CONVERGENCE AND DIVERGENCE IN THE INVESTMENT TREATY UNIVERSE - SCOPING THE POTENTIAL FOR MULTILATERAL CONSOLIDATION

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VERSION: 4 OCTOBER 2016

ABSTRACT

How far away are we from a multilateral investment treaty? In this paper we answer this question by assessing convergence and divergence in the pool of existing bilateral investment treaties (BITs) scoping the potential for multilateral consolidation. To do so, we introduce a novel automated coding procedure, which investigates investment treaty content in unprecedented scope and breadth across 1628 English-language BITs and their 22'500 articles. We show that treaties are split into short, shallow agreements and deep, complex ones. While we find ample support for consolidation around a lowest common denominator in treaty practice, current policy discourse favors more complex agreements that balance investment protection and state sovereignty. Consolidation at the top rather than the bottom, however, faces challenges as the design of such deep agreements diverges more strongly than that of shallow ones. States have adopted varying architectures to solve similar policy challenges and have cherry-picked individual treaty design elements. Differing preferences and selective diffusion call for further consensus-building before multilateral consolidation can be achieved. Consolidation at the regional level and partial multilateralizations thus become the needed stepping-stones towards a multilateral agreement on investment.

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I. INTRODUCTION

With over 3000 international investment agreements (IIAs) protecting foreign capital abroad currently in existence,[1] the size of the IIA universe has become a challenge for all stakeholders. As the United Nations Conference on Trade and Development (UNCTAD) put it in a recent report "[w]ith thousands of treaties, many ongoing negotiations and multiple dispute-settlement mechanisms, today's IIA regime has come close to a point where it is too big and complex to handle for governments and investors alike."[2] One way to reduce this complexity consists of replacing the myriad of bilateral investment treaties (BITs) with one multilateral investment agreement. Aside from the political will for such an endeavor, a key obstacle on the path towards multilateralism is the seemingly divergent content of BITs. But how divergent are BITs in reality? Answering that question will help us to assess how difficult it would be to consolidate existing practice under a single multilateral umbrella.

In this article, we empirically investigate the degree of treaty design convergence and divergence in over 22'500 articles of 1628 English-language BITs. To this end, we develop a novel automated coding procedure that allows us to compare treaty design in unprecedented breadth and depth. Our analysis reveals that the BIT universe is split into short, shallow agreements that focus on investment protection only and comprehensive, complex ones that treat investment in its wider policy context. This creates a significant potential for consolidation at the bottom around a dozen core investment protection standards that virtually every country has accepted in at least one treaty. In contrast, consolidation at the top around more complex treaties with more varied features only included by a handful of states is more ambitious.

There is a trade-off, however, between feasibility and desirability. The current policy discourse has become critical of simple, shallow agreements and favors more complex treaties that strike a balance between protecting investment abroad while safeguarding policy space at home. To assess how difficult it would be to consolidate practice at the top rather than the bottom we investigate treaty divergence in more detail. We find that although only few states have signed complex agreements, their share is growing making the current bifurcation of the BIT universe a temporary one. Yet even

[1] WORLD INVESTMENT REPORT 2016. INVESTOR NATIONALITY: POLICY CHALLENGES, 101 (UNCTAD ed., 2016).

[2] UNCTAD, WORLD INVESTMENT REPORT 2011. NON-EQUITY MODES OF INTERNATIONAL PRODUCTION AND DEVELOPMENT xvi (2011).

though states increasingly sign longer, more complex agreements, the design of these deeper treaties diverges. Indeed, the BIT universe is growing increasingly fragmented as treaty elements diffuse selectively and countries cherry-pick design innovations. As a result, consolidation at the top seems currently elusive and further policy convergence is needed, including through regional initiatives or partial multilateralization, to clear the path for a global consensus around deep investment treaty design.

This article is structured as follows. We begin by conceptualizing the path towards multilateralization of investment law as one of consolidating existing practice. Thereafter, we introduce our automated coding methodology to empirically investigate the scope for consolidation through convergence and divergence across treaties. We subsequently apply that methodology to explore convergence among BITs outlining the scope for consolidation at the bottom around simple agreements and at the top around complex ones. We then shift focus to the elements of divergence to identify obstacles for multilateral consolidation at the top. Finally, we conclude by outlining ways to overcome these obstacles and build multilateral consensus.

II. MULTILATERALIZATION THROUGH CONSOLIDATION

Countries have concluded close to 3000 bilateral investment treaties and almost every state in the world is signatory to at least one of such agreements.[3] Not only do investment agreements have global reach, but they are also relatively similar to each other. According to Dolzer and Schreuer BITs share common principles of investment protection while differing in their fine print.[4] Salacuse even concludes that BITs have converged into a global regime for investment protection characterized by common principles, norms, rules and decision-making processes.[5] Given this apparent similarity and its worldwide reach, one may think that it should not be too difficult to replace these thousands of bilateral deals with one multilateral one.

[3] Our sample includes English-language treaties signed by 171 states. The detailed description of the data is given in Wolfgang Alschner & Dmitriy Skougarevskiy, *Mapping the Universe of International Investment Agreements*, 19 J. INT. ECON. LAW (2016), Appendix "Full text coverage of the data set".

[4] RUDOLF DOLZER & CHRISTOPH SCHREUER, PRINCIPLES OF INTERNATIONAL INVESTMENT LAW (2nd ed ed. 2012).

[5] JESWALD W SALACUSE, THE LAW OF INVESTMENT TREATIES (2010); J. W. Salacuse, *The Emerging Global Regime for Investment*, 51 HARV INTL LJ 427–553 (2010).

Yet, efforts to conclude a multilateral investment agreement have so far been unsuccessful. Attempts to create such a treaty failed under the auspices of the OECD in the 1960s, 1990s and more recently at the WTO.[6] Although plurilateral and regional investment treaties have been concluded among larger subsets of states, they tend to complement rather than substitute parallel bilateral treaties.[7] States thus continue to conclude and to rely on BITs to protect their investors abroad.

One reason for the popularity of BITs is their adaptability. BITs can be molded more closely to the treaty design preferences of their signatories than their multilateral counterpart. Indeed, empirical research has shown that negotiated BITs are often closely tailored to match the treaty templates of developed states.[8] If the adaptability of BITs to unilateral preferences is their key advantage over a multilateral treaty that would require multi-party compromises, then we can scope the potential of the latter by measuring the degree to which states make use of the adaptability of the former. Put differently, by quantifying the degree of convergence and divergence among BITs we can get a sense of how far we are away from a multilateral substitute. Suppose that all bilateral investment agreements looked alike, then it would be easy to consolidate them into a multilateral agreement without making any state worse off. If, however, the terms vary starkly across bilateral agreements, then it would be difficult to consolidate them without deviating significantly from the preferences expressed in bilateral treaties. The prospect for multilateralization can thus be reframed and empirically tested as a function of the scope for consolidation of existing bilateral treaty relationships.

III. EMPIRICAL TREATY DESIGN RESEARCH AND THE AUTOMATED CODING OF TREATY PROVISIONS

A. Existing empirical analysis of investment treaty content

Empirical research on the content of investment agreements has made significant advances in recent years. Several hand-coding initiatives have shed new light on the design of investment agreements. Chaisse and Bellak

[6] See generally UNCTAD, LESSONS FROM THE MAI (1999); Peter T. Muchlinski, *The Rise and Fall of the Multilateral Agreement on Investment: Where Now?*, INT. LAWYER 1033–1053 (2000).

[7] Wolfgang Alschner, *Regionalism and Overlap in Investment Treaty Law: Towards Consolidation or Contradiction?*, 17 J. INT. ECON. LAW 271–298 (2014).

[8] BITs of developed countries, for instance, closely resemble their model treaties. Alschner and Skougarevskiy, *supra* note 3.

have coded 1498 BITs and 158 PTAs across seven core investment treaty categories.[9] UNCTAD went even further investigating 1458 BITs and PTAs along more than one hundred treaty dimensions.[10]

Complementing hand-coding efforts, text-as-data approaches have been employed to uncover latent structures in the IIA universe. Alschner and Skougaresvkiy have introduced a textual distance metric and applied it to investigate bargaining asymmetries, treaty network consistency as well as design diffusion and innovation.[11] In the process, they found, amongst others, that 81% of the Transpacific Partnership's Investment Chapter has been copied and pasted from an earlier U.S. investment treaty.[12]

Unfortunately, for an investigation of convergence and divergence across investment agreements, both approaches are sub-optimal. Neither the Chaisse and Bellak data nor the UNCTAD mapping yields data at the level of detail that would allow an in-depth comparison across potentially all investment treaties. Since both initiatives involve manual labeling of treaties, any re-coding to add further features or to extend the set of coded treaties would prove prohibitively costly for our purposes.

Similarly, existing text-as-data approaches also do not offer satisfying solutions since detecting convergence and divergence at the sub-treaty level is a thorny problem. Comparing two BITs is meaningful to the extent that we know that both documents concern the same subject matter and pursue the same function. Since we expect an underlying similarity, differences between two BITs become interpretable. Once we go deeper into the text of treaties, however, this connection is lost as it is *a priori* unknown whether Article 10 in BIT A and Article 10 in BIT B concern the same subject matter. Consequently, any text-as-data analysis on the sub-treaty level first has to match provisions that share a common content.

Yet, borrowing from jargon, matching apples to apples and oranges to oranges is not a trivial problem. Provisions differ on many levels. First, they

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[9] J. Chaisse & C. Bellak, *Navigating the Expanding Universe of International Treaties on Foreign Investment: Creation and Use of a Critical Index*, 18 J. INT. ECON. LAW 79–115 (2015).

[10] UNCTAD, *IIA Mapping Project*, available at http://investmentpolicyhub.unctad.org/Upload/Documents/UNCTAD%20IIA%20MAPPING%20PROJECT%202013-2014.pdf.

[11] Alschner and Skougarevskiy, *supra* note 3.

[12] Wolfgang Alschner & Dmitriy Skougarevskiy, *The New Gold Standard? Empirically Situating the Trans-Pacific Partnership in the Investment Treaty Universe*, 17 J. WORLD INVEST. TRADE (2016).

can concern the same subject matter, but use different words to address it making a purely textual similarity-based matching of articles problematic. Second, article headers can help to cluster provisions that relate to similar issues, but can also confuse the analysis as some articles have the same label, but different content; other treaty clauses contain no titles at all. Finally, provisions differ considerably in scope, with some treaties regulating what is elsewhere dispersed into a handful of separate clauses in a single, extensive provision.

Given that neither hand-coding nor existing text-as-data methods offer optimal results, we break new ground in this article. In order to seize the best of both worlds, we combine coding with text-as-data approaches to investigate convergence and divergence across investment treaties in unprecedented breadth and depth. To this end, we develop an automated coding pipeline that assigns feature labels from a codebook to each article of an investment treaty.

B. Two approaches to automated coding

Automated coding combines text-as-data approaches with human guidance. The advantage of automated coding over pure human coding is efficiency. Once the algorithm is written, it can label documents in a matter of seconds, while manual labeling would take months and incur significant costs. The added value of machine coding as compared to pure text-as-data approaches, in turn, is that it proceeds deductively with human supervision. Unsupervised text-as-data approaches challenge the researcher to interpret automatically detected patterns and separate meaningful variation from noise.[13] Machine labeling poses no equivalent difficulty, as the researcher knows from the start what she is looking for.

Automated coding comes in two variations: supervised machine learning and rule-based labeling. Under a supervised machine learning approach, the computer is trained with human-labeled training data and subsequently categorizes unlabeled data.[14] A rule-based approach, in contrast, relies on a number of pre-defined procedures to assign labels to text. One very simple procedure could be that if the word "fair and equitable" is in a document, the computer should mark the treaty as containing a "fair and equitable treatment" clause.

[13] See generally Justin Grimmer & Brandon M. Stewart, *Text as Data: The Promise and Pitfalls of Automatic Content Analysis Methods for Political Texts*, POLIT. ANAL. (2013).

[14] See generally *Id.*

Both approaches have their advantages and drawbacks. Supervised machine learning can successfully classify fuzzy data where rule identification is difficult. Yet workhorse supervised machine-learning algorithms operate as black boxes. The reasons why a specific category is assigned by the machine cannot easily be discerned from the probabilistic algorithm and special effort has to go into testing precision and recall of results to ensure accuracy of results.[15] Rule-based approaches, in contrast, are perfectly transparent. Where a label is wrongly assigned, the rule can be amended to remedy the mistake. Yet, rule-based approaches are only sensible if variation in the data is manageable. Where a special rule needs to be written for each new document, such a procedure makes little sense.

In the context of investment treaties, we can capitalize on their boilerplate language, underlying model agreements, and common roots in draft agreements of the 1960s to proceed with a rule-based approach. Part of the automated labeling infrastructure we build, however, also draws from supervised machine learning to label articles without headers.

C. Dataset and Codebook

To conduct our analysis, we have assembled 1628 English language BIT full texts spanning from 1959 to 2015 from different sources covering 171 countries.[16] We next split our 1628 BIT texts into their roughly 22'500 constituent provisions as corpus for our analysis. While this dataset only encompasses 51% of the investment treaty law universe, we are currently engaged in a research project to build a comprehensive set of IIAs on which our automated coding procedure can subsequently be run.[17]

In order to extract legally relevant information from the treaties, we devised an original codebook. The elements of the codebook were identified by consulting international investment law text books,[18] reports by international organization,[19] BIT model agreements and commentaries[20] as

[15] *Id.*

[16] For a detailed description of our data generation technique see *supra* note 8.

[17] SNIS Project "Diffusion of International Law: A Textual Analysis of International Investment Agreements".

[18] DOLZER AND SCHREUER, *supra* note 4. SALACUSE, *supra* note 5; Salacuse, *supra* note 5.

[19] UNCTAD, IDENTIFYING CORE ELEMENTS IN INVESTMENT AGREEMENTS IN THE APEC REGION (2008); UNCTAD, INTERNATIONAL INVESTMENT RULE MAKING: STOCKTAKING CHALLENGES AND THE WAY FORWARD (2009); UNCTAD, BILATERAL INVESTMENT TREATIES 1995-2006: TRENDS IN INVESTMENT RULEMAKING (2007);

well as concluded BIT texts in order to devise a comprehensive list of clauses that are typically encountered in BITs.[21]

The codebook follows a tree structure as depicted in Figure 1. Each branch of the tree represents a major section of a treaty, e.g. "definition and scope", "promotion and admission", "standards of protection", "investor-state arbitration", "treaty administration" etc. Each of these branches has sub-branches that reflect elements typically found within that branch: "fair and equitable treatment", for instance, is an element of the branch "standards of protection" and "conduct of proceedings" is an element of the branch "investor-state dispute settlement". Finally, each sub-branch has sub-sub-branches.

UNCTAD, INTERNATIONAL INVESTMENT ARRANGEMENTS: TRENDS AND EMERGING ISSUES (2006).

[20] CHESTER BROWN & DEVASHISH KRISHAN, COMMENTARIES ON SELECTED MODEL INVESTMENT TREATIES (2013).

[21] We thank our SNIS Project colleagues Rodrigo Polanco, Valentino Desilvestro, and Azernoosh Bazrafkan for their assistance in extending the codebook.

Figure 1: Tree structure of the codebook (partial illustration)[22]

In total, our codebook has four levels of depth. The fourth and most detailed layer comprises 204 specific elements capturing a significant part of the content variation encountered across investment treaties. The important advantage of the tree structure we devised is that it is self-populating. Once an inferior category is filled, this information is

[22] We thank Valentino Desilvestro for designing this chart.

communicated up the branch to its superior category. We thus only need to check for the existence of fourth-layer-categories to fill the entire tree structure.

We use the codebook to build an automated rule-based coding pipeline that draws on BIT article headers as well as article text information to identify whether a given feature from the codebook is present in each of our 22'500 BIT articles. The design and operation of the machine-coding procedure is set out in the paper's annex. By implementing the pipeline, we obtain a detailed mapping of the content of each BIT and its constituent articles.

IV. CONVERGENCE AS BASIS FOR CONSOLIDATION

A. The Structure of the BIT universe

In this section, we use our automated coding pipeline to scope the potential for convergence in the BIT universe. To get a sense of the structure of the BIT universe and the variation encountered therein, we begin our scoping exercise by reducing the results from the most detailed layer of our coded data consisting of 204 treaty elements to two dimensions using metric multi-dimensional scaling (MDS).[23] To facilitate the visual inspection of our figure, we introduce a simple distinction. We assume that treaties that contain more articles are on average more complex and comprehensive agreements; conversely, treaties with fewer articles regulate investment relations in a simpler and more limited manner. On that basis, we visualize treaties with more than 20 articles as red triangles and those with fewer articles as black circles.

[23] All computations are performed in *R* programming language with *cmdscale* command from package *stats*.

Figure 2: The structure of the BIT universe based on a MDS representation of coding results

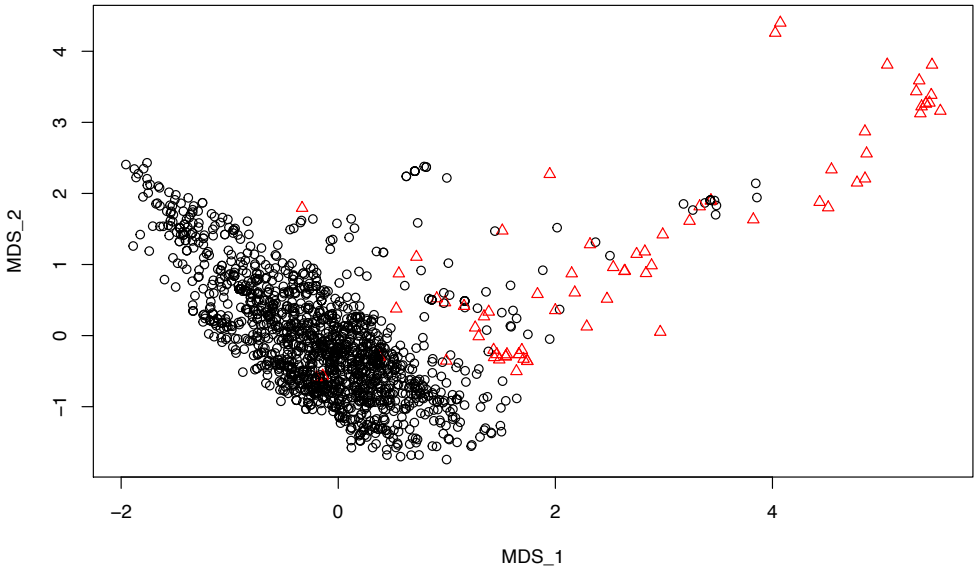
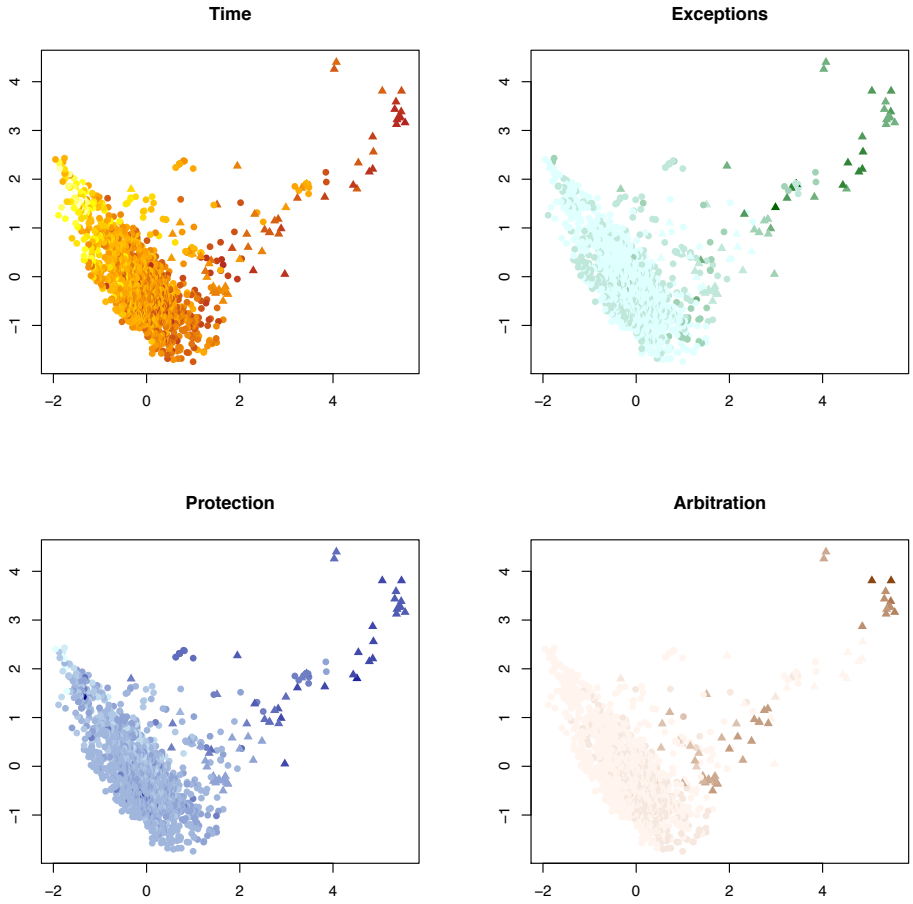


Figure 2 shows that the BIT universe is divided into two clusters. First, the overwhelming majority of treaties is concentrated on the lower left corner of the space. Treaties in that cluster are almost exclusively short agreements with less than 20 articles. Second, departing from the first cluster and extending towards the upper right edge of the scale is a second cluster that consists of a majority of longer agreements with more than 20 articles.

These two clusters, however, are set apart by more than just treaty length. Figure 3 integrates four new dimensions into the same image by introducing a color gradient that depicts (clockwise from upper left) the treaty's year of signature as well as its number of exception, arbitration and protection provisions. Light shading signifies lower scores (earlier agreements or fewer provisions) while dark shading represents higher scores (later agreements or more provisions).

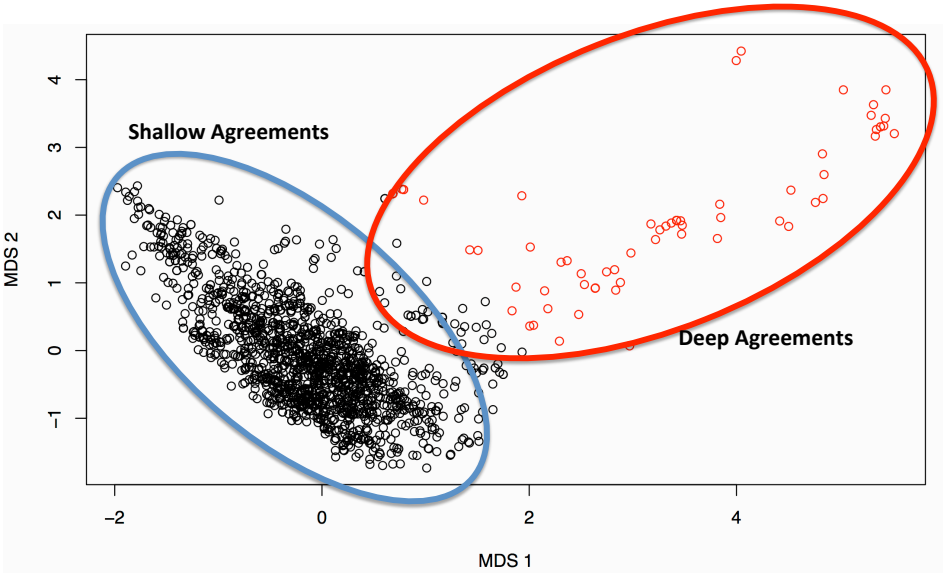
Figure 3: The structure of the BIT universe with different variables as color gradient (brighter shading: low numbers; darker shading: high numbers)



Several distinctions thus become visible. First, whereas treaties on the left of the space are predominantly early agreements; those on the right are mostly recent treaties. Second, these early agreements on the left contain several protection clauses, but very few exception or arbitration provisions. Those on the right, in contrast, contain considerably more exceptions, provide for more detailed arbitration procedures and also entail more protective provisions. The divide between the two clusters is thus one of scope, complexity and depth as well as time. Finally, the two clusters differ in their internal homogeneity. While the denser one on the left is also relatively uniform in its protection, exception and arbitration dimension, the cluster on the right is more scattered both spatially and in terms of its varying content.

In summary, the BIT universe is marked by a two-part structure, which we retrace in Figure 4.[24] The shorthand of a "shallow" and a "deep" cluster describes the two types of agreement areas. On the one hand, there is the large group of short, relatively similar treaties that are shallow in scope. On the other hand, there is the smaller group of more complex and comprehensive agreements. These latter treaties have emerged more recently, generally contain more protection, exception and arbitration features, but also diverge more strongly in content.

Figure 4: Clusters within the BIT universe



In consequence, the structure of the IIA universe points to two consolidation options. Either existing treaties can be consolidated at the bottom taking the cluster of shallow agreements as benchmark or they can be consolidated at the top aiming for a multilateral treaty that is deeper and more ambitious.

B. Shallow vs deep consolidation

The question then arises how easy it is to consolidate investment law at the top or at the bottom. To provide a nuanced answer, we assess the prevalence and consensus surrounding the different clauses that states commonly insert into their investment treaties. For that we use the second-level of our four-level coding, which roughly corresponds to a list of core

[24] We identify and color-code the two clusters by using a kmeans algorithm with the centroids at the coordinates (-1,0) and (3.5,2).

treaty features.

We begin by plotting the relative prevalence of each treaty feature in its respective cluster in Figure 5. The x-axis orders the treaty features in our codebook by their prevalence in the entire BIT universe. We see that while both clusters share a number of prominent treaty features, such as expropriation or transfer clauses, they diverge drastically in scope. The shallow cluster is dominated by relatively few, pervasive features that primarily deal with investment protection. The deeper cluster, in turn, is characterized a broader range of clauses on investment protection, arbitration and exceptions. Moreover the relative prevalence of individual features differs between the shallow and deeper cluster. While on some counts shallow agreements contain higher frequencies of features, e.g. umbrella clauses or arbitrary measures provisions fall into disuse in deeper BITs, other elements that are rare or non-existent in shallow BITs have proliferated in deep agreements. Performance requirements or capital controls, for instance, have become more common and new elements such as transparency in arbitration have been added virtually exclusively in deep BITs. These differences have repercussions for the consolidation potential of each cluster. Shallow BITs display greater potential to serve as benchmark for consolidation as they are dominated by a smaller pool of features that are also present in deep agreements. Deep agreements, in contrast, are more varied and contain unique provisions making consolidation more difficult.

Figure 5: Relative prevalence of coded features in shallow (black) and deep (red) cluster.

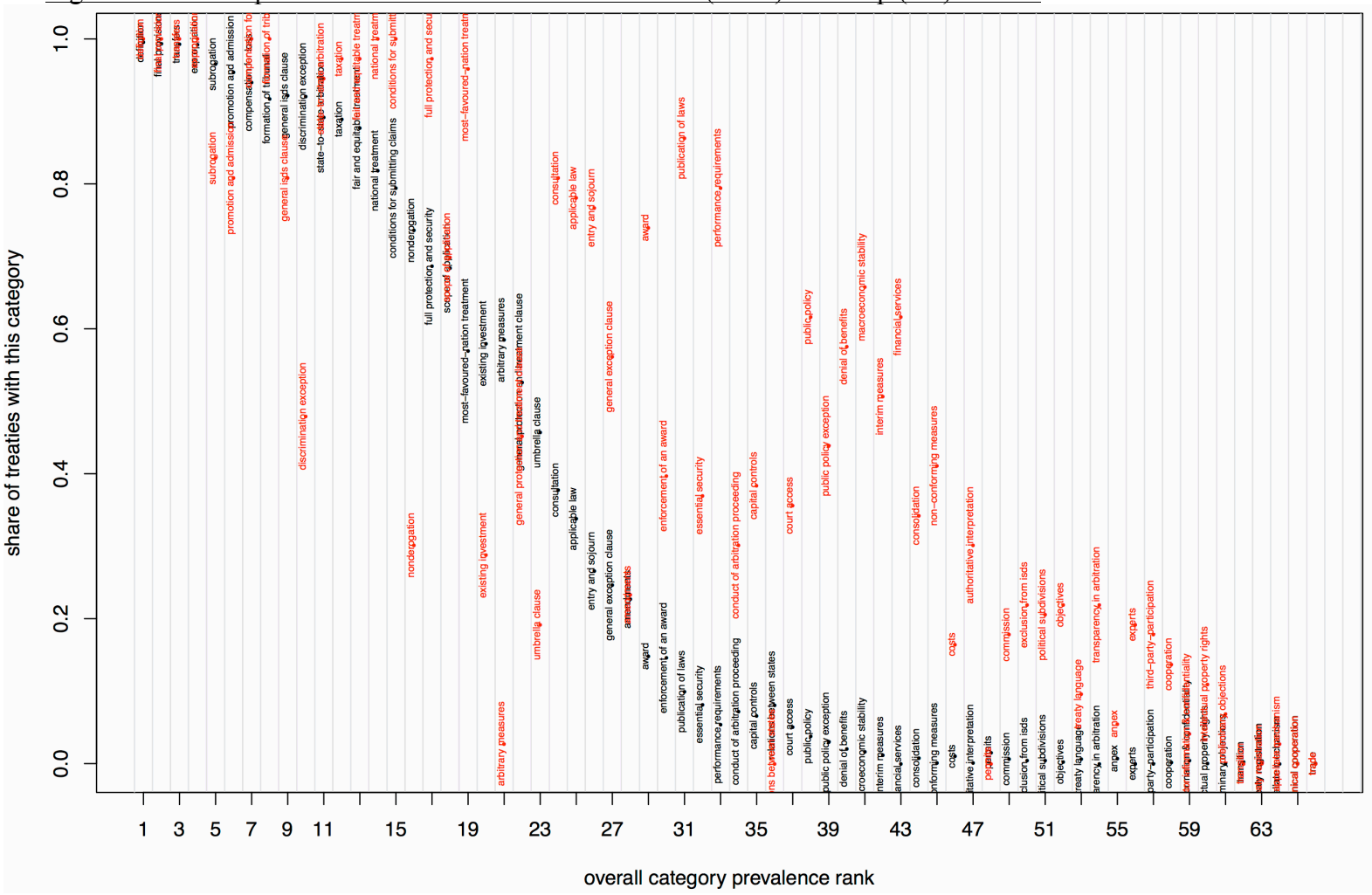


Table 1: State consensus around selected coded features

No of Countries	Clause	Percentage
171	Expropriation	100
171	Compensation for loss	100
171	Transfers	100
170	Promotion and admission	99
170	Fair and equitable treatment	99
169	REIO exception	99
169	State-to-state arbitration	99
168	ISDS	98
167	Full protection and security	98
167	National treatment	98
164	Umbrella clause	96
163	Most-favoured-nation treatment	95
161	Arbitrary measures	94
139	General exception clause	81
138	Entry and sojourn of personnel	81
119	Publication of laws	70
102	Performance requirements	60
99	Essential security	58
95	Capital controls	56
84	Not weaking public policy standards	49
68	Macroeconomic stability exceptions	40
67	Public policy exception	39
66	Denial of benefits	39
33	Non-conforming measures	19
26	Exclusion from ISDS	15

The numbers suggest wide support for a dozen core investment protection clauses. Twelve of the key provisions we code for have been accepted by 95% of the 171 countries involved in our dataset. Among these features is investor-state arbitration that has been accepted by all states apart from Liberia, Lesotho and Somalia in our data. Hence, based on past practice there is ample opportunity for consolidating treaties around a lowest common denominator of investment protection.

At the same time, we also observe treaty elements that are accepted by only part of the community of states. Sojourn of personnel clauses are subscribed to by 81% and performance requirements have only been included by 60% of the countries in our sample. The propensity to accept public policy exception, denial of benefit clauses or non-conforming measures is only present in less than 40% of states. Measured by past

practice, consolidation around these issues thus currently lacks wider consensus.

These numbers add further support to the conclusion that achieving shallow consolidation is a relatively low hanging fruit, while deep consolidation is a hard nut to crack. The twelve core protection features find nearly global support and also correspond to the protective coverage of the majority of shallow investment agreements. A global investment treaty made up of these core features could thus function as a multilateral substitute replacing shallow BITs that are thereby made redundant, while allowing states to go beyond the multilateral baseline by concluding or maintaining deeper agreements. In contrast, consolidating practice around more complex and comprehensive agreements seems elusive based on past practice. Only few states currently sign deep agreements, the features they include are only accepted by a minority of states and even within the cluster of deep agreements there is considerable variation. Consolidation of existing practice is thus currently feasible at the bottom, but not at the top.

C. Deep consolidation is ambitious, yet desirable

Feasibility of consolidation is one thing, its desirability quite another. Our analysis has shown that there is ample consensus based on past practice for a shallow multilateral deal that codifies what is a significant common denominator of investment protection clauses across states. Yet, is such a shallow consolidation desirable?

On the one hand, consolidation irrespective of its scope has desirable elements. It reduces inconsistencies across agreements and helps to foster a predictable and stable jurisprudence around a limited set of common core provisions. Aside from remedying unwanted consequences of fragmentation, it can also help alleviate power asymmetries, as developing countries more so than develop countries currently suffer from a patchwork of inconsistent treaties.[27]

On the other hand, a shallow consolidation would arguably fail to address sustainability concerns currently voiced in investment law policy debates. While shallow agreements share the consensus investment protection features identified in Table 1, they, as seen in Figure 5, largely lack the public policy exceptions or procedural refinements of investor-state arbitration that are found in deep agreements. For that reason, international

[27] Alschner and Skougarevskiy, *supra* note 3.

organizations and scholars have forcefully argued that deeper agreements are more sustainable than shallow ones by striking a more careful balance between investment protection and host state policy space.[28] Old and shallow agreements, the tenor is, fail to account for the complex trade-offs involved in investment policy-making. By not spelling out the scope of protective obligations in detail and by not providing for policy exceptions, they delegate the task to fill gaps left open by the treaty drafters to *ad hoc* arbitrators resulting in an often unpredictable and inconsistent jurisprudence.[29] Indeed, partly in response to these concerns, deeper agreements have proliferated over the past twenty years.[30] In that vein, consolidating practice at the bottom would go against current trends in policy-making by codifying an outdated and unsustainable model of investment protection agreements.

If we accept this benchmark, then the distinction between shallow and deep treaties identified above is actually one between unsustainable and sustainable treaties. That means the consolidation at the bottom, though possible, seems undesirable. We are thus left with a consolidation at the top. Consolidating best practices rather than lowest common denominators offers countries the opportunity to update and improve their existing treaty networks. Yet while desirable, an ambitious, deep agreement is also more difficult to achieve since it cannot be built around existing consensus. How difficult deep consolidation will be then again depends on the scope of policy convergence found among those states engaged in it. We will thus devote the remainder of the paper to investigate the potential for consolidation at the top by identifying areas of convergence and divergence in the practice surrounding deep investment agreements.

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[28] A. van Aaken, *International Investment Law Between Commitment and Flexibility: A Contract Theory Analysis*, 12 J. INT. ECON. LAW 507–538 (2009); S. A. Spears, *The Quest for Policy Space in a New Generation of International Investment Agreements*, 13 J. INT. ECON. LAW 1037–1075 (2010); SUSTAINABLE DEVELOPMENT IN WORLD INVESTMENT LAW, (Marie-Claire Cordonier Segger, Markus Gehring, & Andrew Newcombe eds., 2011); UNCTAD, WORLD INVESTMENT REPORT 2012. TOWARDS A NEW GENERATION OF INVESTMENT POLICIES (2012); J. ANTHONY VANDUZER, PENELOPE SIMONS & GRAHAM MAYEDA, INTEGRATING SUSTAINABLE DEVELOPMENT INTO INTERNATIONAL INVESTMENT AGREEMENTS: A GUIDE FOR DEVELOPING COUNTRY NEGOTIATORS (2013).

[29] UNCTAD, *Interpretation of IIAs: What States can do*, UNCTAD IIA ISSUE NOTE (2011).

[30] See generally Wolfgang Alschner, *The Impact of Investment Arbitration on Investment Treaty Design: Myth Versus Reality*, 42 YALE J. INT. LAW (2017).

V. DIVERGENCE AS OBSTACLE FOR CONSOLIDATION

Our data exposes three main sources of divergence in existing state practice in relation to deep agreements that to varying degrees pose obstacles for future consolidation and multilateralization. First, most obviously, there is gap between states that sign deep agreements and those that sign shallow agreements. Second, states even where they sign deep agreements, diverge in the issues they prioritize resulting in deep agreements that vary more strongly in treaty design than their simpler counterparts. Third, even where states share common policy priorities, their strategies to address the same policy challenges often diverge. While the rift created by diverging treaty scope and depth seems to be closing, divergence on policy preferences persists, and the gap on finding common design solutions to common policy problems is even widening.

A. Divergence I: Shallow vs Deep Agreements

Over the past two decades, investment treaty-making has changed. Some countries have departed from signing short and simple agreements and have turned towards increasingly comprehensive and complex agreements. We illustrate this shift by plotting the first MDS dimension, which is strongly correlated with time, in Figure 6 against the treaties' year of signature. We retain the color-coding from Figure 2 relating to the number of articles per treaty. The figure depicts the evolution of BITs over time and shows that treaties have become more complex, but that this change in treaty-making has not been universal.

Figure 6: The evolution of treaty design as reflected in the first MDS dimension

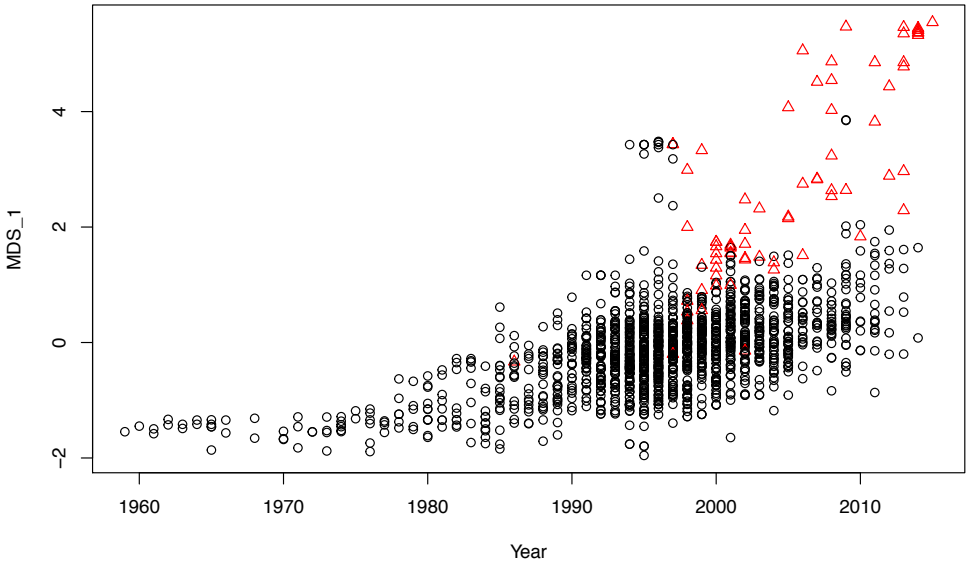

Figure 6 illustrates that deeper agreements with more clauses have appeared and proliferated primarily over the past twenty years. At the same time, a large number of short, shallow agreements continue to be signed. What we equally observe, however, is that there is an upward trend in the data. Since the y-axis represents a scaled-down version of the variation we encounter, this upward trend shows that global practice moves into one direction: deeper agreements become deeper, while shallow agreements catch up being slightly more complex and comprehensive on average than their counterparts in the 1990s. Deeper agreements are thus increasingly trendsetters more than outliers. Hence, although we do see a bifurcation of the IIA universe in those states favoring shallower and those states preferring deeper agreements, the gap between these extremes is closing.

Current developments confirm this trend. The United States, Canada, Japan and Mexico have long been at the forefront of countries concluding deeper agreements with 20 articles or more, whereas states in Asia or Europe lagged behind signing short and simple treaties. Yet, when we look at the current policy of these latter states, the picture changes. India, for instance – the country that has signed most shallow agreements since 2000 – has halted its investment treaty program after being subject to investment claims and has published a revised model BIT in early 2016, which contains 24 articles.[31] Similarly, European states used to sign predominately short

[31] The new template can be accessed at:

and simple agreements.[32] Yet, with the shift of competency over investment policy to the EU, the EU Commission has championed a more complex and comprehensive investment treaty design.[33] The investment chapter of the FTA between the EU and Canada (CETA), for instance, contains 45 provisions. As more and more countries shift towards deeper agreements, the divide between proponents of shallow and deep agreements becomes less important paving the way towards future multilateralization at the top.[34]

B. Divergence II: Differing Policy Preferences

Even though consensus is beginning to form around more complex and comprehensive treaty design, countries' preferences increasingly diverge on what specific content such deeper agreements should contain.

Figure 7 compares the average distribution of the content of the last five BITs concluded by Japan, Canada, Mexico, Belgium, Turkey, and Germany. Each of these countries has a distinct approach when it comes to treaty content. Canada dedicates significant treaty space to investor-state arbitration (ISDS), but also has sections on general exception and non-investment obligations. Mexico, on the other hand, equally extensively deals with investor-state arbitration procedures but devotes little attention to non-investment interests. The opposite is true for Belgium that has few clauses on ISDS, but accords considerable space to non-protection obligations, or Turkey that includes elaborate general exceptions. Finally, Japan divides its treaties relatively evenly among all subject matters while Germany did not devote any attention to non-investment concerns. We thus

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https://www.mygov.in/sites/default/files/master_image/Model%20Text%20for%20the%20Indian%20Bilateral%20Investment%20Treaty.pdf

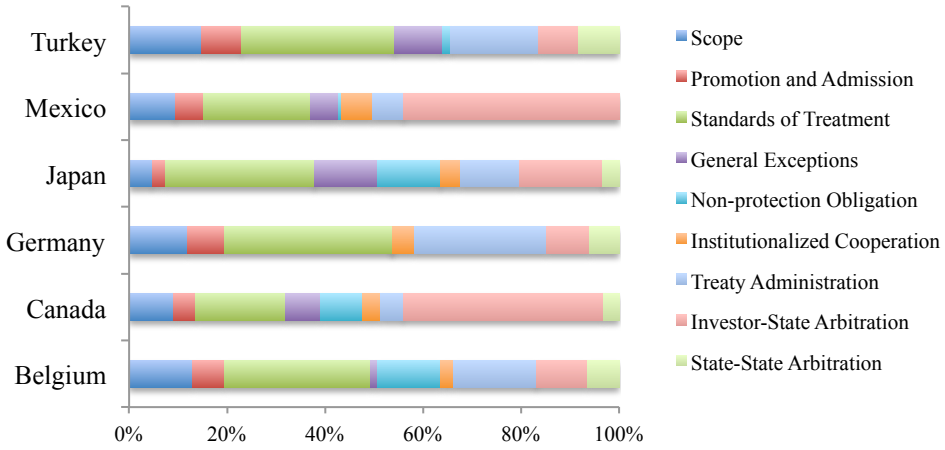
[32] NIKOS LAVRANOS, THE NEW EU INVESTMENT TREATIES: CONVERGENCE TOWARDS THE NAFTA MODEL AS THE NEW PLURILATERAL MODEL BIT TEXT? (2013), http://papers.ssrn.com/abstract=2241455 (last visited Aug 4, 2013).

[33] See Article 188 C (1) of the Treaty of Lisbon (Article 207 (1) Treaty on the Functioning of the European Union (TFEU). See Julien Chaisse, *Promises and Pitfalls of the European Union Policy on Foreign Investment—How will the New EU Competence on FDI affect the Emerging Global Regime?*, 15 J. INT. ECON. LAW 51–84 (2012); August Reinisch, *"Putting the Pieces Together ... an EU Model BIT?,"* 15 J. WORLD INVEST. AMP TRADE 679–704 (2014).

[34] Given that the drive towards greater complexity and depth has been spearheaded by the United States, one of us has termed this development an "Americanization" of the BIT universe. Wolfgang Alschner, *Americanization of the BIT Universe: The Influence of Friendship, Commerce and Navigation (FCN) Treaties on Modern Investment Treaty Law*, 5 GOETTINGEN J. INT. LAW 455–486 (2013); Filippo Fontanelli & Giuseppe Bianco, *Converging Towards NAFTA: An Analysis of FTA Investment Chapters in the European Union and the United States*, 50 STAN J INTL L 211–359 (2014).

see considerable divergence among countries' approaches to the expanding issues covered in BITs.

Figure 7. BIT article content of selected countries



Differing preferences over what issues investment treaties are to cover and to what degree are therefore a main source of divergence among states. As countries move towards deeper and more complex agreements, further consensus needs to be built to allow preferences to converge and prepare the ground for multilateral consolidation. The recent adoption of *Guiding Principles for Global Investment Policymaking* by G20 countries in July 2016 is a step in that direction.[35]

C. Divergence III: Design fragmentation

Yet even where states agree on the policy objectives that investment treaties should pursue, they often disagree on how to get there. Recent negotiations and draft agreements illustrate this development. While, for instance, the United States, the EU, and India all agree that investor-state arbitration has to be embedded in an institutional set-up capable of reining in arbitral misinterpretation and conflicts of interest, they disagree on how best this is to be done. The United States favors an *ad hoc* investor-state arbitration architecture that dates back to NAFTA, which has been further

[35] G20, GUIDING PRINCIPLES FOR GLOBAL INVESTMENT POLICYMAKING available at: http://www.oecd.org/daf/inv/investment-policy/G20-Guiding-Principles-for-Global-Investment-Policymaking.pdf

refined in the recent TPP in light of lessons learned from litigation.[36] The EU, in constrast, wants to replace investment arbitration with a permanent investment court system.[37] India, in turn, in its recently published model BIT, accepts investor-state arbitration but limits access to it by requiring an exhaustion of local remedies.[38] Even though all three states pursue the same goal – fixing a dispute settlement architecture that suffers from conflicts of interests and inconsistent outcomes – they follow very different strategies.

This example illustrates a final source of divergence – treaty design fragmentation – where states increasingly choose different options from a menu of design alternatives to remedy similar policy concerns. While this is a perfectly rational strategy for individual states, it also makes future consolidation more difficult by further fragmenting treaty design. In the past, treaty design variations were limited as states largely opted into a set of core protection elements that were in turn derived from a small number of draft conventions.[39] This is beginning to change as countries invent new approaches to treaty design like Brazil[40] or shop around for existing treaty formulations yet take them not as a package deal, but rather cherry pick individual elements that are then pieced together resulting in increased fragmentation. We illustrate this trend by reference to selective copying from North American treaty practice and by introducing the 2016 Iran–Slovakia BIT as a potpourri of existing practices.

The United States investment policy has been a source of inspiration for many states when formulating their investment policy. Joining the BIT universe only in 1982, it became one of the first countries to face

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[36] For commentary on the approach, see Lisa Sachs & Lise Johnson, *The TPP's Investment Chapter: Entrenching, Rather Than Reforming, a Flawed System*, CCSI Policy Paper, November 2015, available at: http://ccsi.columbia.edu/files/2015/11/TPP-entrenching-flaws-21-Nov-FINAL.pdf.

[37] European Commission, *EU Finalises Proposal for Investment Protection and Court System for TTIP*, Press Release (12 November 2015), available at: http://europa.eu/rapid/press-release_IP-15-6059_en.htm.

[38] Article 14(3) of the Indian Model BIT, available at: https://www.mygov.in/sites/default/files/master_image/Model%20Text%20for%20the%20Indian%20Bilateral%20Investment%20Treaty.pdf

[39] STEPHAN W. SCHILL, THE MULTILATERALIZATION OF INTERNATIONAL INVESTMENT LAW 89–98 (2009).

[40] *The Brazil–Mozambique and Brazil–Angola Cooperation and Investment Facilitation Agreements (CIFAs): A Descriptive Overview*, Investment Treaty News, 21 May 2015, available at: https://www.iisd.org/itn/2015/05/21/the-brazil-mozambique-and-brazil-angola- cooperation-and-investment-facilitation-agreements-cifas-a-descriptive-overview/

investment claims in the late 1990s.[41] Its 2004 model BIT that resulted from its experience as respondent in investment arbitration has since served as reference point for other countries seeking to adjust their treaty models.[42] Yet, this inspiration typically takes the form of selective copying rather than a full endorsement of the American design as we illustrate in relation to national treatment as well as fair and equitable treatment provisions.

When entering the BIT universe the United States introduced two changes to national treatment clauses as compared to existing BIT practices by European states. First, drawing on its prior Friendship, Commerce and Navigation (FCN) treaties, the country extended national treatment to the acquisition and establishment phase.[43] Thereby it added a liberalization component to BITs that were hitherto exclusively concerned with behind-the-border protection.[44] In addition, it also made clear that an assessment of discrimination between foreigners and nationals needed to compare investors and investments that are "in like situations" or "in like circumstances". This addition became important in subsequent litigation as tribunals struggled to define suitable comparator groups for claiming investors in national treatment disputes.[45]

Both sub-elements of national treatment have subsequently spread throughout the BIT universe. Although their relative frequency is still quite modest with about 4% of all BITs containing liberalization elements and 10% providing comparator terms, these shares are much greater when we consider countries party to such BITs. In fact, 36% of all signatories to BITs have concluded at least one BIT with a pre-establishment national treatment clause and 63% have signed on to a clause with comparator.

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[41] See generally KENNETH J. VANDEVELDE, U.S. INTERNATIONAL INVESTMENT AGREEMENTS (2009).

[42] On the 2004 innovations, see Kenneth J. Vandevelde, *A comparison of the 2004 and 1994 US Model BITs: rebalancing investor and host country interests*, *in* YEARBOOK ON INTERNATIONAL INVESTMENT LAW AND POLICY 2008-9 (Karl P. Sauvant ed., 2009); on states being inspired by the 2004 model see M. Kinnear & R. Hansen, *The Influence of NAFTA Chapter 11 in the BIT Landscape*, 12 UC DAVIS J INTL POL 101 (2005); Efraim Chalamish, *Oasis in the Desert: The Emergency of Israeli investment Treaties in the Global Economy, An*, 32 LOYOLA LOS ANGEL. INT. COMP. LAW REV. 123 (2010); Fontanelli and Bianco, *supra* note 33.

[43] Alschner, *supra* note 33.

[44] UNCTAD, ADMISSION AND ESTABLISHMENT (1999); PATRICK JUILLARD, L'ÉVOLUTION DES SOURCES DU DROIT DES INVESTISSEMENTS (1994).

[45] Nicholas DiMascio & Joost Pauwelyn, *Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?*, 102 AM. J. INT. LAW 48–89 (2008).

A similar process can be observed in relation to clarifications to the fair and equitable treatment standard. In July 2001, the Free Trade Commission (FTC) of NAFTA, consisting of representatives of Mexico, Canada and the United States, issued an authoritative interpretation pursuant to NAFTA Article 1131(2) of NAFTA's fair and equitable treatment clause in Article 1105. Reining in expansive interpretations by prior arbitral awards, the Commission stated that the obligation to provide investors with "fair and equitable treatment" (FET) does not require a treatment above or beyond the customary international law minimum standard of treatment.[46] After the decision, the link between FET and customary international law was explicitly taken up in the subsequent treaty practice of the United States, Canada and Mexico from where it diffused to other countries.[47] Today at least 43 countries are parties to BITs that explicitly root FET in the customary international law minimum standard of treatment.

Aside from linking FET to custom, the Commission also stated that "[a] determination that there has been a breach of another provision of the NAFTA, or of a separate international agreement, does not establish that there has been a breach of [FET]."[48] As Figure 8 highlights, Canada, Mexico and the United States included the FTC interpretation as a package deal into their BITs. Other countries, at the periphery of the figure, however only incorporated the link to custom, but not the indirect breach exclusion. This illustrates the effect of selection. Where diffusion takes place through imitation, rather than through treaty-making with the innovative core, countries are selective in terms of the innovation they adopt. Such selection then becomes a source of divergence.

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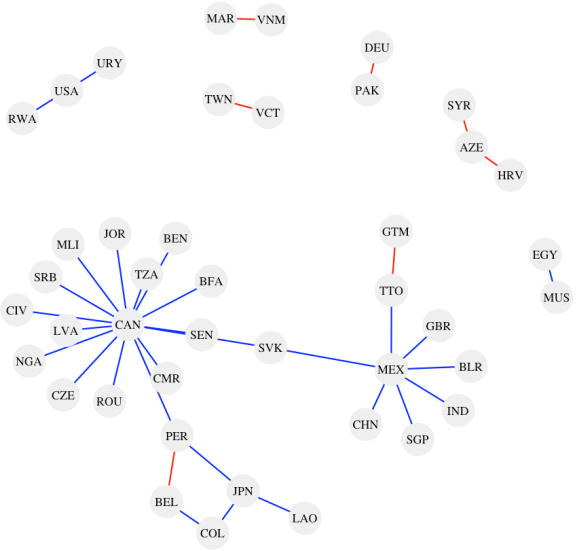
[46] NAFTA Free Trade Commission, NOTES OF *INTERPRETATION* OF CERTAIN CHAPTER 11 PROVISIONS, sec. B (2), 31 July 2001, available at http://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/disp-diff/NAFTA-Interpr.aspx?lang=eng

[47] FAIR AND EQUITABLE TREATMENT, (UNCTAD ed., 2012).

[48] NAFTA Free Trade Commission, NOTES OF *INTERPRETATION* OF CERTAIN CHAPTER 11 PROVISIONS, sec. B (3), 31 July 2001.

Figure 8: Country network of BITs involving FET clauses linked to customary law with (blue) and without (red) indirect breach carve-out



Policy selection and cherry picking is likely to become a growing source of treaty design divergence. The recently concluded 2016 BIT between Iran and Slovakia epitomizes this trend. Rather than being rooted in any specific BIT tradition, the agreement is a potpourri of clauses taken and adapted from different sources.[49] Article 3 on the standard of treatment, which includes fair and equitable treatment and full protection and security, is textually most closely related to Article X.10 while excluding some of the latter's features such as the admissibility of the investor's legitimate expectations. Article 11 on general exceptions partially mirrors Article 10 of the Canada–Jordan BIT (2010). Article 20 on claims manifestly without merit relies on the language from the Australia–Chile FTA (2009) Investment Chapter Article 10.20. Particularly surprising is that the Iran-Slovakia BIT's closest neighbor overall is the 2004 U.S. model BIT with 51% of textual overlap rather than CETA or another European country's BIT. This highlights an emerging trend that BITs are becoming a potpourri of treaty design elements as countries cherry pick innovation from across the globe. This starkly increases variation in a field historically marked by path dependent treaty design rooted in influential model or draft agreements rather than organic innovation.

[49] For an in-depth discussion see, Wolfgang Alschner & Dmitriy Skougarevskiy, *BITs reloaded – How European states are rebooting their investment treaty programs*, Mapping BITs Blog, 29 July 2016.

VI. MANAGING CONVERGENCE AND DIVERGENCE: THE PATH TOWARDS MULTILATERALIZATION

The above empirical assessment of the scope for multilateral consolidation based on the convergence and divergence of existing BIT practice showed two things. First, while shallow consolidation around a dozen investment protection provisions is supported by ample practice and thus feasible, it is not desirable given the current policy discourse that favors deeper treaties that strike a balance between protection and host state policy space. Second, consolidation around such more ambitious best practices, whilst desirable, is currently not backed up by state consensus as expressed in existing agreements.

So what needs to be done to still achieve consolidation at the top? On the one hand our investigation of the sources of divergence shows that we should not worry too much about the divide between short, shallow and deep, complex agreements as obstacles for multilateralism. While a divide remains, states seem increasingly swayed by the current policy discourse to sign deeper agreements. On the other hand, efforts should be concentrated towards ensuring that the drive towards deeper agreement reduces rather than exacerbates treaty design divergence. Here the signs are more alarming.

Even though consensus around deep agreements is emerging, countries continue to differ on the priorities they accord to varying policy areas. States thus need to agree what elements should form part of an investment agreement. Equally threating for multilateral consensus building is the fact that countries increasingly diverge on the remedies they choose to address the same policy problems. Innovation, selective diffusion and cherry-picking risk leading to a proliferation of varying deep treaty design architectures. If continued, this will make consensus building exceedingly difficult in the future and lead to further fragmentation.

The primary order of the day for those pushing for multilateral convergence will thus have to be to rein in the scope for further BIT differentiation. Rather than have each country design individual remedies to policy problems faced by every state, the system would benefit from further consolidation.

On the one hand, consolidation can come through regionalization. As regional blocks develop common approaches to investment policy making, regional investment agreement can serve as stepping-stones for eventual

multilateralization. Yet, currently regional agreements are not used effectively enough for this purpose. Outdated and diverging BITs are not phased out and continue to exist in parallel to regional agreements.[50] Worse even, new BITs are signed that deviate from regional benchmarks. Although the EU Commission has to authorize and approve new BITs concluded by its member states, the Slovakia–Iran BIT illustrates that such agreements can differ markedly from regional benchmarks. Hence, more emphasis needs to be placed on streamlining investment treaty content regionally.

On the other hand, multilateralization of selected issues can help clear the path for a broader global umbrella treaty. Efforts by the EU to multilateralize their proposed investment court system go into that direction. Similarly, the Mauritius Conventions, which updates the BITs of its signatories with respect to transparency in investment arbitration is another means by which a fragmented treaty practice can be converged.[51] Finally, international fora such as the G20 can foster multilateral consensus building.[52]

The common thread of these strategies should be the insight that converging practice facilitates consolidation, which, in turn, is a precondition for multilateralism.

VII. CONCLUSION

This article has empirically investigated convergence and divergence in the BIT universe in order to scope the potential for multilateral consolidation. While it found ample consensus for consolidation around short and shallow agreements, current policy discourse favors the more ambitious consolidation around deep and complex treaties. To achieve the latter goal, further consensus-building is needed. Specifically, those advocating for multilateralism should strive to limit further differentiation and fragmentation among BITs reining in the sources of divergence identified in this article. Regional consolidation and partial multilateralization are important strategies to this effect.

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[50] Alschner, *supra* note 7.

[51] UN, UNITED NATIONS CONVENTION ON TRANSPARENCY IN TREATY-BASED INVESTOR-STATE ARBITRATION, available at: https://www.uncitral.org/pdf/english/texts/arbitration/transparency-convention/Transparency-Convention-e.pdf

[52] G20, *GUIDING PRINCIPLES FOR GLOBAL INVESTMENT POLICYMAKING,* available at: http://www.oecd.org/daf/inv/investment-policy/G20-Guiding-Principles-for-Global-Investment-Policymaking.pdf

ANNEX

We developed an automated coding pipeline that proceeds in several steps in order to identify whether a given feature from the codebook is present in a given BIT article.

First, we begin by extracting all article headers from our data, resulting in over 1200 unique article titles. We then manually match each article header to a first and second level branch of our tree structure. We allow for multiple assignments of the same article header to different branches. By placing each article into a branch (or branches) of the tree, we add efficiency and precision to our subsequent key word search, because we can thereby limit the scope of the search to sub-branches of the tree. For example, an article named "Definition" will prospectively be searched for elements from the "definition" branch, e.g. the notion of "investor" or "investment", but not for features contained in the "standards of protection" branch or other branches. Differently put, article headers limit the search to elements typically found in articles with that article header.

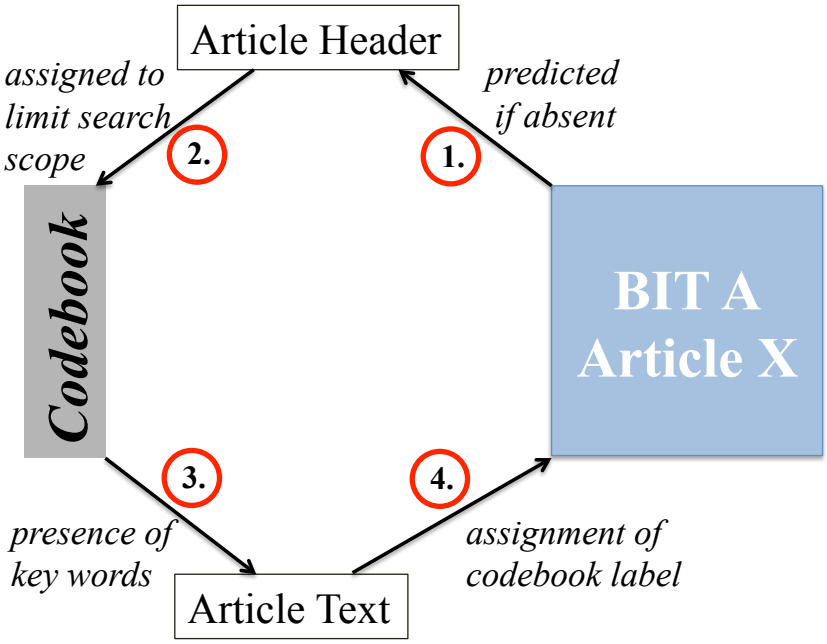
The main problem we encounter, however, is that not all articles have article headers. We thus use a supervised machine-learning algorithm to predict article titles for those articles that do not have article headers.[53] Now each article can be assigned to at least one branch and sub-branch of the tree based on its real or inferred article header.

Second, we assign more detailed sub-branches of the tree to each article based on key words contained in its article texts. For each fourth-level sub-branch of the tree, we identify associated key words and terms e.g. the words "fair and equitable" will be assigned to the part of the tree dealing with "fair and equitable treatment", "expropriat" will denote "expropriation", or "health" connect to "public policy exception". We then search for these key words in the article full texts. Crucially, as discussed above, we limit the scope of search to those articles, which have been

[53] We rely on Matt Taddy, *Multinomial inverse regression for text analysis*, 108 JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION 755–770 (2013) to conduct this task. We learn the inverse relationship between article header and its text word counts by regressing the latter on the former in the first stage (gamma-LASSO multinomial regression with regularization) for the BIT articles with headers. We then compute the sufficient reduction of those article texts, and in the second stage learn the relationship between them and article headers with a multinomial forward regression of the incidence of article header on sufficient reduction of its text. In the third stage we construct the sufficient reduction of the texts of header-less articles and predict their headers with the aid of the relationship estimated by the forward model trained on articles with headers in the previous step.

assigned branches of the tree based on their article headers, where we would expect a conceptual category represented by a key word to occur. For instance, "health" may appear in the preamble of a treaty or in a public policy exception. By excluding preambles from the scope of the search where we are looking for health public policy exceptions we prevent false positives. Figure 9 summarizes the procedure.

Figure 9: Description of automated pipeline to extract features from article-level treaty data



Finally, we combine the output of the key word and the article header-based assignment into a data set that lists the presence or absence of each element of our tree for each of our articles. As a result, we can easily identify in which articles a specific treaty features is present and aggregate this information for each treaty or year. We can also embark on more general queries by aggregating this information, e.g. by counting the number of exceptions or protection provisions in an agreement or checking whether an agreement provides consent to investor-state arbitration. Our automated coding thus allows for a versatile analysis of treaty content in unprecedented depth and breadth.