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Journal of Conflict Resolution 2011 55: 1047 originally published online 23 August 2011

DOI: 10.1177/0022002711414373

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Three Waves of BITs: The Global Diffusion of Foreign Investment Policy

Srividya Jandhyala¹, Witold J. Henisz², and
Edward D. Mansfield²

Abstract

Bilateral investment treaties (BITs), agreements that provide extensive rights and protection to foreign investors, were first adopted in the 1960s, proliferated in the late 1980s and 1990s, especially among developing countries, and seemingly fell out of fashion after 2001. To explain this life cycle of diffusion across the international state system, we argue that BIT signing followed a traditional logic of diffusion for an innovation albeit here in the policy realm. In the first period, BITs provided a solution to the time inconsistency problem facing host governments and foreign investors. In the second period, these treaties became the global standard governing foreign investment. As the density of BITs among peer countries increased, more countries signed them in order to gain legitimacy and acceptance without a full understanding of their costs and competencies. More recently, as the potential legal liabilities involved in BIT signing have become more broadly understood, the pattern of adoption has reverted to a more competitive and rational logic. Our empirical tests of BIT signing over four decades provide evidence for such a three-stage model.

Keywords

bilateral investment treaty, foreign direct investment, policy diffusion

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During the past half century, there has been a rapid proliferation of bilateral investment treaties (BITs). These treaties establish the terms under which nationals and companies of one country can make investments in the jurisdiction of another. Given the surge in foreign direct investment (FDI) since 1990, particularly into developing countries (see Figure 1), it is not surprising that such treaties diffused broadly throughout the international system. In the absence of multilateral institutions to promote and regulate FDI, many observers argue that BITs play an important role in facilitating this investment. Since the first BIT was signed in 1959, over 2,700 additional treaties of this sort have been forged involving almost every country in the world. However, the distribution of BITs has varied markedly over time. From 1959 until the late 1980s, signing occurred at a moderate rate, rarely exceeding 20 treaties per year. In the 1990s, over 100 signing ceremonies were held annually, increasing the density of BIT coverage from approximately 2 percent of all country dyads in 1990 to nearly 10 percent in 2000. Equally, many of these BITs were concluded between capital-poor, developing countries. Beginning in 2001, however, the pattern of diffusion altered markedly with a sharp drop in the number of new BITs and a shift in the set of countries signing these treaties. Our goal in this article is to explain the variation in the extent to which states participate in BITs, when they elect to do so, and the partners they choose.

Some recent studies have argued that the spread of BITs is related to the diffusion of neoliberal policies, and that policy changes in one country are a reaction to policy choices made in others (Simmons, Dobbin, and Garrett 2006). Conflict, coercion, competition, learning, and emulation have been identified as mechanisms influencing the pattern of diffusion in various issue areas, including the spread of neoliberal policies (e.g., Elkins, Guzman, and Simmons 2006; Gleditsch and Ward 2006). The increased emphasis on interstate policy diffusion, however, masks some disagreements over the precise mechanisms governing this process and a puzzle regarding the spate of "strange BITs" formed between capital-poor, developing countries during the 1990s. More generally, scholars have not identified the conditions under which diffusion is likely to be driven by a particular mechanism, nor have they studied why these conditions might change over time. As the implicit assumption in this early work that neoliberal policy innovations would eventually diffuse to all nations is increasingly called into question, the need for a richer model of policy diffusion which allows for other equilibria is increasingly apparent.

We argue that there have been two intertemporal shifts in the forces underlying the diffusion of BITs. During the initial wave of these treaties, the adoption of a BIT helped reassure foreign investors by offsetting weak and unstable domestic institutions in host countries. These treaties furnished capital-exporting countries with an ancillary commitment mechanism above and beyond that provided by host country legal institutions (Salacuse 1990; Neumayer 2006; Salacuse and Sullivan 2005). Thus, a vast majority of the BITs were formed between an

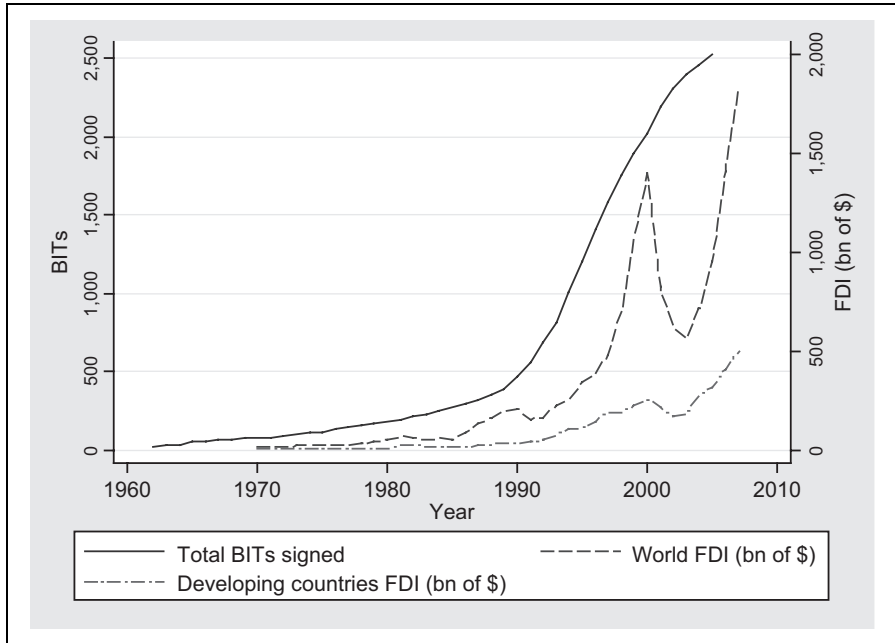


Figure 1. Cumulative bilateral investment treaties (BITs) and foreign direct investment (FDI) inflows.

economically advanced, capital-exporting country and a developing, capital-importing country.

During the second wave of BITs, however, the bulk of these treaties were signed by pairs of developing countries. We argue that this change reflected a growing tendency for states to view forming BITs as an appropriate act for states providing institutional protection for foreign investment, irrespective of any specific pressure from a potential foreign investor or its government. The motivation for such behavior could be a rational cascade, in which countries sign such treaties because peer states are doing so. A complementary explanation is that developing countries began to join an increasing number of these treaties in order to demonstrate adherence to what had become a global standard or norm about the treatment of FDI by host countries. Thus, diffusion in the second wave was driven to a greater extent by pressures of emulation in a form of rational herding (Bubb and Rose-Ackerman 2007) or a “norm cascade” (Finnemore and Sikkink 1998), which helps to explain the seemingly anomalous tendency for BITs to form between countries that have little capital to invest in foreign jurisdictions.

The third wave of BITs began with an increased realization of the potential costs associated with these treaties, triggered by the aftermath of the 1998–2000 East Asian financial crisis and the 1999–2002 Argentine crisis. As both the potential costs

and benefits have become clearer, fewer states are blindly emulating their peers and the BITs that have been established are being driven by rational calculation.

Our empirical analysis centers on BIT signing between 1970 and 2007. We assess the relative strength of various domestic and international factors over this period. We find that the rational political-economic calculus to sign BITs is strongest in the first wave, weakest in the second, and relatively strong again in the third as compared to cues of peer adoption. In the second wave, peer-country cues of adoption and perhaps the norm of property protection for multinational investors in host countries played a larger role. Thus, our analysis provides support for at least a three-stage model of diffusion as compared to the two-stage model outlined by Finnemore and Sikkink (1998) and Ramirez, Soysal, and Shanahan (1997).

The First Wave of BITs: Rational Solution to Domestic Time-Inconsistency Problems

We argue that, initially, BITs arose as a means to credibly commit host governments to protecting the property rights of foreign investors. These investors face significant political risks in their international operations. Once an investment is “sunk,” bargaining power shifts from the foreign investor to the host country and the interests of the two parties diverge. Host governments seek to renegotiate their initial concession agreement when the initial advantages of the multinational corporations (MNCs) erode (Vernon 1980). Such redistributive policies are often perceived as expropriation by foreign investors.

Prior to World War II, the sole external protection for foreign investment was customary international law, which obligated host countries to treat investment in accordance with internationally set standards (Vandeveldt 2009). This protection proved inadequate. The international standards were vague and a source of disputes, and in some developing countries, the treatment of foreign investors did not meet these standards (United Nations Conference on Trade and Development [UNCTAD] 2004). Further, the only mechanism offered by customary law for enforcement was espousal—whereby nonlegal mechanisms of military force and diplomacy were used (Vandeveldt 2009).

In the aftermath of World War II, various developing and newly independent countries adopted socialist economic policies, including large-scale nationalizations. Many of these countries viewed foreign control over key resources and industries as compromising their new-found sovereignty (UNCTAD 2004) and worked within the United Nations (UN) General Assembly to establish their right to expropriate foreign investment without compensation based on fair market value. Developed countries responded to the threat of uncompensated expropriation by creating the BIT.

BITs establish reciprocal terms and conditions for FDI. While the content of these treaties varies, they usually address three key areas: admission and establishment conditions for investment, the treatment of FDI once it has been invested, and dispute settlement (Buthe and Milner 2008). In addition, investors are given assurances regarding their property rights through clauses that provide the right to

sue the host government if its actions are deemed to substantially expropriate the business of the firm (UNCTAD 2000).

Thus, BITs arose as a means to credibly commit developing-country host governments to protecting the property rights of developed country foreign investors. As one member of the British House of Commons explained in 1971,

... I am convinced that the Government's decision to introduce a scheme for insuring new investors against non-commercial risks and to conclude, wherever possible, bilateral treaties with developing countries will bolster confidence and lead to an increased flow of private investment and all the benefits it can bring. The advantage of investment treaties of course, is that they protect existing as well as new investment and they also involve the developing country itself.¹

Similarly, in 1979 the British Secretary of State for Foreign and Commonwealth Affairs, Lord Carrington, pointed out that the BITs England had formed with various developing countries “guarantee that British investors will receive the same treatment as national investors or other foreign investors and that they will receive prompt, adequate and effective compensation in the event of expropriation” (Hansard 1979, c1086WA).

BITs, therefore, were an external legal means for host country governments to partially address a time inconsistency problem in which their optimal policy *ex ante* becomes suboptimal *ex post* (Guzman 1998). Signing a BIT renders a government susceptible to substantial reputational damage if it elects to opportunistically violate the terms of the treaty (Elkins, Guzman, and Simmons 2006). Hence, a BIT reduces the risk an investor faces and the associated threshold rate of return for a project, which, in turn, is likely to promote FDI (Henisz 2000a, Pinto, Pinto, and Stier-Mosess 2010; Wei 2000). Consequently, we should expect to observe BITs involving countries with the greatest potential unrealized FDI due to problems of commitment. More generally, governments of capital-exporting developed countries are likely to sign a BIT with governments of (potential) host countries that face problems making credible commitments. These commitment problems are particularly acute in countries with few checks and balances, where the absence of rule of law, veto players, secure property rights, and (in some cases) coherent administrative institutions raise the specter of rent seeking and other forms of government predation or opportunistic policy making that could jeopardize foreign investment (Henisz 2000a). Hence, in the period when BITs started to emerge on the global landscape, we expect them to be established by countries with the greatest potential unrealized FDI due to these commitment problems.

The Second Wave of BITs: Rational Emulation or Norm Cascade

Over time, however, two patterns emerged in the diffusion of BITs that were inconsistent with the argument advanced in the previous section. First, there was a

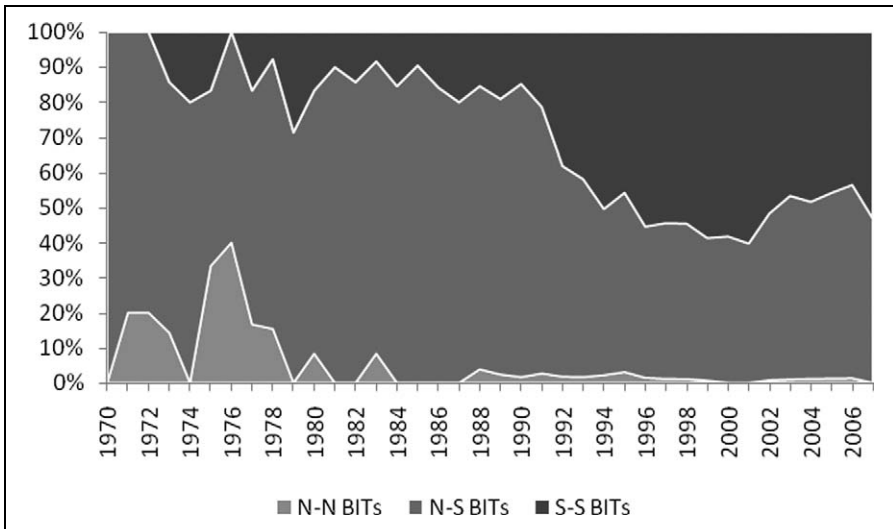


Figure 2. Bilateral investment treaties (BITs) signing by dyad type.

Note: N = north; S = south.

change in the pace of BIT signing over time. Since the first BIT in 1959 until the late 1980s, signing occurred at a moderate rate, rarely exceeding 20 treaties per year. Since the late 1980s and until about 2000, the pace grew much more rapid, with an average of more than 100 treaties a year. As shown in Figure 1, this pattern follows a classic diffusion “S curve.” Building on theoretical and empirical work on the adoption of new technologies and practices in which such patterns have typically been studied, we posit that adopters in the rapid diffusion stage (from the late 1980s until about 2000) differ systematically from those who initially adopt BITs (Rogers 1995). In particular, we posit that these adopters are more heavily influenced by the behavior of their peers and a potentially emergent norm of adoption than a rational calculation of costs and benefits.

Second, while early BITs were limited to dyads comprising countries with vastly different political and economic conditions, BITs in the second wave (late 1980s to 2000) were signed by countries with similar conditions, especially capital-poor developing countries. While most of the early BITs were signed between a developed (capital-exporting) and a developing (capital-importing) country, Figure 2 shows that starting in the late 1980s, there was a substantial spike in the number of BITs signed between developing countries. South–South BITs accounted for less than 10 percent of all treaties signed in the period 1970–1975, but composed nearly 55 percent of all treaties signed in 1996–2000. Figure 3 shows that early BITs were formed between countries with greater differences in income, while the second-stage BITs were established among more similar countries (Elkins, Guzman, and Simmons 2006). Extant theoretical explanations of BITs cast little light on the rationale for such treaties between countries with little potential for capital flows and with similar economic and political institutions.

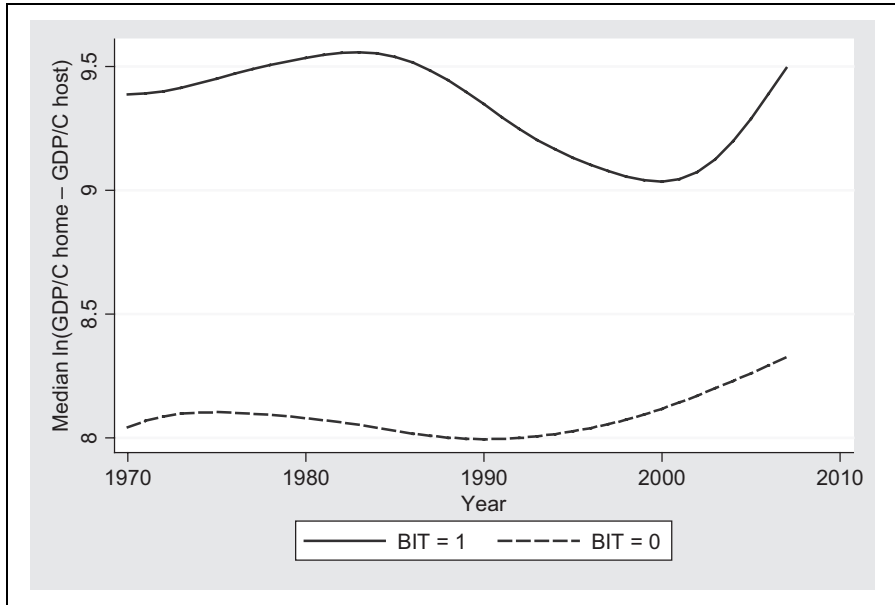


Figure 3. Median difference in real per capita gross domestic product (GDP) for bilateral investment treaties (BITs) signing dyads, by year.

We argue that during the second wave, the purpose of BITs changed. While BITs provided a solution to the time inconsistency problem of FDI in the first stage, in the second stage they diffused across similar or peer countries and potentially became established as one of the expected policy mechanisms for countries pursuing market-oriented reforms. Thus, the second wave of BITs is motivated to a lesser extent by national costs and benefits and to a greater extent by the prior adoption of peers and the potential benefits of behaving in a way that is viewed as legitimate and keeping with accepted norms or standards (Finnemore and Sikkink 1998).

Different motivations for early and subsequent adopters have been observed in other policy areas as well. For instance, a cross-national analysis of suffrage rights reveals a different dynamic at work for early and late adopters (Ramirez, Soysal, and Shanahan 1997). In the period 1890–1930, Western countries with strong national women’s movements were most likely to grant female suffrage. After 1930, however, international and transnational pressures became more important and countries adopted women’s suffrage even though they faced no domestic pressures to do so. Similar results have also been documented in the field of education (Suarez, Ramirez, and Koo 2009) and civil service reforms (Tolbert and Zucker 1983).²

The late 1980s witnessed a shift in the political and economic landscape in which international investment agreements were being negotiated (UNCTAD 2008a). There was increased political commitment by governments of both

developed and developing countries to economic liberalism and the freer international flow of goods, services, and investment (Newcombe and Paradell 2009). The economic success of those Asian economies that encouraged private investment and export promotion, relative to other developing countries that pursued import substitution policies, demonstrated the positive role of foreign investment in developing countries. Further, the debt crisis of the 1980s reduced the availability of private lending, making foreign investment more attractive as a source of capital (Vandeveld 2009). In this context, a large number of developing countries began to actively seek foreign investment for economic development and stabilization (Kobrin 2005), aided by a series of reforms emphasizing fiscal austerity, market liberalization, privatization and property rights protection—the package better known as the Washington Consensus (Williamson 1990). As a part of such reforms, countries were expected to enter international agreements designed to provide a sound, secure, and predictable investment climate for foreign investors. BITs, as a broadly diffusing policy mechanism and a potentially emerging international norm, served this purpose (Garcia-Bolivar 2009; Newcombe and Paradell 2009). Like other late-stage diffusing policies, BITs may or may not have been technically efficient but were adopted by agents responding to cues from their peers or from established notions about appropriate or desirable behavior in the community (Finnemore and Sikkink 1998).

For practices to become broadly diffused or widely held and established norms, they have to be accepted by significant actors without whom the substantive norm gets compromised (Finnemore and Sikkink 1998). In the case of BITs, we argue that two factors further propelled these treaties toward broad-based diffusion or a norm-like status. The first is the endorsement by major capital-exporting countries, particularly the United States. Although several European countries were early adopters of BITs, the United States pursued wide ranging Friendship, Commerce, and Navigation (FCN) treaties well past World War II. By the early 1980s, however, debates in the United States about the appropriate international investment policy instruments shifted attention to BITs. As Harvey Bale Jr., the assistant US trade representative for Investment Policy, noted in his 1982 testimony to the US House of Representatives, “We are starting late in this game. The West Germans, the British, and the Japanese have been negotiating BITs for the last several decades. Some of those treaties, a good number of them, in fact, are less demanding than the type of treaty that we are negotiating” (US Congress 1982, 71). The process of winding down the US FCN program by the early 1980s coincided with the rise of BITs. With the adoption of BITs by principal capital-exporting nations, including the United States and Japan, this period further legitimated BITs as the policy tool of choice in establishing a good governance framework for overseas investment.

The second factor that raised the status of BITs was the emphasis placed on these treaties by multilateral agencies, such as the World Bank and UNCTAD. In 1992, the World Bank prepared a set of guidelines for the universal treatment of FDI. The report and the guidelines highlighted the same issues of admission, treatment,

expropriation, and dispute settlement that are stressed in BITs. These guidelines were expected to reflect “generally acceptable international standards” (World Bank 1992, 10) about the promotion of FDI and lay a foundation for future BITs. Similarly, UNCTAD coordinated several meetings to aid the signing of BITs, especially among developing countries.³ Consequently, entering BITs may have emerged as part of a norm for how to treat overseas investment.

The importance of peer adoption and the potential for norm-like status is evident among countries transitioning from protectionist to neoliberal regimes. For example, Ecuador adopted a series of reforms in the early 1990s under Duran Ballen aimed to attract foreign capital and increase the rights of investors. As Hey and Klak (1999) note, during Ecuador’s transition to neoliberalism in 1993 and 1994, the government launched various changes to the country’s investment sector, including a BIT program. Ecuador signed BITs with the United States, Chile, and Venezuela in 1993, then with Argentina, China, and the England in 1994. Thus, BITs were one of the policy instruments used by Ecuador to demonstrate its commitment to market-oriented reforms.

Therefore, we argue that in the second period, BITs diffusion was driven primarily by pressures stemming from peer adoption and the need to conform to an emerging norm about the treatment of foreign investment. Once initiated, both rational herding and norm cascades spread rapidly throughout the global system (Finnemore and Sikkink 1998). States have reason to form BITs because doing so demonstrates that they have adapted to the social environment to which they belong (Axelrod 1986) and that they are “acting on collectively valued purposed in a proper and adequate manner” (Meyer and Rowan 1977, 349). Nonconformity risks a negative assessment by stakeholders and may erode a state’s legitimacy. Thus, once BITs are broadly diffused or established as the global norm of good governance for foreign investors, countries look to sign BITs, regardless of their functional utility. Forming a BIT allows them to demonstrate that they are acting as economically responsible states and have adapted to their social environment, regardless of whether there are rational economic pressures to conclude the treaty. The role of peer effects and norms in guiding certain periods of policy diffusion is hardly limited to BITs. These factors have been emphasized in studies of environmental policies (Holzinger, Knill, and Sommerer 2008), patterns of regime change (Gleditsch and Ward 2006), and the expansion of the North Atlantic Treaty Organization (Gheciu 2005).

During the second wave of BITs, wealthier countries started emphasizing the broader political and symbolic benefits of BITs as compared to narrow economic interests. Developing countries did likewise and formed a wide variety of BITs with one another without much concern for their economic consequences. For instance, explaining Pakistan’s approach to BITs in the 1990s, the attorney general of Pakistan reported that “I was told that when the President, or Prime Minister, went abroad, our foreign missions would tell the Ministry that BITs are ‘one of the dooables.’ Since Pakistan has signed BITs without any consequences for a long time, everyone simply considered the treaties as a piece of paper, something for the press, a good photo opportunity—and that was the end of it” (Poulsen and Vis-Dunbar 2009, 3).

This more symbolic approach to BIT signing is also evident in the case of the Hungary–India treaty. In a joint statement released when the Hungarian prime minister paid a state visit to India in 2003, “both sides expressed satisfaction over the progressive growth of Indo-Hungarian relationship, which is marked by strong cultural affinity and understanding.”⁴ The two countries signed several agreements including a BIT, a double taxation treaty, and agreements on defense cooperation, cooperation in information technology and services, and cultural and educational exchange programs.

Thus, we argue that in the second stage, BIT creation was driven to a greater extent by the benefits of behaving in a way that conforms to peer behavior or is viewed as legitimate and in keeping with accepted norms or standards, rather than as a solution to a time inconsistency problem. Moreover, we expect peer adoption to have a stronger effect in this period. Sociocultural linkages, such as common language, colonial history, and common international organization membership among countries, may contribute to similar policy choice among states (Rose 1993). Hence, the signing of a treaty between a home–host dyad is likely to initiate similar treaties among the host’s social peers and the home country.

The Third Wave of BITs: Heightened Awareness of Costs Dampens Peer Effects

Recently, the pace of BIT signing has slowed as the number of investor–state dispute settlement cases filed under international investment agreements has soared. Until 2000, approximately thirty-eight investor–state disputes were filed. By 2007, the total cumulative number jumped to nearly three hundred with at least seventy-three countries—fifty-eight developing and fifteen developed—facing investment treaty arbitration (UNCTAD 2008b). BITs were by far the most common type of treaty used by foreign investors to file claims against host states. The vast majority of the claims were against countries with prolific BIT programs, including Argentina, the Czech Republic, Ecuador, and Romania. Following the country’s financial crisis at the turn of the century, twenty-eight disputes were initiated against Argentina in the period 2001–2003. The average award sought by claimants was in excess of \$500 million, while Telefonica S.A. sued Argentina for a whopping \$2.8 billion under the Spain–Argentina BIT.

With the exponential increase in disputes since the early 2000s, the dynamics of treaty signing has also changed (UNCTAD 2009). Several large claims by investors, especially during a period of national crisis, have generated a much greater awareness of the legal liability and the potential costs of BIT signing. This has led several countries to question the desirability of BITs and to probe more carefully the actual costs of signing them. For example, the Attorney General of Pakistan commented at a global forum that “like many countries, Pakistan had signed bilateral investment treaties (BITs) because it was fashionable to do so and under the impression that BITs would not ‘bite’” (Marshall 2009). He noted further that this impression had been dispelled by the various high-value

investor claims that Pakistan has since faced, several of which were more than Pakistan's annual health and education budget combined. He described the difficulty a host state faces in mounting a defense to an investor's claim when it has little expertise in this area, a poor record of treaty negotiations, and weak lines of communication with investors.

In addition to being held liable for large sums, several countries have also, rather belatedly, expressed concern about private tribunals having more power than the host state's highest court and at providing investment protection at *all* costs. As a result, several BITs in the third stage (after 2000) provide explicit safeguards for host countries to enact regulations—even inconsistent with the BIT—to protect legitimate public concerns such as security, public order, health, safety, natural resources, cultural diversity, and prudential measures for financial services (UNCTAD 2007).

Other countries, such as Ecuador, Bolivia, and Venezuela, have fundamentally changed their approach to BITs and denounced some treaties. As of 2008, Ecuador has declared its intention to withdraw several types of investment disputes from the jurisdiction of the International Center for the Settlement of Investment Disputes (ICSID) and to cancel its BITs with (Cuba, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Romania, and Uruguay UNCTAD 2010).

With greater awareness of the legal liability and the potential costs and benefits of BIT signing since 2000, various countries have reexamined the desirability of BITs. As the true net benefits become apparent, there is likely to be a resurgence among later adopters of a more rational or intrinsic cost–benefit calculus as opposed to a bandwagon, fad, or imitative behavior. As a result, the pattern of BIT signings is less haphazard and more consistent with the rational decision model that characterized the first stage.

In light of our discussion, we analyze the following hypotheses about the three waves of BITs:

Hypothesis 1: The influence of the host country political system and the bilateral potential for FDI flows on the likelihood of BIT signing between the home and host countries will be lower in the second stage as compared to the first or third stages.

Hypothesis 2: The influence of sociocultural peers' BIT programs on the likelihood of BIT signing between the home and host countries will be higher in economic significance in the second as compared to the first or third stages.

Empirical Analysis

In order to test these hypotheses, we create a data set comprising all possible dyads between 166 countries for the period 1970–2007. Although West Germany and Pakistan signed the initial BIT in 1959, the first such treaty that expressly incorporates provisions for investor–state arbitrations was concluded by Indonesia and the Netherlands in 1968. Until then, BITs only provided state-to-state dispute resolution

through the establishment of an arbitral tribunal or submission of the dispute to the International Court of Justice (ICJ) (Newcombe and Paradell 2009). Hence, we restrict our analysis to the thirty-eight-year period 1970–2007. This is also the longest period for which we are able to obtain data for all of our variables of interest.

Our unit of analysis is the dyad-year, and we observe all BITs that have been signed in this time period. As many of our hypotheses relate to differences in characteristics between a likely capital exporting and a likely capital importing, we follow Elkins, Guzman, and Simmons (2006) in treating the more-developed country based on real per capita gross domestic product (GDP) as the likely home country and the less-developed country as the likely host. In addition, to avoid contemporaneous correlation, we lag all of the independent and control variables by one year. Summary statistics and a correlation matrix are provided in Table 1.

Our main dependent variable is dyadic BIT signing. The observed value of this variable is 1 if the states in a given dyad signed a BIT in a given year; otherwise, it equals 0. The data are obtained from the UNCTAD database on investment instruments.⁵ This is the same source as used by prior studies of the determinants of BIT signings and their impact (Elkins, Guzman, and Simmons 2006; Neumayer and Spess 2005).

Our main hypotheses are that effects on the BIT signing of the potential for dyadic FDI flows, host country political systems, and transnational norm-based emulation variables will vary over time with variables more closely associated with the resolution of the time consistency problem higher in relative importance in the first and third stages and those more closely associated with a rational bandwagon or normative cascade higher in relative importance in the second stage. We assess the credibility of host country domestic institutions for investors in two ways, by including a measure of political constraints (Henisz 2000b) and another measure of regime type (Jaggers and Gurr 1995). The construction of the first measure—the Political Constraints Index (POLCON)—begins with the identification of the number of independent branches of government with veto power over policy change (e.g., one or two legislative chambers, the judiciary, and subfederal states or provinces). A measure of institutional constraints is then generated by assuming the preference of each branch, and the status quo policy is drawn independently and identically from a uniform distribution. The measure is then modified to take into account the extent of alignment across the branches of government and the extent of preference heterogeneity within each legislative branch. The final values range from 0 (least constrained)—which corresponds to an executive with no formal checks or balances on his or her behavior—to 0.89—which corresponds to an executive checked by a fractious bicameral legislature, the judiciary, and subfederal provincial or state governments (e.g. Belgium).

To the extent that such constraints serve to inhibit a host-country government from reneging on prior commitments made to respect property rights (i.e., responding to the time consistency problem they face in the case of long-term investment), countries with fewer constraints have weak commitment mechanisms. Based on a similar logic to what we employ here, previous studies have found that higher

Table 1. Summary Statistics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Mean	0.36	7.96	7.84	24.75	48.37	1.95	1.69	1.92	2.09	0.01	0.07	0.11	27.50	2.39	0.31	0.59	1.58	4.22	4.09	8.26	0.57
SD	0.29	6.44	1.81	1.88	4.56	1.62	1.01	1.08	0.93	0.03	0.26	0.31	10.76	4.81	0.85	1.34	2.86	0.56	0.57	0.75	0.49
Min	0.00	0.00	-4.49	19.33	19.52	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	-1.25	0.00	0.00	0.00	1.67	1.67	1.61	0.00
Max	0.90	20.00	10.94	30.44	60.14	4.55	4.43	4.80	3.78	0.83	1.00	1.00	108.00	49.11	9.63	15.79	26.46	6.12	6.12	9.42	1.00
1 Polcon (home-host)	1.00																				
2 Polity (home-host)	0.62	1.00																			
3 ln(GDP/C home - GDP/C host)	0.36	0.26	1.00																		
4 ln(GDP home + GDP host)	0.19	0.07	0.62	1.00																	
5 ln((GDP home - GDP host) ²)	0.22	0.10	0.62	0.94	1.00																
6 Average BIT density - Trade	-0.16	-0.17	0.04	0.20	0.12	1.00															
7 Average BIT density - Lang	0.03	0.00	0.01	0.02	0.02	0.36															
8 Average BIT density - ColHer	0.04	-0.05	0.02	0.03	0.03	0.41	0.86	1.00													
9 Average BIT density - IGO	-0.04	-0.14	0.04	0.12	0.09	0.53	0.93	0.92	1.00												
10 Dyadic similarity - Trade	-0.01	-0.08	0.20	0.41	0.38	0.14	-0.01	-0.05	0.00	1.00											
11 Dyadic similarity - Lang	-0.07	-0.10	-0.10	-0.01	-0.02	-0.03	-0.02	-0.10	-0.06	0.13	1.00										
12 Dyadic similarity - ColHer	-0.06	-0.06	-0.06	-0.02	-0.03	-0.02	-0.03	-0.08	-0.05	0.17	0.71	1.00									
13 Dyadic similarity - IGO	-0.19	-0.28	0.06	0.36	0.25	0.43	0.34	0.27	0.43	0.26	0.21	0.15	1.00								
14 Dyadic peer adoption - Trade	-0.09	-0.15	0.17	0.31	0.26	0.53	0.49	0.45	0.55	0.17	-0.07	-0.05	0.45	1.00							
15 Dyadic peer adoption - Lang	0.09	0.03	0.19	0.25	0.23	0.14	0.35	0.36	0.37	0.15	0.07	0.07	0.15	0.42	1.00						
16 Dyadic peer adoption - ColHer	0.08	0.00	0.24	0.29	0.28	0.19	0.36	0.36	0.40	0.09	0.01	0.03	0.16	0.54	0.77	1.00					
17 Dyadic peer adoption - IGO	0.09	-0.01	0.28	0.36	0.33	0.26	0.44	0.39	0.45	0.17	-0.05	-0.03	0.37	0.68	0.58	0.66	1.00				
18 Trade/GDP home	0.02	0.00	-0.06	-0.42	-0.41	0.13	0.25	0.25	0.26	-0.27	-0.04	0.00	-0.01	0.10	0.04	0.08	0.08	1.00			
19 Trade/GDP host	0.13	0.09	0.09	0.03	0.08	-0.02	0.10	0.17	0.16	-0.03	-0.05	0.01	-0.15	0.07	0.10	0.13	0.08	0.05	1.00		
20 Distance (home-host)	0.04	0.08	0.10	0.06	0.09	-0.05	-0.06	0.03	-0.01	-0.17	-0.20	-0.14	-0.44	-0.07	-0.05	0.01	-0.21	-0.11	0.12	1.00	
21 PTA (home-host)	0.00	-0.06	0.18	0.18	0.16	0.16	0.23	0.21	0.27	0.07	0.10	0.12	0.39	0.20	0.12	0.17	0.19	0.06	-0.02	-0.14	1.00

Note: GDP = gross domestic product; BIT = bilateral investment treaty; IGO = intergovernmental organization; PTA = preferential trading arrangement; SD = standard deviation; Min = minimum; Max = maximum; GDP/C = per capita GDP; Lang = language; ColHer = colonial Heritage

levels of POLCON are associated with a reduction in the volatility of fiscal policies (Fatas and Mihov 2003) and the sensitivity of trade policy to increases in unemployment (Henisz and Mansfield 2006). In order to assess the differences in home and host political systems, we calculate the absolute difference between the political constraints index of the home and host countries.

Our second measure for credibility of domestic institutions is based on regime type. A number of studies have shown that democratic governments make more credible policy commitments and are more credible in their dealings with foreign investors than nondemocratic regimes (Fearon 1994; Gaubatz 1996; Jensen 2003). Hence, we use a measure of the host country's regime type based on the Polity IV data set (Jagers and Gurr 1995). This is a twenty-one-point index that ranges from 10 for the most democratic states to -10 for the most autocratic ones. In order to assess the differences in home and host countries, we include the absolute difference between the regime type scores of the two countries.

Next, we introduce measures to capture the potential for both horizontal and vertical FDI between the home and host countries by drawing on the knowledge capital model of FDI (Braconier, Norback, and Urban 2003; Carr, Markusen, and Maskus 2001). In this model, outward investment from a home country to the host is increasing in the sum of their economic sizes, the similarity in size, and the relative skilled labor abundance in the home country (Braconier, Norback, and Urban 2003; Carr, Markusen, and Maskus 2001). Consistent with this model, we introduce the sum of home and host GDP and the square of the difference between home and host GDP to capture the potential for horizontal FDI (Carr, Markusen, and Maskus 2001). This is based on the idea that larger and more similar sized markets better support higher fixed costs associated with setting up production across countries. As a result, when the potential for horizontal FDI is high, we expect the first term (GDP sum) to be positive and the second (squared GDP difference) to be negative. We also include the difference between the home and the host per capita GDP, where per capita GDP is a proxy for the availability of skilled labor. This difference is meant to capture the relative skilled labor abundance in the home country (Braconier, Norback, and Urban 2003; Carr, Markusen, and Maskus 2001). When the potential for vertical FDI is high, we expect this term to be positive. Together, these measures capture the potential for horizontal and vertical FDI between the home and host countries.

Our next measure is intended to capture socially constructed diffusion from the global spread of BITs. We expect the total density of BIT signings in the international system to be a powerful signal of their legitimacy, increasing the likelihood of signing for any dyad. Thus, we construct BIT density measures among reference groups by calculating the average number of BITs in force (1) in all countries with which the focal country has trade (i.e., export or import) ties weighted by the bilateral trade share,⁶ (2) among all countries that share a common language with the focal country,⁷ (3) among all countries that share a colonial history with the focal country,⁸ and (4) among countries that belong to common intergovernmental organizations (IGOs) as the focal country.⁹

We next turn to a series of control variables at the dyadic and the host-country levels. Elkins, Guzman, and Simmons (2006) have argued that the diffusion of BITs is driven by international competition among potential host countries for FDI. In order to control for such an effect, we first construct dyadic measures of competition by focusing on the BIT signing activity of the host's competitors. We define competitors of a state in four ways. First, we consider similarities in trading patterns (i.e., countries that export and import the same basket of goods). Next, we consider countries that share a common language, a shared colony-colonizer relationship or colonial heritage, or countries that belong to the same IGOs. In each case, we construct a measure of weighted dyadic peer adoption for the focal country and the potential BIT signatory based on the existence a BIT between the potential BIT signatory and all other countries giving greater weight to those with (1) similar Pearson correlation coefficients in import and export product categories, (2) the same dominant language, (3) the same colonial heritage, and (4) similar IGO memberships.¹⁰

Next, we control for the extent of similarity between the countries composing the dyad. It may be easier for states that have strong trade ties with each other and with cultural similarities, such as a common language, or colonial heritage to negotiate successfully. Studies examining various types of interstate negotiations have observed that states which share similar cultures understand signals, preferences, and perceptions of each other and are more likely to resolve disputes or reach mediated agreements (Cohen 1997; Leng and Regan 2003). Thus, depending on the model, we include a measure of dyadic trade or the presence of a shared language, colonial heritage, or IGO membership between constituents of the dyad.

The presence of a preferential trading arrangement (PTA) between the states comprising the dyad may also influence the likelihood of BIT signing, although the nature of this relationship is not obvious (Tobin and Busch 2010). We also control for the physical distance between the two countries of the dyad. Finally, we control for a state's integration with global trade by including a measure of its total global trade value as a percentage of GDP for both the home and host countries.

Results

We use event history analysis to examine the hazard rate of BIT signing (Elkins, Guzman, and Simmons 2006). However, our arguments about change in the relative effects of the main independent variables require models that allow for their effects to vary across periods. For this reason, we use piecewise exponential models—which allow the effects of covariates to vary in an unconstrained way across historical periods—and cluster standard errors on the dyad. We include a dummy variable for time in each period as a covariate, thereby accounting for time trends in the models. Similar models have been widely used in the world polity literature (e.g., Ramirez, Soysal, and Shanahan 1997) and in organizational studies (Thorn-ton and Ocasio 1999) to capture time-varying effects of covariates.

We lack sufficient information on the decision criteria of signing governments to predict exactly when each wave of BITs should begin and end. To make such prediction, we would need to make a set of untenable assumptions about the number of dyads which are expected to sign a BIT, the shape of the BIT adoption curve, the stability of various influences on BIT formation over time, and the degree of ambiguity regarding the benefits of establishing a BIT, and the evolution over time of such ambiguity in response to prior adoption decisions. Since we lack the information necessary to make such assumptions in a rigorous manner, we relied on the data and the history of BITs to guide our decisions about how to date the cutoff for each wave. Our three-wave diffusion model proposes a relative decline in importance of factors that should enhance the benefits of a BIT during an intermediate period when peer adoption is driving a rational herd or normative cascade. The most rapid growth in BIT signing during which policy makers spoke of treaty signing in more normative tones occurred between the collapse of the Soviet Union in 1989 and the East Asian and Argentine crises of 1998–2002. As a result, we chose our first and second cutoff points as 1988 and 2000, respectively. Our results are robust to variations in this choice, however, as we describe in the following.

The main results are reported in Table 2. Because the density measures based on the host country's sociocultural peer set are highly correlated, we cannot include them in the same model. Instead, we report four groups of models. In each group, host country's peers are determined by trade relationships or sociocultural relationships based on language, colonial history, and IGO membership. Models 1 through 8 report results from the piecewise exponential models for the first, second, and third waves of BIT signing (1970–1987, 1988–1999, and 2000–2007, respectively).

Before turning our discussion to the substantive hypotheses, it is important to note that our models reveal historical time dependence. Baseline adoption rates increase from the first wave to the second and from the second to the third. Turning to the control variables, we find that, consistent with the results of Elkins, Guzman, and Simmons (2006), competitive forces are a significant predictor of BIT signing in all three waves; however, these effects are larger in the first wave than in the second or third. The effects of dyadic similarity are mixed. There is no stable or consistent impact of trade share or common language, colonial heritage, and IGO membership on the likelihood of signing a BIT. These findings highlight the importance of reconceptualizing the international system as a network rather than analyzing each pair of potential BIT signatories in isolation. We find that the ratio of trade to GDP of the wealthier and poorer counties have a positive and significant effect on BIT signing in the first period, whereas this impact declines in magnitude for the wealthier countries in the second and third periods and even reverses in sign for the poorer countries. These results indicate that countries that conduct relatively little trade were becoming more active in signing BITs in the second and third periods. Physical distance seems negatively correlated with BIT signing in the second and third periods. Finally, the results on PTA membership are inconclusive.

Table 2. Piecewise Exponential Models of BIT Signing

	1 Trade	2 Trade	3 Language	4 Language	5 Col History	6 Col History	7 IGO	8 IGO
Polcon (home-host)	t1 0.7045* (0.321) t2 -0.3771*** (0.112) t3 0.4918*** (0.141)		0.3969 (0.456) -0.5146** (0.165) 0.3837* (0.195)		0.6067 (0.411) -0.3746** (0.117) 0.2023 (0.164)		0.7297† (0.417) -0.5243*** (0.139) 0.1281 (0.212)	
Polity (home-host)	t1 0.0348** (0.012) t2 -0.0142** (0.005) t3 0.0232*** (0.007)		0.0494** (0.019) -0.0041 (0.008) 0.0347** (0.009)		0.021 (0.016) -0.0063 (0.006) 0.0240** (0.008)		0.0236† (0.014) -0.009 (0.007) 0.0351*** (0.011)	
ln(GDP/C home - GDP/C host)	t1 0.4976** (0.167) t2 0.0276 (0.025) t3 0.0710* (0.031)	0.4683** (0.159) 0.0286 (0.026) 0.0736* (0.034)	0.3069† (0.167) -0.0826* (0.034) 0.0268 (0.040)	0.2353 (0.158) -0.1016** (0.035) 0.0217 (0.041)	0.2909† (0.157) 0.0041 (0.026) 0.0247 (0.034)	0.3185* (0.157) 0.0152 (0.028) 0.0239 (0.036)	1.2124*** (0.316) -0.0305 (0.032) -0.0273 (0.044)	1.2651*** (0.318) -0.0131 (0.035) -0.0374 (0.047)
ln(GDP home + GDP host)	t1 0.3305 (0.336) t2 0.4863*** (0.057) t3 0.2896*** (0.059)	0.2885 (0.340) 0.4231*** (0.059) 0.3037*** (0.062)	0.2964 (0.228) 0.6346*** (0.066) 0.4588*** (0.062)	0.2885 (0.069) 0.6536*** (0.069) 0.4688*** (0.063)	0.2743 (0.188) 0.5862*** (0.057) 0.4293*** (0.061)	0.182 (0.201) 0.5466*** (0.060) 0.4659*** (0.062)	-0.4607 (0.339) 0.7125*** (0.061) 0.4822*** (0.083)	0.3858 (0.341) 0.6804*** (0.065) 0.5040*** (0.089)
ln((GDP home - GDP host) ²)	t1 0.1739 (0.149) t2 -0.0213 (0.022) t3 -0.0394† (0.022)	0.19 (0.152) 0.0009 (0.024) -0.0433† (0.023)	0.1891† (0.101) -0.0620* (0.026) -0.1026*** (0.021)	0.2013† (0.106) -0.0607* (0.027) -0.1037*** (0.021)	0.1584* (0.077) -0.0643*** (0.022) -0.0652*** (0.024)	0.1999* (0.086) -0.0441† (0.024) -0.0801*** (0.024)	0.0875 (0.137) -0.1110*** (0.021) -0.0815*** (0.028)	0.107 (0.140) -0.1020*** (0.023) -0.0874*** (0.030)
Average BIT density	t1 0.1765 (0.109) t2 0.0327 (0.023) t3 -0.0079 (0.027)	0.174 (0.108) 0.0662** (0.023) 0.0138 (0.028)	-0.0243 (0.223) 0.5013*** (0.080) 0.0254 (0.110)	-0.1251 (0.251) 0.4944*** (0.084) -0.0368 (0.111)	-0.191 (0.264) 0.8818*** (0.054) 0.5225*** (0.129)	-0.2406 (0.292) 0.9792*** (0.056) 0.7836*** (0.124)	-0.7174 (0.544) 1.2467*** (0.093) 1.5906*** (0.361)	-0.6861 (0.556) 1.4201*** (0.101) 1.4836*** (0.372)
Dyadic peer adoption	t1 0.2603*** (0.031) t2 0.0792*** (0.005) t3 0.0602** (0.004)	0.2738*** (0.032) 0.0744*** (0.005) 0.0579*** (0.004)	0.4535*** (0.075) 0.3182*** (0.025) 0.3297*** (0.022)	0.4532*** (0.069) 0.3116*** (0.026) 0.3358*** (0.022)	0.3762 (0.049) 0.1942*** (0.017) 0.1569*** (0.015)	0.3736*** (0.050) 0.1857*** (0.018) 0.1747*** (0.015)	0.2503*** (0.039) 0.0852*** (0.011) 0.1188*** (0.011)	0.2397*** (0.041) 0.0703*** (0.012) 0.0996*** (0.012)
Dyadic similarity	t1 -3.2203† (1.785) t2 -6.7441*** (1.446) t3 -6.5286*** (1.639)	-3.7771† (2.008) -6.8612*** (1.469) -6.7424*** (1.780)	-0.5175 (0.471) 0.4364** (0.135) 0.3106* (0.145)	-0.6596 (0.524) 0.3891** (0.140) 0.3409* (0.144)	0.0395 (0.324) 0.1166 (0.111) 0.2915*** (0.111)	-0.006 (0.334) 0.1401 (0.112) 0.3649** (0.114)	0.0471** (0.015) -0.0347*** (0.004) -0.0412*** (0.007)	0.0458** (0.016) -0.0335*** (0.004) -0.0310*** (0.007)
Trade/GDP home	t1 0.0576*** (0.227) t2 0.1324† (0.072) t3 0.0635 (0.084)	1.018*** (0.226) 0.1415† (0.073) 0.1900* (0.091)	0.9172*** (0.218) 0.4329*** (0.097) 0.3163*** (0.106)	1.1030*** (0.233) 0.5643*** (0.106) 0.4030*** (0.111)	0.9525*** (0.215) 0.1236† (0.073) 0.2670*** (0.086)	1.1507*** (0.231) 0.2054*** (0.079) 0.4316*** (0.094)	1.1177*** (0.297) 0.0162 (0.088) 0.2812* (0.136)	1.2140*** (0.318) 0.0476 (0.096) 0.4910*** (0.149)
Trade/GDP host	t1 0.4331*** (0.156) t2 0.1178* (0.058) t3 -0.2476** (0.078)	0.5025*** (0.167) 0.1832*** (0.061) -0.1801* (0.080)	0.4464* (0.194) -0.3405*** (0.094) -0.2820*** (0.101)	0.4801* (0.202) 0.3257*** (0.097) -0.2629*** (0.101)	0.3716*** (0.143) -0.2498*** (0.073) -0.2509*** (0.086)	0.4722*** (0.156) -0.1953* (0.077) -0.2307* (0.091)	0.6662*** (0.200) 0.0769 (0.074) -0.2771* (0.118)	0.6129*** (0.204) 0.1347† (0.078) -0.185 (0.121)

(continued)

Table 2. (continued)

	1	2	3	4	5	6	7	8
	Trade	Trade	Language	Language	Col History	Col History	IGO	IGO
Distance (home-host)								
t1	-0.1137 (0.115)	-0.0655 (0.115)	0.0377 (0.181)	0.0251 (0.185)	0.0918 (0.153)	0.1218 (0.157)	0.3958* (0.194)	0.3884* (0.197)
t2	-0.5897*** (0.039)	-0.6051*** (0.039)	-0.1021† (0.059)	-0.0837 (0.062)	-0.6243*** (0.043)	-0.6582*** (0.043)	-0.7205*** (0.050)	-0.7558*** (0.052)
t3	-0.6150*** (0.042)	-0.5426*** (0.044)	-0.3806*** (0.056)	-0.3519*** (0.056)	-0.6632*** (0.047)	-0.5963*** (0.050)	-0.7037*** (0.073)	-0.6244*** (0.079)
PTA (home-host)								
t1	0.4149† (0.217)	0.5159* (0.217)	0.0403 (0.244)	0.1861 (0.245)	0.3776 (0.258)	0.4951† (0.259)	0.4053 (0.283)	0.4746 (0.293)
t2	-0.2385*** (0.065)	-0.2331*** (0.067)	-0.0152 (0.110)	0.058 (0.115)	-0.3985*** (0.073)	-0.3057*** (0.075)	-0.0924 (0.093)	-0.0421 (0.095)
t3	-0.1815* (0.084)	-0.081 (0.099)	-0.1965 (0.129)	-0.0789 (0.137)	-0.1252 (0.101)	0.1241 (0.121)	0.0512 (0.125)	0.2162 (0.140)
Time period								
t1	-34.7547*** (4.312)	-35.0972*** (4.217)	-33.0064*** (4.351)	-33.8545*** (4.457)	-31.2629*** (3.981)	-32.3455*** (4.078)	-46.0936*** (6.091)	-45.5522*** (6.097)
t2	-12.4456*** (0.899)	-12.1671*** (0.926)	-18.1992*** (1.322)	-19.5092*** (1.382)	-12.6913*** (1.004)	-13.3011*** (1.057)	-13.6825*** (1.126)	-14.0990*** (1.205)
t3	-5.3268*** (1.120)	-7.0102*** (1.219)	-9.2213*** (1.509)	-10.0708*** (1.548)	-9.1652*** (1.313)	-11.8693*** (1.375)	-11.4212*** (1.866)	-13.7913*** (2.034)
Observations	291745	260570	200343	179359	229677	201109	168358	148316
Log pseudo-likelihood	-4,147.33	-3,967.79	-1,954.13	-1,818.07	-3,198.56	-2,950.59	-2,302.00	-2,203.75
χ^2	43,906.24	40,642.28	24,096.12	22,479.66	33,159.58	30,127.65	23,321.55	21,470.59

Note: Standard errors in parentheses. GDP = gross domestic product; BIT = bilateral investment treaty; IGO = intergovernmental organization; Col = colonial;

PTA = preferential trading agreement.

Models 1-6: $1970 \leq t1 < 1988$; $1988 \leq t2 < 2000$; $2000 \leq t3 \leq 2007$.

Models 7-8: $1970 \leq t1 < 1988$; $1988 \leq t2 < 2000$; $2000 \leq t3 \leq 2005$.

† $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$. All tests of statistical significance are two-tailed.

The focus of our analysis is on the comparison between the first, second, and third waves of the coefficients of the potential for FDI, institutional quality, and average signing density among peers. In that comparison, a striking pattern emerges. We observe stark differences over time in the effects of our main independent variables that are consistent with our hypotheses.

In model 1, we find that the difference in the levels of checks and balances between the home and host countries (measured by the difference in their POLCON scores) is positively related to the likelihood of BIT signing in the first and third waves. A 1 standard deviation increase in this difference (while keeping all other variables at their mean values and setting dummy variables equal to 0) increases the hazard rate of BIT signing by 23 percent in the first wave and 16 percent in the third. On the other hand, during the second wave, this difference in POLCON scores is negatively related to the likelihood of BIT signing, with a 1 standard deviation increase in this difference reducing the hazard rate of BIT signing by 10 percent. Further, a chi-square test shows that we can reject the null hypothesis that the parameter estimates are equal across the first and second waves (chi-square = 10.22, $df = 1$, $p < .05$) as well as between the second and third waves (chi-square = 23.45, $df = 1$, $p < .05$). A chi-square test also shows that we cannot reject the null that the parameter estimates are equal in the first and third waves (chi-square = 0.37, $df = 1$, $p > .05$). The second wave results are consistent across all models, whereas the positive impact of the POLCON difference in the first and third waves are not statistically significant when we replace trade as a proxy for connections in the interstate system with common language, colonial history, or IGO membership. We observe a broadly similar pattern when we replace the difference in political constraints with the difference in polity score though the positive relationship in the third wave is more consistent and the negative relationship in the second wave is less so.

Taken together, this set of results suggests that in the first wave, BITs were especially likely to form when there were pronounced differences in the domestic institutions of the host and home countries. While this difference had a smaller impact on BIT signing during the second wave, it became more significant in the third wave. These results support our argument that BIT signing was influenced by the need for a credible commitment by host governments in protecting property rights of foreign investors during the first wave but less so during the third wave. The need for credible commitments resurfaced in the third period, driving BIT formation after 2000.

We also find the potential for FDI between a dyad to have a larger effect on the hazard of BIT signing in the first and third waves than in the intervening wave. Based on the knowledge capital model (Carr, Markusen, and Maskus 2001), the potential for vertical FDI is proxied by the relative abundance of skilled labor in the home country ($\ln(\text{per capita GDP home} - \text{per capita GDP host})$). Across each model (except model 4), the difference in per capita GDP between home and host has a large positive effect on the hazard of BIT signing in the first period. The effect in the third wave is smaller but positive (except models 7 and 8) and statistically significant (in models 1 and 2). A 1 standard deviation increase in this measure (while

keeping all other variables at their mean values and setting dummy variables to 0) increases the hazard of BIT signing by 2.5 times in the first wave and 1.1 times in the third wave (based on model 1). However, this effect is either smaller or statistically insignificant or even negative in the second wave. Further, a chi-square test also rejects the null hypothesis that the parameter estimates are equal across the different waves (change in the first and second waves for model 1, chi-square = 7.78, $df = 1$, $p < .05$). Thus, the potential for vertical FDI has a significantly larger effect on the hazard of BIT signing in the first and third waves as compared to the intervening wave.

By contrast, the evidence regarding the potential for horizontal FDI proxied for by the size of the constituent states' economies (captured by $\ln(\text{GDP home} + \text{GDP host})$) and the similarity in their sizes ($\ln((\text{GDP home} - \text{GDP host})^2)$) is less conclusive as one might expect, given the greater emphasis on vertical FDI in country dyads for which a BIT would be signed. While the potential for horizontal FDI is not significant in the first wave, it assumes greater statistical significance in the second and third waves.

When examined together, the above results based on measures of the potential for vertical FDI and credible commitment provide support for our hypothesis that during the first wave BITs are more likely to be established between countries with the greatest potential for FDI, but where this potential is unrealized due to commitment problems. Further, commitment problems resurface as BIT drivers in the third wave while being less important in the second period.

Finally, we focus on measures of the average density of BIT signing among various peer groups. We argued that during the second wave, peer density provides important cues and potentially legitimacy thereby increasing the likelihood of signing for any dyad to a greater extent than in the first or third waves. Consistent with our hypotheses, we observe that our average density measures significantly increase the hazard of BIT signing most consistently in the second wave whereas during the first and third waves they are either smaller in economic magnitude or statistically insignificant (except for models 7 and 8). A 1 standard deviation increase in this measure (while keeping all other variables at their mean values and setting dummy variables to 0) increases the hazard of BIT signing between 1.2 and 3.7 times (based on models 2–8) during the second wave. This suggests that peer adoption is relatively stronger in the second wave than the first or third and that trade-weighted vector of peers, language links, shared colonial history, and common IGO membership capture the extent of social contact between nations through which cues or normative pressure are conveyed.

Taken together, the relative decline in the effects of institutional characteristics and vertical FDI drivers in the second wave as compared to the first and third, combined with the relative increase in the effects of factors reflecting rational herding or norm-based adoption during the second period, provides significant support for our three-stage model of adoption. To further address this issue, however, we now turn to a series of robustness tests to confirm the validity of our empirical results.

First, we analyze whether using an alternate set of host country peers might influence our results. To this end, we reconstructed the density measures by defining the peer group based on countries that are in the same region. The results are reported in Table 3 (see the online appendix). We find the results to be consistent with those reported earlier.

Second, we control for the possibility that potential host countries are coerced or encouraged to enter into BITs at the time a country seeks International Monetary-Fund (IMF) credits. Following Elkins, Guzman, and Simmons (2006), we include a dichotomous measure of whether or not a home or host country has drawn on IMF resources in a given year. The results are reported in Table 4 (see the online appendix). Consistent with Elkins, Guzman, and Simmons (2006), we find the host country IMF dummy to have a strong and positive effect on BIT signing in the first and second periods; however, the pattern of results for our main variables of interest remains unchanged.

Next, we consider the possibility that our results for the second wave are driven by countries that were a part of the Soviet Union, as our cutoff year for the second wave coincides with the end of the cold war. As described in Table 5 (see the online appendix), we include a dummy in the second and third periods identifying former Soviet home and host countries. We find dyads composed of at least one former Soviet country to be significantly more likely to sign a BIT. However, our main results with respect to institutional differences and peer effects remain unchanged in these models.

Finally, we consider whether our results are sensitive to how we define the first, second, and third waves. In our initial tests, we used 1988 and 2000 to delineate between the three waves. However, we also rerun all of our analyses using 1986 or 1990 as the first cutoff year and 1998 or 2001 as the second. These results are reported in Table 6 (see the online appendix). Overall, we find our institutional and FDI variables to mimic the results reported in the main specifications. The peer adoption effects become more blurred between the second and third waves, suggesting that rational herding or normative adoption may taper off more slowly.

Conclusion

BITs proliferated rapidly since the first treaty was signed in 1959, but the pace of their diffusion has slowed since 2001. Although BITs were originally conceived as an institutional device to protect foreign investments from developed countries to the developing world, a large segment of adopters in the 1990s were capital-poor countries signing treaties with each other. Our results help to explain the growth of these seemingly “strange BITs.” We argue that early and late signatories have different motivations for signing BITs than do countries in the intervening period. Early and late treaties were more likely to be signed between dyads where capital exporters faced institutional risks in the host country. In the intervening period, peers were more likely to follow either as part of a rational cascade or

because signing became progressively institutionalized and widely understood to be a desirable policy in the toolkit of economically responsible policy makers.

Our analysis contributes to the growing body of research examining the diffusion of neoliberal reforms. A number of extant studies have examined this diffusion across a wide range of policy areas (Henisz, Zelner, and Guillen 2005) positing policy diffusion as a continuous process driven by varied theoretical mechanisms but ones that act in a constant manner over time. By drawing insight from research in world polity (Ramirez, Soysal, and Shanahan 1997; Suarez Ramirez, and Koo, 2009), we introduce a more dynamic three-stage diffusion process consistent with models of the adoption of new technologies (Rogers 1995) or organizational practices (Thornton and Ocasio 1999; Tolbert and Zucker 1983) to the international relations literature. Further research could extend the study of these dynamics to consider policy implementation and additional potential stages including the possibility of retrenchment or even the repealing of policy.

Although we have found evidence for a three-stage model of adoption, our empirical tests have relied on inference rather than direct examination. Instead of directly examining the motivations of adopters, we have tended to infer these motivations from other characteristics such as political systems and cultural similarities. A more granular approach—examining specific motivations and qualitative analysis of a process of a set of BIT signings and their impact on a set of investors—would greatly enhance our understanding of micro-processes and mechanisms.

In conclusion, our results strongly suggest that different motivations have guided BIT signing over time. Our analysis highlights the need to understand the drivers of adopting a political institution before we can properly assess its impact. Particularly where motivations may range from rational political or economic foresight to a response to institutional pressures for legitimacy, the consequences of adoption of a given institution on a given outcome (economic or otherwise) may exhibit a broad but analytically tractable range. Such exercises in unpacking political motivations and analyzing their economic impact are fertile grounds for collaboration in the social sciences particularly between international political economy and international business.

Acknowledgment

For very helpful comments on earlier versions of this article, we are grateful to Steve Kobrin, Heather Berry, and Harbir Singh. We would also like to thank the reviewers, discussants, and conference participants at the Academy of International Business, International Studies Association, Washington University Conference on Multinational Corporations and Politics, and the American Political Science Association for comments on earlier drafts. We are also grateful to two referees and the editor of JCR for their comments.

Authors' Note

Replication data for this article is available on the publisher's Web site <http://jcr.sagepub.com/>.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Funding from the Christopher H. Browne Center for International Politics, University of Pennsylvania CIBER, and the Ackoff Fund of the Wharton Risk Management and Decision Processes Center is gratefully acknowledged.

Notes

1. Bernard Braine, House of Commons Representative from South-East Essex, June 9, 1971 (Hansard 1971, 1135)
2. In their seminal study of civil service reforms, Tolbert and Zucker (1983) found that early on, cities adopted such reforms to overcome specific administrative problems, especially rampant corruption and dissatisfaction with municipal political machines. The reform movement thereby attempted to change the conception of the city from a politically based system to a bureaucratic one. However, as the adoption of these reforms spread from city to city, they came to be viewed as necessary. The reforms had high face validity, were seen as the proper way for a city to conduct business, and had common agreement concerning their utility. Hence, over time, cities began to implement reforms in order to appear legitimate and as “acting on collectively valued purposes in a proper and adequate manner” (Meyer and Rowan 1977, 349). This two-stage model of adoption, with different motivations for early and late adopters, has formed a cornerstone of the institutional diffusion literature (e.g., Westphal, Gulati, and Shortell 1997; Westphal and Zajac 1994).
3. UNCTAD press release (LDCIII/PRESS/08/Rev.1 dated 18/05/01) available at <http://www.unctad.org/Templates/Webflyer.asp?docID=2914&intItemID=2068&lang=1>, (accessed December 9, 2009).
4. India–Hungary joint statement issued by the Ministry of External Affairs in New Delhi, India, on November 4, 2003, <http://meaindia.nic.in/> (accessed January 26, 2010).
5. Accessed February 17, 2010.
6. Bilateral trade data are obtained from the UN COMTRADE database.
7. The dominant language based on the CIA World Factbook.
8. Colonial History data are obtained from the CIA World Factbook.
9. IGO data are based on Pevehouse, Nordstorm, and Warnke (2004). This data set indicates membership in 495 IGOs including GATT/WTO, NAFTA, United Nations, and the World Bank.
10. Weighted dyadic peer adoption $i,j = \frac{1}{K} \sum_{k=1, 2N, <> i,j} \text{BIT}_{jk,t-1} \times W_{ik,t-1}$.

References

- Axelrod, Robert. 1986. “An Evolutionary Approach to Norms.” *The American Political Science Review* 80:1095–111.

- Braconier, Henrik, Pehr-Johan Norback, and Dieter Urban. 2005. "Multinational Enterprises and Wage Costs: Vertical FDI Revisited." *Journal of International Economics* 67:446–70.
- Bubb, Ryan J., and Susan Rose-Ackerman. 2007. "Bits and Bargains: Strategic Aspects of Bilateral and Multilateral Regulation of Foreign Investment." *International Review of Law and Economics* 27:291–311.
- Buthe, Tim, and Helen V. Milner. 2008. "The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through International Trade Agreements?" *American Journal of Political Science* 52:741–62.
- Carr, David L., James R. Markusen, and Keith E. Maskus. 2001. "Estimating the Knowledge-Capital Model of the Multinational Enterprise." *The American Economic Review* 91: 693–708.
- Cohen, Raymond. 1997. *Negotiating across Cultures: International Communication in an Interdependent World*. Washington, DC: United States Institute of Peace Press.
- Elkins, Zachary, Andrew T. Guzman, and Beth A. Simmons. 2006. "Competing for Capital: The Diffusion of Bilateral Investment Treaties, 1960–2000." *International Organization* 60:811–46.
- Fatas, Antonio, and Ilian Mihov. 2003. "The Case for Restricting Fiscal Policy Discretion." *The Quarterly Journal of Economics* 118:1419–47.
- Fearon, James D. 1994. "Domestic Political Audiences and the Escalation of International Disputes." *The American Political Science Review* 88:577–92.
- Finnemore, Martha, and Kathryn Sikkink. 1998. "International Norm Dynamics and Political Change." *International Organization* 52:887–917.
- Garcia-Bolivar, Omar E. 2009. "The Surge of Investment Disputes: Latin America Testing the International Law of Foreign Investments." In *The Second Biennial General Conference of the Asian Society of International Law*. Tokyo, Japan.
- Gaubatz, Kurt T. 1996. "Democratic States and Commitment in International Relations." *International Organization* 50:109–39.
- Gheciu, Alexandra. 2005. "Security Institutions as Agents of Socialization? NATO and the 'New Europe.'" *International Organization* 59:973–1012.
- Gleditsch, Kristian Skrede, and Michael D. Ward. 2006. "Diffusion and the International Context of Democratization." *International Organization* 60:911–33.
- Guzman, Andrew T. 1998. "Why LDCs Sign Treaties That Hurt Them: Explaining the Popularity of Bilateral Investment Treaties." *Virginia Journal of International Law* 38:639–88.
- Hansard, UK Parliamentary Debates. 1971. "Overseas Aid, *House of Commons*, 9 June 1971. Series 5 (818) cc1135–1198. <http://hansard.millbanksystems.com/commons/1971/jun/09/overseas-aid> (accessed January 27, 2010).
- Henisz, Witold J. 2000a. "The Institutional Environment for Multinational Investment." *Journal of Law, Economics, & Organization* 16:334–64.
- Henisz, Witold. 2000b. "The Institutional Environment for Economic Growth." *Economics and Politics* 12:1–31.
- Henisz, Witold J., and Edward D. Mansfield. 2006. "Votes and Vetoes: The Political Determinants of Commercial Openness." *International Studies Quarterly* 50:189–212.

- Henisz, Witold J., Bennet A. Zelner, and Mauro F. Guillen. 2005. "The Worldwide Diffusion of Market-Oriented Infrastructure Reform, 1977-1999." *American Sociological Review* 70:871-97.
- Hey, Jeanne A. K., and Thomas Klak. 1999. "From Protectionism Towards Neoliberalism: Ecuador across Four Administrations (1981-1996)." *Studies in Comparative International Development* 34:66-97.
- Holzinger, Katharina, Christoph Knill, and Thomas Sommerer. 2008. "Environmental Policy Convergence: The Impact of International Harmonization, Transnational Communication, and Regulatory Competition." *International Organization* 62:553-87.
- Jagers, Keith, and Ted Robert Gurr. 1995. "Tracking Democracy's Third Wave with the Polity III Data." *Journal of Peace Research* 32:469-82.
- Jensen, Nathan M. 2003. "Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment." *International Organization* 57: 587-616.
- Kobrin, Stephen J. 2005. "The Determinants of Liberalization of FDI Policy in Developing Countries: A Cross-Sectional Analysis, 1992-2001." *Transnational Corporations* 14:67-104.
- Leng, Russell J., and Patrick M. Regan. 2003. "Social and Political Cultural Effects on the Outcomes of Mediation in Militarized Interstate Disputes." *International Studies Quarterly* 47:431-52.
- Marshall, Fiona. 2008. "Second Annual Forum of Developing Country Investment Negotiators, Marrakesh, 2-4 November 2008." In *The IISD Blog: International Institute for Sustainable Development*, <http://blog.iisd.org/2008/11/>, (accessed September 1, 2010).
- Meyer, John W., and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *The American Journal of Sociology* 83:340-63.
- Neumayer, Eric. 2006. "Self-Interest, Foreign Need, and Good Governance: Are Bilateral Investment Treaty Programs Similar to Aid Allocation?" *Foreign Policy Analysis* 2: 245-68.
- Neumayer, Eric, and Laura Spess. 2005. "Do Bilateral Investment Treaties Increase Foreign Direct Investment to Developing Countries?" *World Development* 33:1567-85.
- Newcombe, Andrew P., and Lluís Paradell. 2009. *Law and Practice of Investment Treaties: Standards of Treatment*. The Netherlands: Kluwer Law International.
- Pinto, Pablo M., Santiago M. Pinto, and Nicholas E. Stier-Moses. 2010. "Regulating Foreign Investment: A Study of the Properties of Bilateral Investment Regimes." In *The American Political Science Association Annual Conference*. Washington, DC.
- Poulsen, Lauge Skovgaard, and Damon Vis-Dunbar. 2009. "Reflections on Pakistan's Investment-Treaty Program after 50 Years: An Interview with the Former Attorney General of Pakistan, Makhdoom Alikhan." *Investment Treaty News*, (April): 3-4.
- Ramirez, Francisco O., Yasemin Soysal, and Suzanne Shanahan. 1997. "The Changing Logic of Political Citizenship: Cross-National Acquisition of Women's Suffrage Rights, 1890 to 1990." *American Sociological Review* 62:735-45.
- Rogers, Everett M. 1995. *Diffusion of Innovations*. New York: The Free Press.
- Rose, Richard. 1993. *Lesson Drawing in Public Policy: A Guide to Learning across Time and Space*. Chatham, NJ: Chatham House.

- Salacuse, Jeswald W. 1990. "Bit by Bit: The Growth of Bilateral Investment Treaties and Their Impact on Foreign Investment in Developing Countries." *The International Lawyer* 24:655–75.
- Salacuse, Jeswald W., and Nicholas P. Sullivan. 2005. "Do Bits Really Work?: An Evaluation of Bilateral Investment Treaties and Their Grand Bargain." *Harvard International Law Journal* 46:67–130.
- Simmons, Beth A., Frank Dobbin, and Geoffrey Garrett. 2006. "Introduction: The International Diffusion of Liberalism." *International Organization* 60:781–810.
- Suarez, David, Francisco O. Ramirez, and Jeong-Woo Koo. 2009. "UNESCO and the Associated Schools Project: Symbolic Affirmation of World Community, International Understanding, and Human Rights." *Sociology of Education* 82:197–216.
- Thornton, Patricia H., and William Ocasio. 1999. "Institutional Logics and the Historical Contingency of Power in Organizations: Executive Succession in the Higher Education Publishing Industry, 1958–1990." *The American Journal of Sociology* 105:801–43.
- Tobin, Jennifer L., and Marc L. Busch. 2010. "A Bit Is Better Than a Lot: Bilateral Investment Treaties and Preferential Trade Agreements." *World Politics* 62:1–42.
- Tolbert, Pamela S., and Lynne G. Zucker. 1983. "Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880–1935." *Administrative Science Quarterly* 28:22–39.
- US Congress, Subcommittee on International Economic Policy and Trade. 1982. *Foreign Investment in the United States. 97th Congress, 2nd Session*. Washington, DC: US Government Printing Office.
- United Nations Conference on Trade and Development. 2000. *Cross Border M&A and Development*. World Investment Report. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2004. *International Investment Agreements: Key Issues*. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2007. International Investment Rule-Setting: Trends, Emerging Issues and Implications. In *Trade and Development Board, Commission on Investment, Technology and Related Financial Issues, Eleventh Session*. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2008a. *International Investment Rule-Making: Stocktaking, Challenges and the Way Forward*. UNCTAD Series on International Investment Policies for Development. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2008b. Latest Developments in Investor-State Dispute Settlement. In *International Investment Agreements Monitor*. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2009. Latest Developments in Investor-State Dispute Settlement. In *International Investment Agreements Monitor*. New York and Geneva: United Nations.
- United Nations Conference on Trade and Development. 2010. *Investing in a Low-Carbon Economy*. World Investment Report. New York and Geneva: United Nations.
- Vandeveld, Kenneth. 2009. "A Brief History of International Investment Agreements." In *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double*

- Taxation Treaties, and Investment Flows* (pp. 3-36). Edited by Karl P. Sauvant and Lisa E. Sachs. New York, NY: Oxford University Press.
- Vernon, Raymond. 1980. "The Obsolescing Bargain: A Key Factor in Political Risk." In *The International Essays for Business Decision Makers*, edited by M. B. Winchester, 281-86. Houston, TX: Center for International Business.
- Wei, Shang-Jin. 2000. "How Taxing Is Corruption on International Investors?" *The Review of Economics and Statistics* 82:1-11.
- Westphal, James D., Ranjay Gulati, and Stephen M. Shortell. 1997. "Customization or Conformity? An Institutional and Network Perspective on the Content and Consequences of Tqm Adoption." *Administrative Science Quarterly* 42:366-94.
- Westphal, James D., and Edward J. Zajac. 1994. "Substance and Symbolism in Ceo's Long-Term Incentive Plans." *Administrative Science Quarterly* 39:367.
- Williamson, John. 1990. "What Washington Means by Policy Reform." In *Latin America Adjustment: How Much Has Happened* (pp. 5-20). Edited by Williamson John. Washington, DC: Institute for International Economics.
- World Bank. 1992. "Legal Framework for the Treatment of Foreign Investment. In *Report to the Development Committee and Guidelines on the Treatment of Foreign Direct Investment*. Washington, DC: The World Bank.