Learning and Diffusion in International Investment Agreements

The international regime for the promotion and protection of foreign investment consists of a multitude of over 2800 bilateral investment treaties (BITs) and related international investment agreements (IIAs). Yet despite a growing body of research on IIAs, scholars in political economy have paid little attention to the legal language in the treaties themselves. In this paper, we draw on the conceptual apparatus of the legalization literature (Abbott et al. 2000) and focus on legal precision in BITs. We use a new dataset created through quantitative text analysis to develop an index measuring legal precision. We then investigate the causes of the pronounced increase in precision in BITs and the considerable variation across treaties. We argue that capital-exporting countries are the primary drivers of change, and that they are motivated because they learn the implications of existing legal language from two sources: First, from the growing number of arbitration proceedings, and second, when they themselves are targeted by such claims. We provide initial tests of our hypotheses and find ample support.

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Introduction

One of the principal consequences of globalization has been an increased demand from states for international institutions that help solve coordination problems that frequently arise (Sandler 2004). International law is one such institution, and states have increasingly allowed the extension of international law across many issue areas. This legalization has taken different forms, however, from largely normative obligations encoded in many human rights treaties to very specific commitments made in the domain of trade, in particular in the agreements under the auspices of the WTO and the multitude of preferential trade agreements.

In other issue areas legalization has occurred in a less decentralized fashion, with perhaps the rise of international investment agreements (IIAs) as the best example. IIAs are agreements between sovereign states to promote foreign investment and to protect the rights of investors from one contracting party in the jurisdiction of the other party. Most prominent among them are the over 2800 bilateral investment treaties (BITs). Aside from BITs, a few plurilateral treaties cover investment in specific sectors, most importantly the Energy Charter Treaty. Since the signing of the North American Free Trade Agreement in 1992, more and more preferential trade agreements have incorporated clauses on investment, often derived directly from BITs and with closely related language (see e.g. Baccini et al. 2011).

In this paper, we examine legalization in international investment law via the changing content of IIAs. In contrast to previous work, we focus on the evolution of their content over time, and we evaluate those changes quantitatively with a new database of treaty clauses. Changes in legalization, we argue, have been thus far driven primarily by capital-exporting states, and key constituencies in those countries are unlikely to allow significant retreat from this system. More specifically, we submit that capital-exporting states increase the legal *precision* in the sense of Abbott et. al. (2000) in successive treaties by moving from vague rules to highly elaborated rules. They do so in reaction to rulings by arbitration panels. In other words, the goal is to reduce the ambiguity of international law in order to avoid outcomes that contradict the interests of capital-exporting states. Our findings have implications for both the legalization literature and for the discussion of the current "legitimacy crisis" in international investment law.

Legalization and International Investment Agreements

Scholarly analysis of international law has increasingly revolved around rationalist explanations of states' willingness to constrain their sovereignty via international institutions. This research program has coalesced around two related schools of thought: rational design and legalization. The former focuses primarily on the design of legal

institutions and to a lesser degree on their evolution (Koremenos, Lipson, and Snidal 2001; Koremenos 2005). The latter encompasses a larger range of research questions, and views the creation of norms and "soft law" as important steps in institutional development in their own right (Goldstein et al. 2000; Abbott et al. 2000; Goldsmith and Posner 2005; Zangl 2008).

As institutions such as treaties involve higher levels of each element, they move towards "hard law" or formal restrictions on state discretion, whereby compliance is encouraged by third-party actors. Importantly, such evolution need not be unidirectional: states can make precise treaties that they later retract, or they can delegate monitoring to entities that they later refused to be governed by. As such, legalization involves a continuously evolving search for commitments that meet state demands, and it can explain a retrenchment toward soft law/power politics as well as increasing constraints on sovereignty. Legalization examines the evolution of international legal forms along three dimensions: *precision, obligation,* and *delegation* (Goldstein et al. 2000).

Precision refers primarily to the specificity of state commitments—the—precise commitments occur when a treaty "narrows the scope for reasonable interpretation" (Goldstein et al. 2000). Without precision, states can interpret their commitments as they see fit, and at the soft law end of international commitments, states agree to "largely hortatory obligations" (396). Our view is the precision logically precedes the other two dimensions, but that high precision need not create high levels of obligation or delegation. Precise terms regarding circumstances for states to opt-out of their commitments would necessarily reduce the obligations in the treaty, and delegation might be circumscribed by language explaining exactly how third parties should interpret state actions. Precision clearly represents a separate dimension than either of the other two elements of legalization.

Obligation revolves around how binding a commitment is in a legal sense. For treaties, *pacta sunt servanda* is the appropriate principle, in which treaty commitments are regarded as obligatory once made. Alongside this principle of international law, certain flexibilities toward such commitments have evolved, allowing for legitimate breach (Abbott et al. 2000, 409). These include state necessity and *rebus sic stantibus,* whereby states can be exempted due to a material change in conditions (ibid.). This dimension of legalization thus examines the rigidity of state commitment, and takes higher values as commitments apply across a broader range of conditions.

Delegation in turn is high when states designate third parties to monitor correct observance of the norms of behavior stipulated in the treaty, to implement sanctions for violations, or to interpret state commitment on their own. Of the three dimensions, it is the easiest to observe, and it is the variable that has probably received the most attention of the three. Many scholars have ignored a potential tradeoff between delegation and obligation: some international institutions involve

self-interpreted precise commitments, while others involve broader commitments with judicial interpretation (Goldstein et al. 2000, 413). High levels of delegation often create new, non-state actors that are empowered to monitor, engage, or constrain states directly (ibid, 418).

The legalization framework has been applied broadly to human rights (e.g., Hawkins 2004), environment (von Stein 2008), and trade (Davis 2012), among others. In the analysis of international investment law, the focus has been much narrower and almost exclusively on delegation (J. W. Yackee 2008; see Allee and Peinhardt 2010 for delegation; van Aaken 2008; 2009 for broader applications). This is unfortunate, because legalization offers some important perspective to debates in international investment law.

First, although international investment law is primarily codified via bilateral investment treaties (BITs), debates over international investment law often presume a teleological march toward the "multilateralization of investment law" (Schill 2009). This is perhaps best illustrated by repeated analyses of the failure of multilateral treaties in this issue area (Kobrin 1998; Walter 2001; Urban 2006). To some extent, this line of thinking is also embodied in Guzman's (2005) claims regarding investment treaties and their contribution to customary international law. Fundamentally, the question that most analysts have asked of investment law is: why does it take this primarily bilateral form when trade law has had such success with multilateralism?

Second, recent claims of a crisis in international investment law revolve around the inconsistency of investor-state arbitration rulings (Franck 2005; Waibel 2010) and potential bias in the tribunal selection process (Buergenthal 2006). Most solutions that emerge from this debate revolve around the creation of a better appeals mechanism or a standing investment court to promote more consistency of legal rulings (see UNCTAD 2013). These multilateral options seem unlikely in the current climate of bilateral and regional economic deal-making, but countries can revise their own agreements at little cost, and such revisions can at least partially solve some of the problems with the current system and have the added advantage of customizing obligations for each state.

Third, many states have begun to rethink their investment treaty commitments after appearing before international tribunals for allegedly violating investor rights. The countries that have received the most attention in this light are the several Latin American states that have repudiated some international commitments, but even capital-exporting states have had similar introspections and have as a result changed their stance toward investment treaties—in particular the United States and Canada, having been targeted in arbitration claims under NAFTA Chapter 11.

Together these developments suggest a legal system that is still evolving, and one that very well may be moving back toward softer forms of state commitment. Rather than assuming identical multilateral

commitments, or treaty abrogation and a rejection of investment law in its current form, we view it as an empirical question, and one that can be answered using measures of these key three dimensions of legalization. The advantage of this theoretical toolkit is that it might uncover increasing movement toward hard law in one dimension—say precision—while at the same time showing that states are rethinking previous strategies of delegating the interpretation of their commitments to third parties. In other words, examining the legalization of international investment agreements over time may reveal a more accurate and nuanced reality than any of the claims about the crisis in investor-state arbitration currently demonstrate.

The Drivers of Legalization in Investment Law

At the heart of the legalization is a single question: why do states use international law? The rationalist answer, of course, is when it suits them—when it offers more benefits than costs. States only sacrifice autonomy and allow themselves to be constrained by international law when it offers them gains from cooperation. From this perspective, codification of state obligation via treaties constrains behavior for all parties, each of whom benefits from this self-sacrifice. Investment treaties usually pair a capital-exporting country with a capital-importing country, and the deal is made to overcome a common economic dilemma: the hold-up problem, whereby both parties stand to gain from a transaction but neither is willing to exchange due to the likelihood of post-transaction cheating. Long-term investors face the dilemma that any host state powerful enough to maintain order and guarantee their future returns is also strong enough to seize their investment (Haber, Maurer, and Razo 2003). International investment agreements (IIAs) exist to increase the credibility of potential host states to respect the property rights of foreign investors. The overwhelming majority of research on the FDI effects of BITs has been explicitly based on this interpretation of BITs (see inter alia Büthe and Milner 2008; Elkins, Guzman, and Simmons 2006; Haftel 2010a; Kerner 2009; Neumayer and Spess 2005).

Alternatively, states might join a treaty even if it offers negative net benefits if they are coerced or the treaty imposed on them (Krasner 1999), or if shifts in power the status quo even worse (Gruber 2000). Evolution toward legalization in this context suggest that it is disproportionately in the interest of the more powerful signatories, because such moves disproportionately constrain the behavior of countries who dominate in soft law environments. The timing of the first investment treaties suggests that they replaced colonial institutions that effectively overcame the same problem with the threat of force. The first treaties regularly involved European countries whose colonial empires were collapsing but who wanted to maintain international economic ties. From this beginning,

capital-exporting states, with their dominant economic position vis-à-vis their treaty partners, have driven legalization in the issue area. For example, investment treaties regularly encode what Guzmán (1998) calls the Hull Rule, which requires "prompt, adequate, and effective compensation" if a host state expropriates a foreign investment. Existing studies of legalization in IIAs find that power asymmetries are a key factor in the delegation of authority to third party dispute resolution (Allee and Peinhardt 2010). And yet, many of the substantive issues covered by modern bilateral investment treaties already appear in treaties of Friendship, Commerce and Navigation (FCN), negotiated by the United States well before it became a global power, and often precisely in order to avoid discrimination of its investors compared to those from imperial powers. Finally, the first modern BIT was signed in 1959 between West Germany and Pakistan, and much of the early German literature attributes this innovation in international law to the fact that Germany no longer had the ability to enforce the property rights of its investors abroad by means of military force (Alenfeld 1971).

While investment treaties can be traced at least to the late 1950s, they proliferated at much higher rates in the 1990s. As more states signed investment treaties, the classic bargain between capital-exporting and capital-importing state could no longer be seen to be the primary driving force: a growing number of IIAs were signed by countries of similar size and levels of development (Jandhyala, Henisz, and Mansfield 2011). More treaties and the increasing awareness of such agreements meant more investor-state disputes. Recent research suggests that as the costs of investment treaties became clearer to developing countries, they stopped signing IIAs in such numbers. Poulsen and Aisbett (2013) find that once developing countries appear before investor-state tribunals, they display much greater caution in signing IIAs in the future, especially IIAs with more powerful capital exporters. They attribute this to a process of boundedly rationally learning states, but we believe that this is just as likely driven by unexpected costs—not just monetary—of international investment arbitration to the home countries of FDI as well. Whether they were directly targeted by investment arbitration claims or not, the prominence of such claims made the potential cost of IIAs increasingly apparent.

As evidence of the generality of this process, we highlight one example of a rich capital-exporter that changed its model treaty after appearing before an investor-state tribunal as respondent: the United States. Vandevelde (2008) documents the importance of the US response to the event:

> Everything changed on October 30, 1998, when the Loewen Group, a Canadian funeral home company, submitted to investor-state arbitration under the NAFTA a claim against

> the United States arising out of an adverse $500 [million] jury verdict rendered in a Mississippi state court. (285)

Within a year, US IIA negotiations on further treaties were halted in favor of an internal debate over how to protect the country from future involvement. Of particular concern was the "uncertain scope" in existing treaties and the "broad discretion" given to arbitration panels (Vandevelde 2008, 309). The resulting 2004 model BIT was more "comprehensive, more detailed, and more sophisticated than any of its predecessors" (Vandevelde 2008, 287). The model treaty simultaneously increased the legitimate exercise of power by host states, clarified the country's interpretation of particular phrases, imposed greater precision to the norms of host state behavior, and suggested innovations to overcome perceived problems with investor-state tribunals. These changes were not exclusively aimed at reducing the country's (or its partners') obligations under the treaty, or at increasing the protection given to its investors. Instead, the revisions made the state's commitments more precise, and in turn clarified its obligations and the powers it was granting to arbitrators. Together these changes sought "a rebalancing of host country and investor interests" but not uniformly in favor of either party (Vandevelde 2008, 289). The country then continued to sign more treaties and to include investment provisions in free trade agreements. In short, a short-term reduction in the signing of IIAs gave way to a long-term process of legalization.

We maintain that this is the likely case for most rich-country IIA signatories. The overall treaty adoption rate has certainly dropped, but forty to fifty treaties continue to be signed annually. The continuing expansion of IIAs is again being driven by capital-exporting states, who are increasingly aware of not only their own experiences with investor-state arbitration, but of broader trends and developments in investment law. For any state that can dedicate legal expertise to follow such events, it is now easier than ever, with several specialized information providers like Kluwer Arbitration, Investment Treaty News, UNCTAD, and so on.

While part of this may be related to the higher-than-expected costs of IIAs, in many cases the expected benefits have also not been forthcoming. There is some evidence that having more BITs increase foreign direct investment from *any* source as opposed to the specific partner with whom a treaty has been signed (Büthe and Milner 2008; Neumayer and Spess 2005). The case for an increase of FDI from a BIT partner is much less clear. Some studies find no particular or a minute relationship (Hallward-Driemeyer 2003; Peinhardt and Allee 2012), others a powerful effect (Egger and Merlo 2007), some a strong one when considering the endogeneity of BIT signings and FDI (Kerner 2009), and yet others point out that BITs need to be in force to have any effect on FDI (Haftel 2010b).

These studies appeal to the apparent similarity of BIT clauses to abstract completely from their content, and thus treat all BITs the same.

The fact that governments deliberately choose to exclude particular sectors or policy areas from the applicability of a BIT has been widely discussed by legal scholars (see inter alia Newcombe 2013) but largely ignored by political scientists. The notable exception is Blake (2013) who finds strong evidence that the more far-sighted governments are (in the sense of more institutionalized, longer-lived governing parties), the more they will pay attention to excluding key policy areas. His tests, however, are based on comparative statics, so that there is no room for learning and change in the legal language over time in response to recent experience.

More problematically for many existing studies of BITs is that for treaties to be a solution to the holdup problem, they need to be enforceable—in other words, they must include a binding commitment that host states will subject themselves to arbitration. Yet such binding dispute settlement has only been part of BITs since the early 1980s. Yackee (2008) thus statistically tests the relationship between BIT enforceability and FDI, and finds that it makes no difference whether a BIT is enforceable or not—neither has much effect on bilateral FDI flows. This is clearly at odds with the commitment interpretation of BITs.[1] The effect of international law on the behavior of countries and firms is thus perhaps best described as "indirect, subtle, and ambiguous" (Macaulay 1984, 155.)

With the exception of Yackee (2008), few studies have paid close attention to these changes over time, especially along the dimensions of precision and obligation. Such evolution, however, is an aspect that rationalist theories have not been particularly strong in predicting—but note that Koremenos (2005) bases her theory on the assumption that states agree on an initial distribution of gains based on their relative bargaining power, and then subsequently face persistent uncertainty about the future gains. In later time periods, exogenous shocks may result in a different distribution of gains, and these shocks are random, cumulative, and noisily observable. In IIAs, shocks (i.e. being the respondent state in a claim) are unpredictable, but they are not cumulative and their cost is directly observable, as a monetary award is rendered if a host state loses in a formal arbitration proceeding. This makes learning possible. Moreover, while investment treaties are reciprocal treaties between states, the shocks are claims by private investors against host states. In other words, there is no direct (re-)distribution of gains between states.

[1] Studying the effect of *any* variable on bilateral FDI flows is bound to be difficult. Only the OECD uses a coherent standard for measuring FDI, and merely collects information on FDI flows between members and a handful of selected developing countries. Combined with data selectively collected by UNCTAD, bilateral FDI data is only available for about 10% of country dyads since 1971. The other data points are either zero or missing, but we often do not know which is the case, and where data is clearly denoted as missing, it is obviously not missing at random. Add to this the fact that tax havens (e.g. Bermuda) are among the most important registered source countries of FDI, and the estimation issues become secondary to questions of data quality.

In addition to developments surrounding costs and benefits of IIAs, another reason exists for legalization of these particular commitments: the difficulty of abrogation of existing investment treaty commitments. Populist leaders in several Latin American countries have recently decided to reduce existing treaty commitments and/or to leave the IIA system. Bolivia led the way with its initial exit from the World Bank's International Center for the Settlement of Investment Disputes (ICSID), the most prominent arbitration institution in the world. The country then canceled one of its investment treaties. Ecuador followed Bolivia in withdrawing from ICSID, and then renounced several of its treaties with similar sized countries. However, the legislature, despite being controlled by the President's party, failed to act on those withdrawals, and they remain in place. Chavez's Venezuela eventually followed with an ICSID withdrawal, but has hesitated to cancel its BITS due to its need for oil investment and significant assets abroad that could well be legally seized by an investor's home country. Even when the country turned to more satisfactory sources of investment, it found that China's BITs and those of other emerging markets contained many of the same provisions that they disliked in their other IIAs. Ultimately, the investment treaty system has proved much more difficult to exit than they expected, and as a result they may turn instead to protecting their policy space by more clearly stating their obligations. In short, both for OECD countries that are likely to be the source of capital and for likely capital importing states, the reform of investment treaties is most likely to take place via greater precision in the very instruments that created the system to begin with.

One last factor adds to the likelihood of legalization of current instruments: the system has created a number of stakeholders who have gained new privileges or opportunities as a result. Foremost among these are the multinational corporations that benefit from direct access to the international arbitration mechanism. Some early scholarship in this area suggests that they may not have been prime moving forces behind the creation of the IIA system, but those that are aware are unlikely to return their newfound rights easily. Additionally, the international legal firms that have found a profitable new source of clients would be determined opponents of any dramatic changes. Since both of these actors are disproportionately located in OECD countries, we again look to those countries to drive legalization in this area.

Based on the preceding discussion, we believe that legal precision may be an alternative to treaty renunciation, but that it shares some of the same underpinnings. States originally signed IIAs to facilitate investment and closer economic ties, and clearly even some of the most advanced countries that signed them underestimated their potential costs. As such, legalization in IIAs should be driven by participating states' experiences with arbitration tribunals. This may be solely their own experience, but it may also be driven by the larger legal context, as tribunals make rulings and clarify the implications of particular phrases and clauses in treaties.

We therefore focus on the degree of legal precision in subsequent treaties negotiated by a country that has opted for a revision and improvement in the legal language in BITs. We argue that (in particular developed) countries revise BIT language to become more precise. When an opportunity arises, they will sometimes replace a BIT with the same country, but more commonly, they will use more precise language in subsequent BITs with other countries. Typically, the internal process takes places through the revision of *model treaties,* i.e. the templates that the home countries of FDI take to the negotiating table. BIT negotiations between developed and developing countries almost always revolve around such templates, and the BITs of the same home country are often remarkably similar. At times, however, model treaties are overhauled, and new legal language enters the universe of BITs (Dolzer and Schreuer 2012). Ideally, we would trace such changes through the model treaties themselves. Unfortunately, the vast majority of them are not published, sometimes the first model BIT is unavailable, and importantly, language enters a model BIT after being incorporated into a signed BIT, having arisen out of the negotiations. For these reasons, we focus on legal precision in signed (but not necessarily ratified) BITs in the public domains.

Our first two hypotheses reflect these considerations:

Hypothesis 1: BITs are more precise when one of the signatories has appeared as a respondent in an investor-state arbitration.

Hypothesis 2: Precision in IIAs increases in response to trends in IIA cases.

We also view legalization as driven by the bargaining dynamics within the dyad: states without the administrative capacity to write better model treaties and those without much diplomatic power to get preferred language in new treaties will have little recourse to legalization as a strategy. As such, we expect legalization to be driven primarily by the OECD countries, those that have legal expertise and market power enough to achieve preferred outcomes in their treaties.

Hypothesis 3: Greater precision is more likely in asymmetric dyads, where one state is considerably more powerful than the other.

Hypothesis 4: Greater precision is more likely when one or both countries have higher levels of legal expertise.

In the next section, we describe how we operationalize our concepts to test these hypotheses.

Data

Our unit of analysis is the treaty dyad, i.e. a treaty signed in a given year between two countries. We focus on the date of signature rather than ratification as the treaty text is fixed at this point, and because some treaties never get ratified, but nonetheless provide evidence of changes in

legal language in BITs. Our dependent variable, a measure of legal *precision,* is an index ranging from zero to one, with a score of one representing the maximally possible degree of precision given the legal language in BITs up to 2012. We collected 1200 BIT texts in English, to our knowledge close to the actual number of English-language investment treaties with publicly available texts, from the Kluwer Arbitration BIT text collection and the UNCTAD Investment Instruments Online search engine.[2] While this is not even half of the universe of BIT texts with over 2700 treaties in existence, it includes BITs signed by 165 countries. Many countries regularly negotiate BITs in their own official language(s) as well as an English-language version that prevails in the event of disagreement. We therefore have reasons to believe that the sample is representative of the language used in BITs.

We constructed the index by assembling a corpus of "standard clauses." This corpus is derived from the UNCTAD (2007) publication "Bilateral Investment Treaties 1995-2006: Trends in Investment Rulemaking," from the commentaries on representative clauses in Brown (2013), and several additional BITs as reference for unusual choices in wording indicated in the previous two sources.[3] Annexes are considered part of the treaty text. For each clause that is present in a particular treaty, we add one to a counter. The total count is normalized by dividing by the total number of possible clauses, so that we arrive at an index that theoretically ranges from zero (a treaty without text) to one (a treaty containing every clause in our corpus). Clearly, no signed treaty can obtain a zero score, and even elaborate treaties do not reach a score of one, but we cannot prejudge this before our analysis. To obtain index scores for the treaties, we used custom text-matching software to measure the presence or absence of specific clauses in each treaty.[4] In robustness checks, we also substitute this index with the (log of the) count of words and the count of unique words in each BIT.

We analyze BITs beginning in 1959 (i.e. with the first modern BIT, the Pakistan-West Germany BIT) until 2011 (the India-Lithuania BIT). During this time, we observe considerable variation between BITs, even among those signed by the same developed country. Ranking BITs by precision reveals that the 1968 Denmark-India BIT is the least precise, while the top five treaties by precision are all from the last ten years in our dataset: Japan-Peru, Canada-Jordan, Canada-Peru, USA-Uruguay, and Canada-El Salvador. The precision in the BITs of some developed countries, in particular Germany and the UK, shows a clear upward trend, but this is by

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[2] http://www.kluwerarbitration.com/BITs-countries.aspx (Accessed 14 July 2012); http://www.unctadxi.org/templates/DocSearch____779.aspx (Accessed 30 October 2012).

[3] Australia-Indonesia (1992), UK-Belize (1982), Japan-Sri Lanka (1982), USA-Cameroon (1986), Israel-Thailand (2000) and Germany-Ethiopia (2000).

[4] We used the Python package *fuzzywuzzy* to implement a fuzzy match, calibrated by using hand-scored treaty texts.

no means the case across the board: US and Canadian BITs start out with a

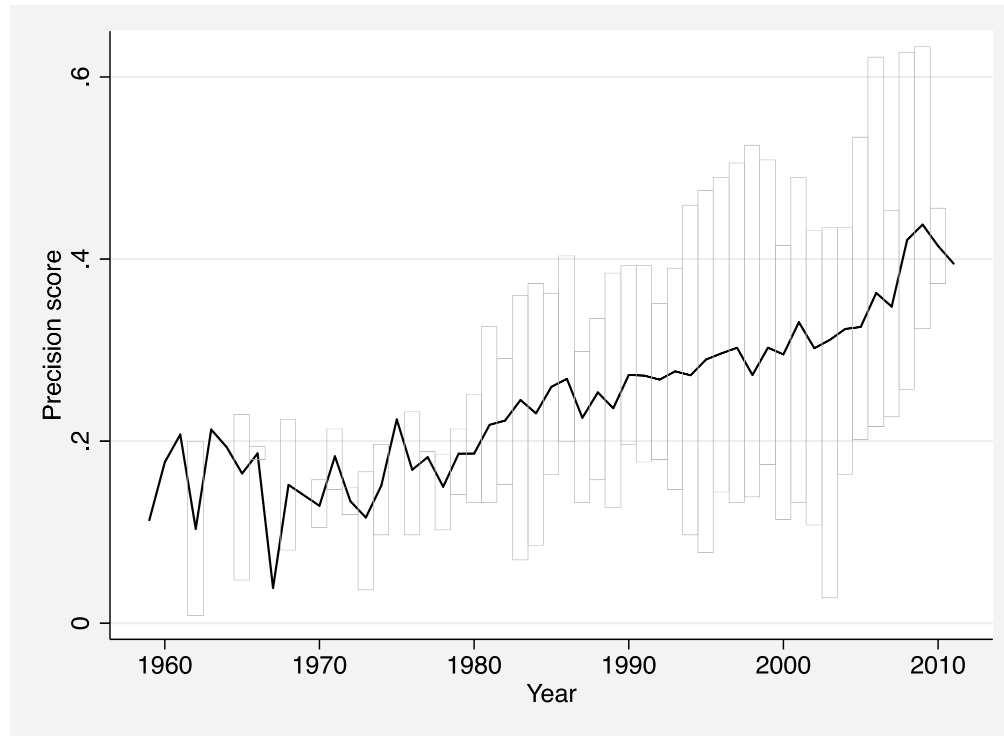

Figure 1: Precision mean and range, 1959-2009

high level of average precision and never fall below this level.

Nonetheless, the average degree of precision in BITs shows a strong upward trend as well, as shown in Figure 1, in particular since the late 1970s. This trend, we submit, is not merely a general move toward a more investor-friendly public international law; nor is it a background drift that we can statistically control for with a "zeitgeist" variable or by detrending our measure of precision. Rather, we aim to explain the driving force of this trend and to endogenize it in our empirical model.

This increase in precision is reflected in the published model BITs of Germany, Canada, and the United States as shown in Figure 2. Although these models were made publicly available, we cannot ascertain that they were the only templates available to negotiators (in fact in the German case it is highly unlikely that the first formal model BIT was published in 1991). The change in precision in model BITs is therefore suggestive, but no direct evidence.

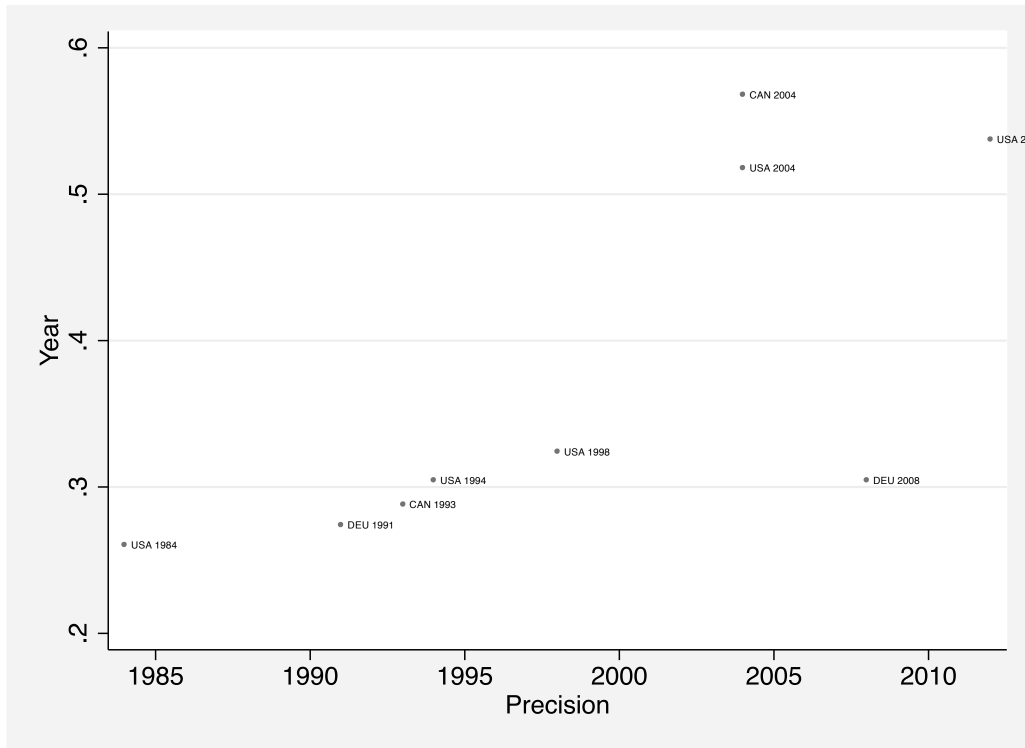

Figure 2: Precision in Canadian, German and US model BITs, 1984-2005

Figure 3 shows the measured precision in Germany's[5] BITs. A particularly striking comparison is the increase in precision from the first BIT with Pakistan in 1959 to its replacement with a "modernized" treaty in 2009 that scores almost six times the precision score in our measure. For comparison purposes, the precision score of US BITs is shown in Figure 4. Over the same time period 1982-2006, the precision score in German BITs increased while that of US BITs stayed on average the same until the revision of its model BIT in 2004 and the subsequent negotiation of the 2006 treaty with Uruguay.

[5] West Germany until 1990. Like the majority of socialist countries, the German Democratic Republic did not negotiate any bilateral investment treaties.

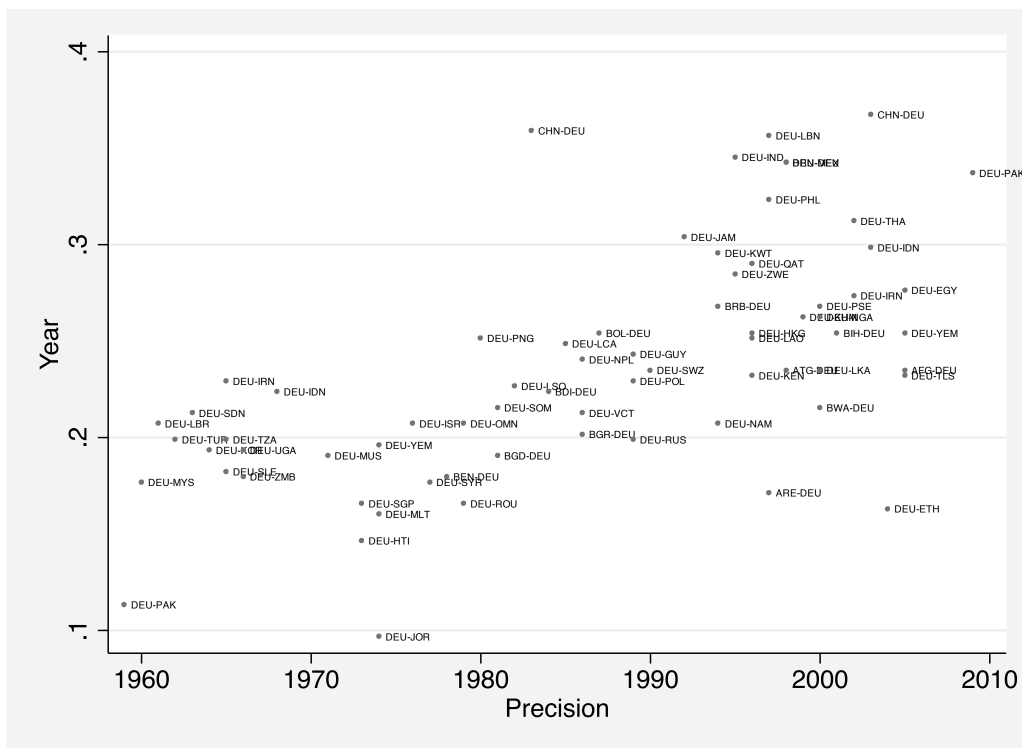

Figure 3: Precision in German BITs, 1959-2009

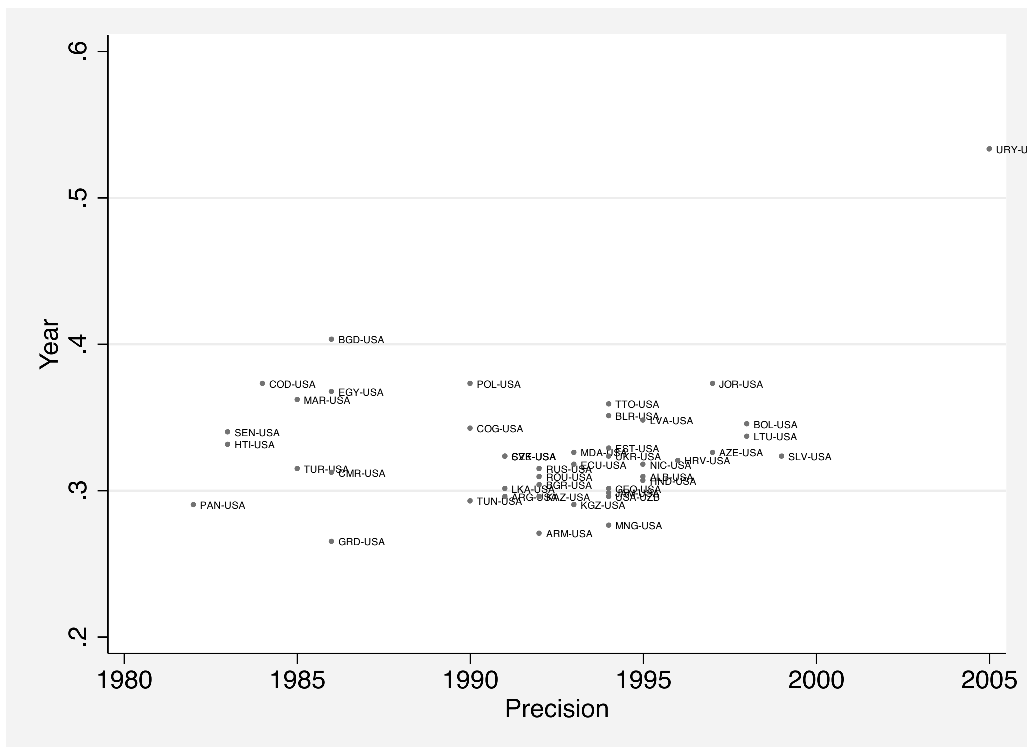

Figure 4: Precision in US BITs, 1982-2005

BIT negotiations tend to take place between an identifiable "home" and "host" country. Nearly all BITs are either treaties between a developed and a developing country or a transition country, or they are agreements between developing countries. There are very few BITs between developed countries, among them treaties with Singapore and a few countries that have only recently reached (or approached) developed-country status such as Chile, South Korea and Mexico. Nonetheless it is not always easy to clearly identify the "home" and "host" country. We therefore follow a theory-guided rule to identify the likely home country.

First, we assume that if only one country is an OECD member, then it is the home country. Next, we consider the country with the greater GDP per capita the home, unless the other country's GDP is at least five times the first country's GDP, in which case we reverse it. If both countries are in the OECD, then we again use the GDP per capita. This rule clearly sorts nearly all dyads into home and host countries.[6]

Independent Variables

Our principal independent variable is the variable *new claims against other states,* a count of the new claims brought against countries other than the home country in question. This measure operationalizes our notion that claims make issues related to legal precision salient, and convey useful information about the meaning of specific clauses. We argue that new claims are largely responsible for the individual decisions of countries to revise model BITs and increase legal precision, with the attendant upward movement in average precision across all BITs signed in a given year. We are particularly interested in what countries learn from other countries, so our main focus is on claims against countries other than the one negotiating the BIT. *Prima facie,* it would make sense to lag this variable, as new information about claims might not immediately be reflected in model BITs. However, we have found in interview with negotiators that recent information about arbitration is regularly incorporated into current negotiations, and that BIT texts are often adjusted "at the last minute" by the inclusion of an explanatory annex to a previously agreed-upon text. Lagging it, however, changes nothing about our main result. To recall, we hypothesize that new information about the interpretation and appropriate precision of BIT law largely becomes available through claims.

We also include the *cumulative number of claims against the home country* in the past three years. We focus on claims rather than "winning" or "losing" in arbitration procedures since often claims are only partially granted, and even a successful defense by a host country can still trigger a reconsidering of legal clauses that would materialize in greater legal precision in future BITs. A positive coefficient on this variable would indicate that countries learn from being sued and revise BIT language

[6] The one exception is India-Lithuania in the year of signature of their 2011 BIT. We consider India the home country in this case.

towards greater precision based on their own experience. However, with few exceptions (especially Argentina) most countries are rarely or never hit by a claim, so that there are relatively few opportunities to learn about the desired degree of legal precision from such instances. Importantly, at least those countries classified as developing by Aisbett and Poulsen (2013) cannot apply the lessons learned when being hit by arbitration claims to new BITs because they stop signing them.[7] In other words, only home countries have the opportunity to learn about the effective legal precision in BIT clauses and to use this knowledge in subsequent BITs.

Control Variables

We use a number of control variables based on previous research. We divide these into those factors that should affect BIT precision because a country is home to investors and those that affect it because the country is a host of FDI. Among home country factors, we include the presence of the headquarters of major multinational corporations (MNCs). MNCs are the main investors in developing countries and hence the main actual or potential beneficiaries of greater legal protection. At least in some countries with active BIT programs and public investment insurance guarantees, MNCs have long since been aware of such treaties (Jüttner 1975, 335–336). Following Allee and Peinhardt (2010, 9) we construct the variable *MNC presence* using the Forbes 2000 list of the largest international companies based on sales. For each country we count the largest companies headquartered there that have sales greater than US$10bn in constant 2005 dollars, or for the years after 2006 are among the 200 largest MNCs by sales. We then calculate the percentage of such MNCs in each year that are from each country in our data set. For year prior to 2007 we use the Allee & Peinhardt data, which is based on the Forbes Global 100 list until 2003 and the Forbes Global 200 list for 2004–2006.[8]

We also expect strong domestic legal interests such as law firms to influence the design of treaties. While we do not have data on e.g. the number of practicing lawyers by country, we consider evaluations of the *law and order* in a country as closely correlated with such interests. The same measure is included for home countries, where it proxies for legal interests, and for host countries, as an effective legal system will be more predictable and reduce the need for greater precision at the international level. We use the variable with the same name from the PRS/ICRG political

[7] Regardless of whether one agrees with the theoretical reasoning in Aisbett and Poulsen (2013), their empirical evidence demonstrates that developing countries do not sign BITs for many years after being hit by the first claim.

[8] For years before 1980, we use the values from 1980 so as not to drop all early observations from our data set, although the inclusion or exclusion of the pre-1980 cases does not change our substantive results.

risk data.[9] We also include the *law and order* variable for the host country. A host country with a more developed legal system, including more lawyers, is also more likely to be willing to move towards greater legal precision because the relevant government ministries can tap into greater legal resources.

Independent of such legal capacity, we control for the (log of) *GDP per capita* of both countries, since richer countries can afford to train and educate their bureaucracy better and access legal advice elsewhere.

The nature of BITs as primarily driven by home-host state negotiation also implies an often stark asymmetry. BITs between powerful home and a relatively weaker host country will likely be more precise. In the vast majority of cases where investment flows in only one direction, greater precision will benefit the more powerful country as host of FDI, since it only puts checks on the behavior of the host country. Nonetheless, there are situations in which the host country may possess bargaining leverage that would allow it to insist on less precision—among them, when the country has a sizable home market to which it controls access. We therefore include the *GDP ratio,* i.e. the ratio of the home state's GDP to the host state's GDP. This measure of asymmetry is the most appropriate because our focus is on the ability to provide FDI and to offer an opportunity to earn revenue for investors. Both are from the World Development Indicators database.

Furthermore, we include controls for the political institutions in home and host. Whether democracies or autocracies are better at attracting FDI is a long-standing debate in IPE (Jensen 2003; Li 2009), so the different perception of risk may well influence the desired level of legal precision in a treaty. For the measure of *Democracy* we rely on the unified democracy score (Pemstein, Meserve, and Melton 2010), as it is at least as reliable as the more commonly used Polity and Freedom House data. Legal precision may also be influenced by how constrained the executive branch is in a particular regime, as a more constrained regime will be more predictable, and home countries may therefore possibly not see the need for such high precision in BITs. We use the *Executive constraints* variable from the World Bank's political institutions database (Beck et al. 2001). Finally, we include a dummy variable for South-South BITs because some scholars have argued that BITs between developing countries are qualitatively different from the typical North-South BIT (Poulsen 2010).

Descriptive statistics for all variables are shown in Table 1.

[9] The PRS data only starts in 1984 so that we follow the same procedure as for the *MNC presence* variable.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Precision	741	0.286	0.075	0.080	0.633
Ln word count	741	7.929	0.286	6.975	10.079
Ln unique words count	741	6.568	0.189	5.894	7.887
Cumulative claims against home	741	0.225	0.945	0	10
New claims against other states	741	9.309	12.184	0	44
MNC presence home	741	0.032	0.064	0	0.405
Law and order home	741	5.077	1.072	2	6
Law and order host	741	3.682	1.181	0	6
GDP ratio	741	51.822	164.988	0.216	2110.493
Ln per capita GDP home	741	9.317	0.971	6.388	10.827
Ln per capita GDP host	741	7.987	1.071	4.617	10.829
Democracy home	741	1.026	0.963	-1.423	2.108
Democracy host	741	0.024	0.732	-1.976	1.574
Executive constraints home	741	6.169	1.570	1	7
Executive constraints host	739	4.453	2.019	1	7
South-South BIT	741	0.328	0.470	0	1

Estimation and Results

Our data is pooled cross-sectional in nature, and our dependent variable *precision* is approximately normally distributed. While the index ranges from 0 to 1, none of the BITs reach the extreme values: we neither have a "BIT without words" nor a perfectly precise treaty (as theoretically defined by us) at hand, so that none of the observed data is censored. We thus use OLS for the estimation. [10] As we find evidence of heteroskedasticity of the residual variance, we use robust (Huber-White) standard errors. Importantly, because many (but not all) home countries use "model BITs" as template for negotiations, we have strong reasons to believe that observations involving the same home country are not independent. We therefore allow for correlations within each group of BITs signed by the same home country.

Table 2 shows our regression results for our preferred specification. To give a sense of the magnitude of the effects, keep in mind that this is a linear model. For each claim against the home country, the average level of precision moves by 0.015 units in our measure of precision, or 0.2 standard deviations from the mean. This is approximately equal to the difference between the 1976 Netherlands-Egypt and the 1984 Netherlands-Sri Lanka BIT, or the 1991 Canada-Hungary BIT to the 1994 Canada-Ukraine BIT. Each new claim against another state moves the degree of precision by 0.0013, but of course there are about four times as many "cases" to learn from than from claims against the home country. Both variables combined explain about a tenth of the observed variation in the data.

[10] This means that the results from a Tobit model with censoring values set to 0 and 1 will by definition be identical with the OLS estimates.

The signs of coefficients on our control variables are broadly in line with our expectations, however only GDP ratio, the log of GDP per capita of home and host and (unexpectedly) the executive constraints in the home country are statistically significant. Greater asymmetry between the states in terms of economic power. We also find that home and host states with a higher GDP per capita are typically signing more precise BITs. As the majority of home states benefit from stable rule of law, there is relatively little variation in this measure. GDP per capita may be a proxy for administrative legal capacity in our data: Those home countries that are rich enough to have high legal capacity in their bureaucracy are nearly all high-income countries. The remaining home countries are usually large enough economies to have highly capable bureaucracies simply due to their economic size, so even countries like India, China or Mexico that have a lower per-capita income have capable legally trained civil servants. The lack of significance of the coefficient on MNC presence contrasts with results by Allee and Peinhardt (2010) regarding the relationship between delegation to dispute settlement bodies and MNCs. They find that having MNC headquarters in a country makes it more likely that a country's BITs will include at least and likely many options for the settlement of investor-state disputes. However, it is quite likely that MNCs do not directly care about the legal precision of BITs: the responsibility for negotiating effective agreements lies clearly with the government.

Our strongest result—that states will aim for greater precision in response to being hit by claims themselves—also holds when we replace our coding with (the log of) a simple count of the words in the BIT text, as well as when we use a count of unique words in the text, but the effect of new claims against other countries is no longer significant. These results are shown in columns (2) and (3) of Table 2.

Conclusions and Outlook

In this paper, we provide a first attempt to explain changes in legalization in international investment agreements. We focus on the degree of precision enshrined in BITs through the use of more elaborate and less ambiguous language. We find that an overall increase in the number of arbitration claims against any home country, and the home state in question being targeted by arbitration claims directly, leads to an increase in precision. There is no evidence of any effect of claims against host states. We also find evidence of a relationship between asymmetries of economic power, and of the GDP per capital and legal capacity of the host country. This may indicate that developing countries with greater administrative capacity are more likely to sign more precise BITs, possibly because they consider their content more carefully; a result that would accord well with the findings by Aisbett and Poulsen (2013) on the limited capacity of low-income countries to assess the implications of BITs.

Our results suggest that home countries are driving the increase in legal precision in treaties, and that their interest in greater specificity emanates from both their direct experiences with investor-state arbitration and from worldwide trends. Combining our findings with the logic from Aisbett and Poulsen (2013), IIAs may be increasingly biased in favor of capital-exporting states. If developing countries stop signing treaties and/or repudiate those they have signed in the past, the overall system may be moving in a direction with less balance of interest between home and host states. Our initial results, however, indicate only one dimension of legalization, and as such we treat them as necessarily tentative.

Although our model goes some way toward explaining variation and evolution in precision in BITs, our findings are clearly only the first step on the way to a better understanding of the driving forces of legalization in international investment law. More work remains to be done to better identify how and through what channels developed countries learn. For example, while claims provide information about the "realized" precision of a given BIT, arbitration rulings should be even more important as a source for model treaty revisions. Furthermore, we also hope to collect and identify a sufficient number of model treaties to put their content into context, and to focus on specific clauses and wordings that represent improvements in precision. Finally, we will expand our dataset to include the dimension of obligation. While countries might always want greater legal precision to make sure future arbitration proceedings "go their way," they also may seek to clarify and in some instances reduce the extent of obligations on host states.

	(1)	(2)	(3)
Independent variable:	Precision	Log of Word Count	Log of Count of Unique Words
Cumulative claims against home	0.0157**	0.0972**	0.0578**
	(0.0050)	(0.0278)	(0.0182)
New claims against other states	0.0013**	0.0027	0.0021
	(0.0005)	(0.0017)	(0.0011)
MNC presence home	-0.0594	1.4692**	0.8413*
	(0.1582)	(0.3725)	(0.3442)
Law and order home	0.0057	0.0217	0.0052
	(0.0049)	(0.0181)	(0.0137)
Law and order host	0.0025	-0.0114	-0.0037
	(0.0021)	(0.0072)	(0.0052)
GDP ratio	0.0000*	0.0001**	0.0001*
	(0.0000)	(0.0000)	(0.0000)
Ln per capita GDP home	0.0294**	0.0723	0.0540*
	(0.0099)	(0.0380)	(0.0254)
Ln per capita GDP host	0.0081**	0.0263*	0.0159*
	(0.0025)	(0.0104)	(0.0065)
Democracy home	-0.0338	-0.0941	-0.0506
	(0.0200)	(0.0615)	(0.0397)
Democracy host	0.0074	0.0150	0.0021
	(0.0069)	(0.0255)	(0.0179)
Executive constraints home	0.0190*	0.0354	0.0233
	(0.0085)	(0.0239)	(0.0144)
Executive constraints host	0.0013	0.0033	0.0047
	(0.0024)	(0.0084)	(0.0055)
South-South BIT	0.0263	0.0254	0.0262
	(0.0158)	(0.0435)	(0.0265)
Constant	-0.2027*	6.7344**	5.7403**
	(0.0939)	(0.3953)	(0.2503)
Observations	739	739	739
R-squared	0.32	0.37	0.35
Robust standard errors in parentheses. * significant at 5%; ** significant at 1%			

Table 2: Regression results

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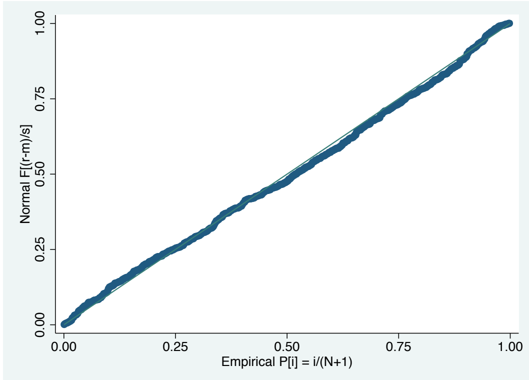
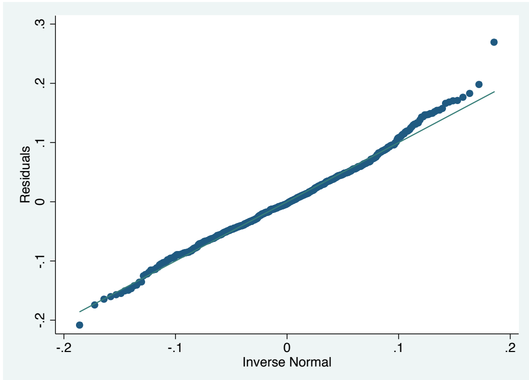
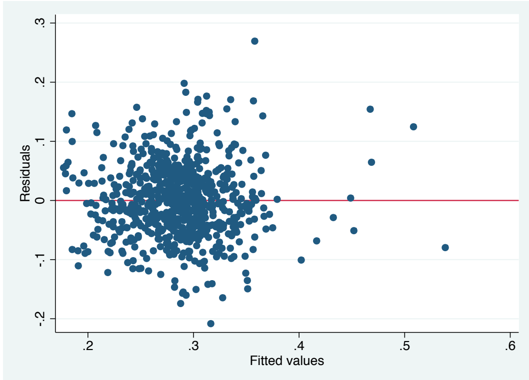
Appendix: Regression Diagnostics



Standardized normal probability plot of residuals



Quantiles of residuals against quantiles of normal distribution



Residuals vs. fitted values