

The Evolution and Current Status of *De Facto Stare Decisis* in International Trade and Investment Tribunals: How to Understand the Present by Looking into the Past

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Abstract

Is there a doctrine of *stare decisis* in international trade and international investment law? From a positive law perspective, the answer is a definite no. However, as many scholars have observed, in practice, there has been a strong level of deference from the Appellate Body to its previous rulings, but less so from investment tribunals. Using social network analysis to assess actual citations from the Appellate Body Reports and investment arbitrations from the inception to the current time, this paper examines the evolution and *status quo* of citation networks in international trade and international investment arbitrations. It asks, not only whether there is a *de facto* rule of precedent in the two regimes, but also when it occurs and how the development links with the institutional design of dispute settlement. The results show how the doctrine of *stare decisis* diverges in international trade and international investment, as well as the importance of institutional design in shaping and constraining the behaviors of tribunals.

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1. Introduction

International trade and international investment as legal regimes are both highly dynamic areas of international law and closely intertwined. The common underpinning of both regimes is the rapid development of globalization, which they are designed to facilitate. As originally situated, international trade and investment were covered under a single treaty, i.e. the Friendship, Commerce and Navigation (FCN) treaty. Despite such common roots, however, historical developments, particularly post-colonial sentiments as well as the US political atmosphere at the time, have led the two regimes on diverging paths. For better or for worse, the governance of international trade and international investment ended up on the opposite ends of the institutional choice spectrum. On the one hand, international trade emerges, more or less, as a centralized system with the World Trade Organization (WTO) at the center. Despite proliferation of Preferential Trade Agreements (PTAs), the WTO, particularly its dispute settlement system, remains central and active in handling international trade issues. On the other hand, international investment is a free-for-all. It is dominated by bilateral agreements between states, and disputes between foreign investors and host states are mostly settled by *ad hoc* tribunals set up pursuant to those agreements.

The close nexus in a globalization scheme between international trade and international investment and the stark contrast in their institutional setups, hence, provide a perfect experimental ground to study and understand how regime structures from the past can influence developments in the present and help us predict the future. This study focuses on one aspect of a legal regime, namely the role of judicial bodies in shaping the regime via treaty interpretation. Specifically, the use of *stare decisis*, or rule of precedent, is examined by way of empirical analysis, i.e. how relevant tribunals actually cited previous cases. In doing so, a concept of social network analysis is utilized to provide a new angle to the debate of *stare decisis* in international trade and international investment.

The organization of the study is as follows. In the next section, a contextual review of relevant concepts, namely historical development of international trade and international investment, treaty interpretation as a tool to shape legal regimes, and the rule of precedent in international trade and international investment law, are presented. Section III introduces the main methodology, i.e. network analysis, and its main features, such as network density, transitivity and centrality. Section IV presents the empirical results from the network analysis of citations in international trade and international investment disputes. Lastly, Section V concludes with some insights and implications on linkages between an institutional setup and regime development.

2. Reviews

A Common Root with Divergent Paths

In the age of globalization, it is undeniable that both trade and investment are crucial aspects of doing cross-border, multinational business. When they plan to export significant numbers of goods or services to a particular country, for efficiency, many multinational corporations will naturally explore the possibility of setting up physical presences in that country as well. Even if the services offered do not necessarily require physical presence, some companies see the need to still set up a physical presence. Google, Inc., for example, has set up 154 offices around the world (as of August 2019).² Particularly, in the 21st century with more advanced technology and innovation, different business practices have developed from moving end products between borders of two countries to moving production factors, i.e. materials, intermediate goods, services, human resources and capital across borders of many different countries for greater efficiency.³ Hence, as DiMascio and Pauwelyn have put it, trade and investment are “bound by the hip” in a business sense.⁴ However, in a legal sense, international trade and investment are somewhat separated and regulated by different legal regimes. The evolution of international trade and international investment legal regimes shows diverging paths, particularly, during their formative period at the end of World War II.

Interestingly, international trade and investment do share a common historical origin. Foreign commerce, including both trade and investment, was part and parcel of imperialist projects.⁵ State-chartered trading companies both invested in and traded with colonies. Imperialist states secured protections for these companies via Friendship, Commerce and Navigation (FCN) treaties, covering, *inter alia*, both trade and investment, to protect their nationals abroad.⁶ In addition, there was also customary international law to protect aliens on foreign territory – the standards of treatments relating to their lives, security, and property.⁷

A fundamental shift between the two legal regimes occurred post-World War II. Initially, both trade and investment were considered to be parts of the US-led project to strengthen

² Barbara Farfan, “Google’s Global Headquarters and Offices around the World,” The Balance Small Business, accessed August 26, 2019, <https://www.thebalancesmb.com/google-headquarters-offices-2892790>.

³ For a detailed explanation of the 21st century regional agreements, see Richard Baldwin, “Multilateralising 21st Century Regionalism,” in *Reconciling Regionalism and Multilateralism in a Post-Bali World* (Global Forum on Trade, OECD Conference Centre, Paris, 2014).

⁴ Nicholas DiMascio and Joost Pauwelyn, “Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?,” *The American Journal of International Law* 102, no. 1 (January 2008): 48.

⁵ Kurtz, Jurgen, *The WTO and International Investment Law: Converging Systems*, Cambridge International Trade and Economic Law (Cambridge: Cambridge University Press, 2016), 32.

⁶ DiMascio and Pauwelyn, “Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?,” 51.

⁷ Stephan W. Schill, *The Multilateralization of International Investment Law*, Cambridge International Trade and Economic Law (Cambridge: Cambridge University Press, 2009), 25–28.

international economic cooperation.⁸ The project to establish the International Trade Organization (ITO) was proposed in 1948, along with two other main pillars, namely the International Monetary Fund and the World Bank. In the ITO's Charter, certain aspects of investment disciplines were included, albeit with only simple rules on foreign investment.⁹ This was due to resistance from the newly independent states, who regarded foreign investment as a new form of colonialism by controlling means of production.¹⁰

Against the changing atmosphere in US domestic politics and resistance from the emerging socialist bloc, the ITO failed to launch altogether as an international institution.¹¹ The General Agreement on Tariffs and Trade (GATT), initially envisioned as an interim agreement, was the only surviving agreement as a result. However, investment was not within the purview of GATT. On the other hand, as mentioned earlier, the post-colonial sentiment vis-à-vis foreign investments was one of hostility, as reflected in many of the UN's General Assembly resolutions after the failure of the ITO.¹² In relevant parts, these resolutions affirm the rights of States to nationalize, expropriate or transfer ownership of foreign property with domestic laws and courts as the default dispute settlement venue. This prompted many capital-exporting countries to engage bilaterally with capital-importing countries to reaffirm the right to "prompt, adequate, and effective compensation," as well as general international minimum standards.¹³

The number of bilateral investment treaties (BITs) concluded thus rose continuously. From 1960s until 2018, the number totaled more than 3,300 treaties.¹⁴ Certainly, one of the most interesting and expansive features in BITs is the *ex ante* undertaking by contracting states to submit themselves to arbitration. Such provision has been construed, e.g. in a landmark case *Asian Agricultural Products Ltd. v. Republic of Sri Lanka*, to provide consent by host states to future disputes with foreign investors from home states.¹⁵ This particular provision has been a

⁸ Kurtz, Jurgen, *The WTO and International Investment Law: Converging Systems*, 34. For aspects of the United States' roles in the project, see, generally, Chris Brummer, *Minilateralism: How Trade Alliance, Soft Law, and Financial Engineering Are Redefining Economic Statecraft* (New York: Cambridge University Press, 2014), 38–40.

⁹ Schill, *The Multilateralization of International Investment Law*, 33.

¹⁰ Kenneth J. Vandeveld, "A Brief History of International Investment Agreements," *U.C. Davis Journal of International Law & Policy* 12, no. 1 (n.d.): 166–67.

¹¹ Kurtz, Jurgen, *The WTO and International Investment Law: Converging Systems*, 36.

¹² See "General Assembly Resolution 1803 (XVII)," Permanent Sovereignty over Natural Resources, December 14, 1962, A/RES/1803(XVII), [https://undocs.org/en/A/RES/1803\(XVII\)](https://undocs.org/en/A/RES/1803(XVII)); "General Assembly Resolution 3201 (6th Special Session)," Declaration on the Establishment of a New International Economic Order, May 1, 1974, A/RES/3201(S-VI); "General Assembly Resolution 3281 (XXIX)," Charter of Economic Rights and Duties of States, December 12, 1974, A/RES/3281(XXIX), <https://digitallibrary.un.org/record/190150?ln=en>.

¹³ DiMascio and Pauwelyn, "Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?," 52. See also, Kenneth J. Vandeveld, "U.S. Bilateral Investment Treaties: The Second Wave," *Michigan Journal of International Law* 14, no. 4 (1993): 625. (Stating that "one of the most important [purposes]...was to counter the claim made during 1970s by many developing countries that customary international law no longer required that expropriation be accompanied by prompt, adequate, and effective compensation...")

¹⁴ "Recent Developments in the International Investment Regime," IIA Issues Note: International Investment Agreements (UNCTAD, May 2018), https://unctad.org/en/PublicationsLibrary/diaepcbinf2018d1_en.pdf.

¹⁵ See Jan Paulsson, "Arbitration Without Privity," *ICSID Review-Foreign Investment Law Journal* 10, no. 2 (1995): 232–57,

jurisdictional basis for modern investor-state disputes and hence the rise of *ad hoc* tribunals in international investment regimes.

While BITs were on a steady rise and investor-state disputes became common occurrences, international trade was also undergoing a significant turn under the auspice of the Uruguay Round initiated in 1986. The outcome led to the formation of the World Trade Organization (WTO) in 1995, marking a significant multilateral expansion of the international trade regime.¹⁶ One of the most important features included in the WTO was the new Dispute Settlement Understanding (DSU) which created a stronger, more hierarchical dispute settlement system than that of GATT, including the reverse consensus rule to adopt panel rulings, and the establishment of Appellate Body to review rulings from *ad hoc* panels.

The importance of studying international trade and international investment law in tandem is even more pronounced now that we see the merging and highly active interactions between the two regimes. Indeed, in recent years, some scholars have observed the merging between international trade and international investment law, as manifested in treaty-making process and strategies employed by practitioners.¹⁷ Puig, for example, notes that such convergence may be linked with “minilateralism,” i.e. the spread of bilateral and regional agreements, covering both trade and investment.¹⁸ In turn, the enforcement of those rules spurs even more interplay between trade and investment. When faced with potential trade or investment disputes, relevant actors now have to make choices such as party-shopping (choosing a more favorable applicable rule among available agreements), party-shifting (choosing between state and private actors), forum-shopping (choosing between multilateral, regional or bilateral forum), cross-referencing between trade and investment legal concepts, or relief-shifting (between prospective trade obligations and/or compensatory investment awards).¹⁹

Accordingly, there are two highly intertwined regimes of trade and investment in a practical sense but with separate international legal regimes, by historical contingencies. One with a centralized dispute settlement system with a clear hierarchical setup, the other with decentralized, independent and tribunals set up on a case-by-case basis. This provides a perfect ground to conduct a comparative study on consequences, across different aspects, which certain

<https://doi.org/10.1093/icsidreview/10.2.232>.

¹⁶ Kurtz, Jurgen, *The WTO and International Investment Law: Converging Systems*, 48–53.

¹⁷ See e.g. Kurtz, Jurgen, *The WTO and International Investment Law: Converging Systems*; Sergio Puig, “The Merging of International Trade and Investment Law,” *Berkeley Journal of International Law* 33, no. 1 (2015): 1–59; Sergio Puig, “International Regime Complexity and Economic Law Enforcement,” *Journal of International Economic Law* 17 (2014): 491–516, <https://doi.org/10.1093/jiel/jgu028>; DiMascio and Pauwelyn, “Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?”

¹⁸ Sergio Puig, “The Merging of International Trade and Investment Law,” *Berkeley Journal of International Law* 33, no. 1 (2015): 13–14.

¹⁹ Puig, 44.

institutional setups can have on the system in the long run.

Shaping International Regimes via Treaty Interpretation of Tribunals

Treaty interpretation by tribunals is, by and large, an indispensable component of an international regime with binding dispute settlement. It is the process through which a tribunal clarifies certain provisions in a treaty as applied to a particular context, i.e. case.²⁰ Naturally, international treaties are incomplete contracts, where parties leave many provisions intentionally vague due to high transactions costs and to accommodate uncertain future circumstances. Tribunals are thus tasked to fill the gaps *ex post*.²¹ Indeed, rapid proliferation of both bilateral and regional trade and investment agreements renders treaty interpretation even more crucial to either exacerbate or resolve fragmentation in international law.²² Viewing international law as a legal system, as opposed to a “mix of solitary treaties hovering over the abyss of international anarchy in no particular order,” would inspire international tribunals to employ interpretative approaches that allow discourses and coherent coordination between them.²³

In a comparative institutional analysis, Shaffer and Trachtman posit that choices made in treaty drafting and judicial interpretation, as parts of a social process, reflect the dominant social decision-making processes by each institution.²⁴ Shaffer and Trachtman examine the interpretive choices made by WTO panels and the Appellate Body, framing it as part of a dynamic process of institutional interaction with broad implications on the question of who decides a policy issue. In a similar manner, the framework can also explain patterns in interpretive choices within investment disputes made by investment tribunals.

Pauwelyn and Elsig have proposed 5 aspects of interpretative choices, namely dominant hermeneutic, timing, activism, precedent, and linkage.²⁵ Dominant hermeneutic refers to a choice between textual interpretation, parties’ intent, or objectives of a treaty. Timing means a choice between original meaning at the time a treaty was concluded or evolutionary when a particular dispute is decided. Activism is a choice between being deferential to States’ sovereignty and, on the other hand, being active to fill the gaps left by the parties. Precedent refers to the binding weight given to prior case law. Lastly, linkage is a choice between creating

²⁰ Joost Pauwelyn and Manfred Elsig, “The Politics of Treaty Interpretation: Variations and Explanations Across International Tribunals,” *Interdisciplinary Perspectives on International Law and International Relations*, 2011, 3.

²¹ Richard Posner, *Economic Analysis of Law*, 8th ed. (New York: Wolters Kluwer, 2011), 178.

²² Pauwelyn and Elsig, “The Politics of Treaty Interpretation,” 3.

²³ Eyal Benvenisti, “The Conception of International Law as a Legal System,” *German Yearbook of International Law* 50 (2008): 4–5.

²⁴ Gregory Shaffer and Joel Trachtman, “Interpretation and Institutional Choice at the WTO,” *Virginia Journal of International Law* 52, no. 1 (2011): 105–6.

²⁵ See generally, Pauwelyn and Elsig, “The Politics of Treaty Interpretation.”

a self-contained legal regime or a regime open to other sources of international law.

As mentioned earlier, this study empirically and comparatively examines the use of precedent, one of the interpretative tools discussed above, in international trade and investment disputes, employed by tribunals over time. An increasingly more consistent use of precedent would signal that tribunals are conscious of and, indeed, carrying out their roles in systematically shaping the respective legal regimes through their carefully constructed networks of case law. That is treaty interpretation play a significant role in shaping international law, as a gap-filling function, and the institutional setup, in turn, partly dictates behaviors of tribunals in their choices to interpret treaty and, thereby, become a feedback loop in stabilizing or destabilizing the whole regime. Examining actual practices of treaty interpretation by tribunals is thus not merely an exercise for immediate litigation strategies but also a way to see cause and consequence of an institutional design and available choices of relevant actors.

The Rule of Precedent in International Trade and Investment Case Law

Rule of precedent or *stare decisis* is a traditionally common law concept. Translated from Latin, *stare decisis* means “to stand by things decided.”²⁶ Under the doctrine of precedent, the court will follow or defer to previously decide cases which have substantially similar issues. However, it can also deviate or overrule a precedent case, which is deemed “unworkable.” Such deviation shall be exercised with caution and the court must still first review the precedent beforehand.²⁷ In international trade regime under the WTO, it is generally well-accepted that there is no *de jure* rule of precedent.²⁸ For example, Article 3.2 of the DSU states:

The dispute settlement system of the WTO is a central element in providing security and predictability to the multilateral trading system. The Members recognize that it serves to preserve the rights and obligations of Members under the covered agreements, and to clarify the existing provisions of those agreements in accordance with customary rules of interpretation of public international law. Recommendations and rulings of the DSB cannot add to or diminish the rights and obligations provided in the covered agreements.

That any rulings of the AB or panels cannot “add to or diminish the rights and obligations” in the WTO agreements strongly limits the reach any clarification and addition from previous case

²⁶ Timothy Oyen, “Stare Decisis,” in *Legal Information Institute [LII]*, March 2017, https://www.law.cornell.edu/wex/stare_decisis.

²⁷ Dana T. Blackmore, “Eradicating Long Standing Existence of a No-Precedent Rule in International Trade Law - Looking toward Stare Decisis in WTO Dispute Settlement,” *North Carolina Journal of International Law and Commercial Regulation* 29, no. 3 (2004): 494.

²⁸ Joost Pauwelyn, “Minority Rules: Precedent and Participation before the WTO Appellate Body,” in *Establishing Judicial Authority in International Economic Law*, ed. Joanna Jemielniak, Laura Nielsen, and Henrik Palmer Olsen (Cambridge: Cambridge University Press, 2016), 141–42, <https://doi.org/10.1017/CBO9781316544860.006>; Blackmore, “Eradicating Long Standing Existence of a No-Precedent Rule in International Trade Law - Looking toward Stare Decisis in WTO Dispute Settlement,” 501.

law to change the scope of rights and obligations originally specified in those agreements. In other words, current case law cannot modify interpretation relating to rights and obligations in future conflicts. However, Article 3.2 also indicates that consistency across different case law is desirable – specifically, to provide “security and predictability to the multilateral trading system.”²⁹ By direct mandate, the text would then suggest a certain level of persuasive authority of precedent, even though it is not mandatory to do so.

Indeed, the issue on rule of precedent was addressed early on by the AB in *Japan—Alcoholic Beverage II*, where it affirmed continued relevance of GATT panel reports to the WTO disputes. In particular, there are “legitimate expectations among WTO Members” and the GATT panel reports should be considered where they are “relevant to any [WTO] dispute.”³⁰ Moreover, in *US – Stainless Steel (Mexico)*, the AB also explicitly recognizes the value of “security and predictability.” Although admitting that the AB reports are not binding, except between the disputing parties, they are “part and parcel of the *acquis* of the WTO dispute settlement,” upon which panels and the AB in subsequent cases rely. Hence, “absent cogent reasons,” a WTO adjudicating body should resolve the same issues in the same manners.³¹ Interestingly, the AB consistently signals its recognition of and desire to “strengthen dispute settlement in the multilateral trading system” and a failure to follow precedent on the same issues would “undermine the development of a coherent and predictable body of jurisprudence.”³² Accordingly, one would expect, as we shall see later, a systematic *de facto* rule of precedent among the AB reports over time. This outcome is predictable, given a centralized institutional setup of the multilateral trade regime mentioned earlier.

In contrast, international investment disputes are notoriously independent of one another. Firstly, there is no concept of *stare decisis* in investment arbitration. Indeed, BITs generally do not contain any provision indicating *de jure* rule of precedent.³³ On the contrary, some investment treaties explicitly scope down the applicability of precedent, e.g. Article 1136(1) of NAFTA, stating that any award “shall have no binding force except between the disputing parties and in respect of the particular case.”³⁴ ICSID, a procedural rule, has also been construed to have

²⁹ *Id.*, 142; see also Kurtz, Jurgens, *The WTO and International Investment Law: Converging Systems*, 234.

³⁰ Appellate Body Report, *Japan – Taxes on Alcoholic Beverages*, [WT/DS8/AB/R](#), [WT/DS10/AB/R](#), [WT/DS11/AB/R](#), adopted 1 November 1996 [hereinafter, *Japan – Alcoholic Beverages II*], page 14.

³¹ Appellate Body Report, *United States – Final Anti-Dumping Measures on Stainless Steel from Mexico*, [WT/DS344/AB/R](#), adopted 20 May 2008 [hereinafter, *US – Stainless Steel (Mexico)*], paras. 158-160.

³² *Id.*, para. 161. (The AB further explains that “the relevance of clarification contained in the adopted Appellate Body reports is not limited to the application of a particular provision in a specific case.”)

³³ *Id.*; Neil Q. Miller, Holly Stebbing, and Ayaz Ibrahimov, “Precedent in Investment Treaty Arbitrations,” *International Arbitration Report 2017 - Issue 8* (Norton Rose Fulbright, June 2017), 10.

³⁴ “The North American Free Trade Agreement” (1992), <https://www.nafta-sec-alena.org/Home/Texts-of-the-Agreement/North-American-Free-Trade-Agreement>, Article 1136(1) [hereinafter, NAFTA].

no binding precedent. Particularly, Article 53(1) of ICSID which states: “the award shall be binding on the parties and shall not be subject to any appeal or to any other remedy...”³⁵ Moreover, the institutional setup of investment regimes, as mentioned above, is far from hierarchical. Each tribunal is independent and bears no seniority vis-à-vis one another, unlike the explicitly hierarchical relationship between the WTO Panels and the AB. Most importantly, unlike the AB, investment tribunals interpret different cases that are based entirely on different treaties. Albeit some textual similarity, investment treaties are formed independently with slight but crucial differences in word choices, under different historical contexts, and with different parties. Hence, there is no apparent reason why, for example, a NAFTA Chapter 11 award should be binding on an ECT tribunal.

Consequently, in international investment arbitration scene, some similarly situated cases were resolved in different directions. A notable example is *SGS v. Pakistan* and *SGS v. Philippines*, both of which address the interpretation of umbrella clauses. The tribunal in *SGS v. Pakistan* takes a more restrictive view, holding that the umbrella clause in the Swiss-Pakistan BIT is not clear as to whether it allows a party to invoke a contract breach as a treaty breach. On the other hand, the tribunal in a subsequent case *SGS v. Philippines*, interpreting a substantially similar umbrella clause in the Swiss-Filipino BIT, takes a much broader view, allowing investors to make treaty claims for any contract breach, regardless of the nature of the act.³⁶ It is interesting to note that the tribunal in *SGS v. Philippines* explicitly addresses the issue of consistency and following prior case law by stating that while a tribunal should in general seek to act consistently, it ultimately has a competence to exercise its independent judgment pursuant to the applicable law. Explicitly rejecting the binding effect of precedent as well as hierarchy among investment tribunals, the tribunal in *SGS v. Philippines* leaves the question of resolving the issue of precedent and consistency in investment regime to the future “development of a common legal opinion or *jurisprudence constante*.”³⁷

At the same time, some tribunals have expressed a strong position supporting the practice of following prior case law for the purpose of consistency. The tribunal in *Saipem v. Bangladesh*, although conceding that it is not bound by previous decisions, maintains that it should at least “pay due consideration” and has a duty to resolve the issues at hand in the manner established

³⁵ Gilbert Guillaume, “The Use of Precedent by International Judges and Arbitrators,” *Journal of International Dispute Settlement* 2, no. 1 (2011): 12, <https://doi.org/10.1093/jlids/idq0205>; Schill, *The Multilateralization of International Investment Law*, 291; Miller, Stebbing, and Ibrahimov, “Precedent in Investment Treaty Arbitrations,” 10–11.

³⁶ See *SGS Société Générale de Surveillance S.A. v. Islamic Republic of Pakistan* (Decision of the Tribunal on Objections to Jurisdiction), ICSID Case No. ARB/01/13 (2003); *SGS Société Générale de Surveillance S.A. v. Republic of the Philippines* (Decision of the Tribunal on Objections to Jurisdiction), ICSID Case No. ARB/02/6 (2004).

³⁷ *SGS v. Philippines*, ICSID Case No. ARB/02/6, para. 97.

by “a series of consistent cases,” absent of “compelling contrary grounds” otherwise.³⁸ Varying degrees of deference to prior case law have been found in other arbitral awards. For example, the tribunal in *Enron v. Argentina* states that it arrives at the same conclusion as previous awards because of similar or identical circumstances and absence of new arguments by the parties, not by compulsory precedent.³⁹ *Gas Natural v. Argentina* even goes further to posit that MFN clauses within the same BITs mandate tribunals in subsequent disputes to follow prior awards.⁴⁰

As noted by Schill, the issue of precedent was not evident in the beginning of the regime due to limited number of cases and tribunals.⁴¹ However, as the regime has developed the issue become prominent as more arbitral awards are available and, in turn, investors and states engaged in investor-state disputes, rely more and more on earlier disputes in their submissions. From a practical standpoint, the emergence of “persuasive” or *de facto* rule of precedent is also as a result of similarity in subject matters and relatively uniform provisions across BITs and the number of repeated players appointed as adjudicators.⁴² The debate on the appropriateness and degree of *de facto* rule of precedent in international investment regime is, however, still ongoing.⁴³

To identify emergence of *de facto stare decisis*, the best evidence is to see the actual practices by tribunals in their use of precedent to establish an overarching rule or principle in the regime. It could be said that such evidence suggests a continuing process of self-institutionalization.⁴⁴ The concept of *stare decisis*, however, is not binary. That is it is not either binding or none at all.⁴⁵ There are varying levels of precedent – different degrees of deference which tribunals give to prior case law. A case law can be (1) binding on subsequent disputes (binding precedent), (2) entitled to certain presumptive deference, i.e. given “respectful consideration” and should be followed if possible⁴⁶, (3) persuasive, to be followed if tribunals are convinced by its reasoning, and (4) developed as parts of *jurisprudence constante*, a doctrine

³⁸ Saipem S.p.A. v. The People’s Republic of Bangladesh (Award), ICSID Case No. ARB/05/07 (2009), para. 90.

See also, El Paso Energy International Company v. The Argentine Republic (Decision on Jurisdiction), ICSID Case No. ARB/03/15 (2006), para. 39. (The tribunal uses a softer language, indicating that “the international arbitral tribunal...will generally take account of the precedents established by other arbitration organs” (emphasis added)).

³⁹ Enron Corporation and Ponderosa Assets, L.P. v. Argentine Republic (Ancillary Claim), ICSID Case No. ARB/01/3 (2004), para. 25. See also, AES Corporation v. The Argentine Republic (Decision on Jurisdiction), ICSID Case No. ARB/02/17 (2005), paras. 30-31.

⁴⁰ Gas Natural SDG, S.A. v The Argentine Republic (Decision of the Tribunal on Preliminary Questions on Jurisdiction), ICSID Case No. ARB/03/10 (2005)

⁴¹ Schill, *The Multilateralization of International Investment Law*, 288–89.

⁴² Miller, Stebbing, and Ibrahimov, “Precedent in Investment Treaty Arbitrations,” 12.

⁴³ Guillaume, “The Use of Precedent by International Judges and Arbitrators,” 16.

⁴⁴ Schill, *The Multilateralization of International Investment Law*, 321.

⁴⁵ James D. Fry, “Regularity through Reason: A Foundation of Virtue for International Arbitration,” *Contemporary Asia Arbitration Journal* 4, no. 1 (May 2011): 61.

⁴⁶ For further explanation, see *Colby v. J.C. Penney Co.*, 811 F.2d 1119 (7th Cir. 1987) by Judge Posner

in French law, which treats a line of cases, as opposed to individual decisions, as precedent.⁴⁷

Unlike other criteria of precedent, a persuasive authority is unique in that it is not mandatory for such precedent to be followed or even considered in the process. However, there are some possible explanations of repeated deference to certain persuasive authorities by tribunals, which is relevant to investment arbitrations. Analogous to the level of deference the US courts have consistently given to the Delaware courts (non-binding for other state courts) on corporate law issues, investment tribunals may refer to prior case law driven by the established expertise within the regime.⁴⁸ Additionally, there is also a possibility of pressures and informal norms among repeated actors in investment arbitration scene to make references to peers.

The discussion regarding the status of precedent in both international trade and investment law is, however, inconclusive but necessary, against the backdrop of a looming crisis in appointing new AB Members, the process which has been repeatedly blocked by the US for the past few years.⁴⁹ This blocking by the US is intended to force renegotiation of new rules, especially in relation to the AB's alleged judicial overreach.⁵⁰ The US's concerns stem in parts from the AB's disregard to its duty not to create or diminish any rights or obligations for WTO Members pursuant to Article 3.2, as discussed earlier. Relevant to this study, the US claims that the AB's tradition of *stare decisis*, emerging from its case law, has further exacerbated the impact of overreaching decisions, as well as effectively binds *ad hoc* Panels, unnecessarily limiting their judicial spaces and independence.⁵¹ Moreover, another criticism from the US is notably on the AB's *obiter dicta*, i.e. decisions on issues not directly raised by the parties, which, again combined with *de facto* rule of precedent, could "wrongly influence future disputes."⁵² It seems, therefore, a timely occasion to go back to the very beginning and try to understand how things end up the way they are today.

A close examination of case law can illustrate the use of precedent (or lack thereof) by tribunals. However, picking and choosing certain cases often produce conflicting conclusions, as it would represent only a selected number of case studies for evidence. Alternatively, a

⁴⁷ See Irene M. Ten Cate, "The Costs of Consistency: Precedent in Investment Treaty Arbitration," *Columbia Journal of Transnational Law* 51, no. 2 (2013): 436–45.

⁴⁸ Cate, 442–43.

⁴⁹ See "Statement by the United States at the Meeting of the WTO Dispute Settlement Body" (U.S. Mission to International Organization in Geneva, September 30, 2019), https://geneva.usmission.gov/wp-content/uploads/sites/290/Sept30.DSB_Stmt_as-deliv.fin_public.pdf. For an overview of the crisis, see Tetyana Payosova, Gary Clyde Hufbauer, and Jeffrey J. Schott, "The Dispute Settlement Crisis in the World Trade Organization: Causes and Cures," Policy Brief (Peterson Institute for International Economics, March 2018), <https://www.piie.com/publications/policy-briefs/dispute-settlement-crisis-world-trade-organization-causes-and-cures>.

⁵⁰ Payosova, Hufbauer, and Schott, 1.

⁵¹ Payosova, Hufbauer, and Schott, 4.

⁵² Payosova, Hufbauer, and Schott, 4. For the US statement, see e.g. "Statement by the United States at the Meeting of the WTO Dispute Settlement Body" (U.S. Mission to International Organization in Geneva, May 23, 2016), https://geneva.usmission.gov/wp-content/uploads/sites/290/May23.DSB_.pdf.

comprehensive look at overall structures and empirics of actual tribunal practices may shed some lights on the trends and formation of norms within both regimes. This study aims to supplement prior studies by providing analyses of citation networks that have been built over time, since the inception until the current era, in order to determine the status of precedent in international trade and investment disputes.

Using an empirical approach, a computational analysis, to quantify citations is admittedly incomplete. It is so in a sense that a citation, coded as 1 or 0, by no means represents all argumentative nuances employed in a given context. However, a decision to cite a certain case comes with a cost – of researching for appropriate case law to cite, and balancing the possibility of criticism from an incorrect use of case law and a failure to cite.⁵³ Hence, a citation, whatever the context it is used, does contribute something to the whole case and is a reflection of a careful thought process of an adjudicator herself. To phrase differently, this is ultimately a classic tradeoff between depth and breadth of a study. An empirical approach such as this one allows for examining a phenomenon at a scope and with a precision that encompasses entire history of citation practices. It allows us to see, if not more, an overview of a system’s development to enhance or confirm our previous understandings.⁵⁴

3. Empirical Looks at Trade and Investment Case Law

This section aims to explain the methodological setup of the study. Recall that the scope of interest is the evolution of judicial citation patterns of trade and investment case law. To holistically represent the citation patterns, the study employs social network analysis as the main empirical method. In this section, first the concept of network in general, and as applied to the citation patterns in trade and investment case law in particular, is introduced. Then, sources of citation data are presented.

Network is a way to represent relationship among “actors” of interest. Hence, every network comprises a set of actors, i.e. nodes, and “relationship” among them, represented by a tie between any two actors. A tie in a network can be undirected or directed. For an undirected network, a tie between Node A to Node B and vice versa are identical. On the other hand, in case of a directed network, a directed tie from Node A to Node B is not identical to a tie from Node B to Node A, the meaning of which depends on the context of each study.

⁵³ Richard A. Posner, “An Economic Analysis of the Use of Citations in the Law,” *American Law and Economics Review* 2, no. 2 (2000): 383.

⁵⁴ For a similar approach see, Niccolo Ridi, “The Shape and Structure of the ‘Usable Past’: An Empirical Analysis of the Use of Precedent in International Adjudication,” *Journal of International Dispute Settlement* 10 (2019): 202, <https://doi.org/10.1093/jnlids/idz007>.

Indeed, network has been used to represent great many relationships in various fields of study, including international economic law networks such as the network of Preferential Trade Agreement (PTAs),⁵⁵ the citation network of all AB reports,⁵⁶ and a comparative study of citation practices in international adjudication⁵⁷. Network science is a particular field of study that focuses on analyzing relationships among actors and often uses visualization, specific descriptive characteristics of a network structure, as well as individual nodes, ties and subgroups in the network, and inferential modeling of the network to replicate and understand dynamics of the network.⁵⁸ Particularly, in this study, visualizations and analyses of certain network characteristics, such as network density, centrality, and transitivity, are discussed in details.

Directed networks of trade and investment case law in this study are created by using citation data from three sources, namely the SQL database from a Swiss National Science Foundation (SNF) Project: Convergence Versus Divergence? Text-as-data and Network Analysis of International Economic Law Treaties and Tribunals⁵⁹, the WTO Appellate Body Reports database⁶⁰, and the ITA database on investment disputes⁶¹. For both networks, each node represents a ruling from the AB for the trade dispute network (WTO Network), and from an investor-state tribunal for the investment dispute network (ISDS Network). Each directed tie from Node A to Node B means Dispute A cites Dispute B at some point in its ruling. Figure 1 and Figure 2, for example, show the first 15 cases from the WTO Network in 1998, and the ISDS Network in 2000, respectively. The existence of a tie only indicates a citation from one dispute towards the other but not the weight, i.e. frequency, of the citation.

⁵⁵ Joost Pauwelyn and Wolfgang Alschner, "Forget about the WTO: The Network of Relations between PTAs and 'Double PTAs,'" in *Trade Cooperation: The Purpose, Design and Effects of Preferential Trade Agreements* (Cambridge: Cambridge University Press, 2015), 497–532.

⁵⁶ Pauwelyn, "Minority Rules: Precedent and Participation before the WTO Appellate Body."

⁵⁷ Ridi, "The Shape and Structure of the 'Usable Past': An Empirical Analysis of the Use of Precedent in International Adjudication."

⁵⁸ Douglas A. Luke, *A User's Guide to Network Analysis in R*, Use R! (Springer, 2015), 3.

⁵⁹ "SNF Project: Convergence versus Divergence? | IHEID," accessed August 19, 2019, <https://graduateinstitute.ch/research-centres/centre-trade-and-economic-integration/snf-project-convergence-versus-divergence>.

⁶⁰ "WTO | Dispute Settlement - Appellate Body Reports," accessed August 19, 2019, https://www.wto.org/english/tratop_e/dispu_e/ab_reports_e.htm.

⁶¹ "Italaw," accessed August 19, 2019, <https://www.italaw.com/>.

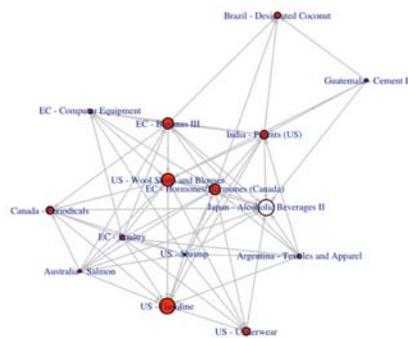


Figure 1 WTO Network in 1998



Figure 2 ISDS Network in 2000

In analyzing the networks, three types of network characteristics are of interest: 1) a visual evolution over time, 2) properties of ties, and 3) properties of nodes. First, the evolutions of trade and investment dispute networks are explored visually. Indeed, network visualization is part and parcel of network analysis. It is one way to highlight important features of a network, to examine certain patterns, and identify important nodes or clusters in the network.⁶² This study will look at the evolutions of citation practices in the WTO Network and the ISDS Network. It aims to highlight similarities and differences between the two, especially on the implications for *stare decisis* practices and authoritative case laws.

Second, the properties of ties of interest in this study are density and transitivity. Density and transitivity are measures of network cohesion.⁶³ Density is the ratio between the observed ties and the maximum number of possible ties in a network.⁶⁴ The closer the density to 1, the more connected the network is. A higher density means that, for any given node, i.e. case, there tends to be more citations on average than a node from a lower density network. It is a good proxy for a *degree of reference* in a citation system since a higher density would suggest that cases are more connected by reference than entirely independent of one another.

While density measures a degree of connectedness, transitivity measures a *second-degree* connection. This means, to provide an example, as in Figure 3 and Figure 4, given that Node A cites Node B and Node B cites Node C, transitivity specifically examines whether Node A also

⁶² Luke, *A User's Guide to Network Analysis in R*, 45.

⁶³ Another measure is called reciprocity, which is not relevant to this context since the citation network of case law is largely one-sided with no reciprocated citations between two cases.

⁶⁴ Luke, *A User's Guide to Network Analysis in R*, 14.

cites Node C or not. Thus, transitivity ratio is a ratio between the observed triangles in the network (as in Figure 3) and the number of connected triples (Figure 3 and Figure 4) in the network.⁶⁵ A second-degree connection, so to speak, is a proxy for a *degree of systematic reference*, as opposed to one level of reference. Hence, density and transitivity are both important indicators in the context of this study because having higher ratios of both is indicative of stronger rules of precedent in the regimes, albeit with different indications.

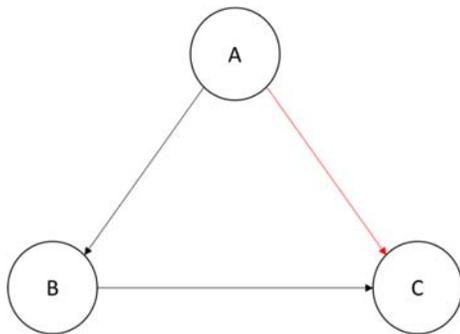


Figure 3 Transitive Triangle

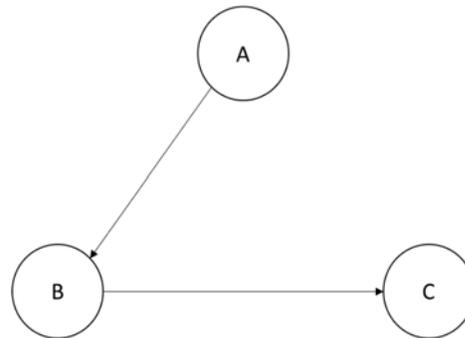


Figure 4 Intransitive Triple

Lastly, for the properties of nodes, centrality is the main measures. Centrality, in general term, is a measure of a node's prominence in the network. A node with a high centrality is positioned relatively more central than a node with a low centrality.⁶⁶ There are, however, many different ways to measure centrality and the suitability of each depends on the context of a particular study. The most common types are degree centrality, closeness centrality, betweenness centrality, and eigenvector centrality. Degree centrality, for example, measures direct contacts that each node has. Closeness centrality measures how close a particular node is to *all* other nodes in the network. This is based on the assumption that the closer to all other nodes, the more central that node is. Between centrality looks at the number of shortest paths in the network, i.e. the shortest path from one particular node to another, which passes through a node of interest. Lastly, eigenvector centrality measures the relative importance of a node's directed contacts. For eigenvector centrality, it is assumed that a central node must be more connected to other central nodes. That is eigenvector centrality measures whether a node of interest is connected to more important nodes than others.⁶⁷

In this case, because a citation network is a directed network which provides information on authority of cases, an appropriate measure of centrality is authority centrality.⁶⁸ Originally,

⁶⁵ Tom A.B. Snijders, "Transitivity and Triads," (May 14, 2012), http://www.stats.ox.ac.uk/~snijders/Trans_Triads_ha.pdf.

⁶⁶ Luke, *A User's Guide to Network Analysis in R*, 92.

⁶⁷ Luke, 93–95.

⁶⁸ Jon M. Kleinberg, "Authoritative Sources in a Hyperlinked Environment," *Journal of the ACM* 46, no. 5 (September 1999): 604–32, <https://doi.org/0004-5411/99/0900-060>.

authority centrality was developed, along with hub centrality, to understand the linked structures of the World Wide Web by providing information on authoritative information sources and hubs that link different sources in the network.⁶⁹ In brief, authority centrality measures how authoritative the information held by a particular node, as referred to by many hubs.⁷⁰ In Figure 1 and Figure 2 above, the sizes of nodes are adjusted according to their respective authority scores with the white colored node indicating the highest authority centrality. Figure 1 indicates that *Japan—Alcoholic Beverage II* was the most authoritative AB Report as of 1998 and Figure 2 shows *AAPL v. Sri Lanka* as the most authoritative investor-state award as of 2000.

4. Results

Overall, the results yield interesting insights into how different institutional setups influence the choices of tribunals to follow precedents and help identify different stages in establishing coherent legal systems through judicial rulings. This section presents empirical results from network analyses in 4 parts. First, the study shows *status quo* visual representation of the networks and the evolutions over 4 time periods, namely 2000, 2005, 2010, and 2015. Second, the networks' density and transitivity are compared and contrasted. Third, the study examines the NAFTA investment arbitration network to test whether a coherent sub-network can be observed for a relatively active and well-established regional agreement. Lastly, changes in authoritative case law over time are presented via an analysis of authority centrality.

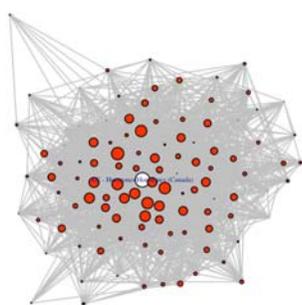


Figure 5 WTO Network in 2017

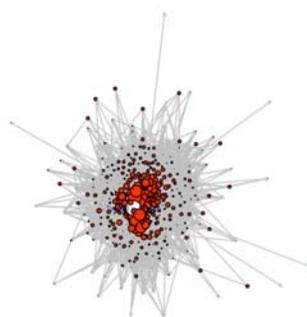


Figure 6 ISDS Network in 2018

⁶⁹ Kleinberg, 604.

⁷⁰ See Jame H. Fowler and Sangick Jeon, "The Authority of Supreme Court Precedent," *Social Networks* 30, no. 1 (January 2008): 16–30, <https://doi.org/10.1016/j.socnet.2007.05.001>. (The application of similar method for US Supreme Court Precedent)

Status Quo and the Network Evolutions

Figure 5 and Figure 6 show the WTO Network as of 2017 and the ISDS Network as of 2018, respectively. It should be noted that for the investment dispute network, some isolated disputes (i.e. those without any tie) are dropped for the sake of comparison. At glance, the main difference between the WTO Network and the ISDS Network is that a citation pattern of the former is much more evenly distributed among case law than the latter, which is relatively more centralized on certain case laws that are disproportionately authoritative.

The evolution of the WTO Network in Figure 7 below confirms that the WTO Network has been, from the beginning of its existence, a coherence system of citation. Indeed, looking back at Figure 1, which shows the first 15 AB reports, one can notice how well-connected the network is. This is not surprising as evidenced in the Working Procedures for Appellate Review, which indicates that to “ensure consistency and coherence in decision-making, ... the [AB] Members shall convene on a regular basis to discuss matters of policy, practice and procedure” and shall exchange views with other AB Members before finalizing the AB Report for circulation.⁷¹ On the other hand, the ISDS Network was initially more scattered with few connected disputes. By 2005, the network started to display a noticeable citation pattern, and continued to evolve until 2015 in to a network. It should also be noted that even though both networks seem to establish a level of *de facto* rules of precedent, the ISDS Network is much more centralized than the WTO Network in term of influential cases (with bigger red nodes at the center of the network). This suggests that compared to the AB, investment tribunals tend to repeatedly cite certain cases disproportionately more than others. The important rulings are more concentrated at the center of the ISDS Network than the WTO Network where the citations are more evenly distributed.

⁷¹ WTO, “Working Procedures for Appellate Review,” August 2010, para. 4, WT/AB/WP/6, https://www.wto.org/english/tratop_e/dispu_e/ab_e.htm.

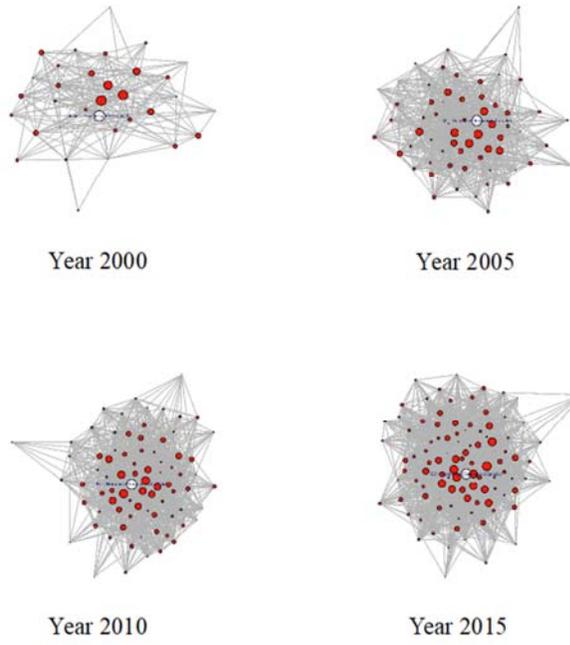


Figure 7 Evolution of WTO Network

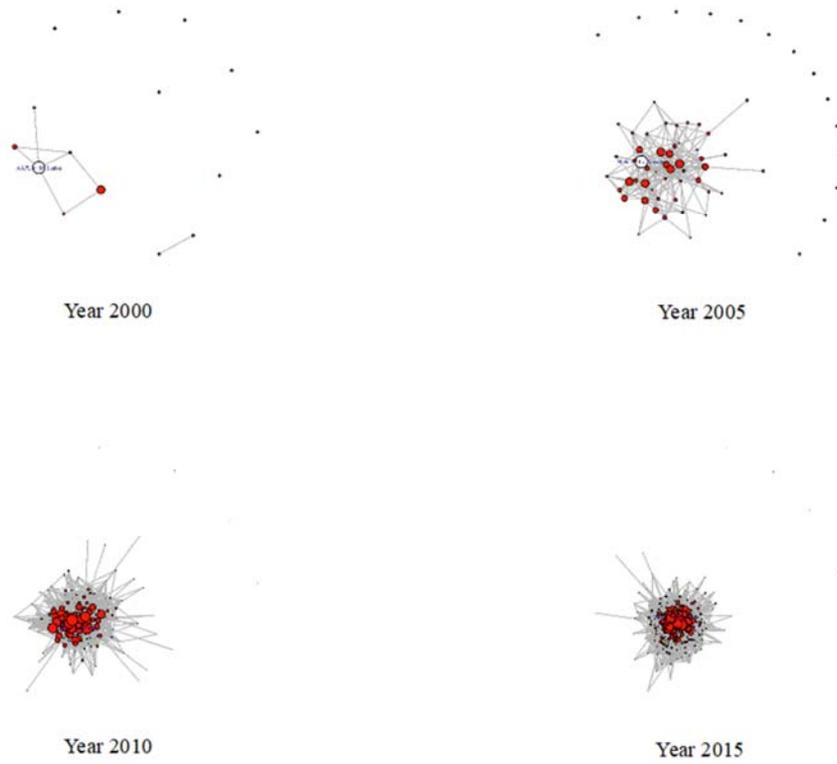


Figure 8 Evolution of ISDS Network

Network Density and Transitivity

As mentioned earlier, network density is the indicator of how dense the network is. That is to say, how many cases, in term of ratio, the tribunals decide to cite, compared to citing all possible cases. Network transitivity, on the other hand, indicate the triangular pattern of citation. In other words, how systematic the citation pattern is, in term of establishing a line of authoritative cases, instead of citing a few cases independently.

First, Figure 9 shows the changes in network densities over time. Both networks show relatively stable network densities. Given that the networks are time-dependent, i.e. no older nodes will be able to cite new nodes, the network density is surprisingly stable over time in both cases. This would suggest that new nodes cite much more cases than older ones in such a way that compensates for the time-dependent feature of the networks. The WTO Network, starting around 0.3, stabilizes at around 0.2, while for the ISDS Network the density begins around 0.05 and manages to stay at the same level.

The WTO Network shows a significant drop in density during 1998-1999, which corresponds to the period when there was a surge in consultation requests during 1996-1997 with 39 and 50 requests, respectively.⁷² This is predictable since an increase in the number of disputes would naturally decrease the density of the network, as older nodes would not add more ties to the networks. As for the ISDS Network, there is a significant bump in density in 2006, coinciding with the period of early 2000s when the number of investment arbitrations started to skyrocket.⁷³ This alone indicates that new investor-state tribunals did cite previous case law more than the tribunals in the earlier period. Viewing the bump in density during the second half of 2000s and the visualization of the ISDS Network in 2010 together further suggests that the increase in citation is more toward a selected number of cases, rather than an even distribution among existing cases. Moreover, predictably, the WTO Network is decidedly denser than the ISDS Network. That means, on average, the AB tends to refer to more cases than investment tribunals, resulting in a more evenly distributed network than the ISDS Network. The density statistics shown in Figure 9 are thus consistent with the visualization of the networks presented earlier.

This, however, does not necessarily indicate a systematic structure of citations. Supplementing network density, transitivity in the network can help detect any overarching norm in *de facto* rules of precedent. More specifically, transitivity of the networks is examined

⁷² WTO, "Dispute Settlement Activity - Some Figures," n.d., fig. 2, https://www.wto.org/english/tratop_e/dispu_e/dispustats_e.htm.

⁷³ See e.g. ICSID, "The ICSID Caseload - Statistics: Issue 2019-2" (International Centre for Settlement of Investment Disputes, n.d.), 8, [https://icsid.worldbank.org/en/Documents/ICSID_Web_Stats_2019-2_\(English\).pdf](https://icsid.worldbank.org/en/Documents/ICSID_Web_Stats_2019-2_(English).pdf). (From approximately 9 registered cases on average per year in 1996-2000 to 24 cases on average per year in 2001-2005)

to identify any systematic practices of citation. Recall that transitivity refers to the ratio between the observed triangles in the network and the number of connected triples (see Figure 3 and Figure 4, respectively). A relatively high ratio means that a tribunal is more systematic in its citations in a sense that any cases cited by a given case it refers to will also be cited in the immediate case, thereby showing evidence of judicial norms to follow a line of cases as precedent, as opposed to citing a single case as the main authority. Figure 10 below shows transitivity of both networks over time. Again, the transitivity ratio of the WTO Network is consistently higher than that of the ISDS Network. This implies a more integrated overarching structure of citations in trade disputes than investment disputes, particularly when the ratio is above 0.5, which means that more than half of the chained citations are done in a systematic manner. However, during the period from 2002 to 2007 of the ISDS Network, the transitivity ratio hikes up to somewhere between 0.3-0.4. Read together with the bump in density during the overlapping period, this coincides with exponential increases in the number of publicly available awards and, at the same time, suggests evidence of collective attempts by investment tribunals to establish a systematic rule of precedent within the ISDS Network, albeit not at the level of the WTO Network (yet).

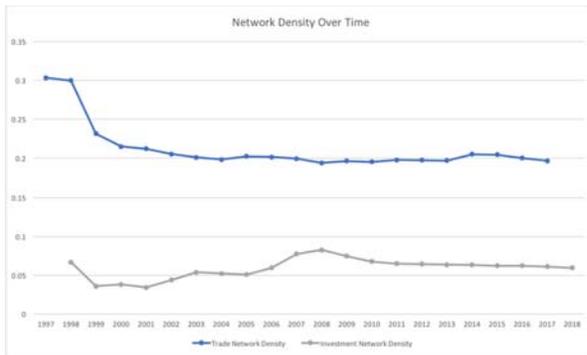


Figure 9 Network Density

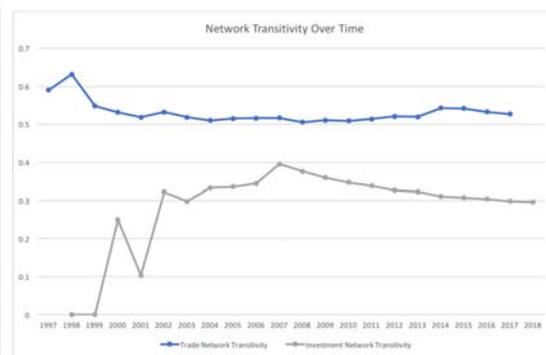


Figure 10 Network Transitivity

NAFTA Investment Disputes

A comparison is made between the whole network of investment arbitration and its sub-network, i.e. the network of NAFTA investment arbitration (NAFTA Network). The rationale for selecting NAFTA arbitrations is twofold. Firstly, the nature of the agreement is plurilateral, which could suggest similar patterns in investment disputes in other “mega-PTAs” such as Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), Comprehensive and Economic Trade Agreement (CETA) between the EU and Canada, or Regional Comprehensive Economic Partnership (RCEP). Secondly, a unique institutional setup, which allows for non-party participation, and the binding authority of Free Trade Commission (FTC) to interpret NAFTA provisions pursuant to Article 1131, operating as constraints on *ad hoc* investment tribunals, can

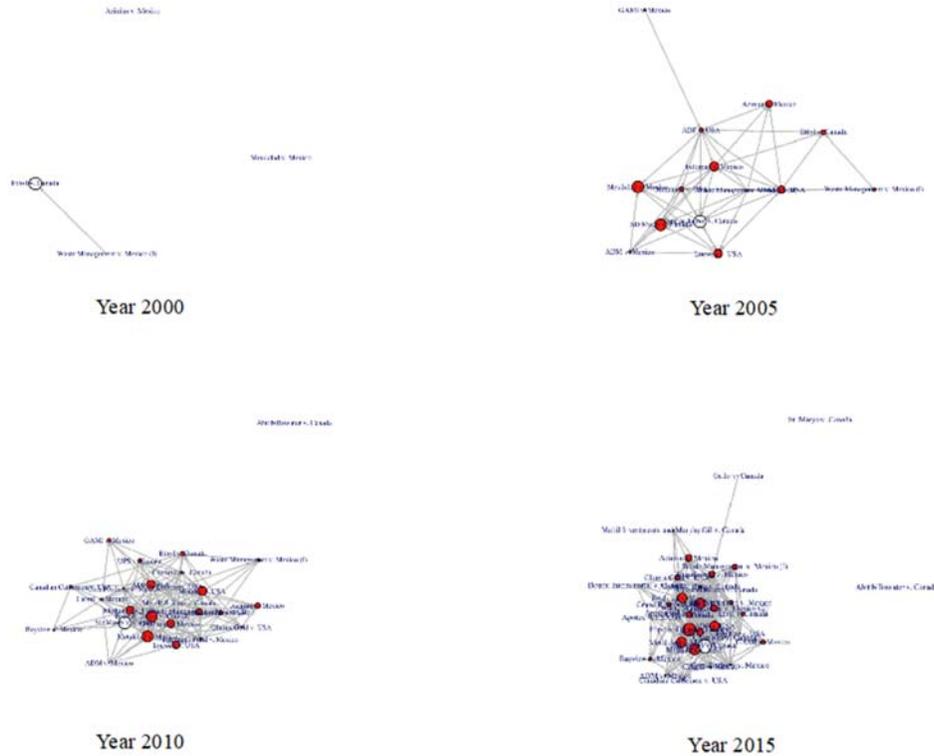


Figure 11 Evolution of NAFTA Network

Similar to the previous presentations, first is the evolution of the NAFTA Network. Notice that the network is well-connected since 2005 and increasingly so to date (see Figure 11). This would suggest a denser network than the ISDS Network. As predicted, the density of the NAFTA network (in Figure 12), as compared to that of the WTO and ISDS Networks, is even higher. It is only toward recent years that its density is approaching the density of the WTO Network. Both the visualization and the density suggest a consistent pattern of citations by NAFTA investment tribunals and their tendency to at least consider and refer to NAFTA case law, more than those outside of the regime. Indeed, the prediction is reinforced by the transitivity statistics shown in Figure 13 (consistently higher than that of the WTO Network). Again, this suggests that NAFTA tribunals not only tend to cite NAFTA case law more than other case law (high density), but do so in a systematic manner (high transitivity), suggesting a consistent line of precedent cases.

⁷⁴ See e.g. Gabrielle Kaufmann-Kohler, “Interpretive Powers of the Free Trade Commission and the Rule of Law,” in *Fifteen Years of NAFTA Chapter 11 Arbitration* (New York: JurisNet, n.d.), 175–94.

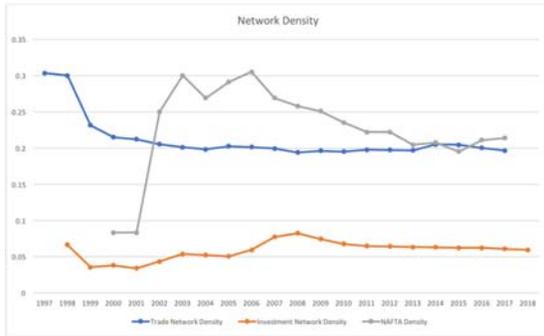


Figure 12 Network Density (with NAFTA)

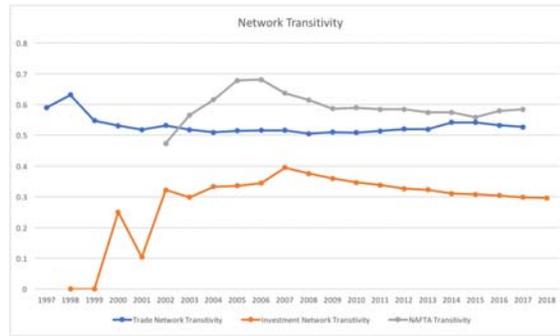


Figure 13 Network Transitivity (with NAFTA)

Authority Centralities

Lastly, as mentioned above, authority centrality measures the relative strength of each ruling vis-à-vis other ruling in its authoritative power, i.e. how much other rulings refer to it. It is important to note here that a high authority index is not necessarily the same as the most popular, in terms of the number of inward citations. It means, simply, that other relatively high authority cases, more often than not, choose to cite this particular case. Examining the changes in the 5 highest authority cases in 2005, 2010 and 2015 among the three networks reveals that the WTO and NAFTA Networks are relatively more consistent than the ISDS Network with 9 and 8 unique cases, as shown in Table 1 and 3, respectively. On the other hand, for the ISDS Network, Table 2 shows 10 unique cases for top authority cases.

Table 1 WTO's Top Authority Cases

2005	2010	2015
EC - Hormones/Hormones (Canada)	EC - Hormones/Hormones (Canada)	EC - Hormones/Hormones (Canada)
US - Wool Shirts and Blouses	US - Wool Shirts and Blouses	Australia - Salmon
US - Shrimp	US - Shrimp	US - Wheat Gluten
EC - Bananas III	Australia - Salmon	Korea - Dairy
India - Patents (US)	EC - Bananas III	US - Carbon Steel

Table 2 ISDS's Top Authority Cases

2005	2010	2015
Metalclad v. Mexico	CMS v. Argentina	CMS v. Argentina
Maffezini v. Spain	Tecmed v. Mexico	Tecmed v. Mexico
Wena Hotels v. Egypt	Vivendi v. Argentina (I)	Vivendi v. Argentina (I)
Feldman v. Mexico	Metalclad v. Mexico	Azurix v. Argentina (I)
Pope & Talbot v. Canada	Wena Hotels v. Egypt	Waste Management v. Mexico (II)

Table 3 NAFTA's Top Authority Cases

2005	2010	2015
Pope & Talbot v. Canada	SD Myers v. Canada	SD Myers v. Canada
Metalclad v. Mexico	Pope & Talbot v. Canada	Pope & Talbot v. Canada
SD Myers v. Canada	Metalclad v. Mexico	Mondev v. USA
Feldman v. Mexico	Mondev v. USA	Metalclad v. Mexico
Loewen v. USA	ADF v. USA	Methanex v. USA

To provide a bird's eye view of changes in authority, average ages of the highest authority cases across the three regimes are plotted against time in Figure 14 to 16.⁷⁵ Figure 14 from the WTO Network and Figure 16 from the NAFTA Network are examples of a predictable pattern in a generally well-established network of precedent, displaying the ever-increasing average ages of high authority cases over time. The pattern strongly suggests a consistent weight given to precedent cases by both the AB and NAFTA *ad hoc* tribunals. The result from the WTO Network is consistent with Ridi's empirical examination of the average age of precedent in the AB reports, which he has shown that the average age of precedent has increased steadily from its existence.⁷⁶

On the other hand, Figure 15 from the ISDS Network displays a more inconsistent pattern of citation in invest-state arbitrations. Sudden drops and volatility in 2000s, especially among top 5 cases (the blue line), suggest a period of regime transformation, which neatly coincides with the surge in the number of investment arbitration, as well as the number of publicly available awards, during the period. It could also reflect the rise of new cases that provide better points of reference than older ones.⁷⁷ The citation pattern, post-2010s, however, seems to reflect overall attempts to stabilize and be more consistent.

Interestingly, the interpretation above is consistent with episodes of legitimacy crisis within investment arbitration.⁷⁸ Charting crisis in investment arbitration, based on signals from states and other stakeholders, Langford and Behn have identified periods of building crisis (2002-2004), legitimacy crisis (2005-2010), and late crisis and counter-crisis (2011-2017). The crisis building period started with *Loewen v. USA*, when a Canadian firm challenged the US domestic court

⁷⁵ Examining the relationship between average age of highest authority case law and changes over time is partly inspired by E. A. Leicht et al., "Large-Scale Structure of Time Evolving Citation Networks," *The European Physical Journal B* 59 (2007): 75–83, <https://doi.org/10.1140/epjb/e2007-00271-7>.

⁷⁶ See Niccolo Ridi, "The Shape and Structure of the 'Usable Past': An Empirical Analysis of the Use of Precedent in International Adjudication," *Journal of International Dispute Settlement* 10 (2019): 200–247, <https://doi.org/10.1093/jnlids/idz007>.

⁷⁷ Again, the result is consistent with an empirical study by Ridi in his examination of the average age of precedent in international investment arbitrations. See Ridi, "The Shape and Structure of the 'Usable Past': An Empirical Analysis of the Use of Precedent in International Adjudication," 210.

⁷⁸ Malcolm Langford and Daniel Behn, "Managing Backlash: The Evolving Investment Treaty Arbitrator?," *The European Journal of International Law* 29, no. 2 (2018): 554–58, <https://doi.org/10.1093/ejil/chy030>.

ruling.⁷⁹ The tribunal rejects the US's argument and interprets that judicial acts may be measures for the purpose of Article 201, NAFTA, directly challenging state sovereignty and autonomy. *Loewen v. USA* triggered a string of responses from Member States, e.g. from the NAFTA FTC as well as a new drafting of US model BIT in 2004.⁸⁰ The beginning crisis period corresponds to with a sudden drop in 2003 in Figure 15 below.

The second period, legitimacy crisis (2005-2010), coincides with the Argentinian economic crisis and several other Latin American countries dealing with state autonomy during the time of national emergency.⁸¹ In parallel, during 2006-2009, Figure 15 shows another dip in the highest authority cases in the ISDS Network. While the legitimacy talk continues post-2010, there are signs that States are again interested more investment treaty signing with the ongoing negotiations for CPTPP, RCEP, TTIP and other bilateral treaties around the world.⁸² This also consistent with the less of a bumpy ride in the authority centrality trajectory from 2011 onwards.

Lastly, on the average age of top authority cases in the NAFTA Network, as mentioned earlier, Figure 16 shows strong evidence of a highly stable, well-connected citation network with few changes in authoritative cases over time. On the one hand, from a legal standpoint, such consistency makes sense because in interpreting the same treaty, NAFTA tribunals should naturally turn to other NAFTA cases. Alternatively, from an institutional design standpoint, NAFTA has an interesting institutional feature, the role of the FTC, as mentioned earlier. In a way, the FTC acts as a quasi-legislative branch that keep in check the interpretation of NAFTA provisions and that should, theoretically, also contribute to the consistency in tribunals' citations.

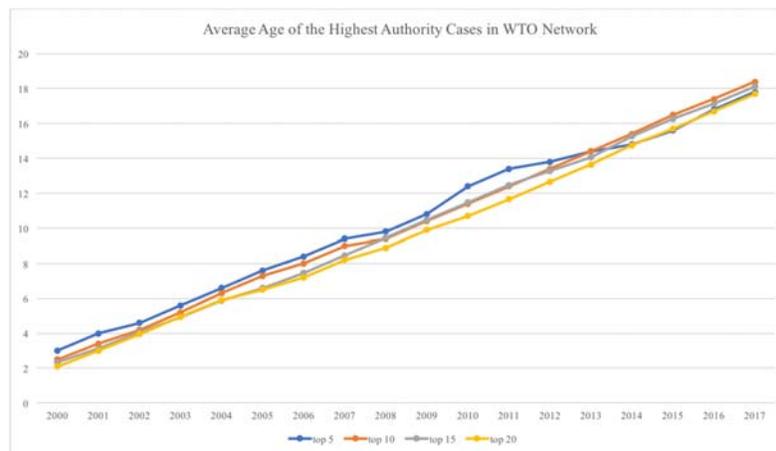


Figure 14 Average Age of the Highest Authority Cases in WTO

⁷⁹ *Loewen Group, Inc. V. United States*

⁸⁰ Langford and Behn, "Managing Backlash: The Evolving Investment Treaty Arbitrator?," 555.

⁸¹ Langford and Behn, 556.

⁸² Langford and Behn, 557–58.

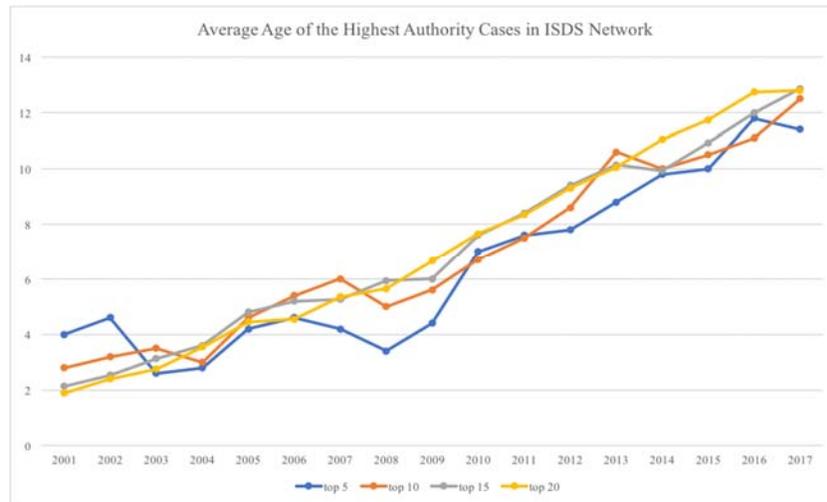


Figure 15 Average Age of the Highest Authority Cases in ISDS

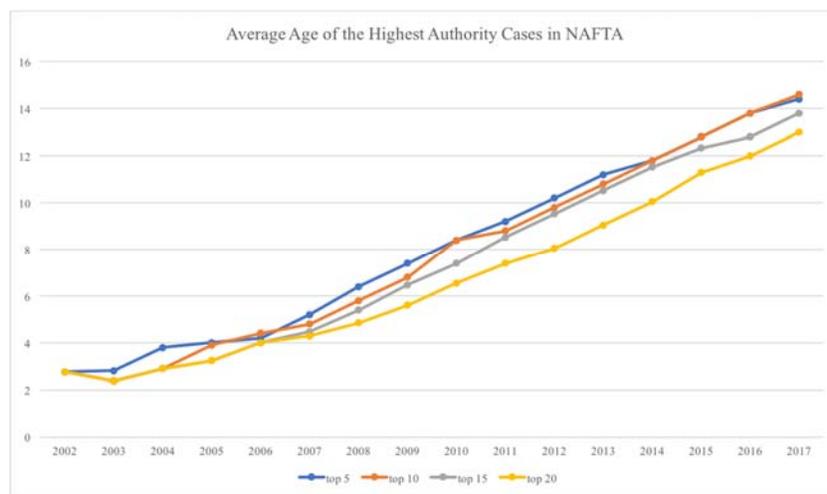


Figure 16 Average Age of the Highest Authority Cases in NAFTA

5. Conclusion

What do these data tell us about the case of *de facto* rule of precedent in international trade and investment?

- A comparison between the WTO and ISDS networks reveals that the WTO Network is much more connected and evenly distributed with a well-established pattern of citations in a manner close to *jurisprudence constante* (higher transitivity). The consistency in the average ages of highest authority cases over time confirms that the WTO Network is a well-established system of precedent since the beginning of its existence.
- The ISDS Network, on the other hand, is relatively more centralized with some cases disproportionately more influential than others, in a manner similar to a group of persuasive precedents. The network is indeed maturing as evidenced by the volatility,

particularly in the crisis periods during 2000-2010, as well as transitivity of the network which shows investment tribunals attempting to cite a line of cases, instead of individual cases but by no means a well-established pattern in the network. However, entering 2010s, the regime becomes relatively more stable.

- The NAFTA Network, as a sub-network of investment disputes, is surprisingly more connected and consistent than the whole ISDS network. It even shows more development of *de facto* rule of precedent, as an authoritative line of cases, among its tribunals than the WTO Network, as evidenced by the network's density, transitivity, and consistency in the average age of the highest authority cases over time.

In a highly centralized international trade regime, the AB indeed, as claimed by the US, follows the *de facto* rule of precedent quite religiously. Moreover, more than 50 percent of the citations are transitive, i.e. citing a line of cases, instead of a few particularly influential cases. This highly suggests that the *de facto* rule of precedent, knowingly or not, observes a principle of *jurisprudence constante* and has been so since the beginning of its existence. On the other hand, in a more decentralized, free-for-all-system of international investment, the course of development reveals less recognizable pattern of triangular citations with only 30 percent of citations doing so. The system will naturally take longer time to develop internal coherence. However, despite the lack of a central figure orchestrating the direction, collective attempts can be found, particularly during the 2000s, when there are significant increases in both density and transitivity in citation patterns.

A critical difference can be seen in the distribution of authoritative power among case law between the two regimes. The authoritative power in the AB Reports is more evenly distributed, while, in the investor-state arbitrations, there appears to have some disproportionately influential and highly centralized cases as persuasive authority. Yet, the decentralized system is more adaptive for changes, as evidenced by the changes in the highest authority case laws over time. Particularly, the average age of the top 5 case law is more volatile in international investment regime.

Based on the conclusion above, one can make a comparison between two institutional design approaches to international adjudication, one with a more well-established, hierarchical and centralized body to orchestrate and review disputes in its regime and the other with free-for-all, non-hierarchical, independent tribunals, appointed on a case by case basis. The former, the WTO Network, shows that for a centralized institutional setup, it is easier for a system to create a coherence network that quickly stabilizes. However, such system is not conducive for

necessary adaptation in response to both external and internal pressures on the regime. Hence, as we can see, the WTO DSB is facing a major backlash from WTO Members, most notably the US, because of its failure to adapt to normative changes. On the other hand, the ISDS Network is much more adaptive, providing a space for competition of ideas and sound judicial reasoning for future tribunals to refer to. At the same time, each tribunal maintains its independence in deliberating and searching for persuasive precedent, which, as shown from the analysis, can evolve, depending on contextual and normative developments overtime.

An insight can also be drawn from a closer examination of the NAFTA sub-network in international investment regime. Particularly, the institutional setup of NAFTA can potentially lead to sub-regime development that is closer to a centralized system, despite the lack of central judicial body. The existence of a central interpretive body, such as the FTC, as well as constant monitoring and participation from non-party members may compensate for the lack of such hierarchical judicial body. While this may inevitably constraint judicial discretion, the system is less susceptible to criticism, drawing its legitimacy from member states' close observations and monitoring. It remains to be further tested, however, whether such constraint may cause a judicial institution to be susceptible to a political power play among nation states, a type of study which certainly can be done in the future with conclusion of mega-PTAs and investment agreements such as CPTPP, CETA and RCEP.