Not the Least BIT Rational: An Empirical Test of the "Rational Design" of Investment Treaties

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Introduction

In the 1990s a wave of bilateral investment treaties (BITs) were signed by numerous pairs of governments. In fact, nearly 200 of these treaties, which specify the rules governing foreign direct investment (FDI) between the signatories, were signed in 1994 alone. The United Kingdom (UK) was among the most active BIT signers that year and on March 1st, 1994 it signed a BIT with Belarus. That BIT contained language stating that if a dispute between a multinational corporation from one state and the government of the other were to erupt, the multinational would be entitled to pursue remedies through the International Centre for the Settlement of Investment Disputes (ICSID), a neutral, prominent, and regularized judicial institution associated with the World Bank. In effect, what the UK-Belarus BIT said was that British firms would be able to directly challenge actions taken by the Belarusian government via the most public and well-known arbitration institution available, without any ability of the Belarusian government to prevent this course of action.

Just under two weeks after the UK-Belarusian BIT was signed, the British government also signed a BIT with India. The UK-India BIT also specified procedures for the settlement of investor-state disputes, but the language in this second BIT read very differently. In this case, a wide range of other, less formal options for dispute settlement were specified, including ad hoc arbitration or arbitration through general rules specified by the United Nations Conference on International Trade Law (UNCITRAL). Furthermore, the UK-India BIT allowed governments to give their consent before arbitration through any venue could begin. In effect, the UK-India BIT limited the ability of firms to pursue cases through ICSID, since other options were specified and various barriers had to be crossed before ICSID could become involved. These important differences across the British BITs with Belarus and India raise an important and previously

unanswered question: why do some important international institutions contain centralized and rigid options for dispute settlement, while others contain far more informal and flexible procedures?

Through rigorous and systematic empirical analysis, this paper seeks to understand why seemingly similar international institutions, such as bilateral investment treaties, vary on important dimensions. In particular, why do BIT-signatory governments sometimes commit to have future investment disputes be arbitrated by centralized international institutions like ICSID, yet at other times only allow disputes to be resolved on a case-by-case basis through ad hoc arbitration or domestic legal institutions? Similarly, under what conditions do governments permit multiple options for investment dispute settlement as opposed to mandating a sole course of action? These choices of the design of international institutions are far from trivial, since they may prove to have major consequences. Years after signing a BIT, a government may be forced to pay out hundreds of millions of dollars in damages to foreign investors who have "sued" them before an international body (like ICSID), a fate which might have been avoided if dispute settlement provisions within the BIT had been more flexible or less centralized. Such is the fate that befell Argentina in 2006, after it was order by an ICSID panel to pay $165 million in damages to Azurix, the water division of infamous U.S. multinational Enron.

The literature on the "rational design" of international institutions is identified as a potentially valuable framework to explain these systematic differences in investment treaties. One reason the rational design framework is so promising is because two of the features of international institutions it attempts to explain, centralization and flexibility, correspond to the two major differences we see in BITs. As noted above, BITs vary in the degree to which they encode centralized or flexible arrangements for dispute settlement, and the rational design

framework provides a set of coherent predictions to explain this variation. The empirical analysis of BIT provides symbiotic benefits for the rational literature as well, since the Rational Design of International Institutions project (see Koremenos, Lipson, and Snidal 2001a) has been criticized for not being subjected to systematic, large-*n* empirical tests. The variation in BITs provides a nearly ideal setting to test the theoretical predictions made by those in the rational design camp.

Our empirical tests of the rational design propositions ultimately generate unexpected yet important findings about variation in investment dispute settlement. In general, there is virtually no empirical support for the rational design propositions, even after considering a wide range of operational measures and methods of testing. All is not lost, however. Much is still learned about the potential benefits of testing the rational design framework quantitatively, and the challenges such an endeavor presents. Furthermore, although the design of BITs may not be "rational" in the manner expected, it is clear that states possess systematic preferences regarding the degree to which an international institution should have centralized functions and flexible arrangements. Those preferences reflect domestic political conditions within both countries, and they are mitigated or accentuated by power disparities among the states.

The Rational Design Project

In 2001 an ambitious and impressive collection of articles on "The Rational Design of International Institutions" was published as a special issue of the journal *International Organization*. The editors of the issue, Barbara Koremenos, Charles Lipson, and Duncan Snidal, summarize the goal of this "rational design" project in their introduction to the volume:

> Our main goal is to offer a systematic account of the wide range of design features that characterize international institutions. We explore—theoretically and empirically—the implications of our basic presumption that states construct

> and shape institutions to advance their goals. The most direct implication is that design differences are not random. They are the result of rational, purposive interactions among states and other international actors to solve specific problems" (Koremenos, Lipson, and Snidal 2001a: 762).

In contrast to many other special issues of academic journals, this "Rational Design" issue is anchored around a comprehensive analytical framework, which is meticulously outlined by the trio of authors in a 40-page introductory chapter. This initial chapter identifies five dimensions on which international organizations vary: membership, scope, centralization, control, and flexibility. These five dimensions serve as the dependent variables for the subsequent articles in the volume, as well as future, related projects. To these five institutional design features are mapped six independent variables thought to influence the manner in which international organizations are designed: distribution problems, enforcement problems, number of actors, uncertainty about behavior, uncertainty about the state of the world, and uncertainty about preferences. What emerges is a total of sixteen cause-and-effect conjectures intended to explain the rational design of international institutions. Taken together, these sixteen conjectures represent arguably the most systematic attempt ever to understand the design of international organizations. They carefully link certain characteristics of an international issue to the design of the institutional apparatus created to address that issue. In sum, the theoretical framework of the rational design project is meticulous, comprehensive, and potentially widely applicable.

In addition to the general theoretical framework, the Rational Design volume also presents eight case study articles on substantive international institutions to which the rational design propositions should apply. The case studies stand on their own as interesting probes of variation within different international institutions, and collectively they illuminate many of the

rational design conjectures identified in the initial conceptual chapter.[1] For instance, Milner and Rosendorff find that international trade institutions include escape clauses (flexibility) when there is uncertainty about future domestic pressures to comply with the agreement—as predicted by the rational design framework—which makes agreements more durable. Similarly, Oatley's study of European trade in the aftermath of World War II demonstrates that the European Payments Union contained both flexible and centralized elements in order to deal with uncertainty and enforcement concerns. On the whole, the eight case studies are generally supportive of the framework, insofar as each provides support for at least one of the rational design conjectures.

In the concluding chapter of the Rational Design volume, Koremenos, Lipson, and Snidal (2001b) summarize the degree to which each conjecture is supported by the case studies and point out that "nearly 70 percent of the findings are strongly positive."[2] Among the various conjectures, they clearly identify those regarding variation in institutional centralization and institutional flexibility as being the most strongly supported. Koremenos, Lipson, and Snidal also identify various forms of "uncertainty" as being the most powerful explanation for the details of IO design. All five conjectures that identify some type of "uncertainty" as a causal factor are supported by a majority of the applicable case studies. The findings in support of "Rational Design" are far from universal or definitive, however. Of the sixteen conjectures, one is not tested in any of the case studies, three are not supported, and four are supported by only one case study. Although the case studies provide some initial evidence that supports the

[1] Each of the case study articles explores only a subset of the rational design propositions. Kydd's chapter on NATO expansion examines only one proposition, while at the other extreme the articles by Richards (on the International Air Transport Authority) and Morrow (on prisoner of war treaties) examine nine propositions each.
[2] See Table 1 of the concluding chapter of the Rational Design issue (Koremenos, Lipson, and Snidal 2001b: 1055) for a summary of the case study findings.

rational design framework, the support is uneven and the qualitative evaluations across the tests are far from systematic.

Criticism of Rational Design

From the time at which it was published, the Rational Design framework has encountered criticism, with most of the skepticism centered on issues related to the specification and empirical evaluation of the project's more abstract theoretical propositions. The original *International Organization* special issue contained a largely critical piece by Alexander Wendt. Wendt's initial criticism was followed two years later by a more widespread and detailed critique by John Duffield, which was published in *International Organization* along with a rejoinder by Koremenos and Snidal. Among the issues raised by both Wendt and Duffield are the lack of specificity of concepts, the neglect of other important concepts (both within and outside of the rational design framework), and the failures of project's empirical evaluation.

Both Wendt and Duffield criticize the project's failure to provide precise and accurate conceptualization of the key concepts. Wendt (2001: 1030-1031) extensively criticizes what he sees as the inappropriate use of "uncertainty," which is one of the project's primary independent variables. He claims the project editors conflate uncertainty with risk. This becomes an important distinction, because risk implies that actors have information over a range of outcomes that are known to be probabilistic, whereas uncertainty requires a fundamental lack of information about some situation. Duffield similarly attacks the dependent variable of "centralization" of international institutions, which he claims encompasses too many important subcomponents and suffers from "excessive aggregation" (2003: 416). Interestingly, the Rational Design editors largely anticipate and agree with Duffield's criticism. They admit that centralization might be "too broad" (Koremenos, Lipson and Snidal 2001a: 760) and assert that

"an important avenue of enquiry will be to refine this concepts into different components" (Koremenos, Lipson and Snidal 2001b: 1060).

Similarly, both Duffield and Wendt criticize the Rational Design project for failure to employ control variables and to account for alternative explanations. Both particularly criticize the failure to explicitly address power relations among states or to incorporate them into the framework. Wendt (2001: 1035) claims that powerful states attempt to embed their practices into the design of regimes. Duffield (2003: 417-418) notes the prevalence of power-based and capability-based explanatory variables in many accounts of international institutions, and he rejects the limited discussion of the concept that occurs in the concluding chapter of the special issue. More broadly, Duffield criticizes the project for failing to account for the interests of the actors; that is, the preferences states have over the design of international institutions (2003: 417). This failure to explicitly incorporate preferences also is discussed at the end of the original Rational Design volume (Koremenos, Lipson and Snidal 2001b: 1072-1075), but the preferences of the actors who design international institutions are not incorporated directly into any of the sixteen rational design conjectures.

The last, and most overarching, criticism of the rational design project is what Duffield labels the "limitations of the empirical evaluation." Duffield (2003: 427) claims the project's failure to evaluate the analytical framework empirically has "impeded the achievement of the project's goal of offering a systematic account of institutional design features." Both Duffield and Wendt are skeptical of the case study evidence, noting that a majority of the case studies relate to more rationalist economic institutions, where one might expect the conjectures to apply—a criticism that is largely accepted by Koremenos and Snidal (2003: 439). Duffield (2003: 424) also notes another problem with the choice of case studies, namely that "few of the

cases fit neatly with the project's stated focus on the rational design of explicit, negotiated arrangements." He asserts: "But given that the Rational Design project is still in its early stages, empirical testing should be tightly restricted to cases that are indisputably at the heart of the project's ambit, namely the design of explicit, negotiated agreements" (Duffield 2003: 428).

Duffield not only is clear on what types of cases he thinks should be used in testing, he also advocates more systematic and precise empirical testing of the rational design conjectures. He seems to prefer the use of large-*n* statistical tests to evaluate the conjectures, a point noted by Koremenos and Snidal (2003: 439), who write: "…we agree with Duffield that more cases and a wider variety of cases would be desirable."

Even if one were to obtain large-*n* data on the design of explicit, negotiated agreements, one major concern is how to operationalize the independent and dependent variables of the rational design project? Duffield is particularly forceful in his criticism on this issue. The original analytical framework, he claims, "offers no guidance on this vital methodological issue to those who would attempt to evaluate the conjectures." He further challenges the consistency of measurement in the existing case studies and claims that one can almost always find some evidence of "uncertainty" in any strategic situation.

Koremenos and Snidal agree with many of Duffield's comments about the empirical evaluation of the project, and concur with his call to pursue large-*n* empirical tests of the theoretical framework. They freely admit that "Duffield's most valuable critique regards the empirical shortcomings of the Rational Design project" (2003: 437). They elaborate on the needs for this next step and the promises and challenges one is likely to face:

> "More general operationalization would be valuable in opening up the possibility of large-*n* quantitative work. The empirical analysis of international cooperation is severely hampered by the lack of large data sets of the sort available for

> security studies. This large-*n* analysis would provide an important complement to the case studies that have provided the typical tool for empirical investigation." (Koremenos and Snidal 2003: 441-442)

A review of the rational design project and its critics reveals a promising theoretical framework that is in need of careful, systematic empirical testing using data on variation in institutional design within explicit, negotiated agreements. As we now discuss, the universe of bilateral investment treaties, and their variation in terms of centralization and flexibility, provide an excellent set of cases for testing the Rational Design framework.

Bilateral Investment Treaties and the Rational Design Framework

In the past few decades bilateral investment treaties (BITs) have become a major pillar of the institutional architecture that regulates international economic affairs. The first BIT was signed by Germany and Pakistan in 1959 and throughout subsequent decades the number of BITs has climbed steadily and currently stands at more than 2,500. The coverage of BITs is vast—nearly all countries in the world are parties to BITs and many countries have signed dozens of BITs with a variety of diplomatic partners.[3] The pairs of states that have signed BITs are quite heterogeneous. Many of the early BITs were signed by European countries and countries in Asia and the Middle East. Subsequent BITs tended to be signed by a rich-country and developing-country pair, although recent years have seen a significant percentage of BITs signed by pairs of developing countries. The only combination of countries who do not sign BITs are pairs of OECD countries.

Regardless of the signatories, BITs are concluded with the explicit goal of increasing flows of foreign direct investment (FDI) between the signatories. The precise reasons why two countries sign a BIT vary (Elkins, Guzman and Simmons 2006), but in general BITs serve as a

[3] For example, as of mid-2007 the United States has 40 BITs in force with a variety of countries from South America, Eastern Europe, Central and West Asia, North Africa, and Sub-Saharan Africa.

commitment device that serves mutually reinforcing purposes for both countries. For capital-rich "home" countries who are the likely source of FDI, BITs provide a general degree of protection for their outwardly-investing firms. The treaties encode a range of absolute and relative standards of treatment for the firms and their investment, and perhaps most importantly, they give firms recourse to dispute settlement in the event of a dispute with the host government. For host governments, particularly those who may have a difficult time attracting FDI from skeptical firms abroad, BITs serve as a way to credibly commit to the protection of foreign investment. Credibility is achieved because the BITs mandate appropriate compensation in the event of a "taking," and outline procedures by which the host government may be taken before an international arbitration body if it allegedly violates the terms of the BIT.

These procedures within BITs regarding investor-state dispute settlement are perhaps the most important and revolutionary component of the treaties (Franck 2006; Dolzer and Stevens 1985; Vandevelde 1992; Yackee 2007). For centuries governments have argued over the legitimacy of expropriation and terms of compensation for expropriation. In 19th century era of gunboat diplomacy, several countries adopted the Calvo Doctrine, which held that foreign investors could not make claims in their home countries or depend on diplomatic intervention until potential local remedies were exhausted.[4] In the wake of a large number of expropriations after the Mexican Revolution, the U.S. government, under the leadership of Secretary of State Cordell Hull, established a policy (known afterwards as the Hull Rule) that states who expropriate property must provide "prompt, adequate and effective payment." In the early 1960s, newly independent states used their numbers in the UN General Assembly to pass a resolution that allowed expropriation in the national interest as long as there was some vague

[4] The doctrine is named for Carlos Calvo, an Argentine historian, whose main work, *Derecho internacional teórico y práctico de Europa y America*, was published in 1868. This was of course more favorable to host states, and has been popular among developing countries in particular.

notion of "appropriate compensation". Today, however, BITs often allow investors to directly challenge host-government actions through a neutral, World Bank-affiliated arbitration institution (ICSID, and the pendulum has shifted back to the side of home governments and their multinationals.

The investor-state dispute settlement provisions within BITs are not only important; they are inconsistent. That is, they differ. As were the editors of the original Rational Design volume, we are motivated by a simple observation—that investor-state dispute settlement provisions vary, most likely in important and systematic ways.[5] The "strongest" dispute settlement clauses within BITs provide for dispute settlement through the aforementioned ICSID. ICSID is distinguished by a few unique features: its affiliation with the World Bank, the comprehensive nature of its arbitration services, the public nature of its awards and the information it provides, and its general predominance as the primary investor-state arbitration venue. Although a majority of BITs allow dispute settlement through ICSID, some of these BITs also identify other dispute settlement venues or mandate certain steps before the dispute may be submitted to ICSID. Among the alternatives to ICSID are arbitration through other permanent institutions such as the Arab Investment Court or the arbitration court of the International Chamber of Commerce. Another option is ad hoc arbitration using predetermined rules, such as those provided by UNCITRAL, the United Nations Conference on International Trade Law. Regardless of dispute settlement venue, BITs also vary in terms of the process by which disputes are submitted. Some BITs require countries to consent to arbitration on a case-by-case basis, while in other treaties governments pre-commit to international arbitration if a

[5] This motivation is identified on the first page of the introduction to the Rational Design volume. Koremenos, Lipson, and Snidal write: "We begin with a simple observation: major institutions are organized in radically different ways" (2001a: 761).

dispute should arise. Put simply, BITs vary in their degree of centralization and flexibility of dispute settlement arrangements.

This dispute settlement variation in BITs is not only substantively interesting, but also provides an ideal setting to test several of the core rational design conjectures. First and foremost, BITs are explicit, negotiated agreements. One of the primary criticisms levied earlier was that empirical tests should be conducted on negotiated agreements, and the collection of BITs in our dataset fit this criterion perfectly. Second, our focus on bilateral treaties governing foreign direct investment holds constant many potentially conflating factors that otherwise would complicate empirical evaluation. All of the treaties concern the regulation and protection of FDI and are similar on nearly all dimensions other than centralization and flexibility of dispute settlement design. Therefore, we do not need to control for the heterogeneity one would encounter if analyzing treaties across multiple issue areas, which might differ in terms of salience, incentives to defect, and other "rules of the game." A related point is that we control for the number of actors by examining only bilateral treaties. For example, we do not need to control for the number of signatories to the treaty, which Koremenos (2005, 2007) does in recent empirical studies of treaty design. Third, BITs exhibit considerable variation on those dimensions we do wish to explain. More than 180 countries are signatories to BITs and these countries span various regions, economic classifications, political systems, and historical experiences. The landscape of investment arbitration—the use of ICSID, patterns of expropriation, and changes in FDI—also varies considerably over this time period. In sum, BITs present a nearly perfect match for testing the internal validity of several of the rational design conjectures.

We focus on propositions related to centralization and flexibility because these are the two institutional dimensions on which there is important variation in BITs. Recall that the conjectures regarding centralization and flexibility were deemed the most promising based on the case studies in the original 2001 Rational Design volume. Four of the seven original rational design conjectures related to centralization and flexibility are identified and tested empirically using data on the design of BITs:

C1: CENTRALIZATION increases with UNCERTAINTY ABOUT BEHAVIOR.

C2: CENTRALIZATION increases with UNCERTAINTY ABOUT THE STATE OF THE WORLD.

C4: CENTRALIZATION increases with the severity of the ENFORCEMENT problem.

F1: FLEXIBILITY increases with UNCERTAINTY ABOUT THE STATE OF THE WORLD.

The three conjectures not tested (one on centralization and two on flexibility) simply do not "fit" because they relate to design influences that are held constant in our design, namely the number of actors and the distribution problems among them. The four conjectures we do consider are among those that were the most applicable and most supported in the original case studies.[6]

Measurement of Dependent Variable Concepts

By far the biggest challenge in attempting to conduct large-*n* tests of the rational design propositions is to properly conceptualize and measure the variables of interest. As noted by Duffield, the original Rational Design volume offers very little guidance for translating abstract concepts like "uncertainty" or "centralization" into precise, operational indicators. Walter Mattli's (2001) case study in the original Rational Design volume provides some guidance, since

[6] Proposition F1, in fact, was the most supported conjecture among the various case studies.

he discusses the operationalization of certain rational design concepts in his study of private commercial arbitration between two non-state actors. Yet Mattli's study is an imperfect guide for our study of investor-state arbitration design, since he examines choices regarding the *use* (not *design*) of arbitration institutions, he looks at commercial actors and not states, and he does not quantify his measures.

We are as comprehensive and objective as possible in devising operational indicators of the rational design concepts and testing the propositions. Our approach is to identify the widest possible range of empirical indicators for any given concept and to incorporate as many plausible indicators for a concept as is reasonable. We scour the universe of published articles on the rational design project to identify all possible causal logics for each proposition—and all associated indicators that might capture each logic that has been articulated. In our empirical tests, we consider each plausible empirical indicator for a rational design independent variable, and examine the relationship between each causal indicator and several indicators of the dependent variables (centralization or flexibility), as determined by theory. For those indicators that reveal the predicted relationship, we then examine their validity in a multivariate framework that employs a few carefully-chosen control variables. This careful process of operationalization and empirical evaluation allows us to assess the degree to which each RD proposition is supported by the empirical evidence.

Centralization

The idea of BIT "centralization" captures the degree to which the investment treaty includes procedures for dispute settlement that rely upon an independent, third-party institutions to enforce the terms of the BIT. This conception of international organization centralization—centralization of enforcement—is perhaps the most common way to conceptualize centralization

within an international institution (Koremenos, Lipson, and Snidal 2001a). Although the investment treaties are negotiated bilaterally, the enforcement of those treaties varies along a continuum or arrangements that range from more centralized to less centralized. Two related components, preconsent to international arbitration and the degree of institutionalization of arbitration, capture the degree to which dispute settlement within BITs is centralized. Three primary empirical measures are therefore generated to measure "centralization": one which identifies whether the parties preconsent to international arbitration, a second which captures the degree to which rules for dispute settlement are institutionalized, and a third which is an index that combines these first two components.

The first component of BIT centralization captures whether the signatories consent *ex ante* to international arbitration of disputes (Yackee 2007). Some treaties contain articles in which both state parties agree in advance to any international arbitration that results from an investment dispute. Without this clause, for most arbitration settings (including ICSID), an investor must obtain the written consent of the state subject to arbitration. While such consent is often given, having a preconsent clause creates a timelier, more efficient arbitration process by removing any possibilities for the host state to contest the dispute before it ever begins. As such, we code treaties in which both state parties agree in advance to international arbitration as equal to 1 for our *Preconsent to International Arbitration* variable.

The second component of BIT "centralization" captures the degree to which procedures for dispute settlement are institutionalized. Mattli's chapter on commercial arbitration in the original Rational Design volume serves as a useful guide here. For Mattli, a key distinction is whether arbitration takes place through a permanent arbitration body as compared to an ad hoc arbitration procedure. Standing bodies like ICSID, the International Chamber of Commerce, or

the Arbitration Institute of the Stockholm Chamber of Commerce are considered "institutional" because they consist of formal arbitration centers, which typically possess more rigid timelines, stronger information reporting and gathering functions, and more extensive monitoring. Among these institutionalized arbitration options, ICSID stands out as the most centralized due to its affiliation with the World Bank, its position as the dominant investment arbitration venue, and the unusually large amount of information it disseminates on the cases it hears. Institutional arbitration is contrasted by Mattli with ad hoc arbitration, which does not rely upon the services of a standing arbitration center, defines arbitration rules on a case-by-case basis, and rarely makes arbitration outcomes public. Within the universe of BITs, we see both institutional and ad hoc arbitration options specified. However, in some cases there is no option for either type of arbitration and instead dispute settlement is handled by domestic courts, in the most decentralized manner possible. Based on the above discussion, we code a variable for the *Institutionalization of International Arbitration* as equal to: 0 if no international arbitration (ad hoc or institutional) is specified in the BIT, 1 if only ad hoc arbitration is specified, 2 if any institutional arbitration option is specified, and 3 if ICSID is specified as the sole option for institutional arbitration.[7]

Because both preconsent and institutionalization of arbitration are important, we also combine both components into a joint index of centralization. This index measure serves as our primary measure of centralization in the empirical tests, although we also consider preconsent

[7] The international arbitration options that are classified as "institutional" are: ICSID, International Court of Arbitration of the International Chamber of Commerce, Arbitration Institute of the Stockholm Chamber of Commerce, Cairo Regional Centre for Commercial Arbitration, Arabian Investment Court, Permanent Court of Arbitration (Hague), Common Court for Justice and Arbitration, Inter-American Commercial Arbitration Commission, Islamic Conference, International Arbitral Centre of Austrian Federal Economic Chamber, Common Court of Justice and Arbitration of the Organization for African Business Law at Abidjan, and Istanbul Chamber of Commerce Arbitration Centre. International arbitration procedures that are classified as "ad hoc" include: the use of UNCITRAL rules, the use of modified UNCITRAL rules, and any other procedure within BITs that is defined on an ad hoc basis.

and institutionalization separately as measures of centralization. The index merges both components into a single scale or *Institutionalization and Preconsent Index*, which is coded as follows: 0 if no international arbitration is specified (which by definition also means *Preconsent* is zero), 1 if only ad hoc arbitration is mentioned (regardless of preconsent), 2 if any form of institutionalized arbitration is specified but there is no preconsent, 3 if any form of institutionalized arbitration is specified along with preconsent, and 4 if ICSID is specified as the only institutional options and there is preconsent. We also consider several additional specifications of a joint index, and in nearly all instance the results are consistent across different indices.[8]

Flexibility

The concept of BIT "flexibility" reflects the degree to which an investment treaty provides the signatories with a range of options for settling investment-related disputes. This conceptualization once again focuses on variation within the treaties' dispute settlement provisions. Most previous accounts of international organization flexibility have focused on provisions for renegotiation of treaties, which is one important source of flexibility (see Koremenos 2001, 2005, 2007). In the case of BITs, however, the vast majority of treaties specify a fixed and consistent period of time (ten years) before they can be renegotiated, which makes this definition of institutional flexibility irrelevant. Flexibility for resolving disputes, however, is now a central issue within BITs, since different avenues for dispute settlement may return different outcomes or different time horizons for dispute resolution. A dispute settled privately thorough ad hoc arbitration, for example, may turn out very differently and have

[8] Findings generated using the alternate indices are available from the authors upon request.

different implications than a dispute ending with an award by a three-person ICSID panel.[9] Therefore, flexibility of dispute settlement captures the range of dispute settlement choices that are provided for in a given BIT. Our focus on the flexibility of dispute settlement provisions is echoed by Mattli (2001: 926), who says that "(f)lexibility characterizes not only arbitral procedures but also the actual institutions of arbitration."

Our primary empirical measure of flexibility is a count of the number of different international arbitration venues specified in each BIT, regardless of the type of venue or the nature of the arbitration rules applied.[10] In other words, both ad hoc and institutional options are counted. Although this count of the *Total Number of Arbitration Options* serves as our primary measure of flexibility, we also consider an alternate measure that capture whether both *Ad hoc and Institutional Arbitration* options are available. This alternate, three-category indicator is equal to 0 if no ad hoc or institutional arbitration option is specified, 1 if only ad hoc or only institutional arbitration is specified, and 2 if both an ad hoc procedure and an institutional procedure is listed.

Measurement of Independent Variable Concepts

The focus now shifts to the conceptualization and measurement of the three independent variables: uncertainty about behavior, enforcement problems, and uncertainty about the state of the world. These independent variables are even more difficult to operationalize than the dependent variables: they are more abstract, there is less guidance provided by existing scholarship, and there is no substantive anchor to which to attach the concepts (as there was with investment arbitration and BITs, which benefit from the presence of an existing legal literature). An additional challenge is to determine how to measure these relevant independent variable

[9] Because of this very reason, Bolivia recently (May 2007) stated its desire to eliminate ICSID as an option for settling their investment disputes (by withdrawing from the ICSID convention).
[10] See fn. 7 for a complete list of all relevant international arbitration bodies (ad hoc and institutional).

concepts dyadically. Many of the concepts, such as uncertainty about behavior, may apply to either or both states and there is little guidance regarding how to combine the parallel measures for the two states into a single operational indicator. In most cases we apply a two-part strategy of first using the average value for the two states, and then substituting the minimum or maximum value between the two states—the most "relevant" value—as dictated by theory.[11]

Uncertainty about Behavior

This first centralization proposition (C1) holds that centralization of dispute settlement within BITs is a function of the level of certainty about behavior. The focus of C1 is squarely on the behavior of the other signatory and how much information is known (or not known) about its current and future behavior. In particular, how is the other state likely to behave after an investment agreement is signed and enters into force? Because there are many ways to think about certainty and information in this context, we examine multiple logics that underlie "uncertainty about behavior" and identify several dozen operational measures to capture these different logics.

One way to conceptualize the degree of uncertainty about another state's behavior is to consider the predictability of its political institutions. Four sets of measures are employed to capture variants of this general logic. The first set of empirical measures reflects the idea that there is there is less uncertainty about a state the longer that state, and its overall political regime, has been in existence. When a state has existed in its current form for a longer period of time, there is greater information about the state's preferences, decision making, and goals—and therefore its likely future behavior. The COW State System Membership (2005) data is used to generate measures of the number of years since each country gained its independence (*Years*

[11] This is equivalent to using the "weak link" coding rule commonly employed in quantitative studies of international military conflict.

since Independence). We take the average and minimum values between the two BIT signatories and hypothesize that as the number of years since independence increases, the likelihood of centralization decreases due to this greater certainty. We also employ indicator variables (*Recent Independence*) to capture whether either or both countries recently has become independent (within the past 10 years; also 5 years and 15 years), in which case centralization is predicted to be more likely. Similarly, we also measure the length of time that the overall political regime has been in place in each state. The logic here is that regimes with longer tenures generate less uncertainty, thereby making centralization less likely. The Polity IV dataset (Marshall and Jaggers 2005) is used to generate average and minimum values for the durability of each regime (*Regime Durability*, the time since a three-point change in the Polity score) and the Database of Political Institutions (Beck, et. al. 2001) is used to generate similar average and minimum values for regime tenure (*Regime Tenure*, the number of years the country has been democratic, autocratic, etc.).

A second, related, way to think about the predictability of political institutions is to focus on the tenure in office of the current political party or chief executive. The logic remains the same. The longer a ruling leader or his party has been in power, the more information is known about the ruling leadership and its likely behavior. This greater certainty, then, makes BIT centralization less likely. Two variables are employed to capture this dynamic, both taken from the World Bank's Database of Political Institutions (Beck, et. al. 2001). The first captures the length of time the current chief executive has been in power (*Tenure of Executive*) and the second captures the number of consecutive years the executive's political party has been in power (*Tenure of Ruling Party*). As before, both average values and minimum values are included in the empirical tests.

A third way to capture predictability of behavior is to focus on the degree of freedom of action given to the chief executive. In certain political systems executives face numerous constraints, whereas in other systems executives are largely free to pursue any course of action they choose. Systems where constraints on the executive are high should entail less uncertainty, since others know that there are limitations on what executives may do. In the absences of constraints, however, outside observers will have much more difficult time predicting how executives are likely behave on a range of issues, including those related to foreign investment. Two variables capture this logic. The first is the political constraints (*Political Constraints on Executive*) or "polcon" variable from Henisz (2002) and the second is the "checks" on executive variable (*Checks on Executive*) from the Database of Political Institutions (Keefer and Stasavage 2003). Once again, we examine the average and minimum values for both states for both of these indicators of executive constraints and hypothesize that greater constraints are associated with less uncertainty and therefore less centralization.

A final way to think about the predictability of political institutions is to consider the degree of transparency within states. This conceptualization of "uncertainty about behavior" is the one employed by Richards (2001) in his case study of air transport. The logic here is that there is less uncertainty in those countries where political institutions are open and transparent. Consequently, we should see less centralization of dispute settlement in BITs involving these types of transparent regimes. Two indicators are identified to capture transparency, and for each indicator the average and minimum values for the states are utilized. The first indicator is the Polity regime score, which captures the degree to which a country has democratic political institutions (*Polity Net-Democracy score).* The logic is that on average democratic political regimes are characterized by greater transparency and should require less centralization of

dispute settlement within BITs. Another indicator of transparency is the lack of corruption with the state (*Lack of Corruption*), which is taken from the International Country Risk Group (PRS 2007). The argument is that corrupt societies generate greater uncertainty about behavior, while less corrupt countries generate behavior that is more predictable and less uncertain.

An entirely different way to conceptualize "uncertainty about behavior" is to focus on a country's past behavior that relates to the issue at hand. In the introduction to the original Rational Design volume, Koremenos, Lipson, and Snidal (2001a: 788) reference the medieval law merchant and note that information about past behavior can affect the way in which one anticipates or understands future behavior. In the context of FDI, one can identify two different logics that link past reputation and future behavior. The first holds that past information about a state's previous transgressions toward FDI generate greater uncertainty about its future behavior toward foreign investors. If a state has expropriated assets in the past or violated the terms of similar investment treaties, then others will be much more uncertain about that state's future propensity to comply with the terms of its BITs. The logic here is that negative past behavior indicates increased future risk.

Using this logic, three types of information should generate greater uncertainty about the future FDI-relevant behavior of the other side: whether it has expropriated assets in the past, whether it has been accused of investment treaty violations in the past, and whether it has previously lost an investment ruling as a defendant. All three types of information signal that one cannot trust the other side to abide by the terms of a BIT and that one should feel uncertain about the other side's willingness to comply with the terms of any BIT it has signed. Because the number of such transgressions by each state increases monotonically over time, we examine five-year windows of past behavior and count of number of each type of action over that period.

Therefore, we have three variables of primary interest (*Expropriations in the past 5 years*, *ICSID disputes in the past 5 years*, and *ICSID losses in the past 5* years). We take the average and maximum values for each pair of states for each variable, and later consider both shorter (3-year) and longer (10-year) time windows. Data on expropriations comes from Kobrin (1987), Minor (1994) and Minor (personal correspondence). Data on ICSID disputes and ICSID outcomes is assembled by the authors from a variety of sources.[12]

The second and somewhat different logic views any information, even information about negative behavior, as helping to reduce uncertainty. In this case, governments can incorporate into their utility function decisive past information about another country's behavior, such as whether it did or did not expropriate or whether it consistently was or was not involved in ICSID disputes. What generates uncertainty, however, is the lack of consistent information about the other state's past behavior. Put differently, the high variance of a country's past behavior generates uncertainty. This alternate logic echoes and addresses Wendt's (2001) claim that Rational Design mistakenly equates uncertainty with "risk" (probabilities over known outcomes) instead of with a genuine lack of information, or the "truly unknown" (Koremenos, Lipson, and Snidal 2001b: 1064). In this case, we first assemble data on each state's number of the following during the past ten years: a) expropriations, b) ICSID disputes in which it was a defendant, and c) ICSID disputes in which it lost a ruling as the defendant. Using this information we then calculate the variance of each indicator over that previous ten year period (*Variance in Expropriation Behavior* [10 years], *Variance in ICSID dispute behavior* [10 years], *Variance in ICSID loss behavior* [10 years]). As above, we then take the average value for both states as well as the largest value among the two states.

[12] A comprehensive list of ICSID disputes can be found at: http://www.worldbank.org/icsid/cases/cases.htm. Additionally, the American Society on International Law, the International Institute for Sustainable Development, and the website Investment Treaty Claims (investmenttreatyclaims.com) provided additional information.

The third and final set of indicators for "uncertainty about behavior" is drawn from Mattli's (2001) article on the use of private commercial arbitration, in which he focuses on the closeness of relationship between the two parties as a proxy for their relative uncertainty about the behavior of one another. Although Mattli looks at arbitration *use* as opposed to arbitration *design*, the logic is transferable. States that have close relationships to one another are less likely to require centralized legal arrangements, since they tend to have better information about the other. Because uncertainty is low, they can eschew formal, centralized dispute settlement and instead rely upon informal and decentralized methods of resolving disagreements. Several types of bilateral linkages, such as alliance ties, colonial ties, and institutional similarities might serve to reduce the uncertainty among BIT signatories. Therefore, we create four relevant indicators: i) alliance ties between the two countries (*Alliance Ties*)[13]; ii & iii) colonial ties, either in the form of either some colonial linkage (*Any Colonial Ties*) or a direct colony-colonizer relationship (*Former Colony*)[14], and iv) legal system ties (*Common Legal System*), in which the two countries share the same legal system.[15]

Severity of Enforcement Problem

This second centralization proposition identifies the "severity of the enforcement problem" as a major impetus for the creation of centralized dispute settlement procedures within BITs. In the introduction to the original Rational Design volume, Koremenos, Lipson and Snidal define enforcement problems as "the strength of individual's actors' incentive to cheat on a given agreement of set of rules" (2001a: 776). All BITs address the same international issue (FDI) and

[13] Data on alliance ties come from the Alliance Treaty Obligations and Provisions (ATOP) Data Set (Leeds et. al. 2002). Our indicator captures whether the home and host states possess any type of alliance tie.
[14] Data on colonial relationships come from the ICOW Colonial History Data Set, version 0.4. The first measure captures whether the two states were colonies of one another or had a common colonial heritage. The second measure simply captures whether either state was a former colony of the other.
[15] Data on the type of legal system in each country (Common, Civil, Islamic, Mixed) are taken from Powell and Mitchell 2007 and also considered along with data from Djankov, et.al. 2003.

encompass the same general strategic structure, yet it is clear that some actors have greater incentives to "cheat" on their BITs than others. Although BITs promise long-term gains to both states due to the economic gains obtained through increased investment, the leader of a state that hosts FDI might have short-term incentives to seize a foreign asset or change the terms of investment to generate a short-term boost in domestic political standing. Which states, then, would have the greatest incentive to "cheat" and thus would generate the most significant enforcement problems? The enforcement problem can be traced to two general components within each state: 1) the economic incentives to cheat, and 2) the ease with which cheating can be accomplished.

The economic incentives to cheat may reflect the "supply" of assets that are available to be taken, or they make reflect a state leader's "demand" to deviate from BIT obligations. The clearest supply-side proposition is that incentives to cheat will be higher, and enforcement problems will be greater, as the amount of inward FDI increases. When there is more inward investment, *ceteris paribus*, leaders will be more tempted to seize assets or engage in a "taking" simply because there is more to take. Related measures of inward bilateral FDI flows (*Bilateral FDI Inflows*) and inward bilateral FDI stock (*Bilateral FDI Instocks*) are used to capture the economic temptations that face leaders who have signed a particular BIT. These data are directed-dyadic for each member of a BIT, and are taken from the OECD's International Direct Investment Statistics (OECD 2007). Because the coverage of the dyadic FDI data is limited, we also employ a country-level measure of inward FDI stocks (*Total FDI Instocks*), which is taken from UNCTAD's (2007a) Foreign Direct Investment database. Although this measure does not capture the direct economic incentives within a particular dyadic BIT—because it is measured at the country-level—it still captures the overall incentives to "cheat" facing each leader and the

data coverage is notably more extensive. Consistent with earlier practice, we take the average value of the two countries' inward FDI stock, and then also take the largest value of the two countries.

A second set of economic variables capture the "demand" to cheat possessed by each BIT signatory. Regardless of the supply of foreign capital, some political leaders will have a greater need to engage in a "taking" when they face poor short-term economic conditions. Given short time horizons, leaders may decide that it is rational to engage in a "taking" as a way to address short-term economic problems. Three indicators capture the degree to which economic conditions in a state are poor, and thus where short-term incentives to cheat present a greater enforcement problem.[16] The first indicator captures the amount of GDP growth (decline) in the country within the past year (*GDP Growth Rate*). When growth is low, incentives to deviate from BITs are high and the enforcement problem is thereby exacerbated. The second and third economic indicators capture the current rates of inflation (*Inflation Rate*) and unemployment (*Unemployment Rate*), respectively. When these rates are high, leaders become more willing to seize foreign assets and thus create a bigger enforcement problem. As in similar cases before, we take the average values for the two states for each of these rates, and examine the smallest of the two growth rates and the largest of the inflation and unemployment rates.

Enforcement problems also become more severe in the absence of domestic institutions that reduce cheating. Cheating becomes more lucrative for states when it is easier to accomplish; that is, when there are few internal safeguards in place to deter such cheating. On the other hand, enforcement problems become less severe when domestic institutions help to foster compliance with BITs. Two domestic legal arrangements capture the degree to which domestic institutions exacerbate or ameliorate the enforcement problems inherent in BITs.

[16] All indicators are taken from the World Bank's *World Development Indicators.*

When legal institutions within the state receiving FDI generate respect the rule of law and function according to legal principles, it becomes considerably more difficult for leaders to successfully engage in "takings" of foreign assets.[17] Their actions are likely to be scrutinized and condemned by well-performing domestic courts. Furthermore, foreign actors are likely to be successful in addressing government "takings" directly through recourse to these higher quality domestic institutions in the host state, who are likely to uphold the valid claims of these foreign actors. The first measure captures the degree to which each state is characterized internally by a respect for legal institutions and the rule of law. This indicator (*Respect for Law and Order*) is taken from the International Country Risk Guide (PRS 2007). We consider the average value of the two states on this indicator, and also the lowest value between the two states. Similarly, some scholars have claimed that common law systems provide stronger legal protection than other types of systems (La Porta, el.al. 1998; Powell and Mitchell 2007) and thus we include a second indicator: whether the signatories have *Common Law* system. We include variables that capture whether neither of the signatories has a common law system and whether only one has a common law system.

Uncertainty about the State of the World

Uncertainty about the "state of the world" is the final independent variable considered. It is unique because it is predicted to affect not only centralization of investment arbitration, but also the flexibility of investment arbitration. It also is one of the most challenging concepts to measure empirically. Koremenos, Lipson, and Snidal provide an initial definition that is very broad. "Uncertainty about the state of the world," they claim "refers to states' knowledge about the consequence of their own action, the actions of other states, or the actions of international

[17] Takings is the legal term that incorporates both outright expropriations as well as less blatant violations of investment treaty commitments.

institutions" (2001a: 778). Mattli's case study provides somewhat more precision, as he refers to this type of uncertainty as reflecting "…the parties' relative lack of information, for example, about the legal environment (the laws and integrity of judges) in which arbitration takes place."[18] Uncertainty about the state of the world might also reflect a nascent regime in which over time the actors obtain "more certainty about how the agreement operates and a better understanding of its costs and benefits" (Koremenos, Lipson, and Snidal 2001a: 794). In this regard, when governments are unsure about the implications of FDI institutions like investment treaty wording, arbitration rules, or the relevant standards of international law, they may prefer greater centralization as well as greater flexibility. However, uncertainty does not necessarily decrease over time, since rapid development or "shocks" might generate heightened uncertainty. In periods of less uncertainty, then, we expect less centralization and less flexibility.

A first set of indicators reflect the changing degree of information that actors have about the overall regime for bilateral investment. Over time, the ebbs and flows of new information, revealed by waves of treaty-making and rulings by ICSID panels, may affect the level of uncertainty for all states. Therefore, we consider the global total of each of the following BIT and/or ICSID developments during the previous five-year period, since each type of action reveals important information about the "state of the world" regarding investment and thus decrease uncertainty.

The first of the four indicators tallies the number of ICSID dispute submitted in the past five years (*Global ICSID Disputes in the past Five Years*). A second indicator counts the total

[18] However, Mattli's discussion of "uncertainty about the state of the world" also invokes several indicators previous incorporated under the headings "uncertainty about behavior" and "severity of the enforcement problem." This calls attention to a major challenge confronted repeatedly in our empirical endeavor: many of the concepts and operational measures could fit in multiple categories. For the reasons laid out in the text, we believe the classification of indicators presented here most faithfully captures the theoretical prediction of the rational design framework.

number of rulings by ICSID panels during that same five-year period (*Global ICSID Rulings in the past Five Years*). Both of these actions through ICSID reveal important information regarding increases or decreases in overall state compliance with BITs. Rulings by ICSID panels also generate greater certainty regarding the overall costs of BIT violations, clarify rules regarding acceptable behavior, and highlight the changing distributional implications that BITs and BIT-related disputes have. A third indicator, the total number of BITs signed worldwide in the past five years (*Global BITs in past Five years*), also reveals information about overall patterns in the FDI regime (how many states are pursuing greater FDI or greater FDI protection, the number of new competitors for foreign capital, etc.). A fourth indicator captures the total number of global expropriations in the past five years (*Global Expropriations in past Five Years*). Once again, information on expropriation actions speaks generally to the fluctuating overall norms regarding treatment of foreign investment and the distribution of costs and benefits of the FDI regime. In all of these cases, recent BIT or ICSID activity means less uncertainty about the current state of the world, which reduces the need to include centralized or flexible arrangement within BITs

A second set of indicators capture (in)stability in FDI patterns in the recent past. When global patterns of FDI stocks and flows are stable, actors have greater information about the state of the FDI world and a reduced need to seek centralization and flexibility within BITs. On the other hand, when global patterns of FDI are changing rapidly, we expect states to include both centralized and flexible procedures for dispute settlement in BIT as a hedge against this ongoing uncertainty and any unforeseen developments. Two indicators are employed to capture the certainty of FDI patterns. The first indicator captures the variance in FDI flows during the previous five years; the second indicator examines variance in the same FDI flows variables, but

over a narrower three-year window (*Variance in Global FDI Flows*). Data for these variance-based measures once again come from the UNCTAD foreign direct investment database.

Empirical Tests

The four relevant rational design propositions are now evaluated empirically using the measures discussed previously. Each proposition is assessed one at a time, in two stages. The first stage consists of an exhaustive series of bivariate analyses, in which each operational measure for the independent variables (uncertainty about behavior, severity of the enforcement problem, uncertainty about the state of the world) is regressed on each operational measure for the relevant dependent variable (either centralization or flexibility). These bivariate tests are intended to provide a simple but comprehensive assessment of each rational design proposition by reporting the direction and significance of all possible bivariate combinations of independent variable and dependent variable measures relevant to each proposition. In the second stage of analysis, these bivariate analyses for each proposition are followed by a set of multivariate tests for that same proposition. This time, however, only those independent variable indicators that are statistically significant in the hypothesized direction in the bivariate analyses are considered, and each is included one-at-a-time in multivariate regressions. In each case, the significant indicator is regressed on the primary dependent variable for centralization and flexibility, along with a series of control variables.

The control variables in the multivariate analyses capture some of the omitted concepts that are identified as relevant in the Duffield and Wendt criticisms. First, the relative power of the two BIT signatories is captured by a term that measures the difference in GDP/capita of the two countries.[19] The inclusion of this term is intended to incorporate power as an alternate explanation for BIT design. In this context, greater differences in power should be associated

[19] Data on GDP/capital is taken from the World Bank's *World Development Indicators*.

with greater centralization. This is because the most powerful countries, who are likely to invest heavily in their less-powerful partners, will want to place authority for dispute settlement in the hands of centralized enforcement procedures. Their sizeable investment will be better protected if any resulting disputes can be arbitrated through neutral, centralized institutional arrangements. Furthermore, in the face of significant power disparities, the more powerful country is likely to obtain its preferred negotiating outcomes, which is greater centralization. The effects of relative power on flexibility are less straightforward, as two competing logics are plausible. On one hand, powerful countries may prefer greater flexibility in dispute settlement, since this provides them and their multinationals with a greater range of options through which they may challenge any "taking" that occurs by the host government. They might also be able to "forum shop" to find the arbitration option that best serves their interests. Therefore, we generally believe that greater flexibility can work to the advantage of powerful states and thus we posit that greater power disparities should be associated with greater flexibility in dispute settlement. On the other hand, greater flexibility might be preferred by relatively weak "host" countries. When many possible venues for dispute settlement are allowed, relatively weak governments that have engaged in a "taking" might be able to delay any challenge to their action or use debates over jurisdiction to slow down any arbitration proceedings. In this way, flexibility might work to the advantage of weaker states and against the interests of more powerful states. According to this alternate logic, then, greater power disparities should be associated with less flexibility.

In addition to power, a second important control variable captures the potential importance of domestic political interests in investment treaty design. The most relevant domestic actors in this case are multinational corporations, who have a strong interest in the design of BITs. Multinational corporations certainly will have a strong preference for

centralization of dispute settlement, for all of the reasons just discussed. In the event of a dispute with a host government, multinational corporations will want to have direct recourse to challenge host government actions through centralized arbitration institutions. In terms of flexibility, however, the same two competing logics apply. On one hand, multinational corporations will prefer to have as many options as possible for contesting host government actions. Therefore, they may prefer BITs to include a greater amount of "flexibility." On the other hand, multinational corporations may fear that flexibility will work to the advantage of host governments, who can use the flexibility to delay arbitration while debates about venue, jurisdiction, and the proper course of action play out. To assess these arguments, we include as a control variable the percentage of the world's largest multinational corporations that are headquartered in the two states. Data for this measure are taken from *Forbes* magazine's annual list of the world's largest MNCs.[20]

Added to these two core control variables, which are included in all multivariate tests, are two additional control variables which appear sequentially in a pair of additional multivariate regressions. One of the new variables controls for the two states' past behavior in designing BITs. When attempting to predict centralization, a variable is included that takes each state's past average amount of centralization (as measured by the preconsent + institutionalization index, which serves as our primary measure of centralization) and computes the average of these two "past centralization" averages. A parallel measure is inserted in the multivariate regression for flexibility, in which we include the average of the two states past averages for flexibility (total number of arbitration options, which serves as our primary flexibility dependent variable).

[20] To standardize the Forbes lists across years (1980-2002), we count all MNCs that have revenues above a constant threshold (approximately $5 billion in 1980 US dollars). We then identify the percentage of those MNCs in each year that are from each country in our data set. For 2003 we use the Forbes Global 100 and for 2004-2006 we use the Forbes Global 200 list. For years before 1980, we use the values from 1980, although the inclusion or exclusion of the pre-1980 cases does not affect our substantive conclusions.

The second additional control variable is actually a series of dummy variables that control for time trends. We include a dummy variable for each five-year time period from 1960-2005, omitting the indicator for the period 1990-1994.[21]

The bivariate and multivariate analyses below are conducted on a set of 1,473 bilateral investment treaties concluded between 1959 and the present. We code the centralization and flexibility of each of these treaties, in the manner described earlier. These 1,473 treaties represent the universe of treaties for which we are able to obtain the treaty text.[22] As far as we can discern, there are no overwhelming systematic patterns in the treaties that we are unable to obtain. Missing data is not a major problem in the analysis, since most bivariate and multivariate analyses are conducted on at least 1,300 of the treaties (if not 1,400 or more of them). In the multivariate analyses, findings for the control variables are based on the estimation specification that yields the largest sample size.[23] All estimations are conducted using ordered or binary probit, as appropriate for the nature of the dependent variable.

Findings for C1: Uncertainty about Behavior and Centralization

The bivariate and multivariate results for proposition C1 are presented in Tables 1 and 2, respectively. Empirical findings generated using the joint index of centralization, which is our primary dependent variable measure, are presented in the first column in Table 1. These are followed by the findings for preconsent and institutionalization in the second and third columns, respectively. Among the many bivariate relationships evaluated in Table 1, only a few scattered

[21] We use five-year periods instead of yearly dummies, since some of our operational measures are constant across all countries in a given year.
[22] The text of these BITs is available from the UNCTAD Investment Instruments Online archive, which is the primary entity that systematically collects and publishes the text of BITs.
[23] Recall that in all of the multivariate analyses, only a single indicator for the rational design independent variable of interest (uncertainty about behavior, enforcement problems, uncertainty about the state of the world) is included in any model, along with the control variables.

measures conform to the rational design predictions in a statistically significant manner. The few findings in support of rational design proposition C1 are highlighted in grey.

[Table 1 about here]

A handful of the findings about the predictability of political institutions are supported, but these findings are far from robust, and the overall picture is of a general lack of support for C1. The most stable finding is that centralization is more likely when the ruling party of the newest partisan regime or both partisan regimes (the average of the two ruling parties) has been in power for a short period of time. In other words, the degree of uncertainty generated by the short tenure of the ruling parties leads to greater centralization.[24] These findings do not hold, however, when considering the tenure of leaders (as opposed to parties) or the tenure of the overall political regime, since the *Tenure of the* Executive, *Regime Tenure* and *Regime Durability* measures do not exhibit the predicted results. In many cases, in fact, the findings are the reverse of what was expected. There is some limited, but far from convincing, evidence that the uncertainty generated by newly independent countries leads to centralization. Among the mixed findings, the average time since independence leads to greater centralization (as measured by preconsent to arbitration) and the time since independence of the newest country leads to greater centralization (as measure solely be institutionalization of arbitration).

A second collection of supportive results reflects the ability of a country's past ICSID disputes to generate greater uncertainty about that state's future FDI-related behavior. In Table 1 we see that the more often the BIT signatories have been involved as defendants in ICSID disputes during the past five years, the more likely they are to include centralized arbitration

[24] Some caution should be exercised in interpreting these results, however, since a few hundred BIT cases are dropped due to missing data on the tenure of ruling political parties.

provisions in their BIT.[25] The results hold when the overall index of centralization or preconsent to arbitration is specified as the dependent variable, but they do not hold for institutionalization of arbitration (the third column). Parallel findings are returned when the variance of the state's past behavior as an ICSID defendant is substituted. The variance-based measures tap into genuine uncertainty—in the true sense of the term—about a state's past and future behavior for upholding as opposed to violating BIT commitments. The counts of the states' past ICSID disputes, on the other hand, are more a reflection of risk than uncertainty (Wendt 2001). Given the similarity of findings for both groups of variables, though, it is difficult to disentangle risk from uncertainty empirically, possibly because any history as a defendant is being picked up by both sets of measures.

[Table 2 about here]

The relatively few supportive relationships from the bivariate tests (Table 1) retain their signs and significance across the multivariate tests (Table 2), even if some relationships do become slightly weaker. In general, though, even after controlling for power, domestic politics, and past history, the uncertainty about behavior reflected by the newness of ruling parties and a recent involvement in ICSID disputes is associated with centralization. All six indicators in Table 2, when substituted one-by-one along with the control variables, remain robust predictors of centralization (using the joint index of centralization as the dependent variable).

One interesting and important finding from Table 2 is that the control variables, particularly those which reflect power and domestic politics, are robust predictors of centralization. Due to space constraints in the table we only report results from estimations using one of the six *uncertainty about behavior* indicators in Table 2. Yet across virtually all multivariate tests of C1, greater power disparities between the signatories and the presence of

[25] Findings remain supportive with three-year lags, but not with ten-year lags.

multinational corporations in the two states leads to greater centralization of dispute settlement provisions in BITs. In fact, the importance of these control variables, or "alternate explanations" for BIT design, are consistent across nearly all empirical tests and definitely are worthy of further exploration.

Findings for C4: Severity of the Enforcement Problem and Centralization

The findings for conjecture C4 parallel those for C1 in that few of the many indicators exhibit the hypothesized relationship. There is very little evidence in Table 3 to support this conjecture about the relationship between severity of enforcement problems and centralization of investment treaties. Only 2 of the 14 indicators in Table 3 receive anything close to robust support, these two indicators are sensitive to measurement and model specification choices, and their effects weaken in multivariate tests (see Table 4).

[Table 3 about here]

The consistent lack of findings for the indicators of enforcement problems is striking. First, there is absolutely no support for the idea that more severe enforcement problems, as measured by various economic incentives to cheat, result in greater centralization of BITs. None of the variables we consider, including lack of GDP growth, high unemployment, and high inflation, result in greater centralization of BIT arbitration as a safeguard against economic temptations to cheat. In fact, about half the coefficient estimates for these indicators have the opposite sign from what we expected, and there is no discernible pattern between these four economic indicators and any three of the measures of BIT centralization.

Similarly, the absence of strong domestic legal institutions does not result in greater centralization of investment arbitration. We expected to see more centralized arbitration provisions in BITs when one or both signatories had weak domestic legal institutions, since this

could exacerbate problems with enforcing BITs. Yet the coefficient estimates on all of the domestic legal variables display the opposite sign from what we predicted.

The only findings that provide any support for the conjecture are those regarding the size of FDI flows, which might increase the temptation for the countries to "cheat" on a BIT. Yet even these results must be qualified. For one, the most precise and conceptually valid indicators, those for the size of the *bilateral* FDI relationship, are not supported for two of centralization dependent variables, and are only weakly supported for the third (see the first four rows of Table 3). The validity of even this one weak relationship is called into question by concerns with missing data, since nearly ¾ of BITs are lost in the analyses due to the incomplete coverage of the OECD bilateral FDI data.

[Table 4 about here]

Therefore, we substitute a looser, more general, measure of the total inward FDI stock in the signatories. The measure of the incentives to "cheat" generates seemingly greater support for conjecture C4 in both the bivariate (Table 3) and to a lesser extent multivariate (Table 4) tests. However, the degree to which this country-level indicator really captures enforcement problems for a particular BIT is open to question, since the country-level measure aggregate all of a state's inward stock of FDI from all investors. Even if a large overall stock of FDI might temp governments to engage in a taking, it is not clear whether all investment partners should be equally fearful of some type of "cheating" occurring against them or their investors. Although the bivariate results are positive for both the average and largest amount of inward FDI (Table 3), the results weaken considerably in the multivariate analyses (see Table 4). The level of statistical significance falls in all cases, and the inclusion of time dummies washes out the effect.

Although there is some limited evidence that greater amounts of FDI create enforcement problems that lead to centralization, one can only reach this conclusion after stretching logic to apply to imperfect measures. Because of this loose matching, and the overall number of bivariate relationships that are not significant in the predicted direction, we reject the overall validity of C4, the conjecture about enforcement problems and centralization.

Findings for C2: Uncertainty about the State of the World and Centralization

This is the first of two sets of tests that focus on uncertainty about the state of the world, examined here in terms of the degree to which this uncertainty leads to BIT centralization. Three of the nine bivariate relationships examined in Table 5 provide some support for the proposition, but these positive findings are sensitive to the introduction of controls for time. Therefore, the overall picture is one of general skepticism in the face of at best modest support for the proposition.

[Table 5 about here]

There is little support for the idea that new developments within the FDI regime that reduce investor uncertainty, such as ICSID cases and rulings, newly signed BITs, and recent expropriations, lead to less centralization. The coefficients on three of the four indicators (the number of recent ICSID rulings, the number of recent ICSID disputes, and the number of recent BITs signed globally) have the incorrect sign (+) from what was predicted (-) in nearly all cases. In other words, the information revealed by these allegedly informative events does not lead to less centralization. The only such indicator that seems to provide some support is the measure for the number of global expropriations within the past five years. However, because of concerns about spurious correlation with general trends in FDI over time, we add a series of five-year time controls to the empirical tests. The previous effects of global expropriation vanish

after this step, as none of the significant relationships in the fourth row of Table 5 are replicated in the new, fifth, row of that table. A similar trend is detected in the multivariate tests (Table 6), in which the *Global Expropriations in the past 5 years* variable loses its predictive power after the introduction of controls for time.

[Table 6 about here]

There is somewhat more evidence for the uncertainty-generating (and centralization-inducting) properties of variance in global FDI over time, yet similar dynamics are at play that cast some doubt on the findings. The bivariate analyses in Table 5 provide mixed support for the idea that continually varying flows of global FDI generate greater uncertainty, which in turn leads to greater centralization. The variance-based measures of global FDI (within both 5-year and 3-year time spans) generate some initial support when certain centralization dependent variables are employed, namely the joint index of centralization (see the first column of Table 5). Yet these bivariate results are not only inconsistent across different dependent variables, they are once again washed out when controls for time are introduced into the bivariate analyses. Similarly, the indicators of variance in global FDI also return positive and statistically significant coefficients in the multivariate analyses (see Table 6), yet these otherwise strong relationships between global FDI variance (uncertainty about the state of the world) and centralization become statistically insignificant, or notably weaker, in the multivariate estimations using time controls (column 3 in Table 6). In sum, although there is limited evidence that the uncertainty generated by wide swings in global FDI leads to centralization, we remain largely unconvinced due to the inability of the findings to stand up to the introduction of time-based controls.

Two additional patterns from Tables 5 and 6 are worth noting. First, the findings for the uncertainty about the state of the world indicators vary considerably depending on which

"centralization" dependent variable one uses. Although more investigation is needed, it seems that the proposition only holds when one uses a form of "preconsent" as the dependent variable (as opposed to some form of "institutionalization"). Finally, the control variables for power and the interests of domestic actors (multinational corporations) remain positive and significant predictors of BIT centralization. The final rows in Table 6 demonstrate that centralization is much more likely in the face of great power disparities among the signatories, and a sizeable presence of multinational corporations within the two states.

Findings for F1: Uncertainty about the State of the World and Flexibility

The only conjecture we test regarding flexibility, which looks for its explanation to the degree of uncertainty about the state of the world, receives moderate support. In fact, conjecture F1 receives the most support of any of the four conjectures we test, although the evidence in support of F1 is far from overwhelming.

[Table 7 about here]

The first set of results once again focuses on the uncertainty generated by fluctuating information about the FDI landscape. Although one might expect ICSID disputes, ICSID rulings, and high number of new BITs to reduce uncertainty, we find no such evidence in Table 7 to suggest a bivariate link between these indicators and the degree to which BIT dispute settlement is designed flexibly. As was the case with uncertainty about the state of the world (as measured by recent global expropriations) and centralization, we see a pattern in which the introduction of temporal dummies casts doubt on one aspect of this flexibility conjecture. From Table 7 it initially appears as if a greater number of global expropriations compels states to design their BITs with more flexible options for dispute settlement. However, this relationship between the uncertainty generated by worldwide expropriations and greater of flexibility goes

away once 5-year time dummies are introduced into the bivariate estimations (see Table 7). These concerns are ameliorated somewhat by the multivariate tests, in which case this same "state of the world" variable has the predicted effect on flexibility, even after time controls are introduced (see row one of Table 8). As a result, we interpret the totality of evidence as providing modest and qualified support for the idea that uncertainty about the state of the FDI world (as capture by shifting patterns of expropriation) leads to greater BIT flexibility.

[Table 8 about here]

We encounter stronger and more consistent findings, however, when we probe the relationship between variance in global FDI in recent years and BIT flexibility. As global FDI fluctuates more—that is, as the world of FDI becomes less certain—governments build greater flexibility into the arbitration clauses of their BITs in order to deal with various uncertain contingencies. This relationship is highly robust across all relevant rows and columns in both Table 7 and Table 8. The finding are consistent for different variance lags for global FDI (3 and 5 years) across both the bivariate (Table 7) and multivariate (Table 8) estimations. Furthermore, in contrast to nearly all earlier tests, the inclusion of dummy variables for time does not change the direction or relevance of the relationship (although the magnitude of the coefficients drops slightly). This is true in both the bivariate and multivariate tests (as evidenced by the last and third-to-last rows in Table 7, and the third column in Table 8). Finally and more generally, the flexibility-inducing design effects of FDI variance are upheld when a series of control variables are introduced into multivariate tests (see Table 8). Among all the findings presented in this paper, the relationship between global FDI variance (uncertainty about the "state of the world") and BIT arbitration flexibility is the strongest and most robust. As a result, we conclude that

rational design conjecture F1 is supported partially (in terms of one of the underlying logics and one set of indicators) but robustly.

Several additional ideas about both flexibility, and uncertainty about the state of the world, are revealed in Tables 7 and 8. One obvious conclusion is that examining the variance of an empirical measure is a potentially fruitful way to operationalize "uncertainty" about the state of the world (or about behavior). The strong findings produced here, using variance in global FDI, suggest that scholars in the future may want to probe such types of variance-based measures more deeply. The control variables employed to explain flexibility also generate interesting results. Most notably, power differentials between signatories have little discernible effect on the degree of flexibility within the BIT. The relationship between power and flexibility appears to be positive, but the relationship is almost always insignificant. This is consistent with our ambivalent *ex ante* predictions about power and flexibility, where competing logics applied. Finally, it appears that multinational corporations oppose having flexible arrangements for settling investment disputes. The relationship between the percent of large MNCs and flexibility is consistently negative and statistically significant. Coupled with earlier findings on MNCs' preferences for centralization, it appears that multinational corporations prefer to have BITs with centralized dispute settlement (perhaps through ICSID) as the only options for settling investment disputes with governments that host investment.

Conclusion

An exhaustive series of empirical tests reveals little support for the rational design framework as an explanation for variation in bilateral investment treaties. Although BITs vary considerably in terms of centralization and flexibility of arbitration provisions, very little of this variation—particularly in terms of centralization—can be attributed to uncertainty about

behavior, uncertainty about the state or the world, or the severity of enforcement problems. Only a small percentage of operational indicators for any one rational design concept are statistically significant in the hypothesized direction in our empirical tests. Furthermore, some of these more supported indicators are among the indicators that provide the loosest conceptual match to the rational design construct, and several of these indicators receive less support once control variables are introduced. Findings for rational design conjecture C4 (uncertainty about the state of the world leads to flexibility) are the most promising, but even these results are far from convincing.

We are surprised by this systematic lack of support for the rational design conjectures. The four theoretical propositions chosen for testing all possess a strong internal logic and maintain a high degree of plausibility when applied to the particulars of BITs and investment arbitration. Furthermore, the two dimensions of IO variation we set out to explain, centralization and flexibility, are the dimensions that receive the strongest overall support among the case studies in the original *International Organization* volume. All four of the conjectures tested here, in fact, received support from at least two of the case studies in the initial volume. In this regard, our failure to find support for any of these propositions in our large-*n* empirical tests is striking. This is particularly true when one considers Wendt's (2001: 1031) claim that studies of economic organizations are biased in favor of supporting rationalist predictions. Upon reflection, the deck seems to have been stacked in favor of finding support for the rational design propositions in the context of BITs, which makes our resounding lack of support that much more notable.

Although our design focuses solely on bilateral investment treaties, we believe the internal validity of our study is high. We choose a highly relevant set of cases (bilateral

negotiations resulting in treaties that vary on important dimensions) and we control for a wide range of conflating factors in our design, such as treaty scope and number of signatories. We also employ multiple operationalizations of the favored independent variables in the rational design project. Despite our failure to find evidence for its core propositions, we strongly encourage others to test the Rational Design project with other negotiated treaties in large-*n* statistical tests.

Much has been learned in our empirical testing efforts, and we pass along several contributions and lessons to other scholars. Our research design is one important contribution to the empirical examination of rational design, since we focus on a single issue-area and collect detailed data on negotiations over the design of treaties within that issue area. We believe this design serves as a desirable model for future empirical studies. We also define concepts like centralization and flexibility in explicit, issue-appropriate, and creative ways. Our indicators of BIT centralization are informed by the legal literature and are measured carefully and robustly. Our focus on flexibility of dispute settlement arrangement is novel, since it differs from most other conceptions of IO flexibility, which highlight periodic treaty renegotiation as the primary source of flexibility. Our exhaustive list of empirical measures is another contribution. They were generated largely from scratch, and while measures will differ somewhat across different institutions and issue areas, we have done much of the conceptual "heavy lifting" in producing a list of indicators that can serve as a starting point for other studies. We also provide guidance on previously ignored issues such as how to create "dyadic" measure of the concepts relevant to rational design. Such issues are non-trivial, as we see from some of our coefficient estimates, which are highly sensitive to changes in the the type of aggregation and dyadic measurement.

We also identify some significant theoretical and empirical limitations of the rational design program. Echoing earlier criticism by Duffield, we faced a very difficult task in creating empirical measures that matched the project's more abstract concepts. Furthermore, it often was not clear to which proposition a particular measure should apply and why. Is the loss of an ICSID case by a state evidence of uncertainty about its behavior, uncertainty about the state of the world, or the severity of the enforcement problem? Or perhaps it reflects all three of these concerns? Several of the rational design propositions could be made more explicit and differentiated more carefully. We worry that the malleability of concepts could be prone to abuse in empirical tests. With so many possible indicators that could be constructed in so many ways, it is imperative to probe the robustness of any findings about the empirical validity of the Rational Design program, whether they are confirmatory or skeptical.

One overarching concern we have is with the lack of attention to the specification of the actors who negotiate treaties and establish international organizations. The rational design propositions shift the focus away from the actors who negotiate treaties and their preferences, and instead point to structural conditions or features of the issue-based environment as explanations for international institution design. This is a significant concern. As Wendt noted originally: "Institutions do not come out of the blue but are designed by people" (2001: 1033). From a strict reading of the propositions, there is no sense of who is designing international organizations, what their preferences are, and whether they are likely to obtain their preferred outcomes. This also complicates the identification of operational measures for empirical testing, since one is not sure "to whom" the concepts apply. Many of the case studies in the original IO volume did emphasize the relevant actors and their preferences, yet in order to have consistent predictive power, the Rational Design conjectures need to incorporate the relevant actors more

directly. It is clear that *states* and, in some cases, *state institutions* design IOs and the process by which they design them also is important.

We also generate some important findings about BITs and investment arbitration in the course of testing these Rational Design conjectures. Factors such as power and domestic political interests play a major role in the design of investment arbitration clauses. Yet power runs counter to its usual logic here: the world's most economically powerful countries prefer to centralize dispute settlement within the most important arbitration institutions, such as ICSID, because doing so ties their hands only rarely, while more often tying the hands of the weaker, capital importing country. Similarly, domestic politics shapes the design of investment treaties. These treaties become much more centralized when numerous multinational corporations, who view centralization as in their interest, are present on either or both sides. On the other hand, these multinational corporations view flexibility of dispute settlement arrangement as running contrary to their interests, since flexibility provides opportunities for delay and exit to those who have violated the terms of BITs. More work clearly needs to be done to advance further these arguments about power and domestic politics, as well as to illuminate the micro-level processes at work in the process of international institutional design. What is clear, however, is that bilateral investment treaties are an important part of the global economic landscape and that variation in arbitration clauses across these BITs is salient and consequential, even if it is not "rational."

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Table 1: Bivariate Relationship between "Uncertainty about Behavior" and "Centralization" of Investment Arbitration in BITs

	Indicators for Centralization		
Indicators for (Un)certainty about Behavior	**Institutionalization & Preconsent Index** (0-4) Ordered Probit	**Preconsent to Int'l Arbitration** (0,1) Binary Probit	**Institutionalization of Int'l Arbitration** (0-3) Ordered Probit
Years since Independence, Avg (-)	-.00004 (.00016)	-.00049 *** (.00019)	.00057 (.00018)
Years since Independence, Min (-)	-.00012 (.00035)	.00062 (.00039)	-.00074 ** (.00032)
Recent Independence w/in 10 years, Either (+)	-.127 (.061)	-.104 (.075)	-.381 (.203)
Recent Independence w/in 10 years, Both (+)	-.513 (.162)	-.526 (.235)	-.204 (.062)
Regime Durability, Avg (-)	.0056 (.0012)	.0077 (.0015)	.0014 (.0012)
Regime Durability, Min (-)	-.0012 (.0019)	-.0013 (.0021)	-.0010 (.0018)
Regime Tenure, Avg (-)	.014 (.002)	.013 (.003)	.014 (.002)
Regime Tenure, Min (-)	.0018 (.0019)	.0025 (.0025)	.0008 (.0019)
Tenure of Ruling Party, Avg (-)	-.019 *** (.004)	-.011 *** (.004)	-.023 *** (.004)
Tenure of Ruling Party, Min (-)	-.011 *** (.003)	-.009 *** (.004)	-.011 *** (.003)
Tenure of Executive, Avg (-)	-.0005 (.006)	-.005 (.006)	.0052 (.0063)
Tenure of Executive, Min (-)	-.0034 (.009)	-.012 (.010)	.0019 (.0093)
Political Constraints on Executive, Avg (-)	.992 (.141)	.789 (.171)	.825 (.144)
Political Constraints on Executive, Min (-)	.543 (.087)	.402 (.102)	.449 (.090)
Checks on Executive, Avg (-)	.069 (.022)	.043 (.028)	.061 (.022)
Checks on Executive, Min (-)	.063 (.020)	.071 (.024)	.031 (.021)
Polity Democracy Score, Avg (-)	.040 (.007)	.037 (.008)	.030 (.007)

Polity Democracy Score, Min (-)	.023 (.004)	.021 (.005)	.015 (.004)
Lack of Corruption, Avg (-)	.033 (.030)	.071 (.038)	.046 (.032)
Lack of Corruption, Min (-)	.026 (.024)	.048 (.027)	.023 (.025)
Expropriations in Past 5 Years, Avg (+)	-.448 (.106)	-.529 (.254)	-.331 (.101)
Expropriations in Past 5 Years , Max (+)	-.224 (.053)	-.265 (.127)	-.165 (.051)
ICSID Defenses in Past 5 Years, Sum (+)	.119 ** (.053)	.153 ** (.076)	.036 (.054)
ICSID Defenses in Past 5 Years, Max (+)	.133 *** (.052)	.160 ** (.076)	.040 (.052)
ICSID Losses in Past 5 Years, Sum (+)	.048 (.108)	-.119 (.141)	.034 (.101)
ICSID Losses in Past 5 Years, Max (+)	.037 (.108)	-.095 (.140)	.012 (.102)
Variance in Expropriation Behavior, 5 years, Avg (+)	-.247 (.090)	-1.17 (.686)	-.237 (.081)
Variance in Expropriation Behavior, 5 years, Max (+)	-.123 (.045)	-.575 (.339)	-.118 (.040)
Variance in ICSID Dispute Behavior, 5 years, Avg (+)	1.48 ** (.667)	1.58 ** (.863)	.525 (.680)
Variance in ICSID Dispute Behavior, 5 years, Max (+)	.727 ** (.325)	.815 ** (.443)	.180 (.329)
Variance in ICSID Loss Behavior, 5 years, Avg (+)	.723 (1.12)	-.481 (1.41)	.542 (1.07)
Variance in ICSID Loss Behavior, 5 years, Max (+)	.381 (.572)	-.0004 (.6997)	.207 (.545)
Alliance Ties (-)	.174 (.057)	.301 (.073)	-.037 (.057)
Any Colonial Ties (-)	.031 (.084)	.051 (.110)	-.105 (.082)
Former Colony (-)	.253 (.152)	-.107 (.172)	.539 (.158)
Legal System Ties (-)	.119 (.056)	.170 (.066)	.068 (.058)
	n typically varies between 1,257 and 1,443		

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)

Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Table 2: Multivariate Relationship between "Uncertainty about Behavior" and "Centralization" of Investment Arbitration in BITs

	Institutionalization & Preconsent Index	**Institutionalization & Preconsent Index (w/ average past Centralization)**	**Institutionalization & Preconsent Index (w/ time dummies, not reported)**
	(0-4) Ordered Probit	(0-4) Ordered Probit	(0-4) Ordered Probit
Indicator for Uncertainty about Behavior			
Tenure of Ruling Party, Avg (-)	-.013 ***	-.012 ***	-.011 ***
	(.004)	(.004)	(.004)
or			
Tenure of Ruling Party, Min (-)	-.008 **	-.008 **	-.007 **
	(.004)	(.004)	(.004)
or			
ICSID Defenses in Past 5 Years, Sum (+)	.140 **	.135 **	.109 **
	(.052)	(.053)	(.055)
or			
ICSID Defenses in Past 5 Years, Max (+)	.155 ***	.150 ***	.124 ***
	(.050)	(.050)	(.053)
or			
Variance in ICSID Dispute Behavior, 5 years, Avg (+)	1.63 ***	1.54 **	1.04 *
	(.685)	(.690)	(.709)
or			
Variance in ICSID Dispute Behavior, 5 years, Max (+)	.848 ***	.799 ***	.526 *
	(.330)	(.332)	(.346)
Control Variables (taken from estimations using "ICSID defenses in past 5yrs, sum")			
Difference in Economic Power b/w two countries (+)	.472 ***	.469 ***	.558 ***
	(.106)	(.106)	(.107)
Percentage of World Largest MNCs located in the two countries (+)	2.17 **	1.63 *	3.23 ***
	(1.02)	(1.06)	(1.07)
Average Centralization in previous BITs, Avg (+)		.058 *	
		(.042)	
	n typically varies between 892 and 1,367		

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)

Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Note: Only one indicator for"uncertainty about behavior" is included in the model at any given time.

Table 3: Bivariate Relationship between "Severity of the Enforcement Problem" and "Centralization" of Investment Arbitration in BITs

	Indicators for Centralization		
Indicators for Severity of Enforcement Problem	**Institutionalization & Preconsent Index** (0-4) Ordered Probit	**Preconsent to Int'l Arbitration** (0,1) Binary Probit	**Institutionalization of Int'l Arbitration** (0-3) Ordered Probit
Bilateral FDI Instocks (+)	.000009 (.000059)	00012 * (.00008)	-.00015 (.00007)
Bilateral FDI Inflows (+)	.00013 (.00011)	.00044 * (.00028)	-.00022 (.00014)
Total FDI Instocks, Avg (+)	.0000020 *** (.00000047)	.0000021 *** (.00000057)	.0000064 *** (.0000024)
Total FDI Instocks, Max (+)	.0000011 *** (.00000022)	.0000012 *** (.0000003)	.00000079 *** (.00000025)
GDP Growth Rate, Avg (-)	-.0043 (.0063)	.0072 (.0084)	-.0073 (.0065)
GDP Growth Rate, Min (-)	-.0056 (.0040)	.0016 (.0055)	-.0071 (.0042)
Unemployment Rate, Avg (+)	.0069 (.0129)	-.005 (.014)	.002 (.013)
Unemployment Rate, Max (+)	-.0013 (.0065)	-.0097 (.0076)	.0011 (.0065)
Inflation Rate, Avg (+)	-.00008 (.00015)	-.00006 (.00022)	-.00023 (.00013)
Inflation Rate, Max (+)	.000027 (.000070)	.00001 (.0011)	-.000033 (.000058)
Respect for Law and Order, Avg (-)	.145 (.041)	.097 (.044)	.110 (.042)
Respect for Law and Order, Min (-)	.074 (.026)	.052 (.027)	.052 (.027)
Common Law system, only one (+)	-.632 (.208)	-.408 (.208)	-.525 (.188)
Common Law system, neither (+)	-.286 (.069)	-.211 (.077)	-.195 (.069)
	n typically varies between 1,272 and 1,453 (243-303 for bilateral FDI)		

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)
Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Table 4: Multivariate Relationship between "Severity of the Enforcement Problem" and "Centralization" of Investment Arbitration in BITs

	Institutionalization & Preconsent Index	**Institutionalization & Preconsent Index (w/ average past Centralization)**	**Institutionalization & Preconsent Index (w/ time dummies, not reported)**
	(0-4) Ordered Probit	(0-4) Ordered Probit	(0-4) Ordered Probit
Indicator for Severity of the Enforcement Problem			
Bilateral FDI Instocks (+)	-.0000043	-.000014	-.000033
	(.000071)	(.000074)	(.000072)
or			
Bilateral FDI Inflows (+)	.00014	.00015	.00015
	(.00012)	(.00012)	(.00012)
or			
Total FDI Instocks, Avg (+)	.00000092 *	.00000092 *	.00000055
	(.00000062)	(.00000062)	(.00000065)
or			
Total FDI Instocks, Max (+)	.00000064 **	.00000064 **	.00000030
	(.00000032)	(.00000032)	(.00000033)
Control Variables (taken from estimations using "Total FDI Instocks, Avg")			
Difference in Economic Power b/w two countries (+)	.586 ***	.585 ***	.585 ***
	(.114)	(.114)	(.112)
Percentage of World Largest MNCs located in the two countries (+)	1.26	.936	2.26 *
	(1.55)	(1.58)	(1.74)
Average Centralization in previous BITs, Avg (+)		.029	
		(.027)	
	n is between 1,232 and 1,282 (240-295 for bilateral FDI)		

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)

Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Note: Only one indicator for the "severity of enforcement problem" is included in the model at any given time.

Table 5: Bivariate Relationship between "Uncertainty about the State of the World" and "Centralization" of Investment Arbitration in BITs

	Indicators for Centralization		
Indicators for Uncertainty about the State of the World	**Institutionalization & Preconsent Index** (0-4) Ordered Probit	**Preconsent to Int'l Arbitration** (0,1) Binary Probit	**Institutionalization of Int'l Arbitration** (0-3) Ordered Probit
Global ICSID Disputes in the past 5 years (-)	.0026 (.0012)	.0027 (.0016)	-.0007 (.0012)
Global ICSID Rulings in the past 5 years (-)	.0070 (.0026)	.0071 (.0035)	-.0005 (.0028)
Global BITs in the past 5 years (-)	.00065 (.00009)	.0004 (.0001)	.0004 (.0001)
Global Expropriations in the past 5 years (-)	-.0035 *** (.0008)	-.0018 *** (.0007)	-.0024 *** (.0009)
Global Expropriations in the past 5 years, with time controls (-)	.0004 (.0034)	.00036 (.0026)	-.0001 (.0036)
Variance in Global FDI Flows in the past 5 years (+)	1.11×10^{-12} *** (4.46×10^{-13})	7.79×10^{-13} (6.20×10^{-13})	-3.59×10^{-13} (4.64×10^{-13})
Variance in Global FDI Flows in the past 5 years, with time controls (+)	-4.35×10^{-13} (1.02×10^{-12})	-1.23×10^{-12} (1.49×10^{-12})	1.84×10^{-13} (1.04×10^{-12})
Variance in Global FDI Flows in the past 3 years (+)	1.62×10^{-12} *** (5.53×10^{-13})	1.42×10^{-12} *** (7.68×10^{-13})	5.10×10^{-13} (5.86×10^{-13})
Variance in Global FDI Flows in the past 3 years, with time controls (+)	-6.99×10^{-13} (8.05×10^{-13})	-6.87×10^{-13} (1.16×10^{-12})	-4.96×10^{-13} (8.27×10^{-13})
	n varies between 1,391 and 1,463		

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)
Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Table 6: Multivariate Relationship between "Uncertainty about the State of the World" and "Centralization" of Investment Arbitration in BITs

	Institutionalization & Preconsent Index	**Institutionalization & Preconsent Index (w/ average past Centralization)**	**Institutionalization & Preconsent Index (w/ time dummies, not reported)**
	(0-4) Ordered Probit	(0-4) Ordered Probit	(0-4) Ordered Probit
Indicator for Uncertainty about the State of the World			
Global Expropriations in the past 5 years (-)	-.0038 *** (.0001)	-.0035 *** (.0001)	.0005 (.0037)
or			
Variance in Global FDI Flows in the past 5 years (+)	1.11×10^{-12} *** (4.46×10^{-13})	1.29×10^{-12} *** (4.72×10^{-13})	5.07×10^{-13} (1.04×10^{-12})
or			
Variance in Global FDI Flows in the past 3 years (+)	2.06×10^{-12} *** (5.62×10^{-13})	1.92×10^{-12} *** (5.74×10^{-13})	1.31×10^{-12} * (8.15×10^{-13})
Control Variables (taken from estimations using "Global Expropriations in past 5yrs")			
Difference in Economic Power b/w two countries (+)	.465 *** (.104)	.461 *** (.104)	.542 *** (.106)
Percentage of World Largest MNCs located in the two countries (+)	3.14 *** (9.91)	2.59 *** (1.03)	3.35 *** (1.07)
Average Centralization in previous BITs, Avg (+)		.052 * (.040)	
		n is between 1,330 and 1,356	

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)

Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Note: Only one indicator of "uncertainty about the state of the world" is included in the model at any given time.

Table 7: Bivariate Relationship between "Uncertainty about the State of the World" and "Flexibility" of Investment Arbitration in BITs

	Indicators for Flexibility	
Indicators for Uncertainty about the State of the World	**Total Number of Arbitration Options** (0-5) Poisson	**Ad Hoc and Inst. Arbitration** (0-2) Ordered Probit
Global ICSID Disputes in the past 5 years (-)	.0051 (.0005)	.015 (.002)
Global ICSID Rulings in the past 5 years (-)	.0097 (.0012)	.033 (.005)
Global BITs in the past 5 years (-)	.00060 (.00004)	.0015 (.0001)
Global Expropriations in the past 5 years (-)	-.0045 *** (.0005)	-.0076 *** (.0006)
Global Expropriations in the past 5 years, with time controls (-)	-.0012 (.0013)	-.0006 (.0020)
Variance in Global FDI Flows in the past 5 years (+)	2.20×10^{-12} *** (2.10×10^{-13})	6.12×10^{-12} *** (6.82×10^{-13})
Variance in Global FDI Flows in the past 5 years, with time controls (+)	1.33×10^{-12} *** (4.86×10^{-13})	4.02×10^{-12} *** (1.56×10^{-12})
Variance in Global FDI Flows in the past 3 years (+)	2.34×10^{-12} *** (2.61×10^{-13})	6.58×10^{-12} *** (8.67×10^{-13})
Variance in Global FDI Flows in the past 3 years, with time controls (+)	5.49×10^{-13} * (3.72×10^{-13})	1.81×10^{-12} * (1.21×10^{-12})
	n varies between 1,405 and 1,461	

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)
Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Table 8: Multivariate Relationship between "Uncertainty about the State of the World" and "Flexibility" of Investment Arbitration in BITs

	Total Number of Arbitration Options	**Total Number of Arbitration Options (w/ average past Flexibility)**	**Total Number of Arbitration Options (w/ time dummies, not reported)**
	(0-5) Poisson	(0-5) Poisson	(0-5) Poisson
Indicator for Uncertainty about the State of the World			
Global Expropriations in the past 5 years (-)	-.0043 *** (.0005)	-.00340 *** (.0004)	-.0017 * (.0013)
or			
Variance in Global FDI Flows in the past 5 years (+)	2.02×10^{-12} *** (2.14×10^{-13})	1.95×10^{-12} *** (2.12×10^{-13})	1.35×10^{-12} *** (4.94×10^{-13})
or			
Variance in Global FDI Flows in the past 3 years (+)	2.15×10^{-12} *** (2.65×10^{-13})	2.12×10^{-12} *** (2.58×10^{-13})	5.42×10^{-13} * (3.76×10^{-13})
Control Variables (taken from estimations using "Global Expropriations in past 5 yrs")			
Difference in Economic Power b/w two countries (+)	.060 (.050)	.033 (.047)	.064 * (.048)
Percentage of World Largest MNCs located in the two countries (+)	-1.43 *** (.488)	-1.39 *** (.479)	-.803 ** (.453)
Average Centralization in previous BITs, Avg (+)		.0555 (.0076)	
		n is between 1,330 and 1,368	

Robust Standard Errors in parentheses *** p<.01, ** p<.05, *p<.10 (one-tailed)

Shaded cells are those which conform to Rational Design predictions and are statistically significant.

Note: Only one indicator of "uncertainty about the state of the world" is included in the model at any given time.