time. A country that initially preferred to have robust investment protections in its BITs may later develop preferences for more restrictions or carve-outs to such protections, as the country becomes a capital importer or as it becomes subject to more ISDS disputes. Conversely, for countries that experience increases in outbound investments, their preferences may shift toward adopting more investor-friendly BIT provisions. As a country’s BIT preferences evolve, the country is likely to find some of its earlier BITs outdated, and may therefore seek to renegotiate or,

\textsuperscript{41} It is possible for any pair of countries to sign a BIT. There can be a BIT between two developed countries (referred to as a north-north BIT in the literature), a BIT between two developing countries (a south-south BIT), and a BIT between a developed and a developing country (a north-south BIT). Although BITs of each variation exist, they are most prevalent among north-south pairings, with 1,496 of the 2,667 BITs that entered into force prior to December 31, 2020 (56.1 percent) being among north-south pairings. See IIA Navigator. For this reason, we focus here on north-south BITs.

\textsuperscript{42} Missing provisions occur in a synthetic model when there is no consistent pattern in the treaties signed by a country, which makes it much harder to infer the country’s true preference.
failing that, unilaterally terminate these treaties. To measure a country’s evolving preferences, we compare the signed treaty provisions against a signatory’s synthetic model BIT in each year since the signed treaty entered into force (which reflects the country’s evolving preferences). We again focus on less developed signatories and expect that a treaty is more likely to be terminated the more it deviates from the less developed signatory’s current preferences.

The primary contribution of this Article is the innovative method we develop to infer parties’ negotiation input, change in bargaining position, preference formation, and preference evolution, which may have relevant applications for the study of private contracts. In addition to this novel method, this Article presents evidence that points to the potential role that negotiation input, evolving bargaining positions, preference formation, and preference evolution play in the termination of BITs. These results reveal a nuanced explanation for BIT termination events: BITs are more likely to be unilaterally terminated when the less developed signatory signed the treaty with little influence over its content, when the less developed signatory obtains a stronger bargaining position, or when the treaty text falls out of sync with the less developed signatory’s evolving preferences. BITs are more likely to be renegotiated when the less developed signatory signed the treaty with more influence over its content and, again, when the treaty text falls out of sync with the less developed signatory’s evolving preferences. As some developing countries gain more leverage in their treaty negotiations, then, one can expect a continued reckoning for old, imbalanced BITs. The Article’s findings suggest that more balanced negotiations and more assistance to developing countries in treaty drafting and preference formation can help increase the longevity of investment protections by raising the prospect of renegotiation and reducing the risk of unilateral termination.

I. NEGOTIATION INPUT, EVOLVING PREFERENCES, AND TREAY TERMINATION

There are four ways to terminate a BIT. First, each signatory has the option to unilaterally terminate the BIT (“unilateral termination”), provided that conditions stipulated in the treaty are met.43 Second, the signatories to an existing BIT may both agree to negotiate a new BIT, which will terminate and replace the existing one (“renegotiation”). Third, the two signatories may agree to terminate a BIT without negotiating a new one to replace it (that is, bilateral

43. Different treaties may contain different rules on the specific conditions that need to be satisfied for a signatory to unilaterally terminate a BIT. Generally, there are two different types of termination clauses: One is known as the “tacit renewal” termination clause, which provides that, following the expiration of the initial term, a BIT is automatically renewed for a specified term unless either party decides to terminate it within a limited window of time. See, e.g., Agreement between the Swiss Confederation and the Republic of Belarus on the Promotion and Reciprocal Protection of Investments art. 12.1, Belr.-Switz., May 28, 1993, IIA Navigator (providing for perpetual automatic renewal for two-year terms). The other is known as the fixed term termination clause, which provides that the BIT is renewed for an indefinite term upon the expiration of the initial term, but that either party may terminate the BIT at any time thereafter. See, e.g., Agreement between Australia and Uruguay on the Promotion and Protection of Investments art. 15.1, Austl.-Uru., Sept. 3, 2001, IIA Navigator.
termination or termination by consent). Fourth, a BIT with a fixed duration and no renewal clause will simply expire at the end of its term (“expiration”). As more countries reevaluate their BIT programs, unilateral terminations and renegotiations have become more common in recent years.44

While the existing literature largely focuses on the impact of ISDS on BIT termination, in this section we illustrate, through a series of case studies, how the signatories’ negotiation inputs, evolving bargaining position, and evolving preferences are also influencing BIT terminations. These case studies inspire the four measures we develop to explore potential explanations for variations within and among countries with respect to BIT outcomes.

The remainder of this section is organized as follows. First, we present an overall summary of BIT terminations by each method. Next, we present case studies of countries that have unilaterally terminated most of their BITs (India and Ecuador) or many of their BITs (Indonesia and South Africa). These case studies demonstrate how limited input from less developed countries during BIT formation, the shifting bargaining positions of these countries, and the incomplete and evolving preferences of these countries are partially driving unilateral terminations. We then present two case studies (Germany and China) that demonstrate the role that evolving preferences play in driving BIT renegotiations. Finally, for completeness, we discuss the motivating factor behind bilateral terminations and expirations that are less related to the factors studied in this article.

A. An Overview

A total of 2,667 BITs, involving 179 countries, have entered into force since 1959.45 Of these, 351 BITs (13.2 percent), involving 121 countries, have been terminated. Table 1 presents summary statistics on the status of all BITs that have entered into force.46

<table>
<thead>
<tr>
<th>Treaty status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>In force</td>
<td>2316</td>
<td>86.8%</td>
</tr>
<tr>
<td>Unilaterally terminated</td>
<td>165</td>
<td>6.2%</td>
</tr>
<tr>
<td>Renegotiated</td>
<td>121</td>
<td>4.5%</td>
</tr>
<tr>
<td>Bilaterally terminated</td>
<td>51</td>
<td>1.9%</td>
</tr>
<tr>
<td>Expired</td>
<td>14</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2667</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Figure 1 plots a time series of BIT terminations by termination method. There is an incremental increase in renegotiations beginning in the mid-1990s, followed by a sharp surge in unilateral terminations after 2010. There is also a

44. See, e.g., Hafeti & Thompson, supra note 37.
45. All statistics discussed in this paper are based on BITs that entered into force prior to December 31, 2020, and that either remain in force or were terminated on or before that same date.
46. See IIA Navigator, supra note 6. These figures were generated in May 2022.

Figure 1: BIT terminations by type

Figure 2 displays a global heat map of BIT termination events, with India the clear front-runner in terms of participating in BIT terminations.

Figure 2: BIT termination

Unilateral termination is the most common termination method. A total of 165 unilateral terminations represent 47.0 percent of all terminations.47 A

47. See id.
summary of unilateral terminations by country is presented in Table 2.\textsuperscript{48} Eleven countries have unilaterally terminated BITs, and countries such as India and Ecuador have terminated the vast majority of their BITs.\textsuperscript{49} We classify these countries as “mass terminators.” The other nine countries, however, terminated fewer than half of their BITs. We classify these countries as “incremental terminators.”\textsuperscript{50}

<table>
<thead>
<tr>
<th>Country</th>
<th>Terminated BIT Count</th>
<th>Total BIT Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>62</td>
<td>72</td>
<td>86.11%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>20</td>
<td>22</td>
<td>90.91%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>20</td>
<td>46</td>
<td>43.48%</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>21</td>
<td>47.62%</td>
</tr>
<tr>
<td>South Africa</td>
<td>9</td>
<td>22</td>
<td>40.91%</td>
</tr>
<tr>
<td>Poland</td>
<td>9</td>
<td>48</td>
<td>18.75%</td>
</tr>
<tr>
<td>Italy</td>
<td>4</td>
<td>78</td>
<td>5.13%</td>
</tr>
<tr>
<td>Malta</td>
<td>1</td>
<td>17</td>
<td>5.88%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1</td>
<td>26</td>
<td>3.85%</td>
</tr>
<tr>
<td>Hungary</td>
<td>1</td>
<td>55</td>
<td>1.82%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1</td>
<td>98</td>
<td>1.02%</td>
</tr>
</tbody>
</table>

Renegotiation is the second most common termination method (121 terminations), constituting 34.5 percent of all terminations.\textsuperscript{51} Sixty-two countries have participated in the renegotiation of BITs (Figure 3).\textsuperscript{52} Germany and China have renegotiated the most BITs (fourteen and twelve renegotiations, respectively), followed by Turkey and Romania (each with ten renegotiated

\textsuperscript{48} The UNCTAD IIA Database does not contain information on which one of the two signatories unilaterally terminated a BIT or initiated the renegotiation of a BIT. Secondary sources, including press releases and news articles, revealed which signatory initiated a unilateral termination for 138 of the 165 BITs being terminated by this method. The majority of them (72.5 percent) are the less developed of the two signatories.

\textsuperscript{49} See IIA Navigator, supra note 6. India has terminated sixty-two of seventy-two signed treaties; Ecuador has terminated twenty of twenty-two signed treaties. See id.

\textsuperscript{50} These nine countries are: Indonesia (twenty of forty-six BITs terminated); Bolivia (ten of twenty-one); Poland (nine of forty-eight); South Africa (nine of twenty-two); Italy (four of seventy-eight); Hungary (one of fifty-five); Malta (one of seventeen); the Netherlands (one of ninety-eight); and Venezuela (one of twenty-six). See id.

\textsuperscript{51} See id.

\textsuperscript{52} These countries are: Germany (fourteen renegotiations); China (twelve); Romania (ten); Turkey (ten); Republic of Korea (nine); Switzerland (eight); Finland (seven); BLEU (Belgium-Luxembourg Economic Union) (six); Egypt (six); France (six); Chile (five); Morocco (five); the Netherlands (five); Peru (five); Australia (four); Canada (four); Indonesia (four); Singapore (four); Tunisia (four); Czech Republic (three); Spain (three); Vietnam (three); Costa Rica (two); Jordan (two); Kuwait (two); Madagascar (two); Mexico (two); Slovakia (two); Sri Lanka (two); Argentina (one); Bangladesh (one); Belarus (one); Bolivia (one); Bulgaria (one); Colombia (one); Denmark (one); Gabon (one); Greece (one); Guinea (one); Hong Kong, China SAR (one); Iran (one); Iraq (one); Israel (one); Japan (one); Kazakhstan (one); Kyrgyzstan (one); Latvia (one); Libya (one); Mongolia (one); Oman (one); Pakistan (one); Panama (one); Philippines (one); Poland (one); Portugal (one); Syrian Arab Republic (one); Tanzania (one); Ukraine (one); United Kingdom (one); Uruguay (one); Uzbekistan (one); and Yemen (one). See id.
Thirty-three of these countries have renegotiated only one BIT.\textsuperscript{54}

Figure 3: Distribution of countries’ renegotiation frequency

Terminations by consent (fifty-one terminations, or 14.5 percent) and expiration (fourteen terminations, or 4.0 percent) account for the remaining BIT terminations.\textsuperscript{55} The former, as discussed below, are almost exclusively between EU member states. The latter are primarily driven by the drafting practices of Italy.\textsuperscript{56}

\section*{B. Mass Terminators: India & Ecuador}

India is the most prolific unilateral terminator, having terminated sixty-two of its seventy-two active BITs.\textsuperscript{57} These terminations account for almost forty percent of all unilateral terminations.\textsuperscript{58} In 2016, India sent a notice of termination of its existing BITs to at least fifty-eight countries.\textsuperscript{59} This wave of terminations was preceded by an internal review of India’s BIT program, which was prompted in part by a loss in an ISDS case against Australian investors in 2011.\textsuperscript{60} During

\begin{itemize}
\item \textsuperscript{53} See \textit{id}.
\item \textsuperscript{54} See IIA Navigator, supra note 6.
\item \textsuperscript{55} See \textit{id}.
\item \textsuperscript{56} Italy is a signatory to twelve of the fourteen BITs terminated by expiration. See \textit{id}. Based on this pattern, we infer that these expirations are driven almost exclusively by Italy’s drafting preferences.
\item \textsuperscript{57} See \textit{id}.
\item \textsuperscript{58} See \textit{id}.
\item \textsuperscript{60} See \textit{id}. Figure 4 shows the trend of terminations for each country discussed in this section. India’s first unilateral termination occurred in 2013, four BITs were terminated in 2016, and forty-three were terminated in 2017. There is some delay between notice of termination and termination, since the termination clause of the BIT specifies when a particular BIT is eligible for termination. Thus, notice may be given in 2016, but six-month notice may be required (leading to a wave of terminations in 2017). A duration clause (which states that a BIT will have an initial term of years) can also cause a delay between
\end{itemize}
this time, India introduced a new model BIT that sought to address India’s concerns with the earlier generation of BITs by recalibrating the balance of interests between India’s autonomy as the host state and the protections offered to foreign investors. 61 India’s new model BIT significantly restricts the standards of protection offered to foreign investors. Notably, the model BIT excludes the most-favored-nation standard and fair and equitable treatment standard, 62 which are typical provisions that can be found in most BITs 63 and are often the basis for claims brought against host states in ISDS proceedings. 64 Since its release, India has negotiated (or renegotiated) at least four new BITs based on the text of the model BIT. 65 India’s entry into these new BITs with reformed text suggests that these terminations (driven in part by India’s recent exposure to liability under ISDS) reflect India’s updated preferences regarding the protections that India is willing to offer and the liability that India is willing to assume under its investment treaty program.

Figure 4: Terminators (case studies)

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61. See id.
63. See IIA Navigator, supra note 6.
64. See IDS Navigator, supra note 7.
Ecuador is another country that has unilaterally terminated the vast majority of its BITs (twenty of its twenty-two BITs have been terminated). Its BIT terminations can be attributed to a lack of input at the negotiation stage. After an arbitral tribunal ordered the country to pay $2.3 billion to the U.S. oil company Occidental in a high-profile ISDS case, Ecuador’s then-president Rafael Correa formed an investment treaty audit committee to comprehensively examine Ecuador’s investment treaty regime. The committee found that none of the BITs that Ecuador signed had gone through a negotiation process. In addition, most BITs were ratified by the Ecuadorian Congress without any debate about their merits. The committee came to the conclusion that Ecuador signed these treaties without carefully considering their costs and benefits, which resulted in BIT provisions that overwhelmingly favored foreign investors. On the committee’s recommendation, Ecuador terminated most of its BITs in 2017.

C. Incremental Terminators: Indonesia & South Africa

Other countries have selectively terminated only a portion of their BITs. The most prominent of these incremental terminators are Indonesia and South Africa. Indonesia has terminated twenty of forty-six BITs that have entered into force, accounting for 12.3 percent of all unilateral terminations. Like India, Indonesia also attributes its termination decisions to changes in its preferences over BIT provisions. Indonesia’s then-president, in explaining Indonesia’s decision to terminate many of its BITs, stated that these BITs were “contracts with foreigners of twenty or thirty years ago [that] turn out to be inappropriate and unjust.” Putting this shift of preferences into context, Indonesia’s ambassador to Belgium stated that “[the BITs] were signed when global economic power had not yet shifted to Asia and when Indonesia was neither a democracy nor a member of the G20 . . . . It should not come as a shock that Indonesia wants to update, modernize, and balance its BITs.” The ambassador also decried the egregious imbalance in the negotiation of one BIT that protected foreign investors in Indonesia, but withheld a reciprocal protection for Indonesian investors in the cosignatory state, calling it a “one-way street.”

South Africa is the second-most prolific incremental terminator. Since 2009, South Africa has unilaterally terminated eleven BITs; all but one were

66. See Olivet, supra note 20.
67. See id.
68. See id.
69. See id.
71. See IIA Navigator, supra note 6.
72. See Price, supra note 21.
74. See id.
signed with European countries. This wave of terminations appears to have been spurred by a 2007 International Centre for Settlement of Investment Disputes (ICSID) case brought by Italian investors against South Africa’s Black Economic Empowerment legislation. This was the first time that a South African domestic policy was challenged before an investment arbitration tribunal. On its face, this case caused the South African government to reconsider its investment treaty policies. At the same time, the decision to terminate BITs with EU member states (but not all other BITs) was driven by the recognition that these BITs—negotiated based on EU model text—represented an imbalance of interests between protected foreign investors and South Africa as the host state.

In reviewing South Africa’s investment treaty practices, the country’s Department of Trade and Industry issued a report, stating that “[e]xisting international investment agreements are based on a fifty-year-old model that remains focused on the interests of investors from developed countries. Major issues of concern for developing countries are not being addressed in the BIT negotiating processes.” Having signed most of its BITs in a hurry to attract investment following apartheid, the South African government eventually started to pay attention to these treaties after prominent legislation was challenged by foreign investors. South Africa ultimately came to the conclusion that some of the provisions in these treaties imposed too great a restriction on the government’s policymaking ability. In this sense, both the ISDS experience and South Africa’s lack of negotiation input contributed to South Africa’s termination decisions.

D. Renegotiators: Germany & China

Germany and China have participated in the most renegotiations (fourteen and twelve, respectively). Together, Germany and China account for 21.7 percent of all renegotiations. Dissatisfaction with existing treaty terms is an important driving factor behind these (and other) renegotiations. Germany, for example, has renegotiated some of its older BITs to expand the protection of

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75. See IIA Navigator, supra note 6. The exception is the South Africa-Argentina BIT, which was terminated in 2017. See id. Eleven South African BITs remain in force. See id. The cosignatories are China, Cuba, Finland, Iran, South Korea, Mauritius, Nigeria, Russia, Senegal, Sweden, and Zimbabwe. See id.

76. See Piero Foresti v. Republic of South Africa, ICSID Case No. ARB(AF)/07/1, Award (Aug. 4, 2010).


79. Id.

80. See id.

81. See Adam Green, South Africa: BITs in Pieces, FIN. TIMES (Oct. 19, 2012), https://www.ft.com/content/b0eec497-5123-3939-92f7-a5fbeb73dd33.
foreign investments. These BITs were among the early generation of German BITs, which offered limited protection for foreign investments. The renegotiated BITs expanded the scope of protection, including introducing strong ISDS provisions that the original BITs lacked.

Similarly, China, which historically took a restrictive approach with respect to both substantive protections and ISDS, has renegotiated some of its early BITs to remove these restrictions as it has shifted from being a predominantly capital-importing country to being a capital-exporting country. For example, while China’s earlier BITs included extremely restricted ISDS clauses, under which China’s consent to arbitration was limited to disputes concerning the “amount of compensation for expropriation,” China’s renegotiated BITs in recent years have considerably broadened its consent to arbitration to “any disputes concerning an investment.” In the same vein, China has also enhanced substantive protections for foreign investments in its renegotiated BITs, most notably by including national treatment standards that it had refused to grant in earlier BITs. These changes underscore China’s shifting preferences as an emerging capital exporter, which likely prompted some of these renegotiations.

Renegotiations are not limited to developed or transitional economies such as Germany and China. Other less developed countries have also renegotiated their BITs. Indonesia, for example, renegotiated a few BITs to carve out more space for host states to regulate public policy matters. Before terminating some of its BITs, Indonesia successfully renegotiated a few BITs with more carve-outs and limitations on the protection of foreign investment. The BIT between Indonesia and Finland, which was renegotiated in 2006 and remains in force today, reserves Indonesia’s right to maintain limited exceptions to the national treatment standard, a reservation that leaves space for state policymaking and was absent in the initial BIT between the two countries. According to the Indonesian ambassador to Belgium, Indonesia was seeking to “update, modernize and balance its BITs” because its old BITs were based on Western

83. See id.
84. See Thompson, Broude, & Haffel, supra note 37, at 264.
88. See Bel.-Chn. BIT 1984 supra note 86, arts. 3, 11 (including equitable treatment and most-favored-nation treatment, but excluding national treatment); cf. Bel.-Chn. BIT 2005 supra note 87, art. 3 (including national treatment).
templates that represented corporate interests and lacked consistency.\textsuperscript{90}

\subsection*{E. Termination by Consent}

Unlike unilateral terminations and renegotiations, terminations by consent are almost exclusively driven by intra-EU BITs; in forty-seven of the fifty-one BITs that have been terminated by consent, both signatories were EU member states (or aspiring EU member states) at the time of termination. Early terminations by consent were driven by new accessions to the European Union and a concern among some member states that intra-EU BITs were incompatible with EU law.\textsuperscript{91} Malta, for example, terminated its BIT with Switzerland in preparation for its accession to the European Union.\textsuperscript{92}

For a time, it was an open question whether intra-EU BITs were contrary to EU law.\textsuperscript{93} This question was resolved in the affirmative in 2018 by the Court of Justice of the European Union decision in \textit{Slovak Republic v. Achmea}, in which the court held that investor-state arbitration provisions in intra-EU BITs were incompatible with EU law.\textsuperscript{94} Since then, several countries have terminated their intra-EU BITs. On May 5, 2020, twenty-three EU member countries signed the agreement for the termination of intra-EU BITs (the so-called “termination agreement”), which aims to terminate some 130 intra-EU BITs.\textsuperscript{95}

\subsection*{F. Expiration}

Fourteen BITs have been terminated through expiration.\textsuperscript{96} Twelve of these BITs were signed by Italy, suggesting that for at least some agreements, Italy likely preferred including sunset provisions to predetermine the expiration of the treaty.\textsuperscript{97} This type of termination event is quite rare, accounting for only three percent of all termination events.\textsuperscript{98}

\section*{II. DATA AND METHODOLOGY}

To explore how negotiation input, shifting bargaining positions, and the evolution of BIT provision preferences affect treaty termination, we use the United Nations Conference on Trade and Development (UNCTAD) International Investment Agreements (IIA) Database, created by one of us in

\begin{flushleft}
\textsuperscript{90} Oegroseno, supra note 73.
\textsuperscript{92} \textit{See} id.
\textsuperscript{93} \textit{See} id.
\textsuperscript{94} Case C-284/16, Slovak Republic v. Achmea BV, 2018 E.C.R. 158, ¶¶ 56, 58.
\textsuperscript{95} \textit{See} EU Member States Sign an Agreement for the Termination of Intra-EU Bilateral Investment Treaties, EUR. COMM. (May 5, 2020), https://ec.europa.eu/info/publications/200505-bilateral-investment-treaties-agreement_en. Signatories of the termination agreement include Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, and Spain.
\textsuperscript{96} \textit{See} IIA Navigator, supra note 6.
\textsuperscript{97} \textit{See} id.
\textsuperscript{98} \textit{See} id.
\end{flushleft}
partnered with UNCTAD. The Database contains provision-level information for every signed BIT with publicly available text, providing a comprehensive picture of the evolution of the BIT network. One hundred seventy-nine countries have a signed BIT recorded in the Database, sixty of which were low-income or lower-middle-income countries at the time of BIT signature. A global heat map of BIT signatories is presented in Figure 5.

Figure 5: BIT signatories

The Database contains detailed information on the inclusion and variation of 118 different treaty provisions. These include definitions, host state obligations, procedural provisions on how to resolve disputes between a protected investor and a signatory, and provisions on the mechanics of the treaty, such as treaty renewal, methods of treaty termination, and treaty duration.

99. Jones worked as lead consultant on the project for the IIA Section at UNCTAD from 2012 to 2016. As coordinator and manager, Jones oversaw the work of more than 550 law students at forty-two universities in twenty-two countries over a three-year period. See Jones, supra note 6, at 4-5.
100. See IIA Navigator, supra note 6.
101. See id.
102. Standard BIT definitions include what qualifies as an investment and who qualifies as an investor.
103. Standard host state obligations include a promise to treat protected investments fairly and equitably (fair and equitable treatment) and at least as well as the host state treats investments made by its own nationals (national treatment) or other international investors (most-favored-nation treatment). Signatories also typically promise to provide protected investments with full protection and security and to not expropriate the protected investment, either directly or indirectly (for example, through regulation that erodes the value of the protected investment).
104. These investor-state dispute settlement provisions include provisions on the rules and forums available to protected investors to resolve disputes, how long protected investors must wait before filing a claim, whether or not protected investors must first litigate their claim in the courts of the host country, and ex ante consent by the host country to investor-state arbitration.
105. See id.
Using the Database, we examine drafting patterns in each country’s signed BITs to generate a set of evolving preferences (which we call a “synthetic model”) for every country. These synthetic models are our best approximation of the true preferences of each country participating in the investment treaty network. We use these synthetic models to estimate (1) a signatory’s negotiation input; (2) a signatory’s evolving bargaining position; (3) the level of preference incompleteness of a signatory at the time the treaty is signed; and (4) how much a signatory’s current (evolving) preferences deviate from the signed agreement relative to that at the time the treaty was signed. We then explore the correlation of these measures with the risk of treaty termination.

Not all BIT provisions are identical in terms of their importance to investors and the constraints they impose on host countries. The main analysis in this paper uses a subset of these provisions, including all of the provisions that enable investors to bring enforcement proceedings against a host country and the primary protections most often invoked by investors in those proceedings.106 All results are replicated using the full set of BIT provisions in the Appendix.107

A. Inferring Preferences

To infer a country’s preferences and generate these synthetic models, we look for consistency in each country’s drafting practices for each provision over a rolling five-treaty window. If at least four out of five treaties contain the same provision during that window, we infer that the country has a preference for that particular provision. We do not infer the formation of an initial preference for a provision until the four-out-of-five-treaties threshold is met during a rolling five-treaty window (until that happens, preference for such provisions is recorded as missing). Once a preference is inferred, if four out of five treaties contain a different version of the provision during a subsequent window, we infer that there is a shift in the country’s preference from the original provision language to the new provision language. We backdate the shift in preference to the first occurrence of the new provision in the relevant five-treaty window. For each BIT signatory, we repeat this process for each of the 118 coded BIT provisions to generate a synthetic model for each year from the time that the country signed its first BIT through the end of 2020. These synthetic model BITs reflect a country’s complete set of evolving preferences over all BIT provisions.

106. The UNCTAD IIA Database includes a total of forty-seven primary provisions and seventy-one secondary provisions for a total of 118 provisions. For example, the Database documents whether each BIT includes a primary provision barring expropriation of protected investments along with three secondary provisions that modify the dimensions of the expropriation protection. Our measures and analysis are based on eighteen of the forty-seven primary provisions, including fifty-five of the secondary provisions associated with the eighteen included primary provisions. These eighteen primary provisions consist of all investor-state dispute settlement (ISDS) provisions and all provisions that comprise the protections that typically give rise to claims in ISDS proceedings. These protections (each of which include multiple secondary provisions) include: (1) the definition of investor, (2) the definition of investment, (3) fair and equitable treatment, (4) most-favored-nation treatment, (5) national treatment, (6) direct and indirect expropriation, and (7) full protection and security. In the Appendix, we use the full set of primary and secondary provisions to replicate our analysis.

107. As explained in detail in Section IV.F.1, the only place where we find inconsistent results in our replication is the relationship between negotiation input and unilateral termination risk.
Some countries publish actual model agreements that document their true BIT preferences. Unfortunately, most countries do not have published models. Among countries that do have published models, many have also signed BITs that predate the publication of the model, providing limited information about the formation and evolution of preferences in earlier BITs. One silver lining, however, is that we are able to use these actual model BITs as a check on the synthetic models that we generate.

We have information on the content of published model BITs for forty-nine countries in the database (Figure 6). For each country with a published model BIT, we compare its synthetic model to the corresponding true model and calculate the share of provisions that match across the two models. The average match share for all synthetic models that have a corresponding true model is 90.9 percent. A distribution of the match share between synthetic and actual models is presented in Figure 7.108 In Figure 8, we generate two separate distributions based on the countries’ income levels. Overall, more developed countries (high-income and upper-middle-income countries) have a higher average match share (91.4 percent) than less developed countries (low-income and lower-middle-income countries), which have an average match share of eighty-nine percent.

Figure 6: Model BITs

108. Two of the outliers with a low match share in the figure are the U.S. model BIT from 2012 and the Canada model agreement released in 2004. These outliers are the result of a lag between the release of the model agreement and the signing of the next BIT. For example, the United States has not signed a new BIT based on the 2012 model, so the U.S. synthetic model in 2012, which is generated using signed BITs, does not reflect the most recent changes in U.S. preferences embodied in the 2012 model agreement. We have considered different ways to address this. One option is to include investment chapters in FTAs, which would give more data points (and, for some countries, more recent data points) for a country’s preferences. One drawback of including FTAs is that these agreements may include more than two signatories, so stronger assumptions are required in order to make inferences about the preferences of a single signatory. Another option we considered is to calculate the match share based on the preferences in the year the first BIT is signed after the publication of the model agreement. This option will improve the match share between synthetic and actual models, but does not provide us with a way to backdate shifting preferences in synthetic models. The lag in the methodology we ultimately are using does, however, gives us at least a conservative estimate of shifting preferences for each signatory.
Figure 7: Match share between actual model BITs and synthetic model BITs
We use these synthetic models to estimate four new measures. The first is an estimate of a signatory’s input in the treaty negotiation, based on how much the signed treaty deviates from the cosignatory’s synthetic model at the time the treaty was signed. The second measure is an estimate of a signatory’s evolving bargaining position based on the number of concessions it was able to obtain from cosignatory in prior treaty negotiations. The third measure is an estimate of the number of provisions for which a country has not formed preferences at the time of treaty signature. The fourth measure is an estimate of how much a country’s current (evolving) preferences deviate from the signed treaty relative to that at the time when the treaty was signed. Because qualitative data and anecdotal evidence suggests that it is mostly the less developed signatory who has little input in BIT negotiation and later becomes dissatisfied with the signed
treaty, in our main analysis, which is done at the treaty level, we explore whether and how BIT termination events are correlated with the less developed signatory’s negotiation input, evolving bargaining position, incomplete preferences, and evolving preferences.\textsuperscript{109} We then conduct country-level analysis that explores whether and how each of these four measures of either cosignatory is correlated with the BIT termination events.

\textbf{B. Estimating Negotiation Input}

In order to estimate a signatory’s input in the negotiation of each treaty, we compare the signed treaty with the synthetic model (in the year the BIT is signed) of its cosignatory and calculate the share of the provisions that match across the two treaties (the “cosignatory match share”). We exclude missing preferences from the calculation of the cosignatory match share.

There are a total of 118 coded treaty provisions. Suppose, for simplicity, that the synthetic model for the cosignatory B has data for 100 of these provisions and that the signed treaty between A and B matches B’s synthetic model on ninety of these provisions. In such a case, signatory A’s cosignatory match share would be ninety out of 100. We infer from this data that signatory A was able to negotiate concessions from signatory B on the drafting of the ten provisions that do not match B’s synthetic model.

A higher cosignatory match share means that there is less deviation from the cosignatory’s synthetic model, suggesting less negotiation input from a signatory. A lower cosignatory match share means that there is more deviation from the cosignatory’s synthetic model, suggesting a greater degree of negotiation input from a signatory.

Qualitative data and anecdotal evidence suggest that the more developed signatory often provides the initial draft that serves as a template in a BIT negotiation.\textsuperscript{110} This is consistent with our finding, detailed below, that lower income countries have more variation in their signed treaties, which leads to more missing provisions in their synthetic models. Hence, we are more confident with our cosignatory match share measure based on the more developed signatory’s synthetic model (measuring the less developed signatory’s negotiation input), which is also the variable we used in our main analysis.

Negotiation input from the less developed signatory is an output of at least three different inputs. The first input is the preferences of the less developed signatory (and the degree to which those preferences deviate from the preferences of its more developed cosignatory). The second is the effort put in by the less developed signatory to have its preferences included in the treaty. The third is the willingness of the more developed signatory to grant concessions when negotiating the text of the agreement with the less developed signatory.

More input from the less developed signatory (resulting in a lower

\textsuperscript{109} Relative development of the signatories is determined using the World Bank income level classification system. A signatory to a BIT is classified as more developed relative to its cosignatory if the signatory is categorized in a higher income grouping relative to its cosignatory.

\textsuperscript{110} See, e.g., Poulsen & Vis-Dunbar, supra note 12.
cosignatory match share) indicates that (1) the less developed signatory formed its own preferences over more treaty provisions (and that these preferences deviated from the preferences of its more developed cosignatory); or (2) the less developed signatory pushed for the inclusion of its preferences in the treaty; and (3) the more developed signatory was willing to make concessions to include new provisions that deviated from its own preferences.

By the same logic, less input from the less developed signatory (resulting in a higher cosignatory match share) may reflect the breakdown of one or more of these inputs. For example, less input from the less developed signatory may have been caused by a failure on the part of the less developed signatory to research and develop its own preferences or to request that those preferences be included in the treaty. Alternatively, even if a less developed signatory worked to develop its own set of preferred provisions and pushed hard in negotiations for the inclusion of those preferences in the treaty, a high cosignatory match share (that is, a score reflecting low input from the less developed signatory) may still result if the less developed signatory’s negotiation position was weak relative to its more developed cosignatory, and if the cosignatory decided to steamroll the negotiations.

Since the cosignatory match share is calculated using the fixed preference of the more developed cosignatory in the year the BIT was signed, the negotiation input measure is constant across time for each BIT. Using this measure, we are able to explore the correlation between negotiation input and BIT termination.

The time-trend of the less developed signatory’s mean cosignatory match share is presented in Figure 9. The mean cosignatory match share fluctuates between 95.2 percent and 92.5 percent from 1970 through 2000. From 2000 to 2020, the mean cosignatory match share falls from 95.2 percent to 90.1 percent. This drop suggests that input from the less developed signatory has approximately doubled (from concessions in 4.8 percent of provisions to concessions in 9.9 percent of provisions) in recent BITs relative to earlier BITs.

111. Although BITs impose the same obligations on both signatories, in a typical pairing of BIT signatories, the less developed signatory will primarily be an FDI importer and the more developed signatory will primarily be an FDI exporter. This asymmetry may naturally lead to different preferences over treaty provisions, with FDI exporters preferring stronger protections, and FDI importers preferring more carve-outs to preserve their ability to regulate FDI without fear of arbitration claims being brought by protected investors.
C. Estimating Bargaining Position

After estimating the cosignatory match share, we used those estimates to calculate a signatory’s evolving bargaining position during the course of each of their signed BITs. We do this by subtracting cosignatory match share from one, revealing the estimated share of provisions for which a signatory was able to secure concessions from its cosignatory. We then take the average of these concessions in a five-treaty rolling window to estimate how each country’s bargaining position has changed over time (a measure that we call the “evolving bargaining position”). This moving average reflects a country’s average ability to secure concessions from its cosignatory, which can serve as a proxy for the country’s evolving bargaining position. If a country is able to consistently secure higher concessions in new BIT negotiations, this change will be reflected as an increase in the country’s evolving bargaining position. However, if a country is only able to occasionally secure higher concessions in new BIT negotiations, then we will not observe an increase in the evolving bargaining position measure.

In our main analysis, we focus on the correlation between BIT termination events and the evolving bargaining position of the less developed signatory. The time-trend of the less developed signatory’s evolving bargaining position is presented in Figure 10. As seen in the figure, the less developed signatory’s bargaining position decreases on average from 1970 to 2000, which is also the period that sees the exponential growth in the number of newly-signed BITs. However, the bargaining position measure has been trending up after 2010, as less developed signatories managed to secure more concessions in recent BITs.
Figure 10: Bargain position trend

D. Estimating Incomplete Preferences

Some countries may not have developed consistent BIT provision preferences until they had signed enough BITs to learn more about the consequences of those BITs. This phenomenon is reflected in a country’s synthetic model as missing provisions.\footnote{112} We use these missing provisions as a measure of preference completeness which may, itself, be another driver of treaty termination.

We calculate the measure we call the “share missing” by taking the number of missing provisions in the synthetic model of a signatory and dividing that number by the total number of possible coded provisions in the BIT. Thus, a higher share missing measure suggests that the signatory has not yet formed an observable and consistent preference for a higher number of investment treaty provisions.

Figure 11 breaks down the share of missing provisions in synthetic models by a country’s income level over time. For countries that signed BITs in or before 1970, our generated synthetic models have missing data for close to one-third of BIT provisions. Preferences for low-income countries are the most incomplete, with 55.7 percent of provisions missing. Preferences for high income countries are the most complete, with 25.9 percent of provisions missing. There is a convergence in completeness over time, with the average completeness for each income level passing and stabilizing at or above ninety percent from 2000

\footnote{112} In order to infer an initial preference for a country on a particular provision, four out of five BITs in the five-treaty window must display a consistent version of the provision. If not, the provision is coded as missing by construction until we reach a five-treaty window that satisfies the four-out-of-five threshold.
through 2020. This finding suggests that countries are gradually forming preferences about BIT provisions, with low-income countries doing more catching-up relative to countries of other income levels.

Figure 11: Missing provisions in synthetic models

![Figure 11](image)

**E. Estimating Evolving Preferences**

Another possible driver of treaty termination is that, as countries update their preferences over time, the distance between a signed BIT and a signatory’s current preferences may increase (or decrease) relative to the distance at the time the treaty enters into force. This reality may increase (or decrease) the probability the BIT is terminated or replaced by a new treaty.

To estimate how much an active BIT deviates from each signatory’s current preferences, we calculate the “preference match share” for each cosignatory by comparing the signed BIT with the current preferences of each cosignatory, as reflected in their respective synthetic models. Since the preference match share is calculated using the evolving preference of each signatory, the preference match share may change across the panel, and it will almost certainly be different for each signatory. Using these measures, we are able to explore the correlation between preference updating and BIT termination.

The trend of the preference match share is broken down by income level in Figure 12. As can be seen in the figure, preference match shares are initially quite dispersed: Low-income countries have a mean preference match share of 83.6 percent and upper-middle-income countries have a mean preference match share of 97.1 percent. There is a convergence over time, however: By 2020, all income levels have a preference match share between 85.2 percent (for low-income countries) and 89.5 percent (for high-income countries). The data used to generate this figure includes all BITs that were active at the end of each decade. Thus, terminations and renegotiations of early BITs likely help to account for
this convergence across income level groupings.

Figure 12: Evolving preferences by income level

Figure 13 largely replicates Figure 12, but it uses a stable set of BITs signed before 1990 instead of a constantly evolving set of BITs that enter and exit throughout the panel. As Figure 13 shows, there is an overall downward trend in preference match share across all income groups. Low-income countries in particular experience a decrease of around twenty percent in the proportion of signed BIT provisions that match their current preferences. This reflects the larger shift in preferences experienced by low-income countries, which likely resulted from lagged preference formation codified in their early BITs. In addition, high-income countries and upper-middle-income countries, which started with higher evolving match shares in the 1970s, also have higher preference match shares in 2020 relative to the other two income groups. This suggests that, despite preference evolution over time, the current preferences of more developed countries still deviate less from the text of pre-1990 BITs than do the current preferences of less developed countries. Figure 13:
A renegotiated treaty should be closer to the signatories’ current preferences as compared to the original treaty. As an example, Figure 14 presents the preference match share distributions for all German BITs that remain in force and for all German BITs that have been renegotiated. This granular depiction demonstrates that, while there are many German BITs with a low preference match share that remain in force, all renegotiated German BITs had a relatively low preference match share at the time of renegotiation.
The data also allows us to focus on the treaty level to see how the preference match share has evolved over time for terminated BITs and to examine how the preference match share of a renegotiated BIT at the time of termination compares to the preference match share of the new BIT at the time it enters into force. Figure 15 plots the evolution of the preference match share for both Germany and Gabon under the Germany-Gabon BIT, which was renegotiated and replaced in 2007.

Figure 15: Renegotiations and preferences – Germany

As seen in the figure, Germany’s initial preference match share was close to ninety-eight percent when the original BIT enters into force. In 1983, Germany updated many of its preferences, particularly with regards to the inclusion of ISDS provisions. This shift in preferences led to a precipitous decline in Germany’s preference match share (to approximately seventy-two percent), which persisted until the treaty was replaced in 2007, leading to a preference match share that was, again, about ninety-eight percent.

Although it began with a much smaller preference match share (seventy-five percent), Gabon also updated its preferences during the lifecycle of the BIT. This updating led to a decline in Gabon’s preference match share in 1995 to below seventy percent, which persisted until the BIT was renegotiated in 2007. At renegotiation, Gabon’s preference match share achieved an all-time high of ninety-two percent, resulting in a win-win for both signatories.

We further investigate whether renegotiation results in a new treaty with provisions that are closer to the signatories’ current preferences than were the provisions of the old treaty. To do so, for each treaty that was renegotiated and replaced by a new one, we compare preference match share at the time the old treaty was terminated against preference match share at the time the new treaty was signed. We then plot the distribution of the difference (the preference match
difference) for three groups of signatories: more developed cosignatories, less developed cosignatories, and cosignatories at the same development level.\textsuperscript{113} A positive preference match difference indicates that the renegotiation moves treaty provisions closer to the cosignatory’s current preferences. A negative preference match difference indicates that the renegotiation moves treaty provisions further away from the cosignatory’s current preferences. As Figure 16 shows, for BITs with cosignatories of different development levels, the vast majority of renegotiated BITs improve on the match rate with both signatories’ current preferences. Overall, the more developed cosignatory appears to benefit more from the renegotiation, with an average of 27.4 percent of treaty provisions being revised to match with its current preferences, which is higher than the figure for the less developed cosignatory (20.4 percent). As for BITs with cosignatories at the same development level, over 34.6 percent of renegotiated BITs are in fact more distanced from either cosignatory’s current preferences than the original BIT. This trend may be explained by contributions both parties make to the renegotiation process and compromises made as a result of their equal bargaining power.

\textsuperscript{113} To reduce noise caused by countries with stale preferences, we only include in the sample renegotiated treaties which are not one of the last three treaties that a country signed.
Figure 16: Comparison between renegotiated and original BITs

(a) More Developed Signatories

(b) Less Developed Signatories

(c) Signatories of Same Development Level
III. Analysis

In this section we explore the correlation between three BIT outcome variables,114 (1) unilateral termination, (2) renegotiation, and (3) bilateral termination, and four covariates, (1) the negotiation input of the less developed signatory, measured by the cosignatory match share; (2) the evolving bargaining position of the less developed signatory; (3) incomplete preferences, or share missing, measured by the number of missing provisions in the synthetic model of the less developed signatory at the time the treaty was signed; and (4) evolving preferences, measured by the change in the preference match share of the less developed signatory.

We use a panel data set that includes an observation for each BIT in each year that it is in force. For example, Chile and Peru signed a BIT on February 2, 2000 that entered into force on August 11, 2001. It was then replaced by a new treaty on March 1, 2009. The Chile-Peru BIT therefore enters the data set in 2001 and survives until 2009 (with an observation in 2009, but no observation in 2010). BITs that have entered into force and remain in force have observations beginning in the year the BIT entered into force through the end of the panel in 2020.

Using this data set, we test the following hypotheses. In each case, termination includes unilateral termination and renegotiation.

Hypothesis 1: BITs are more likely to be terminated when the less developed signatory has lower negotiation input.115

Hypothesis 2: BITs are more likely to be terminated when the less developed signatory has a higher bargaining position.

Hypothesis 3: BITs are more likely to be terminated when the less developed signatory has more incomplete preferences at the time the BIT was signed.

Hypothesis 4: BITs are more likely to be terminated when they fall more out of sync with the less developed signatory’s evolving preferences.

To test these hypotheses, we use a Cox proportional hazard model, which allows us to estimate the risk that each BIT is terminated as time elapses.116 In our analysis, we estimate the correlation between BIT termination and the less

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114. Termination by expiration is not included in the analysis. In this paper we are interested in exploring how ex post decision making is influenced by either negotiation input or preference updating. Termination by expiration is driven largely by the initial treaty drafting (i.e. the treaty is set to expire in the explicit terms of the treaty), not the ex post actions of the signatories.

115. Prior to undertaking our analysis, we expected, consistent with the discussion in Section III, that bilateral terminations would be driven primarily, if not exclusively, by the Achmea decision. Our regression results throughout this section confirm this expectation, finding a positive and statistically significant correlation between the Achmea decision and bilateral termination of intra-EU BITs.

116. This approach has the advantage of being able to estimate the effects of the explanatory variables on the risk of termination, while leaving the baseline risk unspecified. We use the following model: $h_{ij}(t) = h_0(t) e^{B_i ShareX_{ij} + \delta X_{ij} + \epsilon_i j}$

In this model, $h_0(t)$ represents the probability of the BIT between countries $i$ and $j$ being terminated conditional on having continued until year $t$. $h_0(t)$ models the baseline hazard of termination; $ShareX_{ij}$ is the covariate of interest (i.e. the cosignatory match share, bargain position, share missing, or evolving match share); and $X_{ij}$ is the vector of control variables.
developed signatory’s (1) cosignatory match share, (2) evolving bargaining position, (3) share missing, and (4) change in preference match share.\textsuperscript{117} For each of these four measures, we first do a general analysis with the outcome variable being termination by any means. We then run separate regressions based on different termination type.

Our analyses include six additional control variables that may also influence BIT termination events. First, we control for the year each treaty was signed (the “year of signature”). We anticipate that older BITs are more likely to be terminated than newer BITs.

Second, we control for the difference in the two signatories’ income level as determined by the World Bank (the “difference in income level”).\textsuperscript{118} BIT termination decisions may vary depending on the relative power of the cosignatory. We anticipate that, if BIT signatories have the same income level, the BIT is more likely to be renegotiated rather than terminated, because there is a more level playing field for treaty negotiations. If BIT signatories have a greater difference in their income levels, we expect that the BIT is more likely to be unilaterally terminated, since, in these pairings, there may be a greater divergence between each country’s preferences and more imbalance in the relative bargaining positions of the signatories.

Third, we include an indicator variable that equals one if the BIT governs a dyad with no history of bilateral FDI (that is, when the BIT is considered a “paper BIT”). Under a paper BIT, there are no protected investors. Thus, the expected cost of future litigation under the BIT is approximately zero.\textsuperscript{119} We therefore anticipate that paper BITs are less likely to be terminated than BITs that are protecting active investments.

We also include two different measures reflecting the arbitration history of the signatories. One is the cumulative number of ISDS cases brought against either signatory (which we call the “cumulative number of cases”). The other is the number of ISDS cases brought against either signatory in the previous year (which we call the “number of cases”). Informed by the findings of Haftel and Thompson\textsuperscript{120} and Thompson, Broude, and Haftel,\textsuperscript{121} we anticipate a positive correlation between ISDS history of the signatories and BIT termination.

Finally, we include a control variable that is equal to one for intra-EU BITs in any year after the Achmea decision and zero otherwise. As discussed earlier, the Achmea decision held that arbitration provisions in intra-EU BITs were

\textsuperscript{117} All regressions in this section use covariate measures calculated using the most consequential BIT provisions, as discussed supra note 106. Tables A1-A9 in the appendix replicate the regressions in Tables 4-12 using the full set of 118 BIT provisions. These tables demonstrate that the majority of the findings are robust to using the full set of BIT provisions to calculate each of the treatment measures.

\textsuperscript{118} There are four different income levels: high income (which we assign a score of 4), upper-middle income (3), lower-middle income (2), and low income (1). The difference is calculated by subtracting the income level of the lower income country from the higher income country.

\textsuperscript{119} Although there are no current protected investments under a paper BIT, the future litigation risk is not precisely zero because there is always a possibility that protected investments may enter in the future.

\textsuperscript{120} See Haftel & Thompson, supra note 36.

\textsuperscript{121} See Thompson, Broude, & Haftel, supra note 36.
incompatible with EU law. Ninety-five percent of BITs that are termination by consent have been between intra-EU countries. Thus, we anticipate the Achmea variable, as we call it, will be positively correlated with BIT termination by consent and negatively correlated with unilateral termination and renegotiation.

A. Negotiation Input

To test our first hypothesis that less negotiation input (from the less developed signatory) is correlated with a higher rate of termination, we begin with a simple regression that estimates the coefficient for the less developed signatory’s cosignatory match share when the outcome variable is termination by any means, as reported in the first column in Table 3. We then add control variables one at a time to the model specification in columns 2 through 7.

<table>
<thead>
<tr>
<th>Table 3: Negotiation input and termination risk</th>
</tr>
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<tbody>
<tr>
<td>(1) Terminate (any)</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Cosignatory Match</td>
</tr>
<tr>
<td>Share (less developed)</td>
</tr>
<tr>
<td>Year of signature</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Difference in income level</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Paper BIT</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Achmea</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>

Standard errors in parentheses.
Coefficient estimates from Cox proportional hazards model.
* p < .10, ** p < .05, *** p < .01

Contrary to Hypothesis 1, we find a negative correlation between cosignatory match share and treaty termination, though only the estimate in column 2 is statistically significant. This means that the more the signed BIT incorporates the preferences of the more developed signatory and omits the preferences of the less developed signatory, the lower the risk that the BIT will be terminated.

In Table 4, we run separate regressions by termination type using the

122. See Case C-284/16, Slovak Republic v. Achmea BV, 2018 E.C.R. 158.
123. See IIA Navigator, supra note 6.
preferred model specification.\textsuperscript{124} The estimates in columns 3 and 4 in Table 4 suggest that the negative correlation in Table 3 is driven by BITs that are terminated through renegotiation. Doing a bit of math, we are able to determine from the coefficient estimate that increasing the less developed signatory’s cosignatory match share (thus decreasing developed signatory concessions) by ten percent decreases the risk of renegotiation by 27.2 percent.\textsuperscript{125}

Table 4: Negotiation input and termination risk by termination type

<table>
<thead>
<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
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</thead>
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<tr>
<td>Cosignatory Match</td>
<td>1.698 (1.246)</td>
<td>1.566 (1.206)</td>
<td>-2.413*</td>
<td>-2.435*</td>
<td>1.227 (4.592)</td>
<td>1.397 (4.992)</td>
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<tr>
<td>Share (less developed)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0883*** (0.01143)</td>
<td>0.0977*** (0.0157)</td>
<td>-0.0430***</td>
<td>-0.0460***</td>
<td>0.0693 (0.0490)</td>
<td>0.0768 (0.0511)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.115 (0.152)</td>
<td>0.0331 (0.148)</td>
<td>-0.648***</td>
<td>-0.637***</td>
<td>-1.255 (0.867)</td>
<td>-1.210 (0.851)</td>
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<tr>
<td>Paper BIT</td>
<td>-1.099** (0.514)</td>
<td>-1.135** (0.513)</td>
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<td>-0.431</td>
<td>1.660 (1.354)</td>
<td>1.548 (1.378)</td>
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<td>Achnina</td>
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<td>-17.16*** (0.285)</td>
<td>-21.02***</td>
<td>-17.03***</td>
<td>4.616*** (0.347)</td>
<td>4.670*** (0.595)</td>
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<tr>
<td>Cumulative number of cases (cosignatories)</td>
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<td>-0.00908</td>
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<td>0.489 (0.317)</td>
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<td>Observations</td>
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<td>32388</td>
<td>32388</td>
<td>32388</td>
<td>32388</td>
<td>32388</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
Coefficient estimates from competing-risks survival regressions,
* $p < .10$, ** $p < .05$, *** $p < .01$

By contrast, we find a positive (though not statistically significant) correlation between cosignatory match share of the less developed signatory and the risk of unilateral termination. To be precise, we find that a ten percent increase in the cosignatory match share (that is, a ten percent reduction in

\textsuperscript{124} In the regressions for each type of termination, we use competing risk survival regressions which account for all competing events (i.e. terminations by another method).

\textsuperscript{125} The coefficient estimate in a Cox Hazard Model is interpreted by recovering the hazard ratio (i.e. the ratio of the termination likelihood of a BIT with no concessions relative to the termination likelihood of a BIT with full concessions). To recover the hazard ratio, take the exponential of the coefficient estimate. For example, in column 3 of Table 4 the coefficient estimate is 2.413. The hazard ratio is equal to $e^{2.413} = 0.0895$. This means that the risk a BIT with no concessions (i.e. Cosignatory Match Share = 1) is renegotiated is $8.95\%$ as large as the risk a BIT with full concessions (i.e. Cosignatory Match Share = 0) is renegotiated. So, a BIT with full concessions is $1/0.0895 = 11.17$ times more likely to be renegotiated relative to a BIT with no concessions. To scale the hazard ratio by a percent change in the Cosignatory Match Share, multiply the coefficient by the percent change (i.e. $0.1$ or $10\%$) and then take the exponential. For example, a ten percent increase in cosignatory match share (i.e. a ten percent reduction in concessions) would yield a hazard ratio of $e^{-2.413 \times 0.1} = 0.786$. So, a BIT with seven (ten percent more) concessions is $1/0.786 = 1.272$ times as likely to be renegotiated relative to a BIT with no concessions. So, a ten percent increase in concessions increases the probability of renegotiation by 27.2 percent.
concessions) is correlated with an 18.5 percent increase in the risk of unilateral termination. The direction of this coefficient estimate is consistent with our hypothesis that BITs with lower negotiation input from the less developed signatory are at greater risk of unilateral termination.

One plausible explanation for the negative correlation between cosignatory match share and renegotiation is that with more input in the negotiation of the original treaty, the less developed signatory has more incentive to spend time and effort renegotiating the treaty with its cosignatory. Similarly, having granted more concessions in the original negotiation to get the treaty signed, the more developed cosignatory also has more incentive to salvage the deal by agreeing to renegotiation. This would lead to a negative relationship between renegotiation and the original cosignatory match share of the less developed signatory.

To examine our theory as to the negative correlation between cosignatory match share and treaty renegotiation, we further explore whether this relationship is different for BITs signed before and after 2000. Prior to 2000, there was little information about how arbitration tribunals would interpret or enforce BIT provisions. It is generally understood that countries became aware of their potential exposure to litigation and damages under a BIT only after the resolution and publication of a series of highly influential ISDS awards around 2000. Hence, countries had more complete information about the costs of BITs signed after 2000 and may have considered those costs at the time of signing. The fact that countries still entered into these treaties, aware of their costs, suggests that these BITs may be of higher value to the signatories than pre-2000 BITs. That being the case, if our theory is correct, we will observe a stronger negative correlation between cosignatory match share and treaty renegotiation for post-2000 BITs than pre-2000 BITs.

To conduct this analysis, we divide the sample of BITs based on whether the treaty is signed before or after 2000, and run the same set of regressions as those in columns 3 and 4 of Table 4 for these two subsets of treaties. Table 5 presents the results. The first two columns replicate columns 3 and 4 of Table 4 and serve as a baseline for comparison. The next two columns present results using the sample of pre-2000 BITs. The last two columns present results using the sample of post-2000 BITs.

---

126. This number is calculated using the coefficient estimate in column 1 of Table 5.
127. See Jones & Rao, supra note 19, at 357. Following three controversial ISDS decisions, Pope & Talbot, Metalclad, and Maffezi, all of which expansively interpreted host states’ investment protection obligations, a number of countries adopted new provisions to add restrictions or carve-outs to their obligations under new BITs they signed. See Pope & Talbot Inc. v. Government of Canada, Award on the Merits of Phase 2, (Apr. 10, 2001) 41 I.L.M. 1347 (2002); Metalclad Corps. v. the United Mexican States, ICSID Case No. ARB(AF)/97/1, Award (Aug. 30, 2000) 5 ICSID Rep. 209 (2002); Emilio Agustin Maffezi v. The Kingdom of Spain, ICSID Case No. ARB/97/7, Award (Nov. 13, 2000) 16 ICSID Rev. 1 (2001).
Table 5: Negotiation input and renegotiation risk (pre- vs. post-2000)

<table>
<thead>
<tr>
<th></th>
<th>(1) Renegotiate</th>
<th>(2) Renegotiate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Renegotiate</th>
<th>(6) Renegotiate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosignatory Match Share (less developed)</td>
<td>-2.413*</td>
<td>-2.435*</td>
<td>-1.376</td>
<td>-1.408</td>
<td>-14.72***</td>
<td>-14.75***</td>
</tr>
<tr>
<td>Year of signature</td>
<td>-0.0430***</td>
<td>-0.0460***</td>
<td>-0.0454***</td>
<td>-0.0500***</td>
<td>-0.271</td>
<td>-0.267</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>-0.648***</td>
<td>-0.637***</td>
<td>-0.671***</td>
<td>-0.658***</td>
<td>-0.662</td>
<td>-0.689</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.453</td>
<td>-0.431</td>
<td>-0.438</td>
<td>-0.407</td>
<td>-15.96***</td>
<td>-15.92***</td>
</tr>
<tr>
<td>Achmea</td>
<td>-21.02***</td>
<td>-17.03***</td>
<td>-20.97***</td>
<td>-17.00***</td>
<td>-14.29***</td>
<td>-14.52***</td>
</tr>
<tr>
<td>Cumulative number of cases</td>
<td>-0.0120</td>
<td>-0.0153</td>
<td>-0.0153</td>
<td>-0.00387</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of cosignatories</td>
<td>(0.0109)</td>
<td>(0.0124)</td>
<td>(0.0124)</td>
<td>(0.0173)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases</td>
<td>-0.0617</td>
<td>-0.0562</td>
<td>-0.0562</td>
<td>-0.156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of cosignatories</td>
<td>(0.0984)</td>
<td>(0.103)</td>
<td>(0.103)</td>
<td>(0.264)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All BITs</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-2000 BITs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-2000 BITs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>32388</td>
<td>32388</td>
<td>26293</td>
<td>26293</td>
<td>6095</td>
<td>6095</td>
</tr>
</tbody>
</table>

Standard errors in parentheses.
Coefficient estimates from competing-risks survival regressions.
* p < .10, ** p < .05, *** p < .01

Consistent with our prediction, we find a negative and statistically significant correlation between the less developed signatory’s cosignatory match share and renegotiation for the set of BITs signed after 2000. The coefficient on cosignatory match share for pre-2000 BITs is much lower in magnitude and is not statistically significant. This is consistent with our theory that with greater value to both signatories, the signatories have a greater interest in salvaging post-2000 BITs through renegotiation, particularly when one signatory has secured, and the other has granted, more concessions during BIT negotiation. Hence, BITs with more negotiation input from the less developed signatory are more likely to be renegotiated.

B. Evolving Bargaining Position

To test our second hypothesis, which is that BITs with a higher bargaining position of the less developed signatory are more at risk of termination, we follow the same approach used for the cosignatory match share measures. In Table 6 we find a positive and statistically significant relationship between the evolving bargaining position of the less developed signatory and the risk of termination. In the preferred model specification (column 7) our estimates suggest that, if bargaining position, in the form of the average number of concessions secured, increase by seven (or approximately ten percent of seventy-three total provisions), the probability of BIT termination increases by 41.9 percent.
Table 6: Bargaining position and termination risk

<table>
<thead>
<tr>
<th></th>
<th>(1) Terminate (any)</th>
<th>(2) Terminate (any)</th>
<th>(3) Terminate (any)</th>
<th>(4) Terminate (any)</th>
<th>(5) Terminate (any)</th>
<th>(6) Terminate (any)</th>
<th>(7) Terminate (any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargain position (less developed)</td>
<td>4.181*** (0.909)</td>
<td>3.714*** (1.031)</td>
<td>3.619*** (1.015)</td>
<td>3.509*** (1.018)</td>
<td>3.662*** (1.022)</td>
<td>3.707*** (1.023)</td>
<td>5.408*** (1.018)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0336*** (0.0110)</td>
<td>0.0299*** (0.0112)</td>
<td>0.0246** (0.0111)</td>
<td>0.0223** (0.0110)</td>
<td>0.0136 (0.0113)</td>
<td>0.0177 (0.0112)</td>
<td></td>
</tr>
<tr>
<td>Difference in income level</td>
<td>-0.249* (0.131)</td>
<td>-0.225* (0.131)</td>
<td>-0.198 (0.131)</td>
<td>-0.144 (0.134)</td>
<td>-0.168 (0.132)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.555** (0.278)</td>
<td>-0.549** (0.279)</td>
<td>-0.499* (0.279)</td>
<td>-0.518* (0.279)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achmea</td>
<td>1.401*** (0.430)</td>
<td>1.383*** (0.429)</td>
<td>1.387*** (0.430)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0142*** (0.00441)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
<td>0.102*** (0.0224)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
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<td>30634</td>
<td>30462</td>
<td>30462</td>
<td>29097</td>
<td>29097</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses.
Coefficient estimates from Cox proportional hazards model.
* p < .10, ** p < .05, *** p < .01

In Table 7, we run separate regressions on each of the three termination events. The estimates in columns 1 and 2 in Table 7 suggest that the positive correlation in Table 6 is being driven by BITs that are terminated through unilateral termination. BITs become more likely to be unilaterally terminated as the less developed signatory obtains stronger bargaining position over time. Specifically, we find that if bargaining position, in the form of the average number of concessions secured, increase by seven, the probability of unilateral termination increases by 57.6 percent.128 There is also a positive but statistically insignificant relationship between renegotiation and an increase in the bargaining position of the less developed signatory.

128. This number is calculated using the coefficient estimate in column 1 of Table 7.
Table 7: Bargaining position and termination risk by termination type

<table>
<thead>
<tr>
<th>Bargain position (less developed)</th>
<th>Unilaterally terminate</th>
<th>Bilaterally terminate</th>
<th>Renegotiate</th>
<th>Bilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td><strong>Bold</strong></td>
<td><strong>Bold</strong></td>
<td><strong>Bold</strong></td>
<td><strong>Bold</strong></td>
</tr>
<tr>
<td>Table 7</td>
<td>4.547***</td>
<td>4.031***</td>
<td>2.511</td>
<td><strong>Bold</strong></td>
</tr>
<tr>
<td>Year of signature</td>
<td>(1.120)</td>
<td>(1.078)</td>
<td>(2.033)</td>
<td>(2.029)</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>0.0784***</td>
<td>0.0915***</td>
<td>-0.0445***</td>
<td>-0.0474***</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>(0.0134)</td>
<td>(0.0150)</td>
<td>(0.00952)</td>
<td>(0.00967)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.145</td>
<td>0.0752</td>
<td>-0.531***</td>
<td>-0.519***</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>(0.160)</td>
<td>(0.156)</td>
<td>(0.200)</td>
<td>(0.200)</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.919*</td>
<td>-0.969*</td>
<td>-0.326</td>
<td>-0.303</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>(0.515)</td>
<td>(0.514)</td>
<td>(0.339)</td>
<td>(0.340)</td>
</tr>
<tr>
<td>Achmea</td>
<td>-17.60***</td>
<td>-15.00***</td>
<td>-20.80***</td>
<td>-16.82***</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>(0.314)</td>
<td>(0.285)</td>
<td>(0.346)</td>
<td>(0.336)</td>
</tr>
<tr>
<td>Cumulative number of cases</td>
<td>0.0247***</td>
<td>0.0136</td>
<td>-0.00908</td>
<td>-0.00908</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>(0.00424)</td>
<td>(0.0118)</td>
<td>(0.0083)</td>
<td>(0.0183)</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
Coefficient estimates from competing-risks survival regressions.

\* \( p < .10 \), ** \( p < .05 \), *** \( p < .01 \)

C. Incomplete Preferences

To test our third hypothesis—that BITs that were signed at a time when the less developed signatory had more incomplete preferences are more likely to be terminated—we follow the same approach used for the prior two measures. Table 8 shows a positive and statistically significant correlation between the less developed signatory’s share missing and termination risk in all but the most basic model specification (columns 2 through 7). In the preferred model specification (column 7) our estimates suggest that, if the number of missing preferences increases by seven (or approximately ten percent of seventy-three total provisions), the probability of BIT termination increases by 25.4 percent. This result is statistically significant at the 0.01 level.
Table 8: Preference formation and termination risk

<table>
<thead>
<tr>
<th></th>
<th>(1) Terminate (any)</th>
<th>(2) Terminate (any)</th>
<th>(3) Terminate (any)</th>
<th>(4) Terminate (any)</th>
<th>(5) Terminate (any)</th>
<th>(6) Terminate (any)</th>
<th>(7) Terminate (any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Missing (less developed)</td>
<td>-0.320 (0.505)</td>
<td>2.147*** (0.732)</td>
<td>2.295*** (0.734)</td>
<td>2.320*** (0.738)</td>
<td>2.244*** (0.738)</td>
<td>2.351*** (0.740)</td>
<td>2.262*** (0.742)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0699*** (0.0140)</td>
<td>0.0628*** (0.0141)</td>
<td>0.0559*** (0.0140)</td>
<td>0.0530*** (0.0140)</td>
<td>0.0452*** (0.0141)</td>
<td>0.0486*** (0.0141)</td>
<td></td>
</tr>
<tr>
<td>Difference in income level</td>
<td>-0.324** (0.127)</td>
<td>-0.292** (0.127)</td>
<td>-0.268** (0.128)</td>
<td>-0.213 (0.130)</td>
<td>-0.241* (0.129)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.689** (0.278)</td>
<td>-0.686** (0.278)</td>
<td>-0.638** (0.279)</td>
<td>-0.654** (0.279)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acheva</td>
<td>1.216*** (0.428)</td>
<td>1.192*** (0.427)</td>
<td>1.209*** (0.428)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0153*** (0.00428)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
<td>0.104*** (0.0218)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>33041</td>
<td>33041</td>
<td>32856</td>
<td>32856</td>
<td>32856</td>
<td>31329</td>
<td>31129</td>
</tr>
</tbody>
</table>

Standard errors in parentheses.
Coefficient estimates from Cox proportional hazards model.

" * p < .10, ** p < .05, *** p < .01"

In Table 9, we show that this positive correlation is driven by unilateral terminations. We estimate that an increase of seven missing provision preferences is correlated with an increase in the risk of a unilateral termination by 54.4 percent.129 This result is statistically significant at the 0.01 level and is consistent with our hypothesis that a BIT has a higher risk of termination if the less developed signatory has more incomplete preferences at the time the BIT is signed.

---

129. This number is calculated using the coefficient estimate in column 1 of Table 9.
Table 9: Preference formation and termination risk by termination type

<table>
<thead>
<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Missing (less developed)</td>
<td><strong>4.342</strong>* (1.214)</td>
<td><strong>4.232</strong>* (1.294)</td>
<td>0.668 (0.938)</td>
<td>0.684 (0.940)</td>
<td>-2.072 (2.541)</td>
<td>-1.567 (2.312)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.123*** (0.0210)</td>
<td>0.134*** (0.0233)</td>
<td>-0.0268** (0.0165)</td>
<td>-0.0394** (0.01967)</td>
<td>0.0485 (0.0640)</td>
<td>0.0603 (0.0687)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.0937 (0.150)</td>
<td>0.0201 (0.147)</td>
<td>-0.630*** (0.189)</td>
<td>-0.620*** (0.190)</td>
<td>-1.263 (0.919)</td>
<td>-1.221 (0.895)</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-1.043*** (0.515)</td>
<td>-1.086** (0.514)</td>
<td>-0.432 (0.344)</td>
<td>-0.412 (0.346)</td>
<td>1.703 (1.374)</td>
<td>1.602 (1.403)</td>
</tr>
<tr>
<td>Aircraft</td>
<td>-17.82*** (0.295)</td>
<td>-15.23*** (0.276)</td>
<td>-20.93*** (0.365)</td>
<td>-16.95*** (0.357)</td>
<td>4.619*** (0.648)</td>
<td>4.649*** (0.598)</td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0257*** (0.00398)</td>
<td>-0.0120 (0.0109)</td>
<td>-0.00937 (0.0196)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
<td>0.142*** (0.0167)</td>
<td>-0.0651 (0.0991)</td>
<td>-0.489 (0.322)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>31329</td>
<td>31329</td>
<td>31329</td>
<td>31329</td>
<td>31329</td>
<td>31329</td>
</tr>
</tbody>
</table>

We do not find a similar result for BIT renegotiation, however. This null result between share missing and renegotiation may be explained by a lack of resources to entice the cosignatory to revisit the treaty. That is, countries lacking resources to form consistent preferences in early BIT negotiations may also have fewer resources to use to induce their cosignatory to return to the negotiating table. Barring renegotiation, these countries may decide their second-best option is unilateral termination.

D. Evolving Preferences

To test our fourth hypothesis—that BITs that fall more out of sync with the less developed signatory’s evolving preferences are more likely to be terminated—we again begin with a simple regression to calculate the coefficient on the change in preference match share of the less developed signatory. This estimate is reported in column 1 of Table 10. In columns 2 through 7, we add control variables one at a time to the model specification.
Table 10: Evolving preference and termination risk

<table>
<thead>
<tr>
<th></th>
<th>(1) Terminate (any)</th>
<th>(2) Terminate (any)</th>
<th>(3) Terminate (any)</th>
<th>(4) Terminate (any)</th>
<th>(5) Terminate (any)</th>
<th>(6) Terminate (any)</th>
<th>(7) Terminate (any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Preference</td>
<td>-0.344</td>
<td>-2.66***</td>
<td>-2.60***</td>
<td>-2.645***</td>
<td>-2.588***</td>
<td>-2.676***</td>
<td>-2.600***</td>
</tr>
<tr>
<td>Match Share (Less Developed)</td>
<td>(0.527)</td>
<td>(0.717)</td>
<td>(0.716)</td>
<td>(0.721)</td>
<td>(0.722)</td>
<td>(0.721)</td>
<td>(0.724)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0087***</td>
<td>0.0630***</td>
<td>0.0558***</td>
<td>0.0350***</td>
<td>0.0552***</td>
<td>0.0991***</td>
<td>0.00135</td>
</tr>
<tr>
<td>(0.0135)</td>
<td>(0.0137)</td>
<td>(0.0136)</td>
<td>(0.0136)</td>
<td>(0.0137)</td>
<td>(0.0117)</td>
<td>(0.0137)</td>
<td>(0.0137)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>-0.318***</td>
<td>-0.286**</td>
<td>-0.268**</td>
<td>-0.201</td>
<td>-0.236**</td>
<td>-0.258**</td>
<td>-0.235**</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>(0.128)</td>
<td>(0.128)</td>
<td>(0.129)</td>
<td>(0.131)</td>
<td>(0.130)</td>
<td>(0.130)</td>
<td>(0.130)</td>
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<tr>
<td>Achievea</td>
<td>-0.677***</td>
<td>-0.674**</td>
<td>-0.627**</td>
<td>-0.642**</td>
<td>-0.642**</td>
<td>-0.642**</td>
<td>-0.642**</td>
</tr>
<tr>
<td>(0.279)</td>
<td>(0.279)</td>
<td>(0.280)</td>
<td>(0.280)</td>
<td>(0.280)</td>
<td>(0.280)</td>
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<td>(0.280)</td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.00436)</td>
<td>0.103***</td>
<td>0.086**</td>
<td>0.0968**</td>
<td>0.0968**</td>
<td>0.0968**</td>
<td>0.0968**</td>
<td>0.0968**</td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Observations</td>
<td>32,449</td>
<td>32,449</td>
<td>32,264</td>
<td>32,264</td>
<td>32,264</td>
<td>30,737</td>
<td>30,737</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
Coefficient estimates from Cox proportional hazards model.
* p < .10, ** p < .05, *** p < .01

Table 10 shows a negative and statistically significant correlation between change in the less developed signatory’s preference match share and the risk of termination in columns 2 through 7. This finding is consistent with Hypothesis 3: A treaty is more likely to be terminated as the signatories’ BIT preferences evolve and move further away from the treaty text. That is, as the preference match share goes down relative to the original preference match share, the probability of treaty termination goes up. On average, a preference match on seven additional provisions is correlated with a 29.7 percent decrease in the risk that the BIT will eventually be terminated.

In Table 11, we again run separate regressions by termination type using the preferred model specification.130 We find a negative and statistically significant correlation between change in the less developed signatory’s preference match share and the risks of unilateral termination and renegotiation. That is, as the distance between a signed BIT and the less developed signatory’s current preferences increases, the risk that the BIT will be unilaterally terminated or replaced by a new treaty also increases. A preference match on seven additional provisions (or a ten percent increase) is correlated with a 38.7 percent decrease in the risk the BIT will be unilaterally terminated and a 17.8 percent decrease in the risk the BIT will be renegotiated.131

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130. Here we again use competing risk survival regressions which account for all competing events (i.e. terminations by another method).

131. These numbers are calculated using the coefficient estimates in columns 1 and 3, respectively, of Table 11.
Table 11: Evolving preference and termination risk by termination type

<table>
<thead>
<tr>
<th>Change in Preference</th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match Share (Loss Developed)</td>
<td>-2.273*** (0.962)</td>
<td>-3.085*** (0.983)</td>
<td>-1.657 (1.014)</td>
<td>-1.660* (1.007)</td>
<td>2.438 (2.396)</td>
<td>2.219 (2.266)</td>
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<tr>
<td>Year of signature</td>
<td>0.106*** (0.0168)</td>
<td>0.118*** (0.0164)</td>
<td>-0.2067 (0.0163)</td>
<td>-0.0285* (0.0167)</td>
<td>0.0413 (0.0436)</td>
<td>0.0526 (0.0465)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.116 (0.156)</td>
<td>0.0251 (0.151)</td>
<td>-0.615*** (0.194)</td>
<td>-0.605*** (0.194)</td>
<td>-1.305 (0.893)</td>
<td>-1.263 (0.875)</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-1.017** (0.516)</td>
<td>-1.056** (0.515)</td>
<td>-0.438 (0.350)</td>
<td>-0.424 (0.352)</td>
<td>1.666 (1.310)</td>
<td>1.596 (1.345)</td>
</tr>
<tr>
<td>Achmea</td>
<td>-17.93*** (0.312)</td>
<td>-15.33*** (0.283)</td>
<td>-21.04*** (0.384)</td>
<td>-17.06*** (0.377)</td>
<td>4.620*** (0.765)</td>
<td>4.629*** (0.755)</td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0256*** (0.00408)</td>
<td>-0.00950 (0.0107)</td>
<td>-0.00759 (0.0195)</td>
<td>-0.00759 (0.0195)</td>
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</tr>
<tr>
<td>Number of cases (cosignatories)</td>
<td>0.139*** (0.0174)</td>
<td>0.139*** (0.0174)</td>
<td>0.0540 (0.0944)</td>
<td>0.0540 (0.0944)</td>
<td>-0.419 (0.320)</td>
<td>-0.419 (0.320)</td>
</tr>
<tr>
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<td>30737</td>
<td>30737</td>
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<td>30737</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
Coefficient estimates from competing-risks survival regressions.
*p < .10, **p < .05, ***p < .01

E. Control Variables

Throughout our analyses, we also calculate coefficient estimates of the correlation between BIT termination events and six control variables that may also be driving termination. When looking at terminations by any method (as seen in Tables 3, 6, 8, and 10) some of the estimates are consistent with our expectations: BITs that govern no FDI are less likely to be terminated, and the more often the cosignatories have been named a respondent in ISDS, the more likely a BIT is terminated. Each of these results are highly statistically significant.

When looking at terminations by termination type (Tables 4, 7, 9, and 11), the estimates are more nuanced. Consistent with our expectations, bilateral terminations are driven primarily, if not exclusively, by the Achmea decision. The coefficient estimate in columns 5 and 6 of each table is positive and highly statistically significant. For example, we find in column 5 of Table 4 that intra-EU BITs in the years following the Achmea decision are almost 100 times more likely to be bilaterally terminated relative to all other BITs in all other years.

As we expected, we find a negative and statistically significant correlation between BIT termination by renegotiation and the difference in income levels of the BIT signatories, as seen in columns 3 and 4 of Tables 4, 7, 9, and 11. That is, if there is a large difference between the signatories’ income level, the BIT is less likely to be renegotiated. At the same time, while direction of the relationship between the difference in income level and unilateral termination risk is consistent with our prediction, suggesting that BITs are more likely to be unilaterally terminated when the signatories are of more diverging income level, the results are not statistically significant.
Interestingly, we find that newer BITs are more likely to be unilaterally terminated (as seen in columns 1 and 2 in Tables 4, 7, 9, and 11), but that older BITs are more likely to be renegotiated (as seen in columns 3 and 4 in Tables 4, 7, 9, and 11).

Finally, our estimates suggest that the positive correlation between the ISDS history of the signatories and BIT termination is driven exclusively by unilateral terminations (see columns 1 and 2 in Tables 4, 7, 9, and 11). Contrary to Haftel and Thompson\(^{132}\) and Thompson, Broude, and Haftel,\(^{133}\) we do not find a positive correlation between ISDS history and renegotiation (as seen in columns 3 and 4 in Tables 4, 9, and 11).\(^{134}\)

**F. Robustness Checks**

Next, we explore whether or not our estimates become more or less pronounced when we modify the data along four different dimensions. The first dimension explores whether or not our results hold if we consider the full set of BIT provisions rather than the subset of provisions that are the most consequential. The second dimension explores whether the relationship between our measures and unilateral termination events change when we only include observations that occur in a year in which a BIT is eligible for unilateral termination according to the terms of the agreement. The third dimension takes into account bargaining position in estimating the correlation between negotiation input and termination risk. The final dimension explores whether or not our results are more pronounced when we only include BITs signed by countries that have either participated in a renegotiation or initiated a unilateral termination.

**1. Using All BIT Provisions**

As discussed in Part III, all data analysis presented thus far is based on a subset of BIT provisions that includes eighteen of the forty-seven primary provisions, along with the corresponding fifty-five secondary provisions that are associated with those eighteen primary provisions. Recall that these eighteen provisions and their corresponding secondary provisions include all provisions that enable investors to bring enforcement proceedings against a host country and the primary protections most often invoked by investors in those proceedings. In the appendix, we replicate all of the regression estimates using the complete set of forty-seven primary provisions and their corresponding

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132. See Haftel & Thompson, *supra* note 37.
133. See Thompson, Broude, & Haftel, *supra* note 37.
134. More work needs to be done to determine what is driving the difference in our estimates, though we posit three possible explanations here. First, our data set includes termination events through 2020 whereas the Haftel, Broude, and Thompson data only includes termination events through 2010. Second, we follow the UNCTAD IIA classification of “renegotiation” by not classifying BITs that have been amended by a protocol as having been renegotiated. Haftel, Broude, and Thompson, by contrast, classify protocol amendments as renegotiation events. Finally, it may be the case that, in the context of renegotiation, preference formation and evolution erode the correlation between renegotiation and the ISDS history of the signatories.
seventy-one secondary provisions (Tables A1-A9). These results are largely consistent with those already discussed with one notable exception: the relationship between cosignatory match share and unilateral termination.

In the main analysis, we find a positive (though not statistically significant) relationship between the less developed signatory’s cosignatory match share and the risk of unilateral termination (see columns 1 and 2 in Table 4). This estimate suggests that BITs that include less input from the less developed signatory are at a higher risk of unilateral termination. By contrast, we find a negative and statistically significant relationship between the less developed signatory’s cosignatory match share and the risk of unilateral termination when we consider the full set of BIT provisions (see columns 1 and 2 in Table A2). This estimate suggests the opposite conclusion: BITs that include less input from the less developed signatory are at a lower risk of unilateral termination.

One potential explanation for these conflicting estimates is that the cosignatory match share calculated using the full set of provisions captures, to some degree, the bargaining position of the less developed signatory. More concretely, a BIT with a high cosignatory match share that was estimated using the most important provisions and a lower cosignatory match share that was estimated using the full set of provisions suggests that the less developed signatory has at least some bargaining leverage in the bilateral relationship, even if it is only able to secure concessions on less consequential provisions. If this signatory becomes dissatisfied with the consequential provisions, they may be more likely to unilaterally terminate relative to a less developed signatory that is not able to achieve concessions on the less consequential provisions.

2. Unilateral Termination Conditions

In the main analysis, we include an observation for each BIT in each year in which the BIT is in force. However, structuring the data set in this way ignores an important nuance, which is that most BITs are not eligible for unilateral termination every year. Rather, different treaties may contain different rules on the specific conditions that must be satisfied for a signatory to unilaterally terminate a BIT.

Generally, there are two types of termination clauses. One type, which is known as the “tacit renewal” termination clause, provides that following the expiration of the initial term, a BIT is automatically renewed for a specified term, unless either party decides to terminate it within a limited period.\textsuperscript{135} The other is known as the fixed-term termination clause, which provides that the BIT is renewed for an indefinite term upon the expiration of the initial term, but that either party can terminate the BIT at any time thereafter.\textsuperscript{136} Our data set has

\textsuperscript{135} See, e.g., Art. 12.1 of the Belarus-Switzerland BIT (1993), supra note 43, provides that “[t]he present Treaty shall enter into force on the day when the two Contracting Parties have notified each other that the constitutional formalities required for the conclusion and entry into force of international agreements have been accomplished; it will remain into force for a period of ten years. If the Treaty has not been denounced in writing six months before the expiration of this period it will be considered as renewed under the same conditions for a period of two years, and so forth.”

\textsuperscript{136} See, e.g., Art. 15.1 of the Australia-Uruguay BIT (2001), supra note 43, provides that “[t]his
information on the details of these termination clauses, as well as information on the length of each BIT’s initial term.\textsuperscript{137} Hence, we use this information to generate a variable denoting whether a BIT is eligible for unilateral termination in a given year.

We then run the same set of regressions as those that appear in the main analysis (for unilateral termination), using a subset of observations where a BIT is eligible for unilateral termination according to the rules provided in the treaty. As Table A10 shows, the results are qualitatively similar to the original findings. Specifically, consistent with our earlier results, we find a positive and statistically significant relationship between bargaining position and the risk of unilateral termination, a positive and statistically significant relationship between share missing and the risk of unilateral termination, and a negative and statistically significant relationship between the change in preference match share and the risk of unilateral termination. However, the magnitude of most of these relationships is much larger when the estimates are calculated using only the observations that occur in a year in which each BIT is eligible for unilateral termination. We find that a ten percent increase in bargaining position of the less developed signatory is correlated with an 89.4 percent increase in the risk of unilateral termination when only eligible years are included\textsuperscript{138} compared to a 57.6 percent increase when all years are included. We also find that a ten percent increase in share missing is correlated with a 59.4 percent increase in the risk of unilateral termination when only eligible years are included\textsuperscript{139} compared to a 54.4 percent increase when all years are included. Similarly, a ten percent increase in the change in preference match share decreases the risk of unilateral termination by 64.7 percent when only eligible years are included,\textsuperscript{140} compared to a 38.7 percent decrease when all years are included. The amplification of these estimates is unsurprising, given the constraint that BITs may not be unilateral terminated outside of the termination window specified by the provisions of the agreement.

3. **Controlling for Bargaining Position**

As discussed earlier, less negotiation input from the less developed signatory may reflect the signatory’s weaker bargaining position. At the same time, a signatory’s evolving bargaining position may also be correlated with its likelihood to unilaterally terminate a BIT, as we see in Table 7. Hence, in alternative specifications, we conduct the same set of regression analyses as those that appear in Table 4 after adding the less developed signatory’s evolving bargaining position as a control variable. The results reveal the correlation

\textsuperscript{137} See II A Navigator, supra note 6.
\textsuperscript{138} This number is calculated using the coefficient estimate in column 3 of Table A10.
\textsuperscript{139} This number is calculated using the coefficient estimate in column 5 of Table A10.
\textsuperscript{140} This number is calculated using the coefficient estimate in column 7 of Table A10.
between the less developed signatory’s input in BIT negotiation and unilateral termination likelihood after holding constant the less developed signatory’s evolving bargaining position.

Table A11 presents the results. In columns 3 and 4, we add alternative specifications which use a subset of observation years where a BIT is eligible for unilateral termination, as we did in the previous subsection. While the coefficient estimate for the less developed signatory’s cosignatory match share remains positive and statistically insignificant in columns 1 and 2, it becomes statistically significant at the ten percent level when we exclude observations in years in which a BIT is ineligible for unilateral termination. Specifically, we find that a ten percent increase in the cosignatory match share of the less developed cosignatory is correlated with a 38.7 percent increase in the risk of unilateral termination, after controlling for the current bargaining position of the less developed signatory and limiting the data to only include years in which the BIT is eligible for unilateral termination. 

Taken together, the results seem to suggest that holding constant the less developed signatory’s evolving bargaining position, BITs with less negotiation input from the less developed signatory are more likely to be unilaterally terminated.

4. Country-level Analysis

Finally, to explore the drivers of within-country variation in BIT termination decisions, we conduct a final set of regressions on two different subsets of the data: (1) BITs signed by countries that have initiated a unilateral termination (mass terminators and incremental terminators), and (2) BITs signed by countries that have participated in a renegotiation. To create these subsets, we first reorganize the data to include one BIT-year observation for each of the signatories to the BIT. The dependent variable becomes whether a country unilaterally terminated or renegotiated a BIT in a given year. For unilateral termination, we collect information on which signatory unilaterally terminated a BIT in order to attribute the termination event to one of the two signatories of the treaty. For renegotiation, we consider both signatories to be responsible for the return to the negotiating table. Using this modified data set, we run regressions similar to those that appear in the main analysis. To account for country-specific heterogeneity that may affect the hazard rate, we include a country-specific frailty parameter.

The four independent variables of interest in these regressions are the same as those used in the main analysis. We estimate the relationship between each of these measures and unilateral termination for both mass terminators and incremental terminators in Table A12, and for incremental terminators only in Table A13. We then estimate relationships between each of these measures and

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141. This number is calculated using the coefficient estimate in column 3 of Table A11.
142. Recent work in the investment treaty literature has used such shared-frailty parameter for each country to account for country heterogeneity in cox proportional hazard models. See Soumajit Mazumder, *Can I Stay a BIT Longer? The Effect of Bilateral Investment Treaties on Political Survival*, 11 REV. INT’L ORGS. 477 (2016). In untabulated results, we also used state-fixed effects and find similar results.
renegotiation in Table A14.

Columns 3 and 4 in Table A12 report a positive and statistically significant relationship between evolving bargaining position and risk of unilateral termination. The direction of the coefficient estimates for the other three measures is consistent with what we find in the treaty-level analysis, but the results are not statistically significant. When we exclude the two mass terminators (India and Ecuador) from the data set, however, the coefficient for cosignatory match share becomes statistically significant, whereas the coefficient for evolving bargaining position becomes negative and statistically significant. Taken together, the results seem to suggest that negotiation input helps explain the unilateral termination decisions of incremental terminators. That is, these countries chose to unilaterally terminate those BITs in which they lacked input at the negotiation stage but keep the other BITs in which they contributed more to the negotiation of the text. On the other hand, the unilateral termination decisions of mass terminators (India and Ecuador) appear to be driven largely by an increase in bargaining position.

Consistent with the estimates in the main analysis, columns 1 and 2 in Table A14 report a negative and statistically significant relationship between the cosignatory’s match share and the risk of renegotiation. Columns 3 and 4 in Table A14 report a positive and statistically significant relationship between the evolving bargaining position and the risk of renegotiation. Finally, columns 7 and 8 in Table A14 report a negative and statistically significant relationship between the change in preference match share and the risk of renegotiation.

**CONCLUSION**

This paper explores the relationship between BIT termination events and four BIT-specific measures: (1) the degree to which a signed BIT incorporates the preferences of the more developed signatory; (2) the less developed signatory’s bargaining position; (3) how under-developed the preferences are of the less developed signatory at the time a BIT enters into force; and (4) how closely an active BIT’s provisions reflect the updated, current preferences of the less developed signatory relative to its original preference match share.

One of the primary obstacles to studying these relationships is determining how to disentangle individual countries’ preferences from the content of negotiated instruments. One of the primary contributions of this paper is the development of an intuitive and general methodology to do precisely this. The key to this method is to leverage the entire treaty history of each country. The first step is to look, at the individual country level, for consistency in drafting patterns in early BITs. After identifying consistent drafting patterns, we use these patterns to infer an initial set of preferences for each country. We then look at how these preferences evolve over time by rolling our analysis chronologically over the treaty history of each country. Using this method, we are able to construct our four primary treatments measures.

In our initial descriptive statistics, we present evidence that, compared to earlier BITs, BITs signed in the last decade are more balanced in terms of
incorporating provisions that deviate from the preferred provisions of the more developed signatory (Figure 9). We also suggest that in the last decade, less developed signatories have, on average, experienced improvement in their bargaining position (Figure 10); that all countries, and especially low-income countries, have developed more consistent preferences over time (Figure 11); and that these preferences are being updated in ways that have led to some signed BITs falling out of sync with the current preference of its signatories (Figures 12 and 13).

Our statistical analysis explores how these factors may have contributed to unilateral treaty terminations and renegotiations. We present several findings. First, we find some evidence that more input from the less developed signatory is correlated with a lower risk of unilateral termination (Finding 1). Results from country-level analysis suggest that the lack of negotiation input better explains unilateral termination decisions of incremental terminators which selectively terminated some, but not all of their BITs. On the other hand, more input from the less developed signatory is correlated with a higher risk of renegotiation (Finding 2). Our theory is that both signatories have more incentives to salvage a deal when they have invested more in the original negotiation. Next, we find that an increase in the bargaining position of the less developed signatory is correlated with a higher risk of unilateral termination (Finding 3). Results from country-level analysis suggest that an increase in bargaining position better explains unilateral termination decisions of mass terminators. We find that more incomplete preferences for the less developed signatory at the time of entry into force is correlated with a higher risk of unilateral termination (Finding 4). We also find that a decrease in the preference match share of the less developed signatory relative to its original preference match share is correlated with a higher risk of both unilateral termination and renegotiation (Finding 5).

These findings have a number of practical implications. Finding 1 suggests that more balanced negotiations may increase the stability of investor protections. Finding 2 suggests that the fewer concessions a developing country is able to secure from the more developed cosignatory during the original BIT negotiation, the harder it may be to get the cosignatory to revise the treaty through renegotiation. Finding 3 suggests that shifting bargaining positions may continue to play a role in unilateral termination events, particularly those that happen on a mass scale, as more countries experience improvements in their relative bargaining positions. Finding 4 suggests that, even though incomplete preferences may result in a windfall for the more developed signatory in the short run, it may come at the expense of the stability of those protections in the long run. Providing more assistance to developing countries to inform them of available drafting options and to help them form preferences may increase the overall stability of new treaties. Finally, Finding 5 suggests that, as countries become more sophisticated and update their preferences, we can expect to see more turnover in the investment treaty network. To the extent that both signatories have provisions that they would like to change, we anticipate that these are likely to result in a new treaty that better reflects the collective preferences of the signatories.
This Article has documented how early BITs in the investment treaty network were primarily a reflection of the preferences of more developed, capital-exporting countries. This resulted in strong protections and remedies that have benefited protected investors at the expense of host countries in both expected and unexpected ways. It has also shown that, over time, less developed and capital-importing countries updated their preferences in ways that have contributed to recent and seismic shifts in the investment treaty network. As this process plays out over the coming years, more turnover should be expected. To the extent that capital-exporting countries value long-term stability and longevity of investment protections, they would do well to pursue a more balanced and equitable approach when negotiating with their capital-importing counterparts.
### Table A1: Negotiation input and termination risk

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<th>(2) Terminate</th>
<th>(3) Terminate</th>
<th>(4) Terminate</th>
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Standard errors in parentheses. Coefficient estimates from Cox proportional hazards model.

* $p < .10$, ** $p < .05$, *** $p < .01$

### Table A2: Negotiation input and termination risk by termination type

<table>
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<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosignatory Match</td>
<td>-2.322*</td>
<td>-2.452*</td>
<td>-3.561*</td>
<td>-3.564*</td>
<td>-1.261</td>
<td>1.909</td>
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<tr>
<td>Share (less developed)</td>
<td>(1.344)</td>
<td>(1.316)</td>
<td>(1.992)</td>
<td>(1.991)</td>
<td>(5.708)</td>
<td>(5.654)</td>
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<td>Year of signature</td>
<td>0.0859***</td>
<td>0.0969***</td>
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<td>-0.0469***</td>
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<td>(0.0135)</td>
<td>(0.0149)</td>
<td>(0.00983)</td>
<td>(0.00992)</td>
<td>(0.0498)</td>
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<td>Difference in income</td>
<td>0.160</td>
<td>0.0755</td>
<td>-0.661***</td>
<td>-0.650***</td>
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<td>(0.151)</td>
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<td>Cumulative number of</td>
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<td>cases (cosignatories)</td>
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<td>(cosignatories)</td>
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Standard errors in parentheses. Coefficient estimates from competing-risks survival regressions.

* $p < .10$, ** $p < .05$, *** $p < .01$
Table A3: Negotiation input and renegotiation risk (pre- vs. post-2000)

<table>
<thead>
<tr>
<th></th>
<th>(1) Renegotiate</th>
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<th>(5) Renegotiate</th>
<th>(6) Renegotiate</th>
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</thead>
<tbody>
<tr>
<td>Share (less developed)</td>
<td>(1.992)</td>
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<td>(6.955)</td>
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<td>Year of signature</td>
<td>-0.0437***</td>
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<td>-0.0456***</td>
<td>-0.0504***</td>
<td>-0.271**</td>
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<td></td>
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<td>(0.00992)</td>
<td>(0.0104)</td>
<td>(0.0103)</td>
<td>(0.221)</td>
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<td>Difference in income level</td>
<td>-0.661***</td>
<td>-0.650***</td>
<td>-0.679***</td>
<td>-0.666***</td>
<td>-0.680**</td>
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<td>-0.405</td>
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<td>(0.348)</td>
<td>(0.720)</td>
<td>(0.711)</td>
</tr>
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<td>Achmea</td>
<td>-21.02***</td>
<td>-17.94***</td>
<td>-20.98***</td>
<td>-17.01***</td>
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<td>Cumulative number of cases (cosignatories)</td>
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<td>Number of cases (cosignatories)</td>
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<td>Yes</td>
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<td>Yes</td>
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<td>Pre-2000 BITs</td>
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<td>Post-2000 BITs</td>
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Standard errors in parentheses
Coefficient estimates from competing-risks survival regressions.
* p < .10, ** p < .05, *** p < .01

Table A4: Bargaining position and termination risk

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<th>(6) Terminate (any)</th>
<th>(7) Terminate (any)</th>
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</thead>
<tbody>
<tr>
<td>Bargain position (less developed)</td>
<td>5.035***</td>
<td>4.512***</td>
<td>4.448***</td>
<td>4.342***</td>
<td>4.637***</td>
<td>4.591***</td>
<td>4.403***</td>
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<tr>
<td></td>
<td>(1.027)</td>
<td>(1.075)</td>
<td>(1.056)</td>
<td>(1.059)</td>
<td>(1.061)</td>
<td>(1.068)</td>
<td>(1.061)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0317***</td>
<td>0.0279***</td>
<td>0.0226***</td>
<td>0.0201***</td>
<td>0.0118***</td>
<td>0.0113***</td>
<td>0.0112***</td>
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<tr>
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<td>(0.0109)</td>
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<td>(0.0111)</td>
<td>(0.0110)</td>
<td>(0.0113)</td>
<td>(0.0113)</td>
<td>(0.0112)</td>
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<td>Difference in income level</td>
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<td>-0.235**</td>
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<td>(0.133)</td>
</tr>
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<td>-0.544*</td>
<td>-0.496*</td>
<td>-0.514*</td>
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<td></td>
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<td>(0.279)</td>
<td>(0.279)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Achmea</td>
<td>1.514***</td>
<td>1.494***</td>
<td>1.495***</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>(0.432)</td>
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<td>Number of cases (cosignatories)</td>
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<td></td>
<td>(0.0226)</td>
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<td></td>
<td></td>
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Standard errors in parentheses
Coefficient estimates from Cox proportional hazards model.
* p < .10, ** p < .05, *** p < .01
Table A5: Bargaining position and termination risk by termination type

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<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargain position (less developed)</td>
<td>6.097*** (1.134)</td>
<td>5.598*** (1.094)</td>
<td>2.159 (2.298)</td>
<td>2.132 (2.301)</td>
<td>-66.66*** (11.81)</td>
<td>-63.44*** (11.74)</td>
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<tr>
<td>Year of signature</td>
<td>0.0746*** (0.0133)</td>
<td>0.0873*** (0.0148)</td>
<td>-0.0447*** (0.00944)</td>
<td>-0.0477*** (0.00960)</td>
<td>0.118** (0.0589)</td>
<td>0.118** (0.0574)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.124 (0.159)</td>
<td>0.0628 (0.155)</td>
<td>-0.529*** (0.199)</td>
<td>-0.516*** (0.200)</td>
<td>-0.996 (0.980)</td>
<td>-1.020 (0.968)</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.906* (0.515)</td>
<td>-0.959* (0.513)</td>
<td>-0.334 (0.339)</td>
<td>-0.311 (0.340)</td>
<td>1.758 (1.386)</td>
<td>1.607 (1.334)</td>
</tr>
<tr>
<td>Achmea</td>
<td>-17.51*** (0.315)</td>
<td>-14.85*** (0.288)</td>
<td>-20.77*** (0.356)</td>
<td>-16.79*** (0.343)</td>
<td>4.015*** (0.674)</td>
<td>3.948*** (0.677)</td>
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<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0245*** (0.00425)</td>
<td>0.0138 (0.0119)</td>
<td>-0.0146 (0.00165)</td>
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<tr>
<td>Number of cases (cosignatories)</td>
<td>0.139*** (0.0174)</td>
<td>-0.0791 (0.107)</td>
<td>0.307 (0.359)</td>
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<td></td>
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<tr>
<td>Observations</td>
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Standard errors in parentheses
Coefficient estimates from competing risks survival regressions.
* p < .10, ** p < .05, *** p < .01

Table A6: Preference formation and termination risk

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<th>(5) Terminate (any)</th>
<th>(6) Terminate (any)</th>
<th>(7) Terminate (any)</th>
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</thead>
<tbody>
<tr>
<td>Share Missing (less developed)</td>
<td>0.133 (0.645)</td>
<td>3.842*** (0.937)</td>
<td>4.031*** (0.942)</td>
<td>4.042*** (0.944)</td>
<td>4.007*** (0.948)</td>
<td>4.072*** (0.946)</td>
<td>3.931*** (0.951)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0758*** (0.0128)</td>
<td>0.0715*** (0.0139)</td>
<td>0.0644*** (0.0138)</td>
<td>0.0621*** (0.0138)</td>
<td>0.0534*** (0.0129)</td>
<td>0.0567*** (0.0139)</td>
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</tr>
<tr>
<td>Difference in income level</td>
<td>-0.335*** (0.127)</td>
<td>-0.304** (0.127)</td>
<td>-0.280** (0.127)</td>
<td>-0.228* (0.130)</td>
<td>-0.228* (0.130)</td>
<td>-0.228* (0.128)</td>
<td></td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.683** (0.278)</td>
<td>-0.681** (0.278)</td>
<td>-0.634** (0.279)</td>
<td>-0.634** (0.279)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Achmea</td>
<td>1.243*** (0.427)</td>
<td>1.222*** (0.427)</td>
<td>1.240*** (0.427)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative number of cases (cosignatories)</td>
<td>0.0153*** (0.00430)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of cases (cosignatories)</td>
<td>0.101*** (0.0220)</td>
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</tr>
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Standard errors in parentheses
Coefficient estimates from Cox proportional hazards model.
* p < .10, ** p < .05, *** p < .01
### Table A7: Preference formation and termination risk by termination type

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<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Bilaterally terminate</th>
<th>(6) Bilaterally terminate</th>
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</thead>
<tbody>
<tr>
<td><strong>Share Missing</strong></td>
<td>6.868***</td>
<td>6.805***</td>
<td>1.201</td>
<td>1.229</td>
<td>-2.994</td>
<td>-2.324</td>
</tr>
<tr>
<td><strong>Year of signature</strong></td>
<td>0.132***</td>
<td>0.145***</td>
<td>-0.0339**</td>
<td>-0.0365**</td>
<td>0.0463</td>
<td>0.0579</td>
</tr>
<tr>
<td><strong>Difference in income</strong></td>
<td>0.0620</td>
<td>-0.00770</td>
<td>-0.629**</td>
<td>-0.619**</td>
<td>-1.277</td>
<td>-1.233</td>
</tr>
<tr>
<td><strong>Paper BIT</strong></td>
<td>-1.047***</td>
<td>-1.087***</td>
<td>-0.434</td>
<td>-0.413</td>
<td>1.703</td>
<td>1.596</td>
</tr>
<tr>
<td><strong>Achmea</strong></td>
<td>-17.76***</td>
<td>-17.17***</td>
<td>-20.93***</td>
<td>-16.95***</td>
<td>4.395***</td>
<td>4.638***</td>
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<tr>
<td><strong>Cumulative number of cases (cosignatories)</strong></td>
<td>0.0252***</td>
<td>0.00394</td>
<td>-0.0122</td>
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<td><strong>Number of cases</strong></td>
<td>0.138***</td>
<td>0.01369</td>
<td>-0.0676</td>
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Standard errors in parentheses.

Coefficient estimates from competing risks survival regressions:

* *p < .10, ** *p < .05, *** *p < .01

### Table A8: Evolving preference and termination risk

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<th>(3) Terminate</th>
<th>(4) Terminate</th>
<th>(5) Terminate</th>
<th>(6) Terminate</th>
<th>(7) Terminate</th>
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</thead>
<tbody>
<tr>
<td><strong>Change in Preference</strong></td>
<td>-0.381</td>
<td>-2.757***</td>
<td>-2.632***</td>
<td>-2.703***</td>
<td>-2.513***</td>
<td>-2.797***</td>
<td>-2.561***</td>
</tr>
<tr>
<td><strong>Match Share (Less Developed)</strong></td>
<td>0.755</td>
<td>(0.950)</td>
<td>(0.950)</td>
<td>(0.957)</td>
<td>(0.956)</td>
<td>(0.956)</td>
<td>(0.956)</td>
</tr>
<tr>
<td><strong>Year of signature</strong></td>
<td>0.0605***</td>
<td>0.0547***</td>
<td>0.0475***</td>
<td>0.0446***</td>
<td>0.0572***</td>
<td>0.0405***</td>
<td>0.0130**</td>
</tr>
<tr>
<td><strong>Difference in income level</strong></td>
<td>-0.313**</td>
<td>-0.279**</td>
<td>-0.263**</td>
<td>-0.193</td>
<td>-0.231**</td>
<td>-0.231**</td>
<td>-0.130*</td>
</tr>
<tr>
<td><strong>Paper BIT</strong></td>
<td>-0.676**</td>
<td>-0.673**</td>
<td>-0.627**</td>
<td>-0.280</td>
<td>-0.641**</td>
<td>-0.641**</td>
<td>-0.280</td>
</tr>
<tr>
<td><strong>Achmea</strong></td>
<td>0.994**</td>
<td>0.935**</td>
<td>0.977**</td>
<td>0.469</td>
<td>0.977**</td>
<td>0.977**</td>
<td>0.469</td>
</tr>
<tr>
<td><strong>Cumulative number of cases (cosignatories)</strong></td>
<td>0.0160***</td>
<td>0.00438</td>
<td>0.0160***</td>
<td>(0.0221)</td>
<td>0.0160***</td>
<td>(0.0221)</td>
<td>0.0160***</td>
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<tr>
<td><strong>Number of cases</strong></td>
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<td>32.441</td>
<td>32.256</td>
<td>32.256</td>
<td>30.730</td>
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</table>

Standard errors in parentheses.

Coefficient estimates from Cox proportional hazards model.

* *p < .10, ** *p < .05, *** *p < .01
Table A9: Evolving preference and termination risk by termination type

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<th></th>
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<th>(4) Renegotiate</th>
<th>(5) Renegotiate</th>
<th>(6) Bilaterally terminate</th>
<th>(7) Bilaterally terminate</th>
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<tbody>
<tr>
<td>Match Share (Less Developed)</td>
<td>(1.139)</td>
<td>(1.149)</td>
<td>(1.496)</td>
<td>(1.482)</td>
<td>(3.174)</td>
<td>(3.253)</td>
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<td>Year of signature</td>
<td>0.0956***</td>
<td>0.104***</td>
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<td>-0.0263</td>
<td>0.0321</td>
<td>0.0443</td>
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<tr>
<td></td>
<td>(0.0153)</td>
<td>(0.0167)</td>
<td>(0.0163)</td>
<td>(0.0167)</td>
<td>(0.0458)</td>
<td>(0.0495)</td>
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</tr>
<tr>
<td>Difference in income</td>
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<td>-0.593***</td>
<td>-1.337</td>
<td>-1.290</td>
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</tr>
<tr>
<td>level</td>
<td>(0.157)</td>
<td>(0.153)</td>
<td>(0.195)</td>
<td>(0.194)</td>
<td>(0.894)</td>
<td>(0.876)</td>
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<td>-1.075***</td>
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<tr>
<td></td>
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<td>(0.514)</td>
<td>(0.355)</td>
<td>(0.358)</td>
<td>(1.132)</td>
<td>(1.342)</td>
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<tr>
<td>Acshema</td>
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<td>-15.23***</td>
<td>-21.08***</td>
<td>-17.09***</td>
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<td>4.698***</td>
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<td>(0.385)</td>
<td>(0.377)</td>
<td>(0.777)</td>
<td>(0.761)</td>
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<tr>
<td>Cumulative number of</td>
<td>0.0254***</td>
<td>-0.00912</td>
<td>-0.0531</td>
<td>-0.00703</td>
<td>-0.404</td>
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<td></td>
</tr>
<tr>
<td>cases (signatories)</td>
<td>(0.00413)</td>
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<td>(0.0145)</td>
<td>(0.0188)</td>
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<tr>
<td>Number of cases</td>
<td>0.137***</td>
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<td>-0.0531</td>
<td>-0.00703</td>
<td>-0.404</td>
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<tr>
<td>(signatories)</td>
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<td>(0.0108)</td>
<td>(0.0145)</td>
<td>(0.0188)</td>
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<td>Observations</td>
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Standard errors in parentheses.
Coefficient estimates from competing-risks survival regressions.
* p < .10, ** p < .05, *** p < .01

Table A10: Unilateral termination (eligible BIT-years only)

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<th>(7) Unilaterally terminate</th>
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<td>Signatory Match</td>
<td>1.978</td>
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<td></td>
</tr>
<tr>
<td>Share (less developed)</td>
<td>(1.545)</td>
<td>(1.522)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bargain position</td>
<td>6.389***</td>
<td>6.054***</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(less developed)</td>
<td>(1.410)</td>
<td>(1.384)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Share Missing (less</td>
<td>4.663***</td>
<td>4.418***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>developed)</td>
<td>(1.311)</td>
<td>(1.402)</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Change in preference</td>
<td>-4.357***</td>
<td>-4.124***</td>
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<td></td>
<td></td>
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<td>match share (less</td>
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<td>(1.183)</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>developed)</td>
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<td></td>
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</tr>
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<td>0.128***</td>
<td>0.110***</td>
<td>0.122***</td>
<td>0.138***</td>
<td>0.153***</td>
<td>0.131***</td>
<td>0.145***</td>
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<td>(0.0165)</td>
<td>(0.0174)</td>
<td>(0.0201)</td>
<td>(0.0206)</td>
<td>(0.0202)</td>
<td>(0.0221)</td>
<td>(0.0210)</td>
<td>(0.0195)</td>
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<tr>
<td>Difference in income</td>
<td>0.408***</td>
<td>0.323***</td>
<td>0.529***</td>
<td>0.421***</td>
<td>0.399***</td>
<td>0.335***</td>
<td>0.896***</td>
<td>0.316***</td>
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<td>level</td>
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<td>(0.187)</td>
<td>(0.197)</td>
<td>(0.195)</td>
<td>(0.183)</td>
<td>(0.181)</td>
<td>(0.187)</td>
<td>(0.188)</td>
</tr>
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<td>-1.838*</td>
<td>-1.930*</td>
<td>-1.663*</td>
<td>-1.781*</td>
<td>-1.814*</td>
<td>-1.924*</td>
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<td>(0.986)</td>
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<td>(0.991)</td>
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<td>(0.319)</td>
<td>(0.346)</td>
<td>(0.325)</td>
<td>(0.330)</td>
<td>(0.319)</td>
<td>(0.339)</td>
<td>(0.339)</td>
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<tr>
<td>Cumulative number of</td>
<td>0.0263***</td>
<td>0.0283***</td>
<td>0.0292***</td>
<td>0.0283***</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>cases (signatories)</td>
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<td>(0.000476)</td>
<td>(0.000465)</td>
<td>(0.000460)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Number of cases</td>
<td>0.157***</td>
<td>0.148***</td>
<td>0.162***</td>
<td>0.156***</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(signatories)</td>
<td>(0.0219)</td>
<td>(0.0230)</td>
<td>(0.0229)</td>
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<td></td>
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</tr>
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<td>10810</td>
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</table>

Standard errors in parentheses.
Coefficient estimates from competing-risks survival regressions.
* p < .10, ** p < .05, *** p < .01
Table A11: Negotiation input and termination risk by termination type (control for bargaining position)

<table>
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<tr>
<th></th>
<th>(1) Unilaterally terminate</th>
<th>(2) Unilaterally terminate</th>
<th>(3) Unilaterally terminate</th>
<th>(4) Unilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conspiratory Match</td>
<td>1.562</td>
<td>1.415</td>
<td>3.275*</td>
<td>3.120*</td>
</tr>
<tr>
<td>Share (less developed)</td>
<td>(1.220)</td>
<td>(1.188)</td>
<td>(1.731)</td>
<td>(1.692)</td>
</tr>
<tr>
<td>Year of signature</td>
<td>0.0785***</td>
<td>0.0917***</td>
<td>0.115***</td>
<td>0.128***</td>
</tr>
<tr>
<td></td>
<td>(0.0136)</td>
<td>(0.0152)</td>
<td>(0.0215)</td>
<td>(0.0222)</td>
</tr>
<tr>
<td>Difference in income</td>
<td>0.127</td>
<td>0.0594</td>
<td>0.466**</td>
<td>0.359*</td>
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<td>(0.157)</td>
<td>(0.201)</td>
<td>(0.200)</td>
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<td>-1.769*</td>
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<td>(0.515)</td>
<td>(0.513)</td>
<td>(0.986)</td>
<td>(0.987)</td>
</tr>
<tr>
<td>Achmea</td>
<td>-17.38***</td>
<td>-14.98***</td>
<td>-13.03***</td>
<td>-12.28***</td>
</tr>
<tr>
<td></td>
<td>(0.315)</td>
<td>(0.286)</td>
<td>(0.349)</td>
<td>(0.327)</td>
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<td>Cumulative number of</td>
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<td>0.0287***</td>
<td>0.141***</td>
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<td>cases (conspirators)</td>
<td>(0.00424)</td>
<td>(0.00478)</td>
<td>(0.0170)</td>
<td>(0.0235)</td>
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<tr>
<td>Number of cases</td>
<td>4.582***</td>
<td>4.046***</td>
<td>6.746***</td>
<td>6.284***</td>
</tr>
<tr>
<td>(conspirators)</td>
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<td>(1.086)</td>
<td>(1.393)</td>
<td>(1.355)</td>
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Standard errors in parentheses:
Coefficient estimates from competing risks survival regressions
Columns 3 and 4 include only observations from eligible years.
* p < .10, ** p < .05, *** p < .01

Table A12: Unilateral termination risk (country-based analysis) (incremental and mass terminators)

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<th>(6) Unilaterally terminate</th>
<th>(7) Unilaterally terminate</th>
<th>(8) Unilaterally terminate</th>
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<tr>
<td>Conspirator's match</td>
<td>2.767</td>
<td>2.481</td>
<td>1.476*</td>
<td>1.823**</td>
<td>-0.954</td>
<td>-2.824</td>
<td>-1.821</td>
<td>-2.147</td>
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<tr>
<td>Share (less developed)</td>
<td>(2.545)</td>
<td>(2.905)</td>
<td>(7.927)</td>
<td>(7.875)</td>
<td>(2.425)</td>
<td>(2.333)</td>
<td>(2.147)</td>
<td>(2.147)</td>
</tr>
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<td>Change in preference</td>
<td>0.0405</td>
<td>0.155**</td>
<td>0.0011**</td>
<td>0.144***</td>
<td>-0.038</td>
<td>0.155***</td>
<td>0.0523</td>
<td>0.165***</td>
</tr>
<tr>
<td>match share</td>
<td>(0.0396)</td>
<td>(0.0284)</td>
<td>(0.0037)</td>
<td>(0.0284)</td>
<td>(0.0321)</td>
<td>(0.0256)</td>
<td>(0.0350)</td>
<td>(0.0303)</td>
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<td>(0.134)</td>
<td>(0.134)</td>
<td>(0.135)</td>
<td>(0.135)</td>
<td>(0.135)</td>
</tr>
<tr>
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<td>(0.616)</td>
<td>(0.616)</td>
<td>(0.615)</td>
<td>(0.616)</td>
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<td>(0.615)</td>
<td>(0.624)</td>
<td>(0.575)</td>
<td>(0.593)</td>
<td>(0.577)</td>
<td>(0.593)</td>
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<tr>
<td>Achmea</td>
<td>0.127*</td>
<td>0.0939**</td>
<td>0.126**</td>
<td>0.113**</td>
<td>0.113**</td>
<td>0.113**</td>
<td>0.113**</td>
<td>0.113**</td>
</tr>
<tr>
<td></td>
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<td>(0.0292)</td>
<td>(0.0268)</td>
<td>(0.0273)</td>
<td>(0.0268)</td>
<td>(0.0273)</td>
<td>(0.0273)</td>
<td>(0.0273)</td>
</tr>
<tr>
<td>Number of cases</td>
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<td>0.283***</td>
<td>0.309***</td>
<td>0.291***</td>
<td>0.309***</td>
<td>0.291***</td>
<td>0.309***</td>
<td>0.291***</td>
</tr>
<tr>
<td></td>
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<td>(0.0707)</td>
<td>(0.0664)</td>
<td>(0.0677)</td>
<td>(0.0664)</td>
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</table>

Standard errors in parentheses:
Coefficient estimates from Cox proportional hazards models. All specifications include a country-specific frailty parameter.
* p < .10, ** p < .05, *** p < .01
Table A13: Unilateral termination risk (country-based analysis) (incremental terminators only)

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<th>(3) Unilaterally terminate</th>
<th>(4) Unilaterally terminate</th>
<th>(5) Unilaterally terminate</th>
<th>(6) Unilaterally terminate</th>
<th>(7) Unilaterally terminate</th>
<th>(8) Unilaterally terminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargain position</td>
<td>-38.24* (20.36)</td>
<td>-39.64* (20.08)</td>
<td>-38.24* (20.36)</td>
<td>-39.64* (20.08)</td>
<td>-38.24* (20.36)</td>
<td>-39.64* (20.08)</td>
<td>-38.24* (20.36)</td>
<td>-39.64* (20.08)</td>
</tr>
<tr>
<td>Share missing</td>
<td>5.317 (3.317)</td>
<td>5.014 (3.338)</td>
<td>-1.655 (2.395)</td>
<td>-1.522 (2.383)</td>
<td>0.0955 (0.0461)</td>
<td>0.1011 (0.0419)</td>
<td>0.0955 (0.0461)</td>
<td>0.1011 (0.0419)</td>
</tr>
<tr>
<td>Change in preference match share</td>
<td>0.0887** (0.0377)</td>
<td>0.0956*** (0.0333)</td>
<td>0.0798** (0.0438)</td>
<td>0.0798** (0.0391)</td>
<td>0.109*** (0.0418)</td>
<td>0.112*** (0.0377)</td>
<td>0.0955*** (0.0461)</td>
<td>0.101*** (0.0419)</td>
</tr>
<tr>
<td>Difference in income level</td>
<td>0.243 (0.247)</td>
<td>0.252 (0.245)</td>
<td>0.174 (0.249)</td>
<td>0.169 (0.246)</td>
<td>0.177 (0.238)</td>
<td>0.177 (0.236)</td>
<td>0.177 (0.241)</td>
<td>0.177 (0.239)</td>
</tr>
<tr>
<td>Paper BIT</td>
<td>-0.258 (0.632)</td>
<td>-0.302 (0.632)</td>
<td>-0.164 (0.635)</td>
<td>-0.211 (0.636)</td>
<td>-0.404 (0.635)</td>
<td>-0.444 (0.635)</td>
<td>-0.314 (0.635)</td>
<td>-0.350 (0.635)</td>
</tr>
<tr>
<td>Achmea</td>
<td>2.599*** (0.628)</td>
<td>2.638*** (0.625)</td>
<td>2.609*** (0.667)</td>
<td>2.567*** (0.676)</td>
<td>2.618*** (0.630)</td>
<td>2.658*** (0.624)</td>
<td>2.582*** (0.622)</td>
<td>2.591*** (0.624)</td>
</tr>
<tr>
<td>Cumulative number of cases</td>
<td>0.00715 (0.0330)</td>
<td>-0.00352 (0.0344)</td>
<td>0.00097 (0.0335)</td>
<td>0.00150 (0.0331)</td>
<td>0.00097 (0.0335)</td>
<td>0.00150 (0.0331)</td>
<td>0.00097 (0.0335)</td>
<td>0.00150 (0.0331)</td>
</tr>
<tr>
<td>Number of cases</td>
<td>-0.286 (0.187)</td>
<td>-0.280 (0.196)</td>
<td>-0.285 (0.184)</td>
<td>-0.255 (0.187)</td>
<td>-0.255 (0.187)</td>
<td>-0.255 (0.187)</td>
<td>-0.255 (0.187)</td>
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<tr>
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Standard errors in parentheses. Coefficients estimated in country-specific models. All specifications include a country-specific frailty parameter.

Table A14: Renegotiation risk (Country-based analysis)

<table>
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<tr>
<th></th>
<th>(1) Renegotiate</th>
<th>(2) Renegotiate</th>
<th>(3) Renegotiate</th>
<th>(4) Renegotiate</th>
<th>(5) Renegotiate</th>
<th>(6) Renegotiate</th>
<th>(7) Renegotiate</th>
<th>(8) Renegotiate</th>
</tr>
</thead>
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<tr>
<td>Cosignatory's match share</td>
<td>-1.167*** (0.717)</td>
<td>-2.153*** (0.717)</td>
<td>-1.167*** (0.717)</td>
<td>-2.153*** (0.717)</td>
<td>-1.167*** (0.717)</td>
<td>-2.153*** (0.717)</td>
<td>-1.167*** (0.717)</td>
<td>-2.153*** (0.717)</td>
</tr>
<tr>
<td>Bargain position</td>
<td>2.425** (1.064)</td>
<td>2.256** (1.032)</td>
<td>2.425** (1.064)</td>
<td>2.256** (1.032)</td>
<td>2.425** (1.064)</td>
<td>2.256** (1.032)</td>
<td>2.425** (1.064)</td>
<td>2.256** (1.032)</td>
</tr>
<tr>
<td>Missing provisions</td>
<td>0.911 (0.641)</td>
<td>0.948 (0.659)</td>
<td>0.911 (0.641)</td>
<td>0.948 (0.659)</td>
<td>0.911 (0.641)</td>
<td>0.948 (0.659)</td>
<td>0.911 (0.641)</td>
<td>0.948 (0.659)</td>
</tr>
<tr>
<td>Change in preference match share</td>
<td>-0.0452** (0.00926)</td>
<td>-0.0452** (0.00926)</td>
<td>-0.0452** (0.00926)</td>
<td>-0.0452** (0.00926)</td>
<td>-0.0452** (0.00926)</td>
<td>-0.0452** (0.00926)</td>
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<tr>
<td>Year of signature</td>
<td>-0.0486 (0.0921)</td>
<td>-0.0503 (0.0922)</td>
<td>-0.103 (0.0921)</td>
<td>-0.103 (0.0922)</td>
<td>-0.096 (0.0917)</td>
<td>-0.096 (0.0917)</td>
<td>-0.096 (0.0933)</td>
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<td>Difference in income level</td>
<td>-0.235 (0.235)</td>
<td>-0.235 (0.235)</td>
<td>-0.235 (0.234)</td>
<td>-0.235 (0.234)</td>
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</tr>
<tr>
<td>Paper BIT</td>
<td>-44.87 (1.44802e-09)</td>
<td>-44.95 (1.44802e-09)</td>
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<td>-44.94 (1.44802e-09)</td>
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<tr>
<td>Achmea</td>
<td>-0.0215* (0.0125)</td>
<td>-0.0236* (0.0133)</td>
<td>-0.0206 (0.0123)</td>
<td>-0.0206 (0.0123)</td>
<td>-0.0206 (0.0123)</td>
<td>-0.0206 (0.0123)</td>
<td>-0.0206 (0.0123)</td>
<td>-0.0206 (0.0123)</td>
</tr>
<tr>
<td>Cumulative number of cases</td>
<td>-0.124 (0.0957)</td>
<td>-0.139 (0.0997)</td>
<td>-0.120 (0.0951)</td>
<td>-0.120 (0.0951)</td>
<td>-0.120 (0.0951)</td>
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</table>

Standard errors in parentheses. Coefficients estimated in country-specific models. All specifications include a country-specific frailty parameter.

\* p < .10, \** p < .05, \*** p < .01