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Arbitrator Behaviour in Asymmetrical Adjudication (Part Two): An Examination of Hypotheses of Bias in Investment Treaty Arbitration

Gus Van Harten

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Arbitrator Behaviour in Asymmetrical Adjudication (Part Two): An Examination of Hypotheses of Bias in Investment Treaty Arbitration

Abstract

This article reports on a study of potential systemic bias in the resolution of ambiguous legal issues by investment treaty arbitrators. It outlines tentative but significant findings that the arbitrators in general tended to favour (1) foreign investors over states overall, (2) foreign investors from major Western capital-exporting states over other foreign investors, and, albeit based on more limited data, (3) the United States as a respondent state over other respondent states. The evidence is derived from an extensive content analysis of the arbitrators' resolution of fourteen legal issues that are contested among arbitrators or in secondary literature. The findings clearly support initial expectations of systemic bias arising from unique incentives of the arbitrators. Yet the study also has important limitations and there is a range of possible explanations for the findings, some not raising concerns of inappropriate bias. Broadly, the findings lend support to perceptions that the design of investment treaty arbitration does not support fair and independent adjudication of the boundaries of sovereign authority and of disputes involving public funds.

Keywords

Arbitration

Arbitrator Behaviour in Asymmetrical Adjudication (Part Two): An Examination of Hypotheses of Bias in Investment Treaty Arbitration

GUS VAN HARTEN*

This article reports on a study of potential systemic bias in the resolution of ambiguous legal issues by investment treaty arbitrators. It outlines tentative but significant findings that the arbitrators in general tended to favour (1) foreign investors over states overall, (2) foreign investors from major Western capital-exporting states over other foreign investors, and, albeit based on more limited data, (3) the United States as a respondent state over other respondent states. The evidence is derived from an extensive content analysis of the arbitrators' resolution of fourteen legal issues that are contested among arbitrators or in secondary literature. The findings clearly support initial expectations of systemic bias arising from unique incentives of the arbitrators. Yet the study also has important limitations and there is a range of possible explanations for the findings, some not raising concerns of inappropriate bias. Broadly, the findings lend support to perceptions that the design of investment treaty arbitration does not support fair and independent adjudication of the boundaries of sovereign authority and of disputes involving public funds.

Cet article rend compte d'une étude portant sur la possibilité qu'un parti pris systémique fausse la résolution de problèmes juridiques ambigus par les arbitres des traités d'investissement. Il souligne des conclusions provisoires mais importantes voulant que les arbitres tendent généralement à favoriser 1) les investisseurs étrangers par rapport aux États, 2) les investisseurs étrangers venant des principaux États occidentaux exportateurs de capitaux par rapport aux autres investisseurs étrangers et, quoique fondées sur des données plus limitées, 3) les États-Unis comme État défendeur par rapport aux autres États défendeurs. La preuve découle d'une analyse étendue du contenu de la résolution par des arbitres de quatorze questions juridiques qui font l'objet de contestations entre les arbitres ou dans la documentation secondaire. Les conclusions appuient clairement les attentes

* Professor, Osgoode Hall Law School of York University.

initiales d'un parti pris systémique découlant des motivations particulières des abrites. L'étude présente toutefois d'importantes lacunes et de nombreux facteurs pourraient expliquer ses conclusions, certains d'entre eux n'évoquant pas un parti pris inapproprié. Les conclusions appuient *grosso modo* la perception que la conception de l'arbitrage des traités d'investissement ne permet pas un jugement équitable et indépendant des frontières des autorités souveraines et des disputes portant sur des fonds publics.

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INVESTMENT TREATY ARBITRATION, also known as investor-state dispute settlement (ISDS), is a uniquely powerful form of international adjudication that protects foreign investors from countries. Investment treaty arbitration has attracted public attention in recent years as governments in North America and Europe have pressed to expand its role, most significantly in proposed trade agreements among developed countries. Since the late 1960s and especially in the 1990s, investment treaty arbitration has been incorporated into bilateral investment treaties (BITs) between a developed and a developing or transition country or, alternatively, among developing and transition countries. One Western developed country, Canada, has agreed to investment treaty arbitration with the United States (in the North American Free Trade Agreement (NAFTA)).¹ One other agreement, the Energy Charter Treaty (ECT),² has applied investment treaty arbitration among developed countries and it was limited to the energy sector. The push to expand investment treaty arbitration in the Europe-US

1. *North American Free Trade Agreement Between the Government of Canada, the Government of Mexico and the Government of the United States*, 17 December 1992, Can TS 1994 No 2, 32 ILM 296 (entered into force 1 January 1994) [NAFTA].
2. *Energy Charter Treaty*, 17 December 1994, 34 ILM 373 (annex I of the Final Act of the European Energy Charter Conference) [ECT].

Transatlantic Trade and Investment Partnership (TTIP), the Canada-Europe Comprehensive Economic and Trade Agreement (CETA), and the US-led Trans-Pacific Partnership (TPP), in particular, signals a turning point in the position of investment treaty arbitration. It would establish investment treaty arbitration as a near-global institution for regulating and disciplining countries in order to protect multinational companies and very wealthy individuals, who are the foreign investors that have received by far most of the public compensation ordered in investment treaty arbitration.

Investment treaty arbitration is an exceptional form of adjudication.³ It is unique in its use of a for-profit asymmetrical model of adjudication to resolve questions about sovereign authority and public compensation for private actors. The model is for-profit because arbitrators are appointed and paid by the case rather than for a set term with a secure tenure and salary. It is asymmetrical because only one class of claimants brings claims against the other. Investment treaty arbitration also incorporates the exceptionally powerful remedy of an unlimited retrospective damages award against the state, for its sovereign activities, that becomes widely enforceable against the state's assets in other countries with limited or no prospect for judicial review. These features are fundamental to the design of investment treaty arbitration and they are present in all versions of ISDS now proposed by governments for agreements such as the TTIP, CETA, and TPP. These features also create a useful context in which to examine hypotheses of bias arising from the evident incentives of the arbitrators.

For the present study, it was expected that arbitrators would favour some actors over others due to their interest in re-appointment and in expanding the role of the arbitration industry and that this incentive structure might help explain arbitrator behaviour. The expectation was tested through the systematic coding of fourteen legal issues and how they were resolved by arbitrators in situations where the arbitrators faced silence or ambiguity in an investment treaty. The hypotheses were that the arbitrators would tend to favour expansive (*i.e.*, favouring the claimant investor) over restrictive (*i.e.*, favouring the respondent state) resolutions of issues, that this tendency would increase where the claimant was from a major capital-exporting state, and that the tendency would decrease where the respondent was a major capital-exporting state.

3. For a detailed outline, see Gus Van Harten, *Investment Treaty Arbitration and Public Law* (New York: Oxford University Press, 2007) [Van Harten, *Public Law*].

The study is based on a systematic content analysis⁴ of publicly available awards dealing with in 140 known cases under investment treaties. The awards were coded for resolutions by arbitrators of a series of jurisdictional and substantive legal issues that were contested in existing awards or secondary literature. The coded data was used to test three hypotheses developed in advance based on the expectations about arbitrator interests arising from the system's unique structure. In this article, the results of the second phase of the project are examined. The second phase involved systematic coding—as expansive, restrictive, or non-classifiable—of resolutions by arbitrators of seven substantive issues. The first phase, reported previously,⁵ involved coding of seven jurisdictional issue resolutions. In that phase, it was found that there was a tendency toward expansive resolutions that enhanced the compensatory promise of the system for claimants and that this tendency was accentuated where the claimant was from a Western capital-exporting state. The latter finding focused on claimants from the United States, the United Kingdom, France, and Germany (although German claimants were an apparent exception to the overall tendency for the group) and was supported by additional analyses of other Western capital-exporting state groupings.

In the second phase of the project, reported here, it was confirmed that the arbitrators tended to adopt an expansive approach favouring claimants and that the tendency was accentuated for the grouping of US, UK, French, and German claimants. Perhaps most notably, it was also found, based on the cumulative results of both phases, that there was a reduced tendency toward expansive resolutions where the respondent was the United States. This tendency was observed in relation to the US experience as a respondent faced with claims by Canadian investors under NAFTA. It had not been possible in the first phase of the project to test reliably the hypothesis that arbitrators would favour restrictive approaches if the respondent was a major Western capital-exporter due to lack of data. Finally, it was found that, where an arbitrator was frequently appointed, there was an accentuated tendency toward expansive resolutions of jurisdictional issues but such a tendency was not found for substantive issues.

These findings in the second phase of the project support the original hypotheses of bias, especially in favour of the United States via its nationals

4. See Mark A Hall & Ronald F Wright, "Systematic Content Analysis of Judicial Opinions" (2008) 96:1 Cal L Rev 63.

5. See Gus Van Harten, "Arbitrator Behaviour in Asymmetrical Adjudication: An Empirical Study of Investment Treaty Arbitration" (2012) 50:1 Osgoode Hall LJ 211 [Van Harten, "Arbitrator Behaviour"].

acting as claimants and its status as a respondent state. The evidence did not prove such bias because in social scientific research there are always other possible explanations for findings, *i.e.*, correlation does not mean causation. Even so, it was surprising to find significant evidence of the role of claimant nationality and respondent identity in predicting the behaviour of arbitrators when they are faced with silence or ambiguity in an investment treaty. Because they involve the resolution of legal questions, the observed variations in resolutions seem unlikely to be explained by some untested factors that may drive case outcomes, such as factual differences among cases.⁶ Whatever the explanation for the results, the evidence tentatively supports perceptions that investment treaty arbitration is not fair and independent.

I. OVERVIEW OF THE STUDY

In examining hypotheses of bias in investment treaty arbitration, the study focused on two sets of actors on whom the arbitrators appear dependent due to the institutional context in which they operate: prospective claimants and major capital-exporting states. The influence of prospective claimants stems from their power to initiate the use of the system in all cases and from the wider role of foreign investors (especially major companies) as arbitration users, indirect participants in decision making at arbitration bodies such as the International Chamber of Commerce, and negotiators of investment contracts containing arbitration clauses.⁷ The influence of major capital-exporting states stems from their role in negotiating investor-state arbitration in investment treaties and from their relative power in arbitration bodies such as the International Centre for Settlement of Investment Disputes (ICSID) and the Permanent Court of Arbitration, where such states choose or nominate the officials who in turn choose the individuals who either (1) arbitrate cases when the parties do not agree on an arbitrator or (2) choose who will exercise this case-by-case arbitrator appointment power.⁸

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6. See *e.g.* Brian Leiter, "Rethinking Legal Realism: Toward a Naturalized Jurisprudence" (1997) 76:2 *Tex L Rev* 267 at 269; Jonathan P Kastellec, "The Statistical Analysis of Judicial Decisions and Legal Rules with Classification Trees" (2010) 7:2 *J Empirical Leg Stud* 202 at 205-06.
 7. See Gus Van Harten, "Investment Treaty Arbitration, Procedural Fairness, and the Rule of Law" in Stephan Schill, ed, *International Investment Law and Comparative Public Law* (New York: Oxford University Press, 2010) 627 [Van Harten, "Procedural Fairness and the Rule of Law"].
 8. *Ibid.*

The expectations informing this study were derived from wider claims about perceived or actual bias in investment treaty arbitration. Such claims have been made by various commentators who have expressed concern that investment treaty arbitration favours foreign investors, corporations, G-8 countries, Western countries, or capital-exporting countries, and disfavors governments, the public, Third World states, developing countries, capital-importing countries, or low- or middle-income countries. For example, De Ly et al argue that a pro-investor imbalance arose in the system because investors can bring claims against host states but not vice versa;⁹ Chung argues that developing countries are disadvantaged in investor-state arbitration in contrast to industrialized, developed nations;¹⁰ Stewart raises concerns about pro-Western bias;¹¹ Odumosu refers to the number of claims against Third World developing countries as opposed to capital exporting states and the industrialized West;¹² and Bolivian President Evo Morales reportedly claimed bias in ICSID arbitration in favour of transnational companies and against governments other than the United States.¹³ The present study is not apposite to all of these claims. It was designed to test expectations of suspected bias in favour of foreign investors as claimants and in favour of major capital-exporting states, including the United States, as respondents or via a state's nationals acting as claimants. In other words, it was designed to test whether arbitrators would favour claimants in general, whether they would favour claimants especially when they were associated with a major state, and whether they would soften their approach by disfavouring claimants when the claim was against a major state (*i.e.*, the United States) despite the arbitrators' apparent incentive to favour claimants in general.

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9. Filip De Ly et al, "Who Wins and Who Loses in Investment Arbitration? Are Investors and Host States on a Level Playing Field?" (2005) 6 *J World Investment & Trade* 59 at 69.
 10. Olivia Chung, "The Lopsided International Investment Law Regime and Its Effect on the Future of Investor-State Arbitration" (2007) 47:4 *Va J Int'l L* 953 at 963-66.
 11. Ercus Stewart, "Arbitration in the Developing World" (Paper delivered at the Cortina 2008 CPE Legal Conference, 7 January 2008) at 3, 8, online: <cpeconferences.com/wp-content/uploads/2013/01/Paper-Stewart-Cortina08.pdf>.
 12. Ibiwonke T Odumosu, "The Antinomies of the (Continued) Relevance of ICSID to the Third World" (2007) 8:2 *San Diego Int'l LJ* 345 at 346-48, 364, 371-72.
 13. See "Evo Morales plantea buscar fórmula para neutralizar el CIADI," *El Economista* (29 April 2007), online: <ecoaula.economista.es/empresas-finanzas/noticias/204986/04/07/Evo-Morales-plantea-buscar-formula-para-neutralizar-el-CIADI.html> ("En estos pleitos siempre los ganan las transnacionales nunca ganan los gobiernos. El único gobierno que ganó una vez fue el de EE.UU.").

The study was based on a systematic content analysis¹⁴ of all publicly available decisions by investment treaty arbitrators in the 140 known cases under investment treaties up until May 2010, when the coding process began. The decisions were coded for resolutions by arbitrators of fourteen legal issues that were contested in arbitrators' decisions or secondary literature. The cumulative results for these fourteen issues, across a total of 1001 issue resolutions per arbitrator, indicated a strong tendency toward resolutions that enhanced the compensatory promise of investment treaty arbitration for foreign investors and its financial risks for states. This tendency was accentuated where the claimant had the nationality of a major Western capital-exporter and was particularly evident where the claim was under a bilateral investment treaty (BIT) or the ECT; where the claim involved any of eleven of the fourteen issues coded; and, with respect to jurisdictional issues, where the claim was resolved by frequently appointed arbitrators. The tendency was reduced where the claim was against the United States, although this finding was based on a more limited number of issue resolutions and, in all instances, involved claims against the United States by Canadian investors under NAFTA.

The study has important limitations. It does not establish evidence of actual bias on the part of any individual or in any particular case.¹⁵ There is a range of possible explanations, some not entailing inappropriate bias, and further inferences are needed to connect the observed tendencies to the study's underlying rationales. There are important limitations in the coding process and analytical tools and, overall, in the use of quantitative methods to examine potential adjudicative bias.¹⁶ The number of data points (*i.e.*, discrete issue resolutions) and thus the robustness of the findings varied for the different hypotheses. The most reliable finding is the new and cumulative one that the observed tendencies appear to exist in the coded data, that they apply both to jurisdictional and substantive issues, and that they are unlikely to be explained by chance.

14. Hall & Wright, *supra* note 4.

15. See *e.g.* Gregory C Sisk & Michael Heise, "Judges and Ideology: Public and Academic Debates About Statistical Measures" (2005) 99:2 Nw UL Rev 743 at 794; David E Bloom, "Empirical Models of Arbitrator Behavior under Conventional Arbitration" (1986) 68:4 Rev Econ & Statistics 578.

16. See *e.g.* Hall & Wright, *supra* note 4 at 87-88; Klaus Krippendorff, *Content Analysis: An Introduction to Its Methodology* (Newbury Park, Cal: Sage Publications, 1980) at 22; CGG Aitken & F Taroni, "Fundamentals of Statistical Evidence—A Primary for Legal Professionals" (2008) 12:3 Int'l J Evidence & Proof 181 at 203.

II. THEORETICAL BACKGROUND

A more detailed outline of the theoretical basis for the study is provided elsewhere.¹⁷ In summary, the unconventional structure of investment treaty arbitration provides a unique context for testing expectations of adjudicator behaviour. The system of investment treaty arbitration is unique because it uses arbitration to resolve corporate and individual claims against the state in its sovereign capacity.¹⁸ In domestic legal systems, such disputes are resolved ultimately in courts, not by arbitrators. Conventionally, in international law, the use of arbitration to resolve such disputes would be based on a framework of reciprocal state-to-state dispute resolution. The same basic reciprocal framework applies to the arbitration of commercial disputes. In rare situations where individuals can sue states directly in international law, such as at the European courts, international courts resolve the disputes.¹⁹

Thus, in contrast to other forms of arbitration,²⁰ investment treaty arbitration is non-reciprocal because investors can sue sovereign states directly under a treaty and cannot themselves be sued (other than in the limited and hypothetical circumstances of a permissible counter-claim by a state). Further, the system does not employ the usual safeguards of judicial independence otherwise present in domestic and international courts, such as secure tenure, an objective means of case assignment, and restrictions on outside remuneration by the judge. Instead, arbitrators are appointed and paid by the case, assigned to specific cases by the parties or by executive officials, and allowed to work on the side as lawyers who advise clients that may have an interest in how the treaties are interpreted by the arbitrators.²¹

The broad question in this study was how this unique combination of structure and function may affect arbitrator behaviour. The system's asymmetrical structure and absence of conventional institutional safeguards creates apparent incentives for arbitrators to favour the class of parties (investors, especially deep-pocketed ones) that are able to trigger use of the system and appointment of arbitrators.²² Arbitrators may also be influenced by an interest to appease those

17. Van Harten, "Arbitrator Behaviour," *supra* note 5 at 219-21.

18. *Ibid* at 217.

19. See Van Harten, *Public Law*, *supra* note 3, ch 3.

20. See Stewart, *supra* note 11 at 3.

21. See Van Harten, "Procedural Fairness and the Rule of Law," *supra* note 7.

22. *Ibid*. See e.g. Christopher R Drahozal, "Judicial Incentives and the Appeals Process" (1998) 51 SMU L Rev 469 at 500, 503; Nudrat Majeed, "Investor-State Disputes and International Law: From the Far Side" (2004) 98 Am Soc'y Int'l L Proc 30 at 31.

with power over arbitrator appointments or with influence over the position of the arbitration industry more broadly.²³ It is certainly not suggested that these expectations are the only possible factors that may influence arbitrator behaviour. A range of factors and complex interactions is undoubtedly present in the thought process of adjudicators and in the deliberations of a tribunal. Yet the economic factors isolated here do reflect issues of rational self-interest and marketability that have been identified by commentators as playing a role in arbitration and are connected to the suspicions of bias identified earlier.²⁴

The project sought to test three *a priori* hypotheses.²⁵ The first was that investment treaty arbitrators, when exercising their discretion to resolve contested legal issues, would tend to adopt expansive resolutions (favouring the claimant investor) over restrictive ones (favouring the respondent state). This expectation flowed from apparent incentives of arbitrators to encourage claims by signalling to prospective claimants that claims are reasonably likely to succeed.²⁶ The second and third hypotheses were, respectively, that the expected tendency toward expansive approaches would be accentuated in cases brought by claimants from a major Western capital-exporting state, represented primarily by the grouping of France, Germany, the United Kingdom, and the United States, and that the tendency would be lessened in cases against any of those four countries.²⁷ These hypotheses were based on expectations that arbitrators would be more responsive to the interests of major Western capital-exporting states, due to the relative influence of these states in institutions that have default power to appoint arbitrators and due to their role as the primary drivers of the treaty models on which investment treaties are based including their widespread incorporation of investor-state arbitration.²⁸

23. Walter Mattli, "Private Justice in a Global Economy: From Litigation to Arbitration" (2001) 55:4 Int'l Org 919 at 921-22.

24. See *e.g. supra* notes 1-5; Alan Scott Rau, "Integrity in Private Judging" (1997) 38:2 S Tex L Rev 485 at 521-22.

25. For other potential hypotheses identified in the planning of the project, and for an outline of my preconceptions on the hypotheses, see Van Harten, "Arbitrator Behaviour," *supra* note 5 at 224-25.

26. Bernard Trujillo, "Regulating Bankruptcy Abuse: An Empirical Study of Consumer Exemptions Cases" (2006) 3:3 J Empirical Leg Stud 561 at 576.

27. On why these states were identified as the primary measure of major Western capital-exporters, see Van Harten, "Arbitrator Behaviour," *supra* note 5 at 225.

28. *Ibid* at 216-21.

III. METHODOLOGY AND ITS LIMITATIONS

Fourteen issues were selected at the outset for coding with the aim of covering a reasonable range of contested jurisdictional and substantive issues under the treaties that allow investor-state arbitration. They were identified based on a review of existing awards (*i.e.*, decisions) and secondary literature, and on consultations with outside legal experts.²⁹ The coded issues included seven jurisdictional issues in the first phase of the project and seven substantive issues in the second phase.³⁰ The combined results for all fourteen issues offered the most robust basis for testing the hypotheses. The methodology for identifying contested issues, outlining expansive or restrictive resolutions of each issue, and coding the seven jurisdictional issues is discussed elsewhere.³¹ The seven jurisdictional issues and their corresponding expansive and restrictive resolutions were:

- Corporate person investor: Should a claim be permissible where ownership of the investment extends through a chain of companies running from the host to the home state via a third state? Expansive approach: yes. Restrictive approach: no.
- Natural person investor: Should a claim be permissible where brought by a natural person (a) against the only state of which the person is a citizen, or (b) against a state of which the person is a citizen without confirmation of dominant and effective nationality? Expansive approach: yes to either of the two questions. Restrictive approach: no to either of the two questions.
- Concept of investment: Should the *Fedax* criteria³² be applied to limit the concept of investment under the *Convention on the Settlement of Investment Disputes Between States and Nationals of Other States (ICSID Convention)*;³³ or, regardless of whether under the *ICSID Convention*, should there be a requirement for an actual

29. *Ibid* at 228.

30. A contested issue relating to one substantive standard, most-favoured-nation (MFN) treatment, was coded under jurisdictional issues because it related primarily to a tribunal's authority to hear a claim by using MFN treatment to transfer dispute settlement provisions from one treaty to another.

31. See Van Harten, "Arbitrator Behaviour," *supra* note 5 at 225-27.

32. *Fedax NV v Republic of Venezuela* (1997), 37 ILM 1378 (International Centre for Settlement of Investment Disputes) [*Fedax*].

33. *Convention on the Settlement of Investment Disputes Between States and Nationals of Other States*, 18 March 1965, ICSID/15/Rev 1, 4 ILM 524 (entered into force 14 October 1966) [*ICSID Convention*].

transfer of capital into the host state as a feature of an investment; or should the concept of investment be limited to traditional categories of ownership? Expansive approach: no to any of the three questions. Restrictive approach: yes to any of the three questions.

- Minority shareholder interests: Should a claim by a minority shareholder be allowed where the treaty does not permit claims by minority shareholders, such as where the treaty does not include the term “shares” in the definition of investment; or should it be permitted without limiting the claim to the shareholder’s interest in the value and disposition of the shares (as opposed to interests of the domestic firm itself)? Expansive approach: yes to either of the two questions. Restrictive approach: no to either of the two questions.
- Permissibility of investment: Should there be an evident onus placed on the claimant (or the respondent state) to show that an investment was (or was not) affirmatively approved or was (or was not) based on corrupt practices? Expansive approach: onus on the respondent state. Restrictive approach: onus on the claimant.
- Parallel claims: Should a claim be allowed in the face of a treaty-based duty to resort to local remedies that clearly was not satisfied by the claimant; a contractually-agreed dispute settlement clause relating to the same factual dispute; an actual claim, arising from the same factual dispute, via the relevant path of a treaty-based fork-in-road clause;³⁴ or an actual claim, arising from the same factual dispute, via another treaty that could lead to a damages award in favour of the investor? Expansive approach: yes to any of the four questions. Restrictive approach: no to any of the four questions.
- Scope of most-favoured-nation (MFN) treatment: Should the concept of MFN treatment be extended to non-substantive provisions of other treaties (such as dispute settlement provisions)? Expansive approach: yes. Restrictive approach: no.

The focus in this article is on the cumulative findings and coding of the substantive issues, all of which arose from silence or ambiguity in the treaties’ relevant provisions. The issues were coded using pre-set guidelines reproduced in detail in Appendix I with footnotes to indicate the sources that were used to

34. A fork-in-the-road clause requires an investor to choose between pursuing one or more paths that may be available to adjudicate the dispute with the host state, such as domestic courts and investment treaty arbitration.

model expansive and restrictive approaches. In summary, the seven substantive issues and their corresponding expansive and restrictive resolutions were:³⁵

- National treatment: Can this standard be breached where the compared foreign and domestic investors are not in like circumstances, where the like circumstances are established based only on the existence of a competitive relationship between the compared investors, or where there is only limited evidence of de facto discrimination or protectionist intent? Expansive approach: yes to any of the sub-questions. Restrictive approach: no to any of the sub-questions.
- Fair and equitable treatment (FET) (autonomous standard): Is this standard autonomous of customary international law? Expansive approach: yes. Restrictive approach: no.
- FET (content): Does this standard encompass a novel conception of the state's obligations—indicated by terms such as “idiosyncratic,” “unreasonable,” “legitimate expectations,” “stability of the legal or business framework,” “affirmative transparency obligations,” or breach of another international obligation—beyond the conventional *Neer* and *ELSI* terminology of “outrage,” “bad faith,” “wilful disregard of due process of law,” “wilful neglect of duty,” et cetera?³⁶ Expansive approach: yes. Restrictive approach: no.
- Full protection and security: Does this standard go beyond issues of physical security to include issues of legal security or stability of the investment climate, or does the standard assign full responsibility to the state where a foreign investor suffers physical harm without any discussion of a surrounding context of severe longstanding conflict in a country? Expansive approach: yes to either sub-question. Restrictive approach: no to either sub-question.
- Indirect expropriation: Is the standard breached based solely or primarily on the effect of a measure rather than other potentially relevant factors, based on the measure's effects being a significant or substantial taking as opposed to a near-complete taking, or based on conceptual severance of the affected property right or economic

35. The substantive issues were numbered 8 to 14 to distinguish them from the jurisdictional issues reported at the beginning of Part III, above.

36. *LFH Neer and Pauline Neer (USA) v United Mexican States*, (1926) 4 RIAA 60 at 61-62 [*Neer*]; *Elektronica Sicula SpA (ELSI) (United States of America v Italy)*, Judgment, [1989] ICJ Rep 15 [*ELSI*].

interest? Expansive approach: yes to any of the sub-questions.
Restrictive approach: no to any of the sub-questions.

- Umbrella clause: Can this standard be violated by private or commercial acts in addition to public or sovereign acts of the state?
Expansive approach: yes. Restrictive approach: no.
- National security exception: Does this exception exclude emergency measures to address a domestic financial and economic crisis?
Expansive approach: yes. Restrictive approach: no.

Where an issue was found to have arisen in a tribunal's award, each arbitrator's resolution of the issue was classified as expansive, restrictive, or non-classifiable. The expansive and restrictive approaches for each issue reflected positions that enhanced or reduced, respectively, the compensatory promise of the system for claimants and the risk of liability for states. Non-classifiable situations included resolutions that, as explained in the award, did not fall reasonably within the scope of an expansive or restrictive approach in the coding guidelines. Non-classifiable situations also included instances in which the claim or argument was withdrawn by a party, the tribunal found it unnecessary to resolve the issue, or the issue appeared to have been resolved specifically and expressly by the treaty. In the latter situation, the resolution of the issue was not coded as expansive or restrictive because it was not considered a sufficient exercise of arbitrator discretion.

The primary data source was the text of arbitrators' awards (and other decisions) in all known investment treaty cases decided by 10 May 2010 and publicly available by 1 June 2010.³⁷ In summary, descriptive information on known cases was initially double-coded, but not blindly, by law student research assistants over a three-year period. A more involved coding process was then used to determine whether an issue had arisen and, if so, whether its resolution appeared expansive or restrictive. Cases were double-coded, although not blindly, by a law student research assistant and by the author. One student coded all jurisdictional issues in the first phase of the project; a different student coded all of the substantive issues in the second phase. In both phases, disagreements over

37. The coding process is outlined in more detail in Van Harten, "Arbitrator Behaviour," *supra* note 5 at 225-27. A case was "known" (1) where it was listed on the Investment Treaty Arbitration website with an indication that it was brought under an investment treaty; or (2) where it was listed as a treaty-based case on any of the websites of ICSID, the Permanent Court of Arbitration, the Energy Charter Treaty Secretariat, or the governments of Canada, Mexico, or the United States. A case was "publicly-available" where a decision on any jurisdictional or substantive issues was posted on the Investment Treaty Arbitration website. For the Investment Treaty Arbitration website, see Italaw, "Newly Posted Awards, Decisions & Materials" (2015), online: <www.italaw.com>.

coding were resolved on an anonymous basis by a third coder who was a research assistant and lawyer familiar with international investment law. All coders were urged to form autonomous opinions when making coding decisions.

The methodology for identifying issue resolutions, as summarized here, is subject to important limitations. It focused on a sample of jurisdictional and substantive issues, meaning that other aspects of arbitrator discretion were excluded from the study. The coding could not capture any issues or resolutions not outlined in the text of an award.³⁸ The study covered all available cases to the date when coding began, yet some materials in known cases were not public and, in an unknown number of totally secret cases such as at the International Chamber of Commerce's Court of International Arbitration, it is not possible to verify publicly that an investor-state claim was brought and decided by arbitrators at all. The study tested expectations at a systemic level—observable in the overall decision making of arbitrators—but was not designed to test for actual bias on the part of any particular arbitrator.³⁹

For substantive issues, inter-coder reliability among the first and second coders was 78.5% on whether an issue had arisen for coding as expansive or restrictive and 98.9% on whether the issue resolution should be coded as expansive or restrictive (each compared to a random chance of reliability of 50%). Even so, coder discretion was integral despite the steps taken to limit it, and double-coding was not blind.⁴⁰ For purposes of transparency and replication, the coding guidelines for the project are appended and issue-by-issue coding notes, which provided the basis for coding inferences, are publicly available.⁴¹

Overall, the study establishes approximate correlations, not firm conclusions.⁴² The study identified significant evidence to support the hypotheses, but it is only a single study based on a particular method. Perhaps most importantly, although incidental to the immediate project, the inherent uncertainty of any study on

38. Hall and Wright, *supra* note 4 at 100.

39. Lisa B Bingham, "On Repeat Players, Adhesive Contracts, and the Use of Statistics in Judicial Review of Employment Arbitration Awards" (1998) 29:2 *McGeorge L Rev* 223 at 259.

40. See *e.g.* Hall and Wright, *supra* note 4 at 109; Michael Evans et al, "Recounting the Courts? Applying Automated Content Analysis to Enhance Empirical Legal Research" (2007) 4:4 *J Empirical Leg Stud* 1007 at 1008-09.

41. The coding notes will be posted on the Social Science Research Network under my name following publication of this article. See Social Science Electronic Publishing, Inc, "Gus Van Harten" (2016), online: Social Science Research Network <www.ssrn.com/author=638855>.

42. Matthew Hall, "Randomness Reconsidered: Modeling Random Judicial Assignment in the US Courts of Appeals" (2010) 7:3 *J Empirical Leg Stud* 574 at 574-75.

possible adjudicative bias reinforces the case for safeguards of independence at the institutional level to protect against reasonably perceived as well as actual bias.

IV. DATASET

In total, 261 cases were identified as having been decided as of 10 May 2010 and publicly available in English as of 1 June 2010, when coding for the project began. Of these, 174 cases had led to at least one award that dealt with any jurisdictional or substantive issues. In 21 of the 174 cases, an award was not publicly available. In another eight cases, an award was not available in English. Another three cases had been consolidated with another case and were coded under the consolidated case. This left 142 cases that could be coded as publicly available, English-language awards on jurisdictional or substantive matters in known cases that had led at least to an award on jurisdiction by the cut-off dates for the study. The cases arose primarily under bilateral investment treaties (78%) and secondarily under NAFTA (14%), the ECT (6%), and the *ASEAN Agreement for the Promotion and Protection of Investments* (ASEAN Investment Agreement) (1%).⁴³ In twelve of the 142 cases, no jurisdictional or substantive issue was found to have arisen, leaving 130 cases in which one or more issues had arisen. Of these, there were 123 cases in which at least one issue was resolved expansively or restrictively by one or more arbitrators.

The same dataset was used for the coding of substantive and jurisdictional issues, although a different range of cases in the dataset proved relevant to each type of issue. For the substantive issues, 80 cases were available for content analysis, while for the jurisdictional issues, 140 cases were available. This was because in 25 cases, jurisdiction was denied to the claimant thus precluding an award on any substantive issue and, in another 40 cases, no award on substantive issues was available by the cut-off date for the study. Of the 80 cases that could be coded for substantive issues, there were 65 in which one or more substantive issues arose and, in all of those cases, at least one issue was found to have been resolved restrictively or expansively.

43. *An Agreement Among the Governments of Brunei Darussalam, the Republic of Indonesia, Malaysia, the Republic of the Philippines, the Republic of Singapore and the Kingdom of Thailand for the Promotion and Protection of Investments* (ASEAN Agreement for the Promotion and Protection of Investments), 15 December 1987, 27 ILM 612 [ASEAN Investment Agreement].

V. ANALYTICAL MODEL

The analytical model for the study was developed using eight primary measures of interest, a dependent variable, and seven covariates used to test the hypotheses.⁴⁴ In the statistical model, the primary measures of interest were as follows.

Nationality of claimant. Claimants in the dataset had the nationality of 26 different states.

Identity of respondent state. There were 47 states among the respondents in the dataset.

For these first two measures, the second and third hypotheses were tested primarily by isolating France, Germany, the United Kingdom, and the United States as a group, in comparison to all other states. These supplementary groupings of states were also analyzed to provide alternative measures of Western capital-exporting interests:

- The United Kingdom and the United States versus all others;
- France, Germany, and the United Kingdom versus all others (except the United States);
- Historical G-7 members⁴⁵ versus all others;
- Western European former colonial powers⁴⁶ versus all others (except the United States);
- UN geographic classifications of states in North America, Western Europe, Northern Europe, and Southern Europe⁴⁷ versus all others;
- UN classification of states in Eastern Europe⁴⁸ versus all others (except North America, Western Europe, Northern Europe, and Southern Europe);

44. Heather Krause, a statistician and research assistant, conducted the regression analysis and was asked to test the data rigorously and avoid assumptions that could skew the analysis in favour of the study's hypotheses. Kelly Goldthorpe, a law student research assistant and former statistical analyst, advised on project design and conducted initial data analysis.

45. Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

46. Belgium, Denmark, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

47. Albania, Austria, Belgium, Bermuda, Bosnia, Canada, Croatia, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Greenland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Monaco, the Netherlands, Norway, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

48. Belarus, Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Russia, Slovakia, and Ukraine.

- OECD members as of 1990⁴⁹ versus all others;
- OECD members as of 2000⁵⁰ versus all others;
- World Bank classification of high-income countries as of 1990⁵¹ versus all others; and
- World Bank classification of high-income countries as of 2000⁵² versus all others.

Importantly, for the third hypothesis involving claims against capital-exporting states, the only one of the four major Western capital-exporting states against whom claims had been brought was the United States, which was then compared to a range of groupings of other states. For this reason, the findings on this third hypothesis are statistically relevant only to the United States. They may be relevant to other capital-exporting states from a practical or theoretical perspective, but not for statistical purposes. The findings of this study provide no basis to predict what may happen in claims against those other capital-exporting states.

Treaty or treaty type. There were four treaties or treaty types represented in the data: BITs, NAFTA, the ECT, and the ASEAN Investment Agreement. The model excluded the last of these because it arose in only one case. Issue resolutions reached under the other three treaties were analyzed cumulatively, with controls for variations in treaty or treaty type, except in the case of the third hypothesis. For that hypothesis, all of the issue resolutions against the United States arose in claims under NAFTA and thus are specific to NAFTA.

Issue type. There were fourteen coded issues in the study. The issues with the most resolutions were two jurisdictional issues ((3) Concept of investment, and (6) Parallel claims) and two substantive issues ((10) Content of fair and equitable treatment, and (12) Content of indirect or regulatory expropriation). For these issues, expansive or restrictive resolutions arose in 40 to 50 cases per issue. The issues with the fewest resolutions, in 2 to 10 cases each, included three jurisdictional issues (natural person investor, permissibility of investment,

49. Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

50. Czech Republic, Hungary, Mexico, Poland, Slovakia, South Korea, and all OECD members as of 1990 (see *ibid.*).

51. Andorra, Aruba, Australia, Austria, Bahamas, Belgium, Bermuda, Brunei, Canada, Cyprus, Denmark, Finland, France, Germany, Greenland, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Luxembourg, the Netherlands, New Zealand, Norway, Qatar, Singapore, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates, the United Kingdom, and the United States.

52. Barbados, Cayman Islands, Greece, Guam, Liechtenstein, Malta, Monaco, Portugal, Slovenia, and all high income countries as of 1990 (see *ibid.*).

and scope of umbrella clause) and one substantive issue (essential/national security exception).

Count of issues per case. The total number of issues that arose and were resolved expansively or restrictively ranged from one to nine issues per case. The mean and median were four resolutions per case.

Total appointments per arbitrator. Individual arbitrators in the dataset were appointed between one and fourteen times. The mean number of appointments was five and the median was three.

Cases. There were 123 cases in which at least one issue was found to have been resolved expansively or restrictively.

Arbitrators. There were 204 individuals appointed as arbitrators in the 123 cases.

The dependent variable was the issue resolution. A total of 376 issues were coded as having been resolved expansively or restrictively across the 123 cases. This generated 1001 distinct instances in which an arbitrator resolved an issue. Of these, 736 resolutions were expansive and 265 were restrictive.

A generalized linear mixed effects model was used to examine the study's hypotheses.⁵³ The model combined a linear mixed effects model and a general linear model. It is similar to a classical general linear model—the best known of which is logistic regression—with the addition of random effects to the fixed effects already dealt with in classical regression. A generalized linear mixed effects model is more flexible and allows for the adaptation of the model to the available data and its structure. For example, in the present study, the data was nested within both cases and arbitrators. Nested issues will not be independent of each other, requiring a model that controls for the resulting correlation. Random effects were used to account for this. As a general principle, a model should be as simple as possible while representing the data fairly and adequately.

VI. FINDINGS

A. ANTICIPATED TENDENCY IN FAVOUR OF CLAIMANTS

The first hypothesis predicted that arbitrators would tend to adopt an expansive approach across all of the coded issues combined. The results supported this expectation on a significant basis. Thus, there was a very low likelihood that the variation between expansive and restrictive resolutions among all of the

53. The model was used on the advice of statistician Heather Krause, whose description of the model is paraphrased in the remainder of this paragraph.

coded issues was explained by chance. This finding made it safe to reject the null hypothesis that 50% of the resolutions would be expansive and 50% would be restrictive.⁵⁴ Table 1 summarizes the variations in resolutions for all of the fourteen issues.

55

TABLE 1: CLASSIFICATION OF ISSUE RESOLUTIONS BY ISSUE

Issue	Number of Issue Resolutions	Resolution of Issue	
		Expansive	Restrictive
(1) Corporate person investor	72	85%	15%
(2) Natural person investor	6	0%	100%
(3) Concept of investment	119	70%	30%
(4) Minority shareholder interest	75	92%	8%
(5) Permissibility of investment	27	67%	33%
(6) Parallel claims	162	84%	16%
(7) Scope of MFN treatment	60	50%	50%
(8) National treatment	60	35%	65%
(9) Fair and equitable treatment (autonomous standard)	56	73%	27%
(10) Fair and equitable treatment (content)	137	83%	17%
(11) Full protection and security	51	57%	43%
(12) Indirect expropriation	120	72.5%	27.5%
(13) Umbrella clause	32	91%	9%
(14) National security exception	24	75%	25%
Cumulative	1001	73.5%	26.5%

Across all issues, expansive resolutions were about three times more common than restrictive resolutions. This varied modestly between jurisdictional issues

54. The size of the effect was 0.3, which is a strong effect for a one-sample binomial test.

55. All figures are rounded to the nearest whole. There is a slight variation in the results, as previously reported in Van Harten, "Arbitrator Behaviour," *supra* note 5, due to these data entry corrections to the originally reported data: Issue 6 in *Lauder v Czech Republic* was changed from expansive to non-classifiable for all three arbitrators; issue 3 in *Joy Mining v Egypt* was changed from expansive to restrictive for all three arbitrators; issue 1 in *Sedelmayer v Russia* was changed from restrictive to expansive for arbitrators Magnusson and Wachler (but not Zykin, whose resolution remained non-classifiable); and issue 6 in *Maffezini v Spain* was changed from restrictive to non-classifiable for all three arbitrators.

(76% expansive) and substantive issues (71% expansive). The tendency in favour of an expansive approach was reflected in eleven of fourteen issues, as Table 1 indicates. On the scope of MFN treatment, arbitrators were split and, on national treatment and natural person investor (albeit with very little data for this last issue), they tended toward a restrictive approach. The data was examined for whether the overall tendency varied over time. This revealed a greater tendency toward expansive resolutions over time, but without any statistically significant effect for the combined results or for the isolated results for either jurisdictional or substantive issues.

Thus, it is safe to say that the arbitrators favoured an expansive approach overall. This supported the hypothesis that the arbitrators would resolve contested issues in ways that favoured prospective claimants. Tentatively, these results may be connected to the system's asymmetrical structure in the absence of institutional safeguards of independence. Depending on one's view of how the expansive and restrictive approaches were classified, the results may cause concern for those expecting the system to deliver evenness in the resolution of the coded issues. Respondent states clearly have lost across a range of issues that arise often in investment treaty arbitration. That said, the results do not explain fully or establish the truth of any expectation of bias. Also, the overall tendency did not apply to all issues. Finally, even for the issues that tended most often to be resolved expansively, some arbitrators took restrictive approaches. This outcome demonstrates that other factors play a role in the exercise of interpretive discretion by arbitrators.

B. ANTICIPATED TENDENCY IN FAVOUR OF CLAIMANTS FROM MAJOR WESTERN CAPITAL-EXPORTING STATES

The second hypothesis was that the tendency in favour of an expansive approach would be accentuated where the claimant was a national of France, Germany, the United Kingdom, or the United States as the main Western capital-exporters. Additional groupings associated with Western capital-exporting interests were also analyzed. After accounting for the control variables in the model, a significant relationship was found between the dependent variable (issue resolutions) and all other variables operating simultaneously, *i.e.*, the tendency toward expansive resolutions by arbitrators was very unlikely to be explained by chance.⁵⁶ The data were also tested for effect sizes, indicating that the model explained 20% of

56. The model generated an F (F=11.72, 23, 150) that was significantly lower than the critical F value, with a p<.001. Table 7 outlines the results of the model and has been appended.

the variation in issue resolutions as expansive or restrictive.⁵⁷ This test estimates possible inaccuracies in the statistical model; it tends to underestimate rather than overestimate the strength of the association between issue resolutions and the predictor variables.⁵⁸ In 1001 issue resolutions over 123 cases, there was evidence of a strong tendency in favour of an accentuated expansive approach if the claimant was a national of a major Western capital-exporting state. Based on the effect of the control variables, this was most apparent where the claim was brought under a BIT or the ECT, where it raised any of nine of the coded issues, and—to a lesser extent and in the case of the jurisdictional issues only—where the issue was resolved by frequently appointed arbitrators.

The overall effect of the variable of primary interest—claimant nationality—for the main grouping (France, Germany, the United Kingdom, and the United States) was significant ($F=5.78$, 5, 93; $p<.001$). This supported the expectation that the claimants from these countries would benefit from an expansive resolution more often than other claimants. There was a significant likelihood in the case of both jurisdictional issues ($F=5.78$, 5, 93; $p<.001$) and substantive issues ($F=4.14$, 5, 93; $p<=.01$) that such claimants were more likely to benefit from an expansive resolution. Table 2 gives the log odds of each of the five categories of claimant nationality being resolved expansively with all other covariates held steady, highlighting that the findings for claimants from individual countries typically were not statistically significant because they carried a risk of error in excess of 5%. Figure 1 presents the expected probability of an expansive resolution for each claimant nationality in the first grouping with all other covariates held steady.

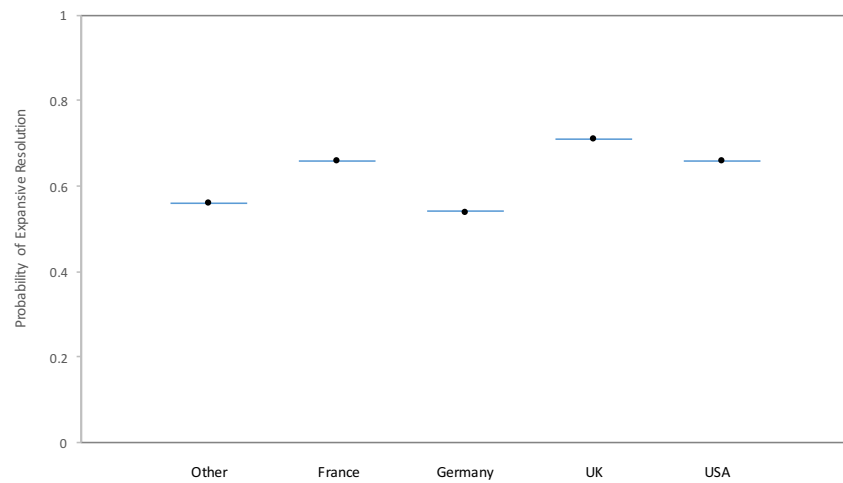
57. This was tested using the McFadden R-squared statistic and generated an effect size of .20 overall, indicating that the model explained 20% of the variation in issue resolutions as expansive or restrictive. See A Colin Cameron & Frank AG Windmeijer, "An R-squared Measure of Goodness of Fit for Some Common Nonlinear Regression Models" (1997) 77:2 J Econometrics 329.

58. Table 8 outlines the change in the McFadden pseudo R-squared attributed to each individual predictor in the model and has been appended.

TABLE 2: EFFECT OF CLAIMANT NATIONALITY (GROUPING #1)
ON THE LIKELIHOOD OF AN EXPANSIVE RESOLUTION

Claimant Nationality	Probability of Expansive Resolution	Statistical Significance
<i>France</i>	.66	p=.34
<i>Germany</i>	.54	p=.85
<i>United Kingdom</i>	.71	p=.05
<i>United States</i>	.66	p=.04
<i>All others</i>	.56	P=.31

FIGURE 1: PROBABILITY OF AN EXPANSIVE RESOLUTION BY CLAIMANT
NATIONALITY: OVERALL (ISSUES (1) TO (14))



For jurisdictional and substantive issues, US claimants benefited from an accentuated tendency toward expansive resolutions, although they led the field only for jurisdictional issues. Thus, only the results for jurisdictional issues supported the more detailed expectation that US claimants would enjoy the strongest accentuation of an expansive tendency. That said, country-by-country results had a higher risk of statistical error and were not always significant. For claimants from the United Kingdom and the United States, the country-specific results had a 5% and 4% risk of error; for claimants from Germany, France, and other states, the risk was 85%, 34%, and 31%, and thus not reliable. There was especially limited country-specific data for claimants of Germany and France; of

123 cases that generated the issue resolutions, 37 involved a US claimant, eleven a UK claimant, six a French claimant, and six a German claimant.

The findings were tested further by analyzing other groupings of claimant nationalities associated with Western capital-exporting interests. The other groupings included the United States and the United Kingdom as a group; France, Germany, the United Kingdom, and the United States cumulatively (*i.e.*, combining all issue resolutions for claimants from these countries); G-7 states; Western European former colonial powers; OECD member states; and World Bank high-income states. For each of these groupings, the findings supported the hypothesis and were statistically significant. Similar tendencies were observed for other groupings (US claimants alone; French, German, and UK claimants as a group; and UN geographic groupings) but the findings were not significant. Table 3 provides a detailed report.

TABLE 3: ANALYSES OF ADDITIONAL GROUPINGS OF CLAIMANT NATIONALITIES: OVERALL (ISSUES (1) TO (14))

Grouping	Summary of Results
Grouping #2 Group 2A: The United States (n=359) Group 2B: All other states (n=642)	The grouping did not have an overall statistically significant effect (F=2.75, 1, 153, p=.10). Claimants from the United States were 63% more likely to benefit from an expansive resolution than claimants from all other states combined, but the effect was not statistically significant because it carried a 10% risk that it was explained by chance.
Grouping #3 Group 3A: France, Germany, and the United Kingdom (n=181) Group 3B: All other states (except the United States) (n=461)	The grouping did not have an overall statistically significant effect (F=3.47, 1, 153, p=.07). Claimants from a state in group 3A were 52% more likely to benefit from an expansive resolution than claimants from all other states combined except the United States, but the effect was not statistically significant because it carried a 7% risk that it was explained by chance.
Grouping #4 Group 4A: The United Kingdom, the United States (n=456) Group 4B: All other states (n=545)	The grouping had an overall statistically significant effect (F=6.14, 1, 153, p=.01). Claimants from the United Kingdom or the United States were 68% more likely to benefit from an expansive resolution than claimants from all other states combined.

TABLE 3: ANALYSES OF ADDITIONAL GROUPINGS OF CLAIMANT NATIONALITIES: OVERALL (ISSUES (1) TO (14))

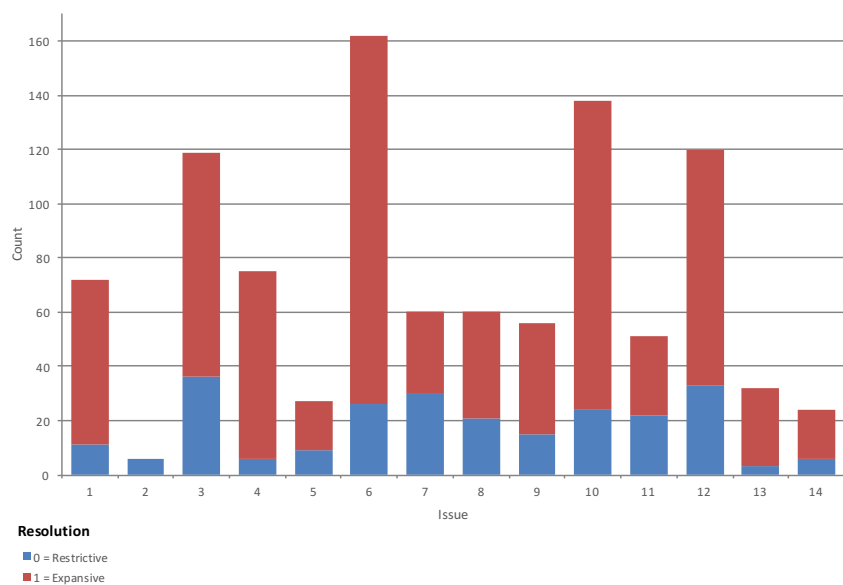
Grouping	Summary of Results
Grouping #5 Group 5A: France, Germany, the United Kingdom, and the United States cumulatively (n=558) Group 5B: All other states (n=443)	The grouping had an overall statistically significant effect (F=5.34, 1, 153, p=.02). Claimants from a state in group 5A were 67% more likely to benefit from an expansive resolution than claimants from all other states combined.
Grouping #6 Group 6A: Historical G-7 states (n=621) Group 6B: All other states (n=380)	The grouping had an overall statistically significant effect (F=4.44, 1, 153, p=.03). Claimants from a state in group 6A were 46% more likely to benefit from an expansive resolution than claimants from all other states combined. Notably, there were no cases in group 6A involving a claimant from Japan.
Grouping #7 Group 7A: Western European former colonial powers (n=187) Group 7B: All other states (except the United States) (n=326)	The grouping had an overall statistically significant effect (F=7.22, 1, 153, p=.01). Claimants from a state in group 7A were 48% more likely to benefit from an expansive resolution than claimants from all other states combined except the United States.
Grouping #8 Group 8A: States in North America, Western Europe, Southern Europe, and Northern Europe (n=849) Group 8B: All other states (n=152)	The grouping did not have an overall statistically significant effect (F=2.81, 1, 153, p=.10). Claimants from states in group 8A were 31% more likely to benefit from an expansive resolution than claimants from all other states combined, but the effect was not statistically significant because it carried a 10% risk that it was explained by chance. As a descriptive finding, 85% of issue resolutions were in cases brought by a claimant from a state in group 8A.
Grouping #9 Group 9A: States in Eastern Europe (n=5) Group 9B: All others (except states in North America, Western Europe, Southern Europe, and Northern Europe)	The grouping could not be tested because there were only five cases, in group 9A, brought by Eastern European claimants.

TABLE 3: ANALYSES OF ADDITIONAL GROUPINGS OF CLAIMANT NATIONALITIES: OVERALL (ISSUES (1) TO (14))

Grouping	Summary of Results
Grouping #10	The grouping had an overall statistically significant effect ($F=6.41, 1, 153, p=.01$).
Group 10A: OECD members as of 1990 (n=490)	Claimants from states in group 10A were 31% more likely to benefit from an expansive resolution than claimants from all other states combined.
Group 10B: All other states (n=511)	
Grouping #11	The grouping had an overall statistically significant effect ($F=12.42, 1, 153, p=.005$).
Group 11A: OECD members as of 2000 (n=755)	Claimants from states in group 11A were 27% more likely to benefit from an expansive resolution than claimants from all other states combined.
Group 11B: All other states (n=246)	
Group #12	The grouping had an overall statistically significant effect ($F=7.04, 1, 153, p=.008$).
Group 12A: High-income states as of 1990 (n=813)	Claimants from states in group 12A were 23% more likely to benefit from an expansive resolution than claimants from all other states combined. As a descriptive finding, 81% of issues resolutions were in cases brought by a claimant from a state in group 12A.
Group 12B: All other states (n=188)	
Group #13	The grouping had an overall statistically significant effect ($F=6.18, 1, 153, p=.01$).
Group 13A: High-income states as of 2000 (n=828)	Claimants from states in group 13A were 22% more likely to benefit from an expansive resolution than claimants from all other states combined. As a descriptive finding, 83% of issues resolutions were in cases brought by a claimant from a state in group 13A.
Group 13B: All other states (n=173)	

The model controlled for other effects and there was sufficient data to provide some findings that involve the effect of other factors on the tendency toward an expansive approach and that are incidental to the original hypotheses of the study. Perhaps most importantly, it was found that the variable of the specific issue—among the fourteen coded issues—accounted significantly for about 8% of the overall variation in issue resolutions ($F=39.87, 13, 208, p<.001$). This finding highlighted the importance of focusing on those issues for which there were extensive data in any comparison of issue-by-issue results. Figure 2 outlines the issue-by-issue coding results across the 1001 issue resolutions.

FIGURE 2: BREAKDOWN OF ISSUE RESOLUTIONS BY SPECIFIC ISSUE



Importantly, these issue-by-issue results are only descriptive; the predictive analysis in the model focused on the overall tendency in the resolution of all fourteen issues combined.

The statistical analysis also revealed, incidentally, that variations in issue resolutions among the three main treaties or treaty types (BITs, the ECT, and NAFTA) had a significant effect on variations in the issue resolutions overall ($F=10.17$, 4, 103, $p<.001$), with an effect size of 6% (7% for jurisdictional issues, though only 2% for substantive issues). Issues arising and resolved under NAFTA had the lowest likelihood of being resolved expansively and there were no noteworthy differences between BITs and the ECT. Table 4 indicates the probabilities for each treaty or treaty type across the fourteen issues, controlling for all other variables. Again, these are descriptive findings; they explain what happened based on the coded data and should not be taken to predict reliably what will happen in the future.

TABLE 4: EFFECTS OF TREATY OR TREATY TYPE ON THE LIKELIHOOD OF AN EXPANSIVE RESOLUTION

Treaty or Treaty Type	Probability	<i>p-value</i>
<i>Bilateral investment treaty</i> (BIT)	.67	.001
<i>Energy Charter Treaty</i> (ECT)	.75	.001
<i>North American Free Trade Agreement</i> (NAFTA)	.54	.03

Perhaps less importantly, the model indicated, incidentally, that as total issue resolutions increased per case, so too did the likelihood that the issues would be resolved expansively. However, the effect size of 3% for this variable was relatively small, indicating that this was not important by itself as a predictor of issue resolutions. It was also found that the frequency of arbitrator appointments (measured by the total count of appointments per arbitrator) was a significant factor for jurisdictional issues and cumulatively, but with a relatively small effect size (3% and 2%, respectively). For the substantive issues, this factor did not have a significant effect.

These findings supported the expectation that arbitrators would resolve issues differently for foreign investors that are associated with a major Western capital-exporter. Overall and for both jurisdictional and substantive issues, all of the groupings indicated a tendency toward expansive resolutions for these claimants. The strongest finding was that claimants from those states—when they bring claims under a BIT or the ECT and raise any of eleven of the coded issues—are more likely to benefit from an expansive approach. By extension, respondent states are at a disadvantage relative to claimants overall but are more likely to benefit from a restrictive approach when the claimant is from a state other than a major Western capital-exporter, especially if the claim is brought under NAFTA.

What should one make of these results? They may be surprising if one anticipated that the resolution of contested legal issues would not vary much according to claimant nationality. Indeed, this expectation is a basic proposition of impartiality in international adjudication. There are also limitations, however, in the case of observed tendencies at a systemic level. While arbitrator incentives provided the rationales for the study's hypotheses, they should not be taken to explain the results fully. Other possible explanations that were not tested here could include variations in ideological preferences of arbitrators, variations in parties' legal representation, poor appointment decisions by groups of states or investors, or variations in the degree to which some cases may influence subsequent

interpretations.⁵⁹ The findings are tentative for these and other reasons. Even so, whatever their explanation, the observed tendencies raise questions about the fairness of investment treaty arbitration for interests that are not associated with major Western capital-exporters. They indicate that suspicions of bias about the system do have a tendency that is linked to the arbitrators' exercise of discretion.

C. ANTICIPATED TENDENCY IN FAVOUR OF THE UNITED STATES

It was hypothesized that the tendency in favour of an expansive approach would be lessened where the respondent was France, Germany, the United Kingdom, or the United States. However, it emerged that the United States was the only country for which there was data on this issue; that is, among the four countries initially identified to represent major Western capital-exporting states, only the United States was subject to a decision in which the arbitrators resolved coded issues. France, Germany, and the United Kingdom had not been the subject of such decisions presumably because, unlike the United States, they had (and have) not consented to investor-state arbitration in a broad-based investment treaty with another developed state. A few cases against France or Germany under the ECT came after the cut-off dates for the study. As well, all of the cases against the United States were brought by Canadian investors under NAFTA. Thus, while there was sufficient data for reliable findings, the more limited dataset makes the findings for this hypothesis less robust than the findings for the first two hypotheses.

For example, due to limited data, it was not possible to test this hypothesis for jurisdictional or substantive issues alone. It was also not possible to isolate other potential effects built into the model in order to generate incidental findings, as was done for the hypothesis related to claimant nationality. That said, the results indicated that the United States was more likely than other countries to benefit from a restrictive approach when other variables were held steady. On a statistically significant basis, the United States benefited from a restrictive approach:

- 60% more often than the other 45 respondent states under BITs and the ECT;

59. See *e.g.* Sisk and Heise, *supra* note 15 at 746; R Polk Wagner & Lee Petherbridge, "Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance" (2004) 152:3 U Pa L Rev 1105 at 1129; Catherine A Rogers, "The Arrival of the 'Have-Nots' in International Arbitration" (2007) 8:1 Nev LJ 341 at 357-58; Ole Kristian Fauchald, "The Legal Reasoning of ICSID Tribunals—An Empirical Analysis" (2008) 19:2 EJIL 301 at 337-38.

- 55% more often than Canada under NAFTA;
- 35% more often than Canada and Mexico, under NAFTA and in one BIT case;
- 35% more often than non-high-income respondent states,⁶⁰ usually under BITs and the ECT;
- 37% more often than other OECD states;⁶¹ and
- 59% more often than all states other than the Western European former colonial powers.⁶²

Table 5 outlines the findings in more detail, comparing the United States alone, as a respondent state, to the other groupings of respondent states not associated with major Western capital-exporters. Because the data for the United States arose from its experience as a respondent state under NAFTA, groupings involving the other NAFTA respondent states—Canada and Mexico—were also examined.

TABLE 5: ANALYSES OF GROUPINGS OF RESPONDENTS: OVERALL (ISSUES (1) TO (14))

Grouping	Summary of results
Grouping #1 Group 1A: The United States (n=45) Group 1B: All other states (n=956)	This grouping had an overall statistically significant effect (F=21.65, 1, 153, p<.01). As a respondent, the United States was 60% more likely to benefit from a restrictive resolution than all other states.
Grouping #2 Group 2A: The United States (n=45) Group 2B: Canada (n=32)	The grouping had an overall statistically significant effect (F=23.16, 1, 153, p<.01). The United States was 55% more likely to benefit from a restrictive resolution than Canada.
Grouping #3 Group 3A: The United States (n=45) Group 3B: Canada and Mexico (n=89)	The grouping had an overall statistically significant effect (F=20.81, 1, 153, p=.04). The United States was 35% more likely to benefit from a restrictive resolution than Canada and Mexico.

60. See *supra* notes 51-52.

61. See *supra* notes 49-50.

62. See *supra* note 46.

TABLE 5: ANALYSES OF GROUPINGS OF RESPONDENTS: OVERALL (ISSUES (1) TO (14))

Grouping	Summary of results
Grouping #4 Group 4A: The United States (n=45) Group 4B: All other states except high income states as of 1990 and 2000 (n=891)	The grouping had an overall statistically significant effect (F=17.47, 1, 153, p<.01). The United States was 35% more likely to benefit from a restrictive resolution than non-high income states.
Grouping #5 Group 5A: The United States (n=45) Group 5B: All other OECD states as of 1990 (n=41)	The grouping did not have an overall statistically significant effect (F=0.14, 1, 153, p=.89). The United States was 65% more likely to benefit from a restrictive resolution than other OECD states as of 1990, but the effect was not statistically significant because it carried an 89% risk that it was explained by chance.
Grouping #6 Group 6A: The United States (n=45) Group 6B: All other OECD states as of 2000 (n=194)	The grouping had an overall statistically significant effect (F=17.03, 1, 153, p=.02). The United States was 37% more likely to benefit from a restrictive resolution than other OECD states as of 2000.
Grouping #7 Group 7A: The United States (n=45) Group 7B: All other states except Western European former colonial powers (n=926)	The grouping had an overall statistically significant effect (F=21.96, 1, 153, p<.01). The United States was 59% more likely to benefit from a restrictive resolution than other states besides the former Western European colonial powers.

Taken together, these findings support the original hypothesis that the United States, as a major Western capital exporter, would receive more favourable treatment in the resolution of contested legal issues. The findings are limited to the United States and did not test the expectation for other countries on any statistical basis. Also, the findings emerged only from the United States' experience as a respondent exclusively under NAFTA, meaning that they could be explained by an overall more restrictive approach by NAFTA arbitrators as compared to BIT and ECT arbitrators. This explanation is contradicted, however, by the finding that the United States benefited from restrictive resolutions significantly more than Canada, which was also a respondent state only under NAFTA, and Mexico, which was a respondent under NAFTA in all but one of the coded cases.

Further, the coded issues reflected a range (nine) of the fourteen issues that were coded, and those issues arise often at a general level across the treaties and treaty types beyond NAFTA.

In the findings for the different groupings of respondent states, compared to the United States, the higher likelihood of a restrictive resolution in cases against the United States ranged from 35% to 60%. As an aside, this variation was less stark than what one sees in the raw coding results, which indicated a much greater tendency toward restrictive resolutions in favour of the United States. The difference between the statistical findings and the raw results highlights the role of the control variables. By holding such variables steady, the apparent benefit enjoyed by the United States was diminished but still significant. Similarly, viewed by themselves, the raw results would exaggerate the evidence of a pro-US bias. With that caveat in mind, I have reproduced the raw results below to shed greater light on the ways in which the United States was found to benefit more often from a restrictive approach.

These raw results can be summarized as follows. The fourteen coded issues were resolved expansively 6 times and restrictively 39 times in cases against the United States. In NAFTA cases against Canada and Mexico, the respective ratios were 24 to 8 and 34 to 14. In cases against all other respondent states under all treaties and treaty types, the proportion was 730 expansive to 216 restrictive. Thus, the proportion of expansive resolutions was 13% for the United States in contrast to 75% for Canada, 71% for Mexico, and 77% for all other states. Figures 3 and 4 represent these descriptive findings about the raw results.

FIGURE 3: ISSUE RESOLUTIONS PER ARBITRATOR, BY RESPONDENT STATE

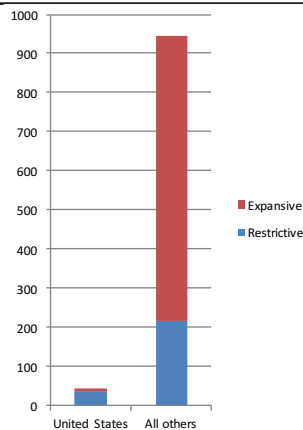
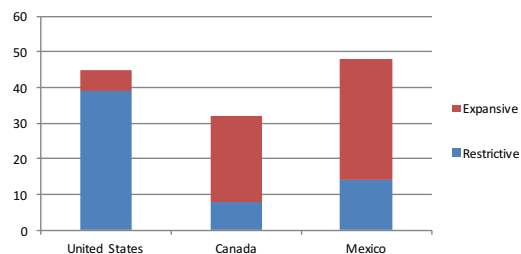


FIGURE 4: ISSUE RESOLUTIONS PER ARBITRATOR UNDER NAFTA, BY RESPONDENT STATE



As a further illustration of the raw results, Table 6 outlines the issue resolutions in NAFTA cases against Canada, Mexico, and the United States. I have reported the information in this table to provide more background to those who are familiar with the doctrine of NAFTA investment law and interested to know how the issue resolutions in the coded data were distributed by issue and respondent state. Again, I stress that these are not reliable predictive findings because they are not based on the statistical model that held control variables steady. They do not affect the overall finding of pro-US bias outlined above, except to demonstrate how the tendency was based on data drawn from, for example, a range of issues under the same treaty. The following is simply a report of the raw coding, for transparency.

TABLE 6: RAW CODING RESULTS FOR ALL ISSUE RESOLUTIONS UNDER NAFTA

	Canada	Mexico	The United States
Issue 1: Corporate person investor		6 expansive ⁶³	3 restrictive ⁶⁴
Issue 2: Natural person investor			3 restrictive ⁶⁵
Issue 3: Concept of investment	6 expansive ⁶⁶	3 restrictive ⁶⁷	6 restrictive ⁶⁸
Issue 4: Minority shareholder interests		6 expansive ⁶⁹	
Issue 6: Parallel claims		3 expansive ⁷⁰	3 restrictive ⁷¹

63. *Waste Management, Inc v United Mexican States* (2004), 43 ILM 967 at paras 76-77, 85 (International Centre for Settlement of Investment Disputes) [*Waste Management*]; *Fireman's Fund Insurance Company v The United Mexican States* (2003), 15:6 WTAM 3 at para 5 (International Centre for Settlement of Investment Disputes); *Fireman's Fund Insurance Company v The United Mexican States* (2006), ICSID Case No ARB(AF)/02/01 at paras 137-38 (International Centre for Settlement of Investment Disputes).
64. *The Loewen Group, Inc and Raymond L Loewen v United States of America* (2003), 42 ILM 811 at paras 220-39 (International Centre for Settlement of Investment Disputes) [*Loewen*].
65. *Ibid.*
66. *Pope & Talbot Inc v The Government of Canada* (2000), UNCITRAL Rules at para 96 [*Pope & Talbot #1*]; *SD Myers, Inc v The Government of Canada* (2000), 40 ILM 1408 [*SD Myers*]. For the majority opinion, see *ibid* at paras 226-31. For Schwartz's separate opinion, see *ibid* at paras 39-41.
67. *Bayview Irrigation District et al v United Mexican States* (2007), 19:5 WTAM 5 at paras 91, 98-105.
68. *Methanex Corporation v United States of America* (2005), 44 ILM 1345, at paras IV.D.16-IV.D.18 [*Methanex*]; *Canadian Cattleman for Fair Trade v United States of America* (2008), UNCITRAL Rules at paras 111-12, 193.
69. *GAMI Investments, Inc v The Government of the United Mexican States* (2004), 44 ILM 545 at paras 26-35 [*GAMI*]; *International Thunderbird Gaming Corporation v The United Mexican States* (2006), 18:2 WTAM 59 at paras 97-110 [*International Thunderbird*].
70. *GAMI, ibid* at paras 24-42.
71. *Loewen, supra* note 64 at paras 143, 149, 154.

TABLE 6: RAW CODING RESULTS FOR ALL ISSUE RESOLUTIONS UNDER NAFTA

	Canada	Mexico	The United States
Issue 8: National treatment	6 expansive ⁷² 5 restrictive ⁷³	1 expansive ⁷⁴ 6 restrictive ⁷⁵	9 restrictive ⁷⁶
Issue 9: Fair and equitable treatment (autonomous standard)	3 expansive ⁷⁷		3 restrictive ⁷⁸
Issue 10: Fair and equitable treatment (content)	6 expansive ⁷⁹	6 expansive ⁸⁰ 5 restrictive ⁸¹	6 expansive ⁸² 6 restrictive ⁸³
Issue 12: Indirect/regulatory expropriation	3 expansive ⁸⁴ 3 restrictive ⁸⁵	12 expansive ⁸⁶	6 restrictive ⁸⁷

72. *Pope & Talbot Inc v The Government of Canada* (2001), 13:4 WTAM 61 at paras 76-78 [*Pope & Talbot #2*]; *SD Myers*, *supra* note 66 at paras 250-55; *United Parcel Service of America, Inc v Government of Canada* (2007), UNCITRAL Rules at paras 17, 94-96, 101-02 (International Centre for Settlement of Investment Disputes) [*United Parcel Service*].
73. *Merrill & Ring Forestry LP v The Government of Canada* (2010), UNCITRAL Rules at paras 83, 87-93 (International Centre for Settlement of Investment Disputes); *United Parcel Service*, *supra* note 72 at paras 98-101, 117, 135-36, 174-78.
74. *International Thunderbird*, *supra* note 69 at paras 2-4, Walde.
75. *GAMI*, *supra* note 69 at paras 112, 114-15; *Marvin Feldman v Mexico* (2002), 42 ILM 625 at 6-9, 15 (International Centre for Settlement of Investment Disputes), Blanco [*Feldman*]; *International Thunderbird*, *supra* note 74 at paras 180-83.
76. *DF Group Inc v United States of America* (2003), 15:3 WTAM 55 at paras 157-58 (International Centre for Settlement of Investment Disputes) [*ADF*]; *Loewen*, *supra* note 64 at paras 139-40; *Methanex*, *supra* note 68 at paras IV.B.12-IV.B.29.
77. *Pope & Talbot #2*, *supra* note 72 at paras 108-18.
78. *ADF*, *supra* note 76 at para 183.
79. *Pope & Talbot #2*, *supra* note 72 at paras 116, 118; *SD Myers*, *supra* note 66. For the majority opinion, see *ibid* at paras 263, 266-68. For Schwartz's separate opinion, see *ibid* at para 233.
80. *GAMI*, *supra* note 69 at paras 103-04, 107-10; *Metalclad Corporation v The United Mexican States* (2000), 40 ILM 36 at paras 89, 97-101 (International Centre for Settlement of Investment Disputes) [*Metalclad*].
81. *Waste Management*, *supra* note 63 at paras 92-93, 98-101; *International Thunderbird*, *supra* note 69 at paras 194-201.
82. *ADF*, *supra* note 76 at para 188; *Mondev International Ltd v United States of America* (2002), 42 ILM 85 at paras 113-27 (International Centre for Settlement of Investment Disputes).
83. *Loewen*, *supra* note 64 at paras 132-37; *Methanex*, *supra* note 68 at paras IV.C.14-IV.C.25.

Based on the statistical findings for this hypothesis, it is evident that aspects of investment treaty law that may give rise to substantial state liability have been applied less rigorously to the United States than to the other NAFTA states under NAFTA and, although the comparison is less direct because it involves treaties other than NAFTA, to other respondent states. There was no basis to evaluate whether this pro-US tendency extended to other major Western capital-exporters. However, the pro-US variation in the case of NAFTA claims by Canadian investors against the United States, and in favour of US investors that brought NAFTA or BIT against other states, suggests tentatively that there is a degree of hierarchy among Western capital-exporters themselves.

Reflecting on the original theoretical rationales for the hypotheses for the study, the findings provide support for the hypothesis of systemic pro-US bias based on the disproportionate power of the United States over the economic position of arbitrators and the arbitration industry. They also provide support for the expectation that US power in the organizations that exercise default appointing authority, and in the negotiation of investment treaties, would affect how arbitrators exercise their discretionary power. They also appear relevant to the widely known contextual fact, regarding case outcomes, that the United States has never lost a NAFTA case. That is, if the arbitrators tend to apply the same disciplines more softly to the United States than to other states, it is less surprising that the United States rarely (or never) loses cases. However, I stress that, like other findings in this study, the results may be explained by a range of alternative explanations such as a superior legal capacity of the US government or ideological preferences of the arbitrators.

VII. CONCLUSION

The present study was an attempt to use empirical methods to test specific hypotheses of systemic bias arising from larger institutional concerns. It relied

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84. *Pope & Talbot #1*, *supra* note 66 at paras 96, 101-02.
 85. *D Myers*, *supra* note 66. For the majority opinion, see *ibid* at paras 281, 287. For Schwartz's separate opinion, see *ibid* at paras 220-23.
 86. *Feldman*, *supra* note 75 at paras 100-11, 128-29; *Waste Management*, *supra* note 63 at paras 143, 155, 160-62, 171-77; *Archer Daniels Midland Company and Tate & Lyle Ingredients Americas, Inc v The United Mexican States* (2007), 146 ILR 439 at paras 240-48 (International Centre for Settlement of Investment Disputes); *Metalclad*, *supra* note 80 at paras 107, 111-12.
 87. *Methanex*, *supra* note 68 at para IV.D.7; *Glamis Gold Ltd v United States of America* (2009), 48 ILM 1035 at paras 354-57, 536 (International Centre for Settlement of Investment Disputes).

on a content analysis of arbitrators' resolutions of contested legal issues instead of other empirical approaches and so offers only one perspective, derived from a particular method. In turn, its findings should be taken as tentative.

It was somewhat eye opening, however, to find strong support for the anticipated tendency toward an expansive (pro-claimant) approach and, more so, for the expected accentuation of this tendency in the case of claimants from the four major Western capital-exporting states. The finding of significant support for the expected reduced tendency in cases against the United States was also eye-opening, though it was less robust because it was based on a smaller amount of data and thus more limited to the sample of data that was coded and analyzed.

To put this point in other words, the findings of (1) apparent systemic bias in favour of the United States as a respondent state were limited to the cumulative results under NAFTA, and primarily to the US-Canadian investor relationship, and thus were less robust than those of (2) apparent systemic bias in favour of claimants from the United States, the United Kingdom, France, and Germany, as a group, across jurisdictional and substantive issues both in isolation and cumulatively. Both sets of findings were supported incidentally by analyses of other groupings of comparable states, such as G-7 states, Western European former colonial powers, OECD members (to represent Western capital-exporting states), and the opposites of these three categories (to represent other states in the world).

The study is subject to important limitations that I have summarized in the introduction and text of this article, and elaborated previously.⁸⁸ Briefly, empirical research cannot resolve issues of possible bias in any particular case. At the systemic level, an empirical project should be understood as an attempt to falsify discrete expectations (*i.e.*, that arbitrators in general would be influenced by their unique and apparent dependencies on prospective claimants and powerful states), not to prove or disprove possible bias.⁸⁹ This study is not, nor will there ever be, a final word on whether there is bias in the system.⁹⁰

Keeping these limitations in mind, the findings provide a perspective on how arbitrators are able to, and may in fact, shift the rules according to who is suing whom and may even be incited to do so as a result of their unique status compared to other adjudicators who decide similar types of disputes. My view based on this study is that there is only tentative evidence of the expectations

88. See Van Harten, "Arbitrator Behaviour," *supra* note 5 at 231-33.

89. See Richard Lempert, "Empirical Research for Public Policy: With Examples from Family Law" (2008) 5:4 J Empirical Leg Stud 907.

90. See Sisk and Heise, *supra* note 15 at 794.

of systemic bias at present, but that this evidence supports the well-established doctrinal and theoretical rationales for using institutional safeguards of judicial independence, such as secure tenure, a set amount of remuneration not dependent on the length or frequency of cases, objective methods of case assignment, and prohibitions on issue conflicts and outside counsel work, to reduce the risk of actual and perceived bias in adjudication. Such safeguards would help to ensure that states, investors, and other affected actors do not have a reasonable basis for concern about potential bias.

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 8 (National treatment): Expansive approach⁹¹

Flexible approach to national treatment, indicated by:

- (a) the non-application of the requirement for “like circumstances” or “similarly situated” investors/investments; or
- (b) a broad approach to “like circumstances,” including where it is based on an approach that is at least as broad as a competition-based reading (*i.e.*, one that focuses simply on the competitive relationship between the compared investors/investments and that does not account for differences based on policy considerations such as health or environmental risks arising from the economic activity); or
- (c) a low evidentiary threshold (*e.g.*, less than a balance of probabilities or its approximate equivalent, with no requirement for systemic discrimination beyond individual comparator(s)) for a claimant to establish *de facto* discrimination; and
- (d) a low evidentiary threshold to establish protectionist intent as the sole basis for a breach (*e.g.*, ambiguous statements by a public officer are potentially justified by other policy objectives that provide a non-economic rationale in favour of domestic competitors).

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning. Where elements of a tribunal’s interpretation fall under both the expansive and restrictive categories, they were classified as “issue arose, non-classifiable/neutral.”

91. For the cases on which this was modeled, see *Occidental Exploration and Production Company v The Republic of Ecuador* (2004), 17:1 WTAM 165 (London Court of International Arbitration) [*Occidental*] (finding a violation of national treatment, although the compared investments were not in like circumstances); *Pope & Talbot #2*, *supra* note 72 (adopting a competition-based approach to like circumstances, presuming a violation based on initial evidence of *de facto* discrimination subject to broad exceptions, and rejecting a proposed requirement for proof of disproportionate disadvantage); *Saluka Investments BV (The Netherlands) v The Czech Republic* (2006), 18:3 WTAM 166 [*Saluka*] (requiring the state to justify any differential treatment).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 8 (National treatment): Restrictive approach⁹²

Restrictive approach to national treatment, indicated by:

- (a) a strict approach to “like circumstances” or “similarly situated”; or
- (b) declining to find like circumstances based solely on a competition-based reading; or
- (c) a rigorous evidentiary threshold (*e.g.*, a balance of probabilities or its approximate equivalent, or higher, with a requirement for evidence of systemic discrimination beyond individual comparator(s)) for a claimant to establish *de facto* discrimination; or
- (d) a requirement of protectionist intent as a condition of breach.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning. Where elements of a tribunal’s interpretation fall under both the expansive and restrictive categories, they were classified as “issue arose, non-classifiable/ neutral.”

**Issue 9 (Fair and equitable treatment—relationship to customary standard):
Expansive approach⁹³**

Broad approach to fair and equitable treatment, indicated by:

- (a) establishment as an autonomous standard beyond customary standard.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning. In the NAFTA context, where the issue is dealt with by a statement of interpretation of the treaty on behalf of the states parties, then this qualifies as non-classifiable (*i.e.*, resolved by treaty).

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- 92. For the cases on which this was modeled, see *United Parcel Service*, *supra* note 72 (adopting a relatively flexible approach to like circumstances); *ADF*, *supra* note 76 (adopting a rigorous approach to the investor’s evidentiary burden to establish *de facto* discrimination).
 - 93. For the cases on which this was modeled, see *CMS Gas Transmission Company v The Republic of Argentina* (2003), 42 ILM 788 (International Centre for Settlement of Investment Disputes) [*CMS Gas*] (equating a broad version of fair and equitable treatment to the customary minimum standard); *Occidental*, *supra* note 91 (declining to limit fair and equitable treatment to the customary standard); *Siemens AG v The Argentine Republic* (2004), 44 ILM 138 (International Centre for Settlement of Investment Disputes) [*Siemens*] (declining to limit fair and equitable treatment to the customary standard).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

**Issue 9 (Fair and equitable treatment—relationship to customary standard):
Restrictive approach⁹⁴**

Narrow approach to fair and equitable treatment, indicated by:

(b) limitation to customary standard.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning. In the NAFTA context, where the issue is dealt with by a statement of interpretation of the treaty on behalf of the states parties, then this qualifies as non-classifiable (*i.e.*, resolved by treaty).

94. For the case on which this was modeled, see *Noble Ventures, Inc v Romania* (2005), ICSID Case No ARB/01/11 (International Centre for Settlement of Investment Disputes) [*Noble Ventures*] (limiting fair and equitable treatment to the customary standard).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 10 (Fair and equitable treatment—content): Expansive approach⁹⁵

Restrictive approach to fair and equitable treatment, indicated by:

- (a) where limited to a customary standard, the application of a requirement to establish state practice and *opinio juris* as the basis for novel aspects of customary standard; or
- (b) whether or not limited to a customary standard, the limitation of the standard to the *Neer* or *ELSI* terminology and/or rejection or serious containment of novel concepts (*e.g.*, by incorporation of a rigorous duty on the claimant to know and evaluate the law of the host state and prospect of legal reform, or by the adoption of a deferential position where the host state has an objective basis for the decision).

NOTES: The “*Neer* or *ELSI* terminology” is that of “outrage,” “bad faith,” “willful disregard of due process of law,” “willful neglect of duty,” “an extreme insufficiency of action,” “insufficiency of governmental action so far short of international standards that every reasonable and impartial man would readily recognize its insufficiency,” or conduct that would “shock or at least surprise a sense of judicial propriety.”⁹⁶

“Novel concepts” are indicated by such terminology as “idiosyncratic,” “unreasonable,” “legitimate expectations” (including incorporation of a strict duty of the state to abide by specific undertakings as an umbrella-like component of fair and equitable treatment), stability of the legal and business framework, affirmative transparency obligations of the host state (without emphasis on the investor’s duty to know and evaluate the law and to anticipate possible legal reforms), or breach of another international obligation, where the terminology is not limited by a strong statement of the need for deference wherever the host state has an objective basis for its decision.

An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning.

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- 95. For the cases on which this was modeled, see *CMS Gas*, *supra* note 93 (concluding that arbitrary or discriminatory treatment in general would violate fair and equitable treatment and went beyond the language in *Neer*, *supra* note 36, or *ELSI*, *supra* note 36; requiring stability and predictability; and precluding any need for bad faith in favour of an objective assessment of whether legitimate expectations of the foreign investor were met); *Occidental*, *supra* note 91 (approaching fair and equitable treatment as an objective requirement not requiring bad faith and incorporating the concept of legal and business stability); *Sempra Energy International v Argentine Republic* (2005), ICSID Case No ARB/02/16 (International Centre for Settlement of Investment Disputes) [*Sempra Energy*] (incorporating concepts of legal stability and observance of legal obligations); *Siemens*, *supra* note 93 (broadening the language in *Neer*, *supra* note 36, and *ELSI*, *supra* note 36; incorporating the concept of legitimate expectations; and precluding any requirement for bad faith).
 - 96. For the cases on which this was modeled, see *Genin (Alex) and Others v Republic of Estonia* (2001), 17:2 ICSID Rev 395 (limiting the standard to the language in *Neer*, *supra* note 36, and *ELSI*, *supra* note 36); *Noble Ventures*, *supra* note 94 (applying the standard in *ELSI*, *supra* note 36).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 10 (Fair and equitable treatment—content): Restrictive approach⁹⁷

Restrictive approach to fair and equitable treatment, indicated by:

- (a) where limited to a customary standard, the application of a requirement to establish state practice and *opinio juris* as the basis for novel aspects of customary standard; or
- (b) whether or not limited to a customary standard, the limitation of the standard to the *Neer* or *ELSI* terminology and/or rejection or serious containment of novel concepts (*e.g.*, by incorporation of a rigorous duty on the claimant to know and evaluate the law of the host state and prospect of legal reform, or by the adoption of a deferential position where the host state has an objective basis for the decision).

NOTES: The “*Neer* or *ELSI* terminology” is that of “outrage,” “bad faith,” “willful disregard of due process of law,” “willful neglect of duty,” “an extreme insufficiency of action,” “insufficiency of governmental action so far short of international standards that every reasonable and impartial man would readily recognize its insufficiency,” or conduct that would “shock or at least surprise a sense of judicial propriety.”⁹⁸

“Novel concepts” are indicated by such terminology as “idiosyncratic,” “unreasonable,” “legitimate expectations” (including incorporation of a strict duty of the state to abide by specific undertakings as an umbrella-like component of fair and equitable treatment), stability of the legal and business framework, affirmative transparency obligations of the host state (without emphasis on the investor’s duty to know and evaluate the law and to anticipate possible legal reforms), or breach of another international obligation, where the terminology is not limited by a strong statement of the need for deference wherever the host state has an objective basis for its decision.

An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning.

97. *Neer*, *supra* note 36; *ELSI*, *supra* note 36.

98. *Ibid.*

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 11 (Full protection and security): Expansive approach⁹⁹

Expansive approach to full protection and security, indicated by:

- (a) the expansion beyond issues of physical security of the investor and investment to include concepts of legal security and stability of the investment climate; or
- (b) the assignment of full responsibility to the host state for physical harm suffered by the investor or investment without discussion of severe longstanding conflict in a country that provides context for the physical harm suffered.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

Issue 11 (Full protection and security): Restrictive approach¹⁰⁰

Narrow approach to full protection and security, indicated by:

- (a) the limitation to issues of physical security; or
- (b) the alleviation of the host state's responsibility for physical harm suffered by the investor or investment based on severe longstanding conflict in a country that provides context for the physical harm suffered.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

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- 99. For the cases on which this was modeled, see *CME Republic BV (The Netherlands) v The Czech Republic* (2001), 14:3 WTAM 109 (extending the standard to security and protection of the investment); *Ceskoslovenska Obchodni Banka, AS v The Slovak Republic* (1999), 17:3 WTAM 189 (International Centre for Settlement of Investment Disputes) (finding a breach based on the state's conduct in the interpretation of contractual terms); *Azurix Corp v The Argentine Republic* (2006), ICSID Case No ARB/01/12 (International Centre for Settlement of Investment Disputes) (extending the standard beyond protection against physical violence to create a state obligation to ensure a secure investment environment).
 - 100. For the cases on which this was modeled, see *PSEG Global Inc, The North American Coal Corporation, and Konya Ilgin Elektrik Üretim ve Ticaret Limited Sirketi v Republic of Turkey* (2004), 44 ILM 465 (International Centre for Settlement of Investment Disputes) (limiting the standard to physical safety); *Saluka, supra* note 91 (limiting the standard to civil strife and physical violence); *Rumeli Telekom AS and Telsim Mobil Telekomikasyon Hizmetleri AS v Republic of Kazakhstan* (2008), ICSID Case No ARB/05/16 (International Centre for Settlement of Investment Disputes) (limiting the standard to physical integrity without extending it to legal or economic security).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 12 (Indirect/regulatory expropriation): Expansive approach¹⁰¹

Expansive approach to indirect expropriation, indicated by:

- (a) a test for indirect expropriation that focuses exclusively or primarily on the effect of the measure on the investor and that ignores or seriously downplays other potentially relevant factors, such as the regulatory purpose of measure (even where the measure is non-discriminatory) or a requirement for enrichment of the host state; or
- (b) the extension of an effects-based analysis of indirect expropriation to situations in which the effect on the investor/investment is “significant” or “substantial,” or otherwise less than a “nearly complete taking” of the investment; or
- (c) the allowance of an expropriation claim based on severance of the property right or economic interest into segments, which are then subjected to a distinctive analysis for expropriation.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning.

Issue 12 (Indirect/regulatory expropriation): Restrictive approach¹⁰²

Restrictive approach to indirect expropriation, indicated by:

- (a) a test for indirect expropriation that excludes all measures that are adopted for a legitimate public purpose or that applies stringent limiting factors beyond the effect on the investor/investment, such as a requirement for enrichment by the host state; or
- (b) the limitation of an effects-based analysis of indirect expropriation to situations in which the effect on the investor/investment is a “nearly complete taking” (or equivalent); or
- (c) the refusal to allow an expropriation claim on the basis that it represented an attempt to sever the property right or economic interest into segments, which would then be subjected to a distinctive analysis for expropriation.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal’s reasoning.

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101. For the cases on which this was modeled, see *Metalclad*, *supra* note 80 (adopting an effects-based analysis and extending the concept of indirect expropriation to non-discriminatory measures passed for a public purpose regardless of specific commitments of the state); *Técnicas Medioambientales Tecmed, SA v The United Mexican States* (2003), 43 ILM 133 (International Centre for Settlement of Investment Disputes) (disregarding the government’s intentions and shifting the burden to the state to justify measure as proportionate); *Biloune and Marine Drive Complex Ltd v Ghana Investments Centre and the Government of Ghana* (1989), 95 ILR 184 (declining to consider the regulatory aims of the state as a factor).
102. For the cases on which this was modeled, see *Methanex*, *supra* note 68 (declining to find an indirect expropriation where the measure was for a public purpose, non-discriminatory, and not in breach of a specific commitment of the state); *Olguín (Eudoro Armando) v Republic of Paraguay* (2001), 18:1 ICSID Rev 143 (International Centre for Settlement of Investment Disputes) (declining to find an indirect expropriation arising from a mere omission of the state and without enrichment of the state); *Lauder (Ronald S) v Czech Republic* (2001), 4 WTAM 35 (requiring enrichment of the respondent state to find a violation).

APPENDIX I: CODING OF SUBSTANTIVE ISSUES

Issue 13 (Scope of umbrella clause): Expansive approach¹⁰³

Expansive approach to umbrella clauses, indicated by:

- (a) an interpretation that the umbrella clause can be violated by private or commercial acts of the host state (*i.e.*, any breach of contract).

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

Issue 13 (Scope of umbrella clause): Restrictive approach¹⁰⁴

Restrictive approach to umbrella clauses, indicated by:

- (a) a limitation of the umbrella clause to cases of sovereign interference or denial of justice or equivalent "public" acts of the host state, without extending to private or commercial acts of the state.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

Issue 14 (Essential/national security): Expansive approach¹⁰⁵

Narrow approach to essential or national security exception, indicated by:

- (a) the exclusion, from the scope of the exception, of emergency measures to address a domestic financial and economic crisis.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

Issue 14 (Essential/national security): Restrictive approach¹⁰⁶

Flexible approach to essential or national security exception, indicated by:

- (a) the inclusion, within the scope of the exception, of emergency measures to address a domestic financial and economic crisis.

NOTES: An award is non-classifiable where the issue is dealt with expressly and specifically in the text of the relevant investment treaty and this forms the basis of the tribunal's reasoning.

103. For the cases on which this was modeled, see *Duke Energy Electroquil Partners & Electroquil SA v Republic of Ecuador* (2008), 20:6 WTAM 189 (International Centre for Settlement of Investment Disputes) (extending the umbrella clause beyond situations of sovereign interference).
104. For the cases on which this was modeled, see *SGS Société Générale de Surveillance SA v Islamic Republic of Pakistan* (2003), 42 ILM 1290 (International Centre for Settlement of Investment Disputes) (declining to extend the umbrella clause to domestic contractual obligations); *Impregilo SpA v Islamic Republic of Pakistan* (2005), ICSID Case No ARB/03/3 (International Centre for Settlement of Investment Disputes) (concluding that the respondent state could only breach the treaty through acts of sovereign authority).
105. For the cases on which this was modeled, see *CMS Gas*, *supra* note 93; *Sempra Energy*, *supra* note 95 (both of which rejecting Argentina's essential security defence).
106. For the cases on which this was modeled, see *Continental Casualty Company v The Argentine Republic* (2006), ICSID Case No ARB/03/9 (International Centre for Settlement of Investment Disputes); *LG&E Energy Corp, G&E Capital Corp, and LG&E International, Inc v Argentine Republic* (2006), 46 ILM 40 (International Centre for Settlement of Investment Disputes) (both of which partially allowing Argentina's essential security defence).

TABLE 7: REGRESSION RESULTS OF THE MODEL

Coefficients	Estimate	Std.Error	t-value	p-value
Intercept	1.20	0.48	2.48	0.01
Claimant nationality:2	0.65	0.69	0.95	0.34
Claimant nationality:3	-0.13	0.70	-0.18	0.86
Claimant nationality:4	1.07	0.54	1.99	0.05
Claimant nationality:5	0.74	0.35	2.10	0.04
Specific issue:2	-26.68	51154.92	0.00	1.00
Specific issue:3	-0.85	0.44	-1.92	0.06
Specific issue:4	-0.32	0.56	-0.57	0.57
Specific issue:5	-1.97	0.59	-3.37	0.00
Specific issue:6	-0.11	0.44	-0.25	0.80
Specific issue:7	-3.07	0.49	-6.23	<.00001
Specific issue:8	-3.52	0.48	-7.31	<.00001
Specific issue:9	-2.60	0.49	-5.30	<.00001
Specific issue:10	-1.00	0.44	-2.27	0.02
Specific issue:11	-4.19	0.50	-8.42	<.00001
Specific issue:12	-2.51	0.43	-5.83	<.00001
Specific issue:13	-0.62	0.64	-0.97	0.33
Specific issue:14	-2.84	0.58	-4.85	<.00001
Treat category:2	0.64	0.64	1.00	0.32
Treat category:3	-0.85	0.43	-1.97	0.05
Treat category:4	-0.76	1.42	-0.54	0.59
Total Issue resolutions	0.29	0.08	3.67	0.00
Total arbitrator appointments	0.08	0.05	1.79	0.07

TABLE 8: EFFECT SIZES FOR INDIVIDUAL PREDICTORS IN THE MODEL

Individual Predictor	Dataset jurisdictional issues	Dataset substantive issues	Dataset cumulative
Claimant's state of nationality	0.08	0.08	0.09
Specific issue among coded issues	0.08	0.06	0.06
Category of treaty or treaty type	0.07	0.06	0.06
Total issue resolutions in the case	0.02	0.03	0.03
Total appointments per arbitrator	0.03	0.00	0.02