

Foreign Direct Investment and the Business Environment in Developing Countries: the Impact of Bilateral Investment Treaties

Jennifer Tobin and Susan Rose-Ackerman¹

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Abstract:

The effects of Bilateral Investment Treaties on FDI and the domestic business environment remain unexplored despite the proliferation of treaties over the past several years. This paper asks whether BITs stimulate FDI flows to host countries, and if the treaties have any impact on the environment for domestic private investment. We find a very weak positive relationship between BITs and FDI. We also find a weak positive relationship between BITs and the domestic investment environment. Thus, BITs do not appear to impose costs on low- and moderate-income countries, but they also seem to have little positive effect either on foreign investment or on outside investors' perception of the investment environment.

¹ Jennifer Tobin is a graduate student in the Department of Political Science, Yale University. Susan Rose-Ackerman is the Henry R.Luce Professor of Law and Political Science, Yale University. Email addresses: jennifer.tobin@yale.edu; susan.rose-ackerman@yale.edu. The comments of Daniel Tarullo, Thomas Waelde, Bertrand Marchais and participants in workshops at the Aspen Institute, New York University Business School, Georgetown Law School, and the New England Political Science Association are gratefully acknowledged.

I. Introduction

The impact of multinational firms on developing countries is one of the most hotly contested issues in the current debate over globalization. Much has been written about the macro-economic impact of foreign investment. Our interest goes beyond these macroeconomic implications to focus on the political and social effects of foreign direct investment (FDI). Our general interest is in the decision-making processes of both foreign investors and host governments. Although these processes are complex and multi-faceted, our focus in this paper is on the role of Bilateral Investment Treaties (BITs), an instrument of growing importance as emerging economies seek to attract foreign investment. This study of BITs is part of our ongoing attempt to understand how foreign investors' and host countries' efforts to limit risk affect the domestic business environment.

Investors always face risks because changes in market prices and opportunities cannot be perfectly predicted *ex ante*. However, in many developing countries the risk goes beyond ordinary market risk. Investors may have little trust in the reliability and fairness of property rights and government enforcement, and conversely, local businesses, citizens, and politicians may have little confidence in the motives and staying power of international business. Investors complain that the rules are unclear and variable over time. Critics in the host country worry that international investors will reap most of the gains and will flee at the first sign of trouble. In the extreme, the distrust on both sides can be so large that little or no investment takes place, even when this investment would be beneficial to both parties.

Foreign direct investment has frequently been studied as if it were an undifferentiated mass of capital that moves around the world in response to domestic conditions in host countries. We agree that investment is affected by domestic conditions, but we argue that it should be analyzed as a series of deals between host countries and foreign firms that may involve input from the firm's home country as well. Especially in poor and emerging economies, FDI frequently takes the form of large projects each one of which represents a sizable share of the host country's total investment. Therefore, so long as the foreign investor has alternative potential sites for its investment, it has bargaining power *vis-à-vis* the host country's government and may be able to negotiate terms that are more favorable than those available to domestic investors. These terms may take the form of exemptions from certain local laws, including tax laws, and of special subsidies and public services, such as new roads and upgraded port facilities. In addition, foreign investors may worry about being exploited by the host country after their investments are sunk and will seek assurances that the government will not treat them worse than domestic firms.

In recent years international investors have been aided by the growth of bilateral investment treaties (BITs). These are treaties signed between the home countries of investors and potential host countries that set a general framework for the negotiation of FDI deals. They bind the host country to treat all foreign investors from the home country in ways that will protect their investments and that give them either parity with or advantages over domestic investors.

The popularity of BITs suggests that many investors are not confident about the legal and political environment in low- and middle-income countries. Given this fact, host countries believe they will benefit from signing a treaty that may seem on its face quite one-sided in favor

of foreign investors. The policy questions are then two-fold. First, do BITs stimulate FDI flows to the host country? If the answer to this question is positive, do the treaties encourage certain types of FDI more than others? Second, what is the impact of BITs on the environment for domestic private investment? Is domestic investment stimulated or discouraged by an aggressive effort to sign BITs with many potential investment partners? In other words, is FDI a substitute or a complement for domestic investment, and do BITs encourage countries to improve the protection of domestic property rights?

If countries concentrate on making special deals with foreign direct investors, we speculate that they might neglect measures that improve the investment climate overall. One could study this problem at the level of individual deals to see if their terms permit multinationals to opt out of restrictive local rules or to get better protections from costly government policies. This is an important research priority, but it is beyond the scope of this paper. Instead, we focus on BITs, the one generic policy that clearly singles out foreign investors and consider their effects. However, we realize that our results will not be definitive. BITs are a relatively new phenomenon in international business, and their impact is only beginning to be felt.

We proceed as follows. Section II provides a brief overview of the growth and impact of FDI on low- and middle- income countries and discusses its relationship to domestic property rights. Section III is an introduction to BITs. Section IV discusses our empirical results. Section V concludes.

II. Foreign Direct Investment, and Domestic Property Rights

Both theory and empirical evidence provide mixed results on the benefits versus the costs of FDI. On one side of the debate, scholars suggest that FDI brings new technology and production techniques, raises wages, improves management skills and quality control, and enhances access to export markets.² Some of the costs include stifling of domestic competition and indigenous entrepreneurship, increased income inequality, lower public revenues, an appreciation of the exchange rate and a continuing reliance on local resource endowments, rather than modernization of the productive sector of the economy. Characteristics of the host country—such as human capital, labor and wage standards, and the distribution of existing technology across countries, will affect how much countries benefit (or lose) from foreign investment opportunities (Lall and Streeten 1977, Lankes and Venables 1996, Kofele-Kale 1992, and Blomstrom et al. 1996).

Both the type of FDI and the mode of entry affect FDI's impact on host countries. The existing empirical work has only begun to sort out these complexities. In our view, the inconclusive results arise because the precise impact of FDI varies between industries and countries depending on the characteristics of countries and their policies.³ Its impact also depends upon the precise nature of the deal that is struck between the investor, the host country, and any joint venture partners.

² For overviews of work discussing the influence of FDI on technology transfer see Caves (1996), Findlay (1978), Mansfield and Romeo (1980), Koizumi and Kopecky(1980), Klein et al. (2001), Cooper (2001), and Hanson (2001).

³ Lankes and Venables (1996), Kofele-Kale (1992), Blomstrom et al (1992).

In poor, high-risk environments FDI is likely to be the major source of investment funds. Regardless of the inconclusive results concerning the pros and cons of FDI, low- and middle-income countries view it as a primary means for increased economic growth. Thus, host country governments work to attract FDI. They offer incentives to multinational corporations (MNCs) designed to attract FDI from competing countries and to offset potential risk factors that might deter investment. Likewise, MNCs employ strategies to reduce the potential risk of investing in unstable environments.

Over the period 1995-2000, FDI inflows grew at an annual average rate of 17 per cent for low- and middle-income countries.⁴ Following a short period of decline in inflows both absolutely and as a share of world flows in 2000-2001, inflows to developing countries have continued to rise both absolutely and as a share of global inflows. FDI inflows to developing countries grew from US\$158 billion in 2002 to \$172 billion in 2003; their share of world FDI increased to by 8 percentage points to 31 per cent in 2003 (figures 1a and 1b).⁵ FDI continues to be the largest source of external finance for developing countries, exceeding the sum of commercial bank loans and portfolio flows in most years (figure 2). It is also more stable than financing from other external sources. Between 1997 and 2001, FDI was relatively flat as a share of the GDP of developing countries, but the ratio between FDI and non-FDI flows varied from 4.6 to 1.8.

[Insert figures 1a, 1b, and 2 about here]

There are two principal ways to attract FDI, which may be complements or substitutes. The first is to establish special, favorable conditions for FDI that do not apply to all investment; the second is to improve the overall political/economic environment to reduce risk. One way to reduce risk is to have clearly defined and enforced property rights. Well-enforced property rights not only lead to greater amounts of current domestic investment⁶ but also create a stable market

⁴ FDI inflows are defined as the gross level of FDI flowing into a region over a period of time (usually one year). FDI stock is defined as the total accumulated value of foreign owned assets at a given point in time. Developing countries are defined according to the World Bank's income classifications, based on gross national income (GNI) per capita. The category "developing countries" includes low-income, lower-middle income, and upper-middle income countries. See appendix A for exact classifications.

⁵ All dollar figures are in constant 2000 US dollars.

⁶ Douglas North (1990) argues that inefficient property rights are "the most important source of both historical stagnation and contemporary underdevelopment in the Third World." Hernando De Soto (2000) claims that property rights help people to borrow more easily and overcome the information constraints that enable markets to function efficiently. In Firmin-Seller's (1995) study of property right in Ghana, she found that the key to the state's economic success lay in the ability of the government to enforce property rights through its political institutions. Knack and Keefer (1995) offer evidence that "institutions that protect property rights are crucial to economic growth and investment." Likewise, Goldsmith (1995), using cross-sectional data found a correlation between property rights and economic growth in low- and middle-income countries. In a firm-level study of political risk in developing countries, Borner, Brunetti and Weder (1993) found that "if political uncertainty is present, economically sound domestic investments are rare...institutional reform is therefore a crucial precondition for market-driven development that depends primarily on private sector investment." Torstensson (1994) found that "insecure property rights result in an inefficient allocation of investment funds and an inefficient use of human capital." Taking into account the time dimension of economic growth, David Leblang demonstrated that nations that protect property rights grow faster than those that do not. Stepping back to look at overall policies that affect not only overall growth, but also the incomes of the poor, Dollar and Kraay (2001) found that basic packages of good policies, within which property rights plays a vital role, raise overall incomes in developing countries and have an

environment that can promote FDI. Confidence in the enforcement of property rights reduces the incentive to insure against political risk and reduces the cost of doing business (Abbott 2000). Studies on corruption and political risk show that foreign investors prefer to do business in environments with well-enforced property rights.⁷

If strong property rights are desirable for both domestic and foreign investors, why don't countries simply replicate the property rights systems of western capitalist societies? One reason is that most developing country governments do not have the legal systems and institutional structures in place to adequately enforce laws. In other cases, it is simply not in the best interests of governments to create or enforce strong property rights. Such governments cannot make credible commitments not to violate their own country's rules. It is only when the benefits of property rights enforcement outweigh the benefits of low levels of enforcement that governments will strengthen enforcement.⁸ Governments in countries with weak property rights may seek to attract FDI by making special deals with investors that do not have to be extended to the domestic economy as a whole, or even undermine domestic protections.⁹ Thus it is important to discover if efforts to improve the conditions for foreign investors go along with improvements in the overall domestic business environment or whether foreign investors can be treated well without the benefits being shared by local firms.

III. Bilateral Investment Treaties

Given the weakness of the domestic political/legal environment in many low- and middle-income countries, investors seek alternatives tailored to their needs. This can be done on a case-by-case basis, but transaction costs can be reduced if the host country commits itself to a basic framework. Along with other international institutions, this is what BITs do.¹⁰ They provide clear, enforceable rules to protect foreign investment and reduce the risk faced by investors. According to UNCTAD's comprehensive overview of BITs, the treaties promote foreign investment through a series of strategies, including guarantees of a high standard of treatment, legal protection of investment under international law, and access to international dispute resolution (UNCTAD 1998). BITs are becoming a more and more popular tool for developing countries to promote and protect foreign investment.

additional positive impact on the incomes of the poor. Likewise, Hall and Jones (1999) found that differences in government policy and institutions, with property rights playing a major role, equated to large differences in income across countries.

⁷ Although a number of authors have hypothesized this link, Anderson's studies of corruption in Eastern Europe confirm the relationship. See for example, Anderson et al. (2003) and Anderson (1998, 2000). See also Goldsmith (1995), LeBlang (1996), and Grabowski and Shields (1989).

⁸ See Barzel (1989) and Firmin-Sellers (1995). Borner et al (1995) confirms Firmin-Sellers finding in their study of property rights and investment in Ghana.

⁹ For example, Hernando De Soto argues that without clear ownership, land can be stripped from the poor to make way for government and foreign-led industrialization projects (De Soto 2000).

¹⁰ Other parts of a foreign-investor-friendly package usually include membership in the World Bank's International Center for the Settlement of International Disputes (ICSID) and its Multilateral Insurance Guarantee Agency, a tax treaty limiting double taxation, and membership in the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

The first BIT was signed in 1959 between Germany and Pakistan and entered into force in 1962. The number of new BITs concluded rose rapidly in the 1990s. According to UNCTAD, the overall number of BITs rose from 385 in 1990 to 1,857 at the end of 1999. As of the end of 1999, 173 countries were involved in bilateral investment treaties (figure 3)¹¹. Most early treaties were signed between a developed and a developing country, generally at the urging of the developed country governments. Typically, before the 1990s, developing countries did not sign BITs with each other, but throughout the 1990s and into the present day more and more developing countries have been signing the treaties with each other (figure 4).

[Insert figures 3, and 4 about here]

The proliferation of BITs has followed a general geographic pattern. Most early BITs were signed between African and Western European Countries. Asian nations slowly began to enter the arena in the 1970s, followed by central and eastern European countries. It was not until the late 1980s that Latin American nations began to enter into these agreements (figure 5).¹²

[Insert figure 5 about here]

A. BITs: History

International law on commerce and investment originally developed out of a series of Friendship, Commerce, and Navigation treaties (FCNs) and their European equivalents. They were part of the US Marshall Plan that was meant to reinvigorate the European economy after World War II. FCNs provided foreign investors with most favored nation treatment in host countries but were mainly signed between developed countries. The United States also attempted to protect foreign investors through investment guarantees and legal provisions. It established the Overseas Private Investment Corporation (OPIC) in 1959 to protect investment in postwar Europe and expanded its coverage to developing countries in 1959. Further, the U.S. Congress passed the Hickenlooper amendment requiring the U.S. government to terminate aid to any country that expropriated property from a U.S. investor without adequate compensation. The amendment was used only twice and did not serve its purpose in deterring investment (Mckinstry Robin 1984).

In 1967, the OECD attempted to establish a multilateral agreement on foreign investment protection—the OECD Draft Convention on the Protection of Foreign Property. The convention proposed an international minimum standard of protection for foreign investment but was opposed by developing countries, mainly in Latin America, that insisted on subjecting foreign

¹¹ Figures 3 and 4 only have data through 2000. Although most countries maintain public lists of the treaties that they have signed and ratified, publicly available data that aggregates all treaties are only available beyond 2000 for all ratified treaties. In these figures we include both signed and ratified treaties.

¹² Although Latin American countries were not signatories to BITs until the 1990s, their largest trading partner, the United States, provided political risk insurance and guarantee agreements to most Latin American Nations.

investment to domestic control with disputes being settled in domestic courts.¹³ Following the failure of the OECD convention, European countries and later the United States began to establish more and more bilateral investment agreements with developing countries.¹⁴

B. BITs: Basic Provisions

Overall, the provisions of BITs are meant to secure the legal environment for foreign investors, establish mechanisms for dispute resolution, and facilitate the entry and exit of funds. BITs cover expropriation of property as well as indirect takings that are tantamount to expropriation. BITs are currently the dominant means through which investment in low- and middle-income countries is regulated under international law (Kishoiyian 1994, Schwarzenberger 1969, Walker 1956). The treaties are a response to the weaknesses and ambiguities of customary international law as applied to investments by international firms in countries at low levels of development. Customary law mainly developed in response to trade and investment between developed countries and was not adequate to conditions in these more risky and institutionally weak environments (UNCTAD 1998).

The majority of existing BITs¹⁵ have very similar provisions based as they are on the model treaties developed by the home countries of the major MNCs. The major differences lie in the protection or non-protection of certain types of investment and in whether or not the treaties' apply as soon as a contract has been signed or where funds must actually have been invested. The need for developing countries to retain control over certain types of investments and resources restricts the establishment of an international agreement on investment. As with their predecessors, the FCNs, BITs usually provide national and most-favored-nation treatment to foreign investors in the host country. However, most BITs contain clauses that exclude investments in particular areas such as national security, telecommunications, and finance. National treatment ensures foreign investors the right to establish any business that the host government would have allowed a domestic investor to establish. National treatment is not followed in all BITs. Some limit treatment to that considered "fair and equitable," although some require that all foreign investments gain approval regardless of the domestic situation (McKinstry Robin 1984). Further, the US model treaty as well as many European BITs establish the right of the investor to transfer all earnings to the investing country.

Over time BITs have evolved. The most important change was treaty provisions that transferred some investor-host country disputes from local courts to international arbitration. According to one knowledgeable observer, such disputes only began to be covered in the late eighties, and this change was essential in giving the treaties real bite.¹⁶ BITs generally provide for resolution of

¹³ In 1974, a number of developing countries supported a United Nations resolution to protect the national sovereignty of the economic activities and resources of host countries (Charter of Economic Rights and Duties of States, G.A. Res. 3281, 29 U.N. GAOR Supp. (No.31) at 50, 51-55, U.N. Doc. A/9631 (1974)).

¹⁴ European treaties are generally known as Bilateral Investment Protection Agreements (BIPAs); the U.S. treaties are known as BITs. The United States signed twenty-three FCNs between 1946 and 1966, but did not enter into any other bilateral agreements on investment until the 1982 BIT with Panama. Shenkin (1994) attributes this to a reluctance on the part of developing countries to enter into FCNs with the United States as well as the attractiveness of the European BIPA program.

¹⁵ We will use BIT to refer to both BITs and BIPAs.

¹⁶ Email correspondence from Thomas Wälde with Susan Rose-Ackerman, August 5, 2004.

both country-country and investor-host country disputes by an international body such as World Bank Group's International Center for the Settlement of International Disputes (ICSID) or other arbitration systems, such as those operated by the International Chamber of Commerce (ICC) and the United Nations Commission on International Trade Law (UNCITRAL) (UNCTAD 1998). Enforcement of such arbitral decisions is provided by the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. The possibility of enforcing arbitral awards directly without going through diplomatic channels benefits investors who win judgments against states. Violations of BITs and of accompanying obligations under the arbitration regime should result in the future reluctance of both the partner country and new countries to sign further treaties, loss of faith in existing treaties, and lack of faith in the investment environment in the host country.

The caseload of ICSID has recently expanded markedly and the other arbitration systems also draw a significant number of cases brought under BITs. Of the 124 cases registered with ICSID as of 2003, more than 50 per cent were pending in late 2004. Furthermore, many hundreds of disputes are settled between interested parties thus avoiding a formal arbitration (Shenkin 1994). The overall the impact of ICSID on the status of BITs and their interpretation is large and likely to increase as its arbitration panels hear more cases and issue more rulings that the parties agree to allow to be posted on ICSID's website.¹⁷

Typically, developed countries prepare a model treaty based on the 1967 Draft Convention on the Protection of Foreign Property and on already existing BITs (UNCTAD 1996). These model treaties are then modified for use in a variety of situations. Thus, treaties emanating from a developed country are likely to be similar or even identical, but differences exist between those proposed by different developed countries. The principal aim of the treaties is to outline the host country obligations to the investors of the home country. An important recent development, not reflected in our data set, is the United States' new model BIT issued in late 2004. It represents a significant new departure because it strengthens property rights protections and includes requirements for signatories to make rules and regulations transparent, to introduce domestic administrative procedures, and to consider the impact of investments on environmental and labor conditions. Only the first two elements in this list, however, can be enforced through arbitration. Discussion of this new model is beyond the scope of this paper, but it appears to reflect the United States' belief that BITs are truly bilateral and that greater specificity will be in the interest of US investors, consumers, and workers.¹⁸

C. The Impact of BITs on Developing Countries

¹⁷ ICSID lists 86 decided cases on its website www.worldbank.org/icsid (visited September 20, 2004). Another 14 cases have produced some kind of holding although some panel rulings face annulment proceedings with the losing party demanding a follow-up procedure with a new panel. Of these 100 cases, only 37% were filed during the first 25 years of ICSID's existence. The rest were filed between 1997 and 2003 as BITs begin to play a major role in international investment. Furthermore, NAFTA arbitrations are also filtered through ICSID's Alternative Facility. Another indication of caseload is the number of pending cases. In September 2004 there were 64 cases pending that date from 2002-2004. The Argentine peso crisis produced an unusually large number of challenges. Twenty-seven of the pending cases filed in that period list Argentina as the respondent or over forty per cent of the total.

¹⁸ The 2004 Model BIT is available at <http://www.state.gov/e/eb/rls/othr/38602.htm>.

1. Costs and Benefits of BITs

Developing countries employ BITs as a means to attract inward investment. The protections to foreign investment are presumed to attract investment flows to developing countries that will lead to economic development. Developing countries hope that the treaties signal to foreign investors either a strong protective investment environment or a commitment that foreign investments will be protected through international enforcement of the treaty. In turn, this signal of a strong investment environment should spread beyond foreign investment to increased overall investment.

Beyond attracting investment, developing countries hope that BITs will have peripheral benefits. For example, binding foreign investment disputes to international arbitration may serve not only as a signal that the current government is friendly towards FDI, but it may also lock future governments into the same policy stance. Further, BITs may provide symbolic benefits to the current government. For example, signing a BIT may signal a willingness to sign international treaties in other areas. For countries in transition, BITs may provide a shortcut to policy credibility in the international arena (Martin and Simmons 2002).

These benefits must be balanced against the costs. Although developing countries may enter into the treaties in the hopes of obtaining peripheral benefits, some countries may be forced to sign the treaties to compete with similar countries. For example, if two countries offer relatively similar investment environments and one signs a BIT with a major foreign investor, the other country may agree to sign a similar treaty—regardless of the potentially negative impacts of that treaty—simply to remain on par with the competing country.

BITs may lead to a division of profits that favors developed countries. They increase the bargaining power of MNCs relative to a non-BIT regime and may disfavor domestic investors. MNCs argue that BITs only level the playing field for them relative to domestic investors, but it is at least possible that the scales may end up tilted toward foreign investors. For example, foreign investors have recourse to international arbitration tribunals to settle any claims resulting from what they believe to be unfair treatment of their property. Domestic investors are left to the local property rights enforcement systems. If domestic investors try to define themselves as foreign to get access to their preferred forum, that is evidence that the local courts are seen as less effective than international arbitration.¹⁹

Furthermore, developing countries fear a loss of control over their internal economic activity through restrictions on their employment and development policies as well as through challenges to national industries. This loss of sovereignty may be too high a burden for some developing countries and lead them to refuse to sign BITs (Kahler 2000).

The US model BIT and several European model BITs prohibit investment performance requirements. This may reduce the leverage of the host country over foreign investors. Investment performance requirements enable host countries to influence the trading and

¹⁹ See, for example, a recent case involving the Ukraine and the status of a Lithuanian company organized by Ukrainian investors who then claimed that the Lithuanian/Ukrainian BIT applied to their business dealings in Ukraine. *Tokios Tokelės v. Ukraine*, ICSID Case No. ARB/02/18.

locational decisions of foreign investors in favor of host country development. For example, export requirements can improve the balance of payments accounts of a host country, and locational incentives can aid the infrastructure development of the host country (Shenkin 1994).

Under a BIT, a claim of expropriation may require the host country to pay compensation to the investor under an international arbitration regime. In the absence of BITs, developed countries push for a standard of “prompt, adequate and effective compensation,” and developing countries have long insisted that only their own domestic tribunals can decide upon appropriate compensation (Kishoiyian 1994). Repatriation of profits is another area that may have negative consequences for developing countries. The majority of treaties grant the investor the ability to repatriate profits “without undue delay” although there is an exception for times of economic emergency.²⁰ If the treaties are interpreted to give a narrow reading to the term “economic emergency,” the ability to repatriate profits could intensify liquidity problems faced by host countries (Kishoyian 1994, McKinstry Robin 1984). This issue seems to be arising in a series of cases currently pending in ICSID against the government of Argentina. As an example, Suez, a French water and energy firm that has invested in Argentina, is suing the government of Argentina under the expropriation provisions of the French-Argentinean BIT for compensatory damages following the devaluation of the peso. This is only one of 30 cases currently pending against Argentina, all stemming from the financial crisis of 2002. Although the Suez case is still pending, the validity of the claim under the BIT is worrisome for the economic situation in Argentina.²¹

Nearly all BITs contain clauses that some firms have used to petition governments for damages stemming from government actions such as tax law changes and environmental or health regulations enacted after investment has taken place. Firms have tried to sue for damages under an equivalent clause in NAFTA. Specifically, firms have claimed that the state’s actions amount to the expropriation of profits or that they do not give the investor equal treatment. Investors have lost many of these cases especially when the government law or regulation has a public policy justification and is applied uniformly. Nevertheless, this remains an area of concern to countries contemplating signing new BITs and to developing countries with many outstanding BITs that are seeking to reform their tax and regulatory systems.²²

²⁰ Kishoiyian(1994) points to an ICSID study of 335 BITs. All provided for the immediate repatriation of profits, but 60 enabled the host country to take into account its balance of payments situation in the country, and many provided for interest or set the precise rate of exchange in the event of a delay.

²¹ EFE News Service, June 28, 2002, “France-Argentina French Firm to Press Argentina for Indemnification on Losses.”

²² This is not the place for a detailed analysis of this important issue. However, to give a flavor of the issues involved consider Occidental Exploration and Production Company (OEPC) v. the Republic of Ecuador, London Court of International Arbitration, Administered Case No. UN 3467 (July 1, 2004). OEPC won refund of a portion of value added tax paid. The arbitrators dismissed OEPC’s claims for expropriation and impairment of investment through arbitrary and discriminatory measures. Instead, the panel held that Ecuador had not given OEPC fair and equitable treatment because it did not treat it as well as other exporters. These other exporters included not just oil and gas exporters but exporters of any other product from flowers to bananas. This decision suggests the level of intervention with domestic policymaking by arbitral tribunals even if panels seldom find that tax and regulatory rules amount to “expropriation.”

BITs have recently become the focus of some scholarly attention. One scholar, Hallward-Driemeier (2003), analyzes bilateral FDI flows from OECD countries to developing nations and finds little evidence of a connection between BITs and FDI flows. She further finds that countries with weak domestic institutions do not get significant additional benefits from signing BITs with OECD nations. On the other hand, Salacuse and Sullivan (2004) find a strong correlation between signing a US BIT and FDI flows both overall and from the United States. Similarly, Neumayer and Spess (2004) find that the more BITs a country signs, the greater the FDI flows to that country. They also suggest that BITs serve as a substitute for domestic institutions. We discuss the results of each of these papers in more depth in our results section.

2. Property Rights and BITs

Who is signing BITs and why

Given the mixed impact of BITs, we would expect that low- and middle-income countries will vary in their enthusiasm and in their insistence on the inclusion of exceptions. For example, resource rich countries have an advantage in bargaining with foreign investors. Therefore, we would expect resource rich states to try to avoid signing such treaties or to sign treaties with favorable clauses; in contrast, states with few distinctive benefits to offer investors need to sign BITs (Kahler 2000; Abbott 2000). Countries competing for the same types of investment need to mimic the policies of competing countries, or they risk placing themselves at a disadvantage. Thus, we would expect that if one country signs a BIT as a signal to foreign investors that their investments will be protected, this will encourage similar countries to act likewise.

Weak countries may sign BITs to constrain stronger states, but in the process they must accept a deal that is favorable to the stronger state. Only risk-takers will invest in countries such as Somalia, the Congo, and Tanzania. These investors are likely mainly to care about natural resources; they are not much concerned with the overall domestic investment. Even if these countries signed BITs, it is unlikely that investors would rely on the treaties to assure investment protections. In contrast, a few middle-income countries, such as Korea, Chile, and Singapore, have broken the property rights barrier and are considered to be low investment risks. Firms have confidence that those countries will enforce the property rights of all investors. In these countries, BITs vary more from the model treaties than in other developing countries. Their stable investment environment enables them to negotiate over the terms or even to refuse to sign treaties without risking a loss of foreign investment. For example, Singapore refused to enter into a BIT with the United States based on its model treaty because of the limits on performance requirements. Further, its treaties with France, Great Britain, and the Netherlands limit the protection offered to investors to specifically approved investment projects (Kishoiyian 1994). Singapore only agreed to a treaty that covered investment as part of a broader free trade agreement that contained other provisions of importance to its import and export business.²³

The middle cases are the most interesting to us. These cases lie at mid-point of property rights evolution and could either stagnate or move forward. On the one hand, without BITs competition for foreign investors could encourage property rights reform—perhaps aided by domestic

²³ The text of the agreement, signed on May 6, 2003 is at http://www.ustr.gov/Trade_Agreements/Bilateral/Singapore_FTA/Section_Index.html

investors who realize the potential benefits of establishing a rule of law. On the other hand, domestic elites and corrupt bureaucrats might attempt to maintain the status quo. A governmental decision to reform property rights is unlikely if the rents derived from the non-enforcement of property rights are high, if incumbents do not expect to gain many benefits from reform (perhaps because they risk losing political power) and, most importantly, if the power of the opposing interest groups is high.

Property rights reform

Without BITs, improvements in property rights enforcement come from government decisions to foster economic growth through increased foreign and domestic investment. But, this will only occur when the benefits of increased investment, combined with any political capital gained from those changes, outweighs the costs of enforcement and the political losses from those who lose from the new system. The trade literature has demonstrated that foreign investors have a great deal of power in host country political decisions. Thus, in the absence of BITs, these investors might be advocates of broader reforms that could benefit all investors. In contrast, a world with BITs might reduce the interest of MNCs in property rights reform and enforcement in developing countries. Domestic reform may be less likely and the country may even regress toward policies that harm domestic investors. In some countries, attempts at reform may fail, or no attempts at reform may be made at all. In such cases, the BIT, although benefiting foreign investors, could have a negative effect on the trustworthiness of the business environment for domestic investors. Of course, even with a BIT foreign investors can benefit from some improvements in the domestic property rights regime and may even use the provisions of international treaties as a template for domestic legislation.²⁴ Thus a key empirical issue is whether MNCs seek both BITs and overall domestic reform that has spillovers for local firms or whether they concentrate on international instruments such as BITs and ignore or even oppose domestic legal reform.

It is instructive to mention a few cases that indicate the possible disjunction between property rights and BITs. First, in many countries, western donor agencies, especially USAID, in conjunction with the local chamber of commerce, work to establish local arbitration tribunals to deal with investment disputes.²⁵ USAID also promotes BITs to overcome the same problems that the local arbitration tribunals were meant to deal with. Thus, if BITs prove effective, the pressure for property rights reform that was evident through these local tribunals may well be scaled back. Second, consider specific countries. Botswana and Namibia have the highest property rights rankings of all countries in sub-Saharan Africa in both the International Country Risk Guide (ICRG) and Freedom House, two generally accepted ratings of property rights.²⁶ Yet, as of 2000, Botswana was a signatory to two BITs, only one of which is with a developed country (Switzerland) and Namibia has signed only five. Zimbabwe and South Africa, neighboring countries with significantly lower rankings on the property rights scale, have signed 24 and 18 BITs, respectively. In Botswana and Namibia most FDI is in the natural resource

²⁴ For an example see Konoplyanik (1996) on a Russian case where the Energy Charter Treaty was used as a template for a domestic statute.

²⁵ See various documents on the USAID website relating to their programs on Legal and Institutional Reform: http://www.usaid.gov/our_work/economic_growth_and_trade/eg/lir.htm

²⁶ Data available from ICRG and Freedom House websites: <http://www.icrgonline.com>; <http://www.freedomhouse.org/ratings/index.htm>

sector, and investors obviously have much more limited choices and will invest even without BITs.²⁷ However, the important issue is whether that investment, even if mostly in natural resources, helped stimulate domestic legal reform or whether the association is a mere coincidence.

Third, in Latin America, the cases are not clearcut. However, Peru and Venezuela, two countries that both embarked on programs of property rights reform and failed are well above the mean for BITs in the remainder of Latin America. Specifically, Peru and Venezuela have signed 26 and 22 BITs respectively, with the mean for Latin America below 14. Peru's attempt at reform is notable. A program to reform the property rights system and ensure its enforcement was supported by a grant from the World Bank. Additionally, a well-known local non-governmental organization initiated a public information campaign to inform potential investors of the benefits of property rights. Yet the program was terminated a year and a half into the project, before actual implementation ever began.²⁸ It is, of course, unlikely that BITs played the primary role in impeding property rights enforcement reform in Peru. However, a lack of pressure from major investors for reform appears to have played a major role.

D. Conclusions

Many observers of the global business environment view the growing internationalization of commercial law, through BITs and international arbitration, as a desirable trend. They urge its expansion to cover a broader range of contract disputes. However, although international commercial law norms and BITs reduce risk and solve collective action problems, their impact on social welfare is ambiguous. They may impose discipline on governments that would otherwise favor narrow interests or demand corrupt payoffs. They bind a country to uphold contracts with international direct investors (Waelde 1999). Alternatively, developing countries may be faced with standard form treaties drafted by wealthy countries that limit a nation's domestic policy flexibility and lead it to favor outside investors or narrow local interests over the general population. Because BITs are based on models drafted by capital exporting states and express little concern with improving the overall legal structures of developing countries, they may reduce the available benefits to the host country from FDI (Guzmán 1997). Of course, such countries are in a weak bargaining position in all international fora unless they have valuable natural resources deposits. Thus, there may be nothing special about BITs. Perhaps on the margin they are better than a non-BIT regime based on individual contracts enforced in international arbitration outside of the BIT framework. Nevertheless, one can also ask if an alternative regime, say a more truly multilateral one, might not provide greater benefits to emerging and developing countries that compete for foreign direct investment.

IV. Quantitative Analysis

An empirical analysis of the effects of BITs requires a two-pronged approach. First, we look at how BITs interact with other determinants of foreign investment to affect FDI inflows. The main benefit of BITs is purported to be increased FDI to developing countries. This analysis

²⁷ In the empirical work reported below we use the absolute dollar value of natural resource exports as a control. It appears to play no independent role in determining a country's share of FDI after correcting for other factors. 28 LCHR (2000) and *The Economist*. "The dark side of the boom," August 5, 1995

takes a first step towards understanding if this is true. Second, we analyze the effects of BITs and the domestic business environment through their effects on domestic private investment and on property rights.

The data for our study are based on various indicators of government performance, investment rates, social indicators, and investment treaties in up to 176 countries. The datasets were compiled from a variety of sources and therefore contain a different number of observations for each variable. The data sets use panel data from the first BIT signed in 1959 through 2000 for low- and middle-income countries²⁹ to take into account the dynamic nature of some of the data, and to control for some of the statistical problems inherent in cross sectional analyses of this type.

We recognize that our findings are preliminary. Without the ability to differentiate between treaties, it is not possible to ascertain if certain elements within the treaties, rather than the overall number of treaties signed, or even the identity of the home country act as the causal mechanisms in the study. However, this analysis takes a first step towards understanding some of the important relationships between BITs and the investment environment in low- and middle-income countries.

A. FDI

There is a broad empirical literature on the determinants of FDI.³⁰ A review of the literature shows that there is no clear agreement on the factors that determine FDI inflows to developing countries. The studies use diverse variables and often come to opposing findings on the relationship between certain variables and investment. Nevertheless, we can use past work to specify a reasonable model for the determinants of investment as a basis for understanding the impact of BITs. We break our analysis into two parts, a general analysis to determine the impact of signing treaties on overall FDI inflows and a bilateral analysis between the United States and low- and middle-income countries.

Our first analysis addresses the hypothesis that BITs act as a signal for foreign investors. If this is the case, we would expect FDI flows to increase as a function of the overall number of BITs signed. However, the strength of the signal could be related to the economic strength of the home country. Thus we separate BITs into two categories depending upon whether the home country is classified as developed or developing. Of course, it is also possible that rather than sending a signal to all investors, BITs merely reassure home country investors, thus encouraging investment only if an investor's home country has signed a BIT with the host country. Our second analysis addresses this point by examining how BITs signed with the United States affect US FDI flows to host countries.

²⁹ Appendix C contains a list of countries used in each analysis. Appendix E contains correlations between variables in each of the analyses.

³⁰ Chakrabarti(2001) offers a good overview of the literature on the determinants of FDI. For more specific analyses, see for example: Schneider, F. and B. Frey (1985), Root and Alimed (1979), Sader (1993), Billington (1999), Markusen (1990), Gastanaga et al (1998), Ozler and Rodrik (1992), and Henisz (2000).

1. General Analysis

As the dependent variable for our general analysis we use the broadest measure of FDI inflows available on a yearly basis from UNCTAD.³¹ We measure FDI as inflows to a particular country as a percentage of world FDI inflows for that year. In this case we are interested in how each country's fraction of world FDI inflows increases (or decreases) based on the number of treaties signed. The ratio of inflows to a particular country for each year to overall FDI flows to all countries is the best measurement of change in the fraction of world FDI.³² FDI inflows are provided on a net basis, and include capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise or capital received from an FDI enterprise by a foreign direct investor. There are three components in FDI: equity capital, reinvested earnings, and intra-company loans. If one of these three components is negative and is not offset by positive amounts in the remaining components, the resulting measure of FDI inflows can be negative, indicating disinvestment.³³

Market size is universally accepted as the leading determinant of FDI inflows. We use two proxies that, taken together, indicate the value of investing to serve a country's market. The first is the log of GDP per capita (income), and the second is population. Beyond market size, there is general disagreement on the determinants of FDI. Theoretically, the rate of growth of a country's economy would seem to be important for attracting FDI, as a fast growing economy in the present would indicate future development potential (Schneider and Frey 1985). However, although growth and market size affect the level of investment in a country, it is also likely that the opposite direction of causation operates as well. That is, higher investment leads to greater growth and a larger market. We deal with this problem by instrumenting for income and economic growth with their lagged values.

According to UNCTAD (2001), the majority of FDI to the least developed countries is through natural resource investment. The presence of natural resources in a country is expected to attract foreign investment regardless of other factors that would usually attract or discourage investors. Natural resource endowments are measured through a composite of natural fuels and ores exported from individual countries that is available from the IMF's International Financial Statistics Database.

We include political risk as a potential determinant of FDI inflows, theorizing that countries with high levels of political risk will attract less investment than those with low levels of risk. There are several readily available measures of political risk. We include the inflation rate as a proxy for macroeconomic stability in a country. We expect the impact of inflation to be ambiguous. On the one hand, if lending is done in the local currency, unanticipated inflation benefits debtors. On the other hand, high inflation rates may indicate domestic policy failures that discourage both savings and investment. Macroeconomic stability ought to be an important determinant of

³¹ See appendix D for sources and definitions of variables and appendix E for summary statistics.

³² We re-ran the models using FDI as a percentage of GDP, and the results did not change significantly. This ratio, however, measures changes in the importance of FDI to the overall economy, rather than changes in inflows, the measure we are interested in, so we retained our ratio of FDI inflows to overall FDI flows in the reported results.

³³ For more information see the World Investment Directory Website:
http://r0.unctad.org/en/subsites/dite/fdistats_files/WID.htm

foreign investment. For the purpose of cross-sectional comparison across time and to have the ability to separate out factors such as property rights risk in our subsequent analysis, we use a measure produced by the International Country Risk Guide (ICRG). Their variable is based on institutional indicators compiled by private international investment risk services. The ICRG political risk index utilizes measures of the risk of expropriation, established mechanisms for dispute resolution, contract enforcement, government credibility, corruption in government, and quality of bureaucracy. It is measured on a scale from one to 100 (the individual components are available in appendix B) with higher numbers equating to lower (better) levels of risk in a country.

Other independent variables are also available for analysis, including measures of human development, level of democracy, and geography. To account for country specific factors, we include a continent dummy³⁴ and latitude, a variable equal to the distance of the country from the equator, scaled between 0 and 1.³⁵ Theories of institutions and economic growth claim that countries in more temperate zones have more productive agriculture and healthier climates, enabling more highly developed economies and institutions (Landes 1998, La Porta et al 2000). Social factors such as literacy or health are highly collinear with our measures of market size and growth and were therefore excluded from the model. Finally, there is no reason to assume that the level of democracy in a country necessarily attracts or detracts from overall FDI flows absent other favorable institutional conditions.³⁶

Depending on the type of FDI, the level of openness (measured as exports plus imports to GDP) could have a positive or negative impact on a country's ability to attract FDI. FDI focused on exploiting the local market would be attracted to a country with a less open economy, and FDI focused on the tradeables sector would be positively related to openness. The opposing nature of the theory as well as gaps in the data for our sub-sample of countries led us to exclude openness from our estimation. We also exclude black market premia from our analysis. Black market premia are a symptom of overvaluation of national currencies and thus are likely to relate to lower levels of investment. They are often used in empirical evaluations as a proxy for distortions in the financial system. However, in our case, the paucity of data reduced our sample size from 68 to 48 countries, necessitating its exclusion from the analysis. Further variables that could act as determinants of FDI that we excluded because of opposing theory or data inefficiencies include the host country's wage, government consumption, and tax rates. The host country wage has been shown in various studies to be both an inducement and a deterrent to FDI based on the type of investment. For example, Schneider and Frey (1985) and Pistoresi (2000) found that higher wages tended, on average, to discourage FDI, although Caves (1974) and Wheeler and Mody (1992) found a positive association between FDI inflows and the real wage. Tax rates do not let us separate out tax incentives to attract investment from high tax rates that

³⁴ Asia was the omitted case for comparison purposes, but insufficient data on the former communist countries resulted in their omission from the analysis as well. Thus, in our random effects models, the missing geographic category is Asia and former Communist Countries.

³⁵ We also considered including legal origin in our analysis. However, the meaning of this variable is in doubt. It may simply be capturing general historical regularities. For purposes of robustness we included it in one version of our random effects specification, but its coefficient estimates across specifications was zero and insignificant, and its inclusion did not affect the remaining variables.

³⁶ As a robustness check we include the level of democracy in a country as given by the a country's Polity IV rating, but in no case was the variable significant for the analysis.

deter FDI.³⁷ Likewise, overall measures of government consumption do not permit one to separate out that which types of spending attract investment and that which are deterrents.

Data on BITs are available from a listing published by UNCTAD that documents the parties to every bilateral investment treaty, the date of signature, and the date of entry into force. These data are available for every BIT of public record from the first treaty signed in 1959 between Germany and Pakistan through December 2000 (UNCTAD 2000). Because of the long-term nature of BITs, we measure our BIT variable as the natural log of the cumulative number of BITs signed by a particular country at the beginning of the time period.³⁸ We take the natural log of the total number of BITs signed under the assumption that if BITs are serving as a signal to foreign investors, they are likely to have decreasing returns to scale for attracting investment. We measure the cumulative total at the beginning of the time period rather than the average over the period, assuming that BITs signed at the beginning of a five-year period will affect subsequent, but not immediate FDI flows. We separate out those BITs signed with developed countries from those signed with developing countries to determine if the identity of treaty partners might have an effect on the investment or property rights levels in the host country.

The possibility of endogeneity needs to be addressed. Perhaps a developing country that signs a BIT with a developed country is simply one that is already attracting FDI from that country. This would be a problem if we were analyzing the impact of signing a particular BIT on investment from a particular country. Then we might expect that if greater amounts of FDI flow from a particular country, this would impel the host country to sign a BIT with that country.³⁹ In our case, however, we are measuring the impact of signing BITs more generally on overall FDI flows. Thus, while we may expect that countries with greater amounts of FDI are likely to sign BITs to attract even greater flows of FDI, we would also expect that countries with lower FDI inflows are likely to sign BITs to increase their attractiveness to foreign investors.

To avoid the impact of year-to-year variation caused by the pattern of individual deals, we use five-year averages for the period 1975 to 2000 for all variables other than BITs which are measured at the beginning of each five-year time period.⁴⁰ We model the data in two forms, random and fixed effects. Our general specifications for foreign direct investment to low- and middle- income countries are as follows:

³⁷ We included measures of taxes on goods and taxes on income available from the IMF's International Financial Statistics in both sets of regressions on FDI and private investment. The coefficients were equal to zero and not statistically significant in any regression. This, in addition to the problems discussed in the text, led us to exclude them from the analyses.

³⁸ Although the results of the analysis do not change substantially if we use ratified BITs rather than signed BITs, we believe that signed BITs are a more appropriate measure as the time between signature and ratification should, in general, reflect the anticipation of ratification, especially as treaties are retroactively applied to existing investments.

³⁹ See, for example, Hallward-Driemeier(2003).

⁴⁰ Although some of our data goes back to 1959, the bulk of the data covers 1975 to 2000.

$$y_{it} = \beta_0 + \beta_1 \mathbf{b}_{i,t} + \beta_2 \mathbf{i}_{i,t} + \beta_3 \mathbf{r}_{i,t} + \beta_4 \mathbf{s}_{i,t} + \beta_5 \mathbf{p}_{i,t} + \beta_6 \mathbf{g}_{i,t} + \beta_7 \mathbf{n}_{i,t} + \tau_t + \eta_i + v_{it} \quad (1)$$

$$y_{it} = \beta_0 + \beta_1 \mathbf{b}_{i,t} + \beta_2 \mathbf{i}_{i,t} + \beta_3 \mathbf{r}_{i,t} + \beta_4 \mathbf{s}_{i,t} + \beta_5 \mathbf{p}_{i,t} + \beta_6 \mathbf{g}_{i,t} + \beta_7 \mathbf{n}_{i,t} + \tau_t + \beta_8 D_i + v_{it} \quad (2)$$

Where FDI inflows to low-income country i in time t as a percentage of world FDI flows (y), depends upon the number of BITs signed by the host country (b), the log of the average level of income (i), the level of political risk (r), the inflation rate (s), the natural log of the population of the host country (p), economic growth (g), natural resources (n), time effects (τ), some random error (v), and either fixed country effects (η), in equation (1) or various exogenous variables determining FDI that do not change across time (D) in equation (2). The subscript i represents country i and the subscript t represents time period t .

We estimate equations (1) and (2) by two-stage least squares analysis with heteroskedasticity consistent standard errors, instrumenting for economic growth and income with their own lagged values and other determinants of growth and income. Beyond the theoretical reasoning for instrumenting for growth and income with their own lagged values, the F-statistics in each of our first-stage regressions was well over the 99 percent significance level, indicating the validity of the instrument set.

A Hausman specification test rejected the assumption that the error component from the random effects model was uncorrelated with the error in that model. Thus, our random effects model will be less efficient than our fixed effects model. However, because of the paucity of the data across time for a number of our countries, we felt that it was important to examine the implications of both models.

Table 1
FDI and Bilateral Investment Treaties: Random Effects Model (1980-2000)

Dependent Variable: FDI inflows to country/world FDI inflows

	Base Case	2	3	4	5
Log of BITs signed High income			0.20 [*] (0.11)		0.85 (0.74)
Log of BITs signed Low income			0.13 (0.10)		-0.32 (0.52)
Log of BITs signed All		0.24 ^{**} (0.09)		0.38 [^] (0.38)	
Natural log GDP per capita	0.15 (0.10)	0.07 (0.13)	0.07 (0.13)	0.07 (0.14)	0.04 (0.15)
Economic Growth	-0.03 (0.04)	-0.09 (0.06)	-0.08 (0.06)	-0.08 (0.06)	-0.10 (0.07)
Political Risk	0.02 ^{**} (0.01)	0.02 ^{**} (0.01)	0.02 ^{**} (0.01)	0.02 (0.01)	0.02 [*] (0.01)
Risk* log of Total BITS				-0.002 [^] (0.006)	
Risk* log of High BITS					-0.01 (0.01)
Risk* log of Low BITS					0.01 (0.01)
Inflation	0.00002 (0.13)	0.00006 (0.17)	0.00004 (0.16)	0.00007 (0.16)	0.00004 (0.18)
Natural Resources	0.001 (0.001)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.0002 (0.0017)
Natural log population	0.000003 ^{**} (0.001)	0.000003 ^{**} (0.001)	0.000003 ^{**} (0.001)	0.000003 ^{**} (0.001)	0.000003 ^{**} (0.001)
Latitude	0.17 (0.47)	0.21 (0.53)	0.15 (0.54)	0.24 (0.56)	0.13 (0.58)
Latin America	0.21 [*] (0.13)	0.44 ^{**} (0.20)	0.44 ^{**} (0.19)	0.46 ^{**} (0.21)	0.46 ^{**} (0.22)
Africa	0.04 (0.15)	0.09 (0.17)	0.10 (0.18)	0.11 (0.18)	0.07 (0.18)
Intercept	-1.89 ^{**} (0.72)	-1.13 (0.86)	-1.10 (0.79)	-1.30 (0.77)	-1.26 (0.79)
Country N	62	62	62	62	62
R-Squared	0.41	0.30	0.32	0.31	0.28
Root MSE	0.75	0.81	0.80	0.81	0.83

**indicates significant at .05 level, *indicates significant at .10 level; ^ indicates joint significance of f-test.

Heteroskedasticity consistent standard errors given in parentheses

Table 2
FDI and Bilateral Investment Treaties: Fixed Effects Model (1980-2000)

Dependent Variable: FDI inflows to country/world FDI inflows

	Base Case	2	3	4	5
Log of BITs signed High Income			0.13 (0.09)		0.43 (0.73)
Log of BITs signed Low Income			0.09 (0.11)		-0.26 (0.46)
Log of BITs signed All		0.16 (0.12)		0.14 (0.31)	
Natural Log GDP per capita	0.21 ^{**} (0.07)	0.19 ^{**} (0.08)	0.19 ^{**} (0.08)	0.19 ^{**} (0.08)	0.18 ^{**} (0.08)
Economic Growth	-0.03 (0.04)	-0.07 (0.06)	-0.07 (0.06)	-0.06 (0.07)	-0.06 (0.07)
Political Risk	0.02 ^{**} (0.01)	0.01 ^{**} (0.01)	0.01 ^{**} (0.01)	0.01 [^] (0.01)	0.02 [^] (0.01)
Risk* Log of Total BITs				0.0002 [^] (0.0051)	
Risk* Log of High income BITs					-0.01 [^] (0.01)
Risk* Log of Low income BITs					0.01 [^] (0.01)
Inflation	0.0001 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)	0.0002 (0.0002)	0.0002 (0.0002)
Natural Resources	0.0011 (0.0018)	0.0007 (0.0017)	0.0007 (0.0018)	0.0008 (0.0016)	0.0006 (0.0016)
Natural log Population	0.000003 ^{**} (0.000002)	0.000003 ^{**} (0.000002)	0.000003 ^{**} (0.000001)	0.000003 ^{**} (.000002)	0.000003 ^{**} (.000001)
Intercept	-2.22 ^{**} (0.69)	-1.91 ^{**} (0.70)	-1.83 ^{**} (0.69)	-1.90 ^{**} (0.94)	-1.92 ^{**} (0.94)
Country N	62	62	62	62	62
R-Squared	0.40	0.35	0.35	0.36	0.36
Root MSE	0.74	0.77	0.77	0.77	0.77

**indicates significant at .05 level, *indicates significant at .10 level; ^ indicates joint significance of f-test.

Heteroskedasticity consistent standard errors given in parentheses

Both of our models clearly demonstrate the importance of political risk and population or market size for determining FDI. In the fixed effects specification, GDP per capita is also influential. Although the coefficients on political risk and GDP appear small, it is important to remember that average FDI inflows as a percentage of world inflows for the countries in our sample is 0.20 percent. In our fixed effects base specification, we find a positive and significant relationship between GDP per capita and FDI inflows, controlling for the remaining determinants of FDI. Specifically, a one-percent increase in GDP per capita leads to a 0.0021 percentage point increase in a country's share of total world FDI, while in our random effects model income does not have a statistically significant effect on a country's share of world FDI. Political risk has a significant and positive effect on FDI in our base case, with a one unit increase in the political risk scale (equating to an improvement in political risk) equating to a .02 point increase in the share of a country's FDI inflows as a percentage of world inflows, in both models. Likewise, an increase of 1 percent in the population of a country, equates to a small but positive impact on FDI flows in both models.

When we add BITs into our models, the basic results remain the same. BITs seem to have a positive relationship with FDI inflows. However, the only point where this relationship is statistically significant at above the 5% level is in the random effects model, table (1), column (2) where without controlling for their interaction with risk, a one percent increase in the number of BITs signed equates to a 0.0024 increase in a country's share of world FDI. There is no significant relationship between BITs and FDI in the fixed effects model. This lack of significance might indicate a misspecification of the model. However, controlling for a variety of other factors including the level of BITs rather than the natural log, the ratification of a US BIT, black market premiums, checking for outliers in the data, among a series of other robustness checks did not increase the significance of BITs for FDI. Instead, it is possible that this lack of significance simply shows that the number of BITs signed or the number signed with high income countries, has little or no impact on a country's ability to attract foreign investment.

Political risk is significant throughout our models, either alone or combined with its interacted effect on BITs. The interaction between BITs and political risk is jointly significant with one of its components in some of the specifications. This indicates that BITs may influence foreign investors' estimations of the risk they face, but the results are not conclusive. Under some specifications both the number of BITs and lack of political risk positively affect FDI, however, their interaction is negative. In such specification, the less underlying risk an investor faces (that is the higher is the index of political risk), the less important are BITs. This result holds in the random effects model for all BITs and in the fixed effects model for BITs with high income countries. In contrast, in the fixed effects model, less risk seems to enhance the value of BITs at least for low income countries. We will explore this point further in our later analysis.

It is important to contrast these results with the results obtained in other studies of the effect of BITs on FDI mentioned above. Neumayer and Spess (2004) find that the more BITs a country signs, the greater the FDI flows to that country. This opposing result could, as the authors point out, be a result of the difference in our sample size as well as the extended time period of their study. Their study includes 119 countries and goes back as far as 1970; we have only 62 countries in our study, and our time period is limited to after 1984 because of the limited availability of political risk data. Although a number of countries (such as Korea, China, and

countries in Central and Eastern Europe) that are omitted from our study because of data limitations may be important to our analysis, the inclusion of a number of small island countries may also be skewing the results of Neumayer and Spess. It is also unclear how they have dealt with the transition from socialism that occurred in Europe during the period which was surely a more important structural shift than the signing of BITs. More importantly looking at year-to-year variation in the data across such a long time period is likely to skew their results. Year-to-year variation in FDI inflows to developing countries, especially small developing countries, tends to be large, so that averaging over the period appears to a more appropriate technique.

Salacuse and Sullivan (2004) find a strong correlation between US BITs and overall FDI inflows to a country, but they find that BITs with OECD members have no impact. We have a number of questions about their methodology. First, like our criticism of Neumeyer and Spess, the one-year lag they employ seems too short. Second, by using overall flows instead of shares, they may be compounding time trends with the impact of BITs. Third, fixed country effects may be important. We experimented with both a random effects model and a fixed effects model. The dummy for Latin America had explanatory power in the random effects regression, a region with a number of US BITs. Overall, it is likely that there is omitted variable bias in the Salacuse and Sullivan estimates. In this portion of their study the authors do not estimate a fixed effects model and do not compensate by including country-specific factors that may not change substantially from year to year. Finally, the different sample composition may have an effect here as well. Our analysis includes 62 countries while they include only 30.

To conclude, although we can point to some possible reasons for our differing results compared to these two studies, clearly, more work is needed to sort out the underlying factors at work. However, according to our results, BITs do not seem to be a strong determinant of FDI. This suggests that, contrary to the studies summarized above, the total number of BITs does not signal an improved climate for investment. Rather, they may only benefit investors from signatory countries. Our next step, therefore, is to look at this possibility.

Bilateral Analysis

Our general analysis investigates how signing BITs affects overall FDI flows into a country. If, as our results indicate above, BITs have little impact on a country's ability to attract overall FDI, it may, nevertheless, be the case that BITs serve to attract FDI from the home country. Thus, we turn to an analysis of US BITs and related outflows of US FDI.

The most comprehensive source for FDI data is the "U.S. International Transactions Accounts Data," produced yearly by the United States Bureau of Economic Analysis (BEA).⁴¹ The data comprise two broad areas covering all US FDI operations from 1950 through the present. The BEA reports balance of payments and direct investment data on transactions between US parents and their foreign affiliates abroad, and financial and operating data covering the foreign operations of US-based multinational corporations. The BEA's data generally conform to international reporting standards and are available with substantial country and industry detail. Thus, for understanding the bilateral relationship between FDI inflows and BITs, the BEA data would seem ideal. Unfortunately, it is available only for MNCs based in the United States. According to the United Nations Conference on Trade and Development (UNCTAD) database on FDI, US-based MNCs accounted for only twelve percent of outward world FDI flows in 2000 and 21 per cent of FDI outward stock. Further, more than half of U.S. FDI is directed towards the European Union. Nevertheless, the breadth and quality of the BEA data give a strong indication of the relationship between US BITs and US FDI flows (Mataloni 1995, Quijano 1990, Lipsey 2001, and UNCTAD 2001).

We measure FDI flows as net capital inflows [or outflows(-)] from the United States in millions of US dollars. In this case, we are interested in changes in overall US capital stock as a result of signing a BIT with the US. In other words, we care only about how signing a BIT with the US affects US FDI flows to that specific country. FDI flows are the best indicator of yearly changes in US capital stock in our countries of interest. It is important to note that changing the variable of interest to reflect the stock of FDI inflows as a percentage of all US flows and affiliate sales did not significantly impact our analysis. Our BIT variable is a dummy equal to 1 in the year that a BIT was signed between the host country and the US and each year thereafter and a 0 for countries without US BITs.

In addition to the variables used in the general analysis, we include a measure of distance between the US and the host country government in our pooled data analysis. Distance serves as a proxy for the transport and trade costs that affect the firm's decision to invest, and thus we assume that the greater the distance between a host country and the US, the lower the probability of US investment. Further, to account for the bilateral nature of the flows, we include a measure of exchange rate stability of the host country, as well a variable to measure the difference in average years of schooling between the US and the host country to proxy for skill differences between the host and investing country. Theoretical analysis posits that the greater the difference in skill level between countries, the lower the level of investment (Carr et al. 2002). Specifically, we use the difference in total mean years of education between the United States and the host country as our measure of skill difference. Theoretically, exchange rate levels and

⁴¹ The BEA's U.S. International Transactions Accounts Data are available on line for interactive analysis at: <http://www.bea.doc.gov/bea/di/di1fdibal.htm>

stability have an important influence on FDI flows, but their impact is ambiguous. Exchange rate stability could increase investment in low productivity investment or investment for production in the local market while decreasing investment in industries with high entry costs or investment tended for re-export (Bénassy-Quéré et al 1999).

The endogeneity problem in our general model does not seem to be a concern in the case of US FDI flows. Blonigen and Davies(2001), in their work on bilateral tax treaties with the US, point out that the U.S. does not limit BITs only to countries that have high FDI activity. Appendix F demonstrates that there is no correlation between the levels of inflows of US FDI and the date that the treaty was signed. In fact, in many cases, the US has signed treaties with host countries with very low FDI inflows. Thus, we do not need to control for endogeneity in our estimates⁴².

We again model the data using random and fixed effects analysis. Our model specifications are identical to those used above. Data limitations necessitated year-to-year changes rather than observing means over five year periods as in the general analysis. To account for FDI reflecting past levels of income and economic growth, our first two models lag GDP per capita and growth, while our second two models lag all economic variables to account for greater changes over time. We report both analyses in table 3, but the differences between the lagged and non-lagged models are insignificant.

Our results from this more detailed analysis are interesting and counter-intuitive in many cases. Two of our most interesting results are the negative coefficients on both BITs and political risk. Countries that have signed a BIT or have a BIT with the US in place are likely to have significantly lower FDI flows than those that do not have a BIT with the US. It could be the case that countries with low levels of FDI from the US are signing BITs at higher rates in order to attract more US FDI. Partly as a result of this phenomenon, a US BIT does not seem to be a signal to US investors of a stronger or better protected investment environment. The negative sign on political risk indicates that for low- and middle-income countries, as the political risk indicator increases (equating to a less risky environment), FDI flows from the US also decrease. Recall that our data set only includes such low- and middle-income countries, the main addressees of BITs. Nevertheless, this runs counter to our intuition and accepted evidence on political risk, and so we must look to the interaction between political risk and signing a US BIT, which is jointly significant at the 95% confidence level for all the regressions.

Table 4 looks at the conditional effect of the interaction. For US BITs, we see that as political risk goes down (increases in the actual indicator), the conditional effect of signing a BIT with the US increases conditional FDI inflows. In other words, as countries become less risky, a BIT with the US aids in attracting greater FDI inflows from the US.⁴³ For example, as a country decreases in risk from a level of 45 (Congo and Algeria in 2000) to a level of 55 (Turkey and Senegal in 1999), signing a BIT attracts 66 million more dollars of US foreign investment. The reasoning for this result could be that in order for BITs to be credible to investors, some

⁴² Following Hallward-Driemeier (2003), we checked this result by instrumenting for a country having signed a US BIT with the number of BITs signed with other countries. This estimation did not significantly affect the results of our estimation.

⁴³ This finding is similar to the finding of Hallward-Driemeier (2003) who finds that only those countries that already have a reasonably strong institutional environment seem to benefit from ratifying treaties.

minimum level of property rights protection needs to be in place. Unfortunately, we can only be certain of this outcome at very high levels of political risk (countries at risk levels of 55 and below).

The negative sign on openness is not completely surprising. The results tell us that the more open a country's economy, the lower the inflows of US investment. This could be a result of investment for the host country market, where more closed economies advantage the investor. GDP, time, education, and population all fit with our intuitive reasoning. GDP and population, our proxies for market size, both agree with theoretical reasoning that the greater the market size, the larger the size of FDI inflows. US outflows of FDI continue to increase yearly, and so it is not surprising that FDI flows increase along with time. The coefficient on distance indicates that the further a country is from the United States, the lower the level of investment flows to that country, though this variable is statistically insignificant from zero. Finally, the greater the difference in education levels between the US and the host country, the lower the level of FDI flows.

As noted above, these results are similar to those found by Hallward-Driemeier (2003) who finds little evidence of a connection between BITs and bilateral FDI flows. By contrast, Salacuse and Sullivan (2004) find a strong correlation between US BITs and US FDI flows. There are a number of possible explanations for the differences in our results. First, our data comes from US BEA statistics which is the most comprehensive data available on US FDI outflows. Salacuse and Sullivan use OECD data which accounts for their low sample size (our analysis includes 54 countries while Salacuse and Sullivan include only 30). Second, although Salacuse and Sullivan do use a fixed effects model to account for stable inter-country differences, they do not include other variables that shift over time such as openness, political risk, and skill differences. Finally, their data only covers the period 1991-2000 while we extend the analysis back to 1980 before the first US BIT was signed in 1982.

Overall, our results indicate that signing a BIT with the US does not correspond to increased FDI inflows from US firms except for countries that already have low levels of risk. Additionally, it does not appear that the US BIT alleviates political risk factors for investors based in the US. Although it is important to replicate this analysis for other investor countries, our results suggest that BITs, by themselves, do not serve as a signal of a secure investment environment in host countries.

Table 3
FDI and Bilateral Investment Treaties:
Bilateral Relationship with the United States (1980-2000)

	<i>Dependent Variable: US FDI</i>			
	GDP lag		All lag	
	Random	Fixed Effects	Random	Fixed Effects
BIT signed with US	-408.51 (301.96)	-477.97 ** (208.07)	-370.01 (339.33)	-463.71 *** (195.50)
Ln GDP per capita	223.02 *** (82.28)	49.41 (187.92)	266.73 *** (81.44)	120.02 (191.63)
Political Risk	-9.47 *** (3.08)	-10.65 *** (3.29)	-7.19 ** (3.26)	-9.45 *** (2.91)
Risk* US BIT	4.39 (4.84)	6.03 * (3.31)	4.15 (5.74)	6.58 ** (3.41)
Growth	298.77 (225.23)	352.14 ** (176.85)	240.91 (237.42)	284.56 (178.09)
Population	0.00063 * (0.00032)	0.0025 * (0.0016)	.00066 ** (.00030)	0.0029 (0.0019)
Natural Resources	-1.81 (1.64)	-3.20 (2.09)	-1.69 (1.66)	-3.37 * (1.94)
Openness	-2.89 ** (1.34)	-2.20 * (1.35)	-3.41 ** (1.34)	-2.64 ** (1.32)
Exchange Rate Stability	0.082 (0.057)	0.09 (0.10)	0.25 (0.19)	0.44 (0.48)
Skill Difference	-58.53 (40.50)	-236.64 *** (72.01)	-31.92 (35.66)	-247.05 *** (77.92)
Time Counter	51.97 *** (6.46)	40.54 *** (9.35)	50.86 *** (7.02)	36.60 *** (8.82)
Distance	-0.020 (0.026)		-0.02 (0.02)	
Constant	-103646.6 *** (12891.86)	-78501.74 *** (18152.41)	-102062.1 *** (14037.81)	-71163.91 *** (17131.32)
Countries	54	54	54	54
Observations	667	667	622	622
R-Squared	0.17	0.59	0.18	0.61

**indicates significant at .05 level, *indicates significant at .10 level; ^ indicates joint significance of f-test.

Heteroskedasticity consistent standard errors given in parentheses

Table 4
Effects of US BITs on US FDI Flows Conditional on Political Risk

Range of PR	Conditional effects of US BITs on FDI	Standard error of conditional effect	t statistics of conditional effect	Countries with avg. in range
0 (high risk)	-463.71	195.50	-2.37	
5	-430.83	179.40	-2.40	
10	-397.95	163.49	-2.43	
15	-365.06	147.83	-2.47	
20	-332.18	132.51	-2.51	
25	-299.30	117.67	-2.54	4
30	-266.42	103.52	-2.57	10
35	-233.54	90.37	-2.58	22
40	-200.66	78.73	-2.55	51
45	-167.78	69.37	-2.42	46
50	-134.90	63.30	-2.13	58
55	-102.02	61.51	-1.66	65
60	-69.14	64.35	-1.07	108
65	-36.26	71.27	-0.51	124
70	-3.38	81.24	-0.04	100
75	29.50	93.29	0.32	54
80	62.38	106.70	0.58	20
85	95.26	121.04	0.79	8
90	128.15	136.00	0.94	
95	161.03	151.41	1.06	
100 (low risk)	193.91	167.13	1.16	

B. Domestic Business Environment

Although BITs are meant to improve the investment environment for foreign investors, it is important to understand the potential benefits and/or costs of the treaties for domestic investors as well. We investigate this relationship in two steps. First, we use a specification identical to that for foreign investment to determine if BITs affect the level of domestic investment. If BITs serve as a signal of a strong investment environment for foreign investors, this may also be the case for domestic investors if their independent knowledge of the investment climate is lacking or if signing BITs acts to lock in an investor-friendly climate. Secondly, we examine the effects of BITs on property rights. Earlier we hypothesized that BITs could hinder improvements in property rights environments by removing foreign investor pressure for improvements in property rights regimes. Our second estimation in this section takes a preliminary step towards understanding this relationship.

i. Private Domestic Investment

We estimate the determinants of private domestic investment in a manner similar to our model of FDI except that the dependent variable is measured in per capita terms. We build on the literature on the determinants of private investment in developing countries.⁴⁴ Market size, proxied by GDP per capita, and growth rates of the country are again theorized to be the primary determinants of investment. The financial depth or overall size of the financial sector of a country is also likely to be an important determinant. We proxy financial depth with a measure of liquid liabilities. The hypothesis is that the greater the size of the financial sector in a country, the more investment we should see. As in the FDI regression, we exclude taxes and inflation.⁴⁵ As with FDI, political risk is likely to be an important determinant of private investment. Finally, we include continent and latitude as country-specific effects.

Private domestic investment is defined as the difference between total gross domestic investment (from national accounts) and consolidated public investment. The variable is the ratio of domestic private investment to GDP. The ratios are computed using local currency units at current prices, readily available from the World Bank's World Development Indicators. Aside from differences in variables, we model private investment identically to our FDI specification.

⁴⁴ There are a number of good overviews of the determinants of private investment in developing countries. See for example, Schmidt-Hebbel et al. (1996), Wai, and Wong (1982), and Ndikumana (2001).

⁴⁵ Robustness checks again resulted in coefficients of zero with no statistical significance and no change to the remaining estimates.

Table 5
Private Investment and Bilateral Investment Treaties:
Random Effects Model (1980-2000)

<i>Dependent Variable: Private Investment</i>	Base Case	2	3	4
BITs signed with High income			0.34** (0.13)	
BITs signed with Low income			-0.29** (0.09)	
Total BITs		-0.05 (0.04)		0.53** (0.26)
Natural log GDP per capita	2.08** (0.68)	1.96** (0.68)	2.13** (0.68)	2.08** (0.69)
Political Risk	0.03 (0.03)	0.05 (0.04)	0.03 (0.04)	0.08** (0.04)
Risk*Total BITs				-0.01 (0.01)
Liquid Liabilities	0.04 (0.03)	0.04 (0.03)	0.04 (0.03)	0.05 (0.03)
Growth	-0.05 (0.14)	-0.05 (0.14)	-0.05 (0.13)	-0.06 (0.13)
Natural Resources	-0.05** (0.02)	-0.05** (0.02)	-0.05** (0.02)	-0.05** (0.02)
Time Counter	0.50 (0.32)	0.93** (0.36)	0.78** (0.35)	0.79** (0.37)
Latitude	-13.63** (4.53)	-12.76** (4.58)	-12.46** (4.58)	-13.91** (4.64)
Latin America	-3.90** (1.39)	-4.14** (1.41)	-3.70** (1.41)	-3.74 (1.43)
Africa	-7.68** (1.66)	-8.21** (1.71)	-7.76** (1.71)	-7.77 (1.73)
Intercept	1.12 (4.33)	1.07 (4.33)	-0.22 (4.34)	-1.54 (4.51)
Country N	40	40	40	40
R-squared	0.410	0.416	0.446	0.426

**indicates significant at .05 level, *indicates significant at .10 level; ^ indicates joint significance of f-test.

Heteroskedasticity consistent standard errors given in parentheses

TABLE 6
Private Investment and Bilateral Investment Treaties:
Instrumental Variables Fixed Effects regression (1980-2000)

Dependent Variable: Private Investment

	Base Case	2	3	4
BITs signed with high income			0.43** (0.19)	
BITs signed with low income			-0.31** (0.13)	
Total BITs		0.003 (0.044)		0.45* (0.25)
Natural log GDP per capita	1.6** (0.63)	1.6** (0.63)	1.84** (0.6)	1.67** (0.62)
Political Risk	0.02 (0.05)	0.02 (0.05)	0.01 (0.05)	0.05 (0.05)
Risk*Total BITs				-0.01* (0.01)
Liquid Liabilities	0.07** (0.03)	0.07** (0.03)	0.06** (0.03)	0.07** (0.03)
Growth	-0.06 (0.12)	-0.07 (0.12)	-0.05 (0.11)	-0.07 (0.12)
Time Counter	0.52 (0.38)	0.64 (0.46)	0.64 (0.43)	0.58 (0.46)
Intercept	-2.33 (4.97)	-2.32 (5.23)	-4.4 (5.01)	-4.69 (5.4)
Country N	40	40	40	40
R-squared	0.21	0.21	0.27	0.23
Root MSE	4.39	4.41	4.28	4.39

**indicates significant at .05 level, *indicates significant at .10 level; ^ indicates joint significance of f-test.

Heteroskedasticity consistent standard errors given in parentheses

In both of our specifications, market size appears to be the most significant determinant of private investment. Specifically, an increase of one percent in GDP per capita increases private investment over GDP by approximately two percent in both of our models. Our fixed effects model (table 6) posits that for every one percent increase of liquid liabilities in the economy, private investment increases by .07 percent. This is not true in our random effects model, where our coefficient estimate is not significantly different from zero. The importance of natural resources has a negative impact on domestic investment in the random effects model. We omitted natural resources from our fixed effects regression, as they would be accounted for in the country fixed effects. In our random effects model, we are able to view some of the country specific effects. For example, the closer a country is to the equator, the lower the level of private investment in the economy. Latin America and Africa have lower levels of investment than do the countries of Eastern Europe and the Soviet Union.

In both cases, BITs have a significant effect on investment once the interaction between BITs and political risk was taken into account (equation 4 in tables 5 and 6). In addition, BITs with high income countries have a positive effect and those with low income countries a negative one. In the random effects model, for each additional BIT signed with a high-income country, private domestic investment increases on average by .34 percent. At the same time, for each additional BIT signed with a low-income country, private investment decreases by about .29 percent. These results were nearly identical in the fixed effect model.

In table 7, using the results from the fixed effects model, we see that as political risk goes down (increases in the actual indicator), the conditional effect of an additional BIT on domestic investment falls actually becoming negative in the range of 70-100 (Mexico and Thailand have political risk ratings of 70 in the current time period.). In other words, as countries become less risky, the number of BITs in force appears to discourage domestic investment. For example, as a country's political risk level increases from that of a 55 (Uganda and Colombia in 1995-2000) to a level of 45 (Algeria and Guinea-Bissau in 1995-2000), each additional BIT signed with a high income country translates to an increase in domestic investment of .08 percent. We cannot tell from this exercise why this occurs, but one explanation is that the FDI that is encouraged by BITs is crowding out domestic investment in spite of the rather good political/legal environment. In contrast, at high levels of risk, BITs may encourage FDI that takes the form of joint ventures with local firms. Thus, BITs seem to have a positive relationship to private investment in developing countries except when political risk is low. Although we would like to know the type of investment they encourage, that is not possible from the available data.

Range of PR	Conditional effects of BITs on Domestic Investment	Standard error of conditional effect	t statistics of conditional effect	Countries with avg. in range
0 (high risk)	0.53	0.25	2.16	
5	0.49	0.23	2.16	
10	0.45	0.21	2.15	
15	0.41	0.19	2.15	
20	0.37	0.17	2.14	
25	0.32	0.15	2.13	
30	0.28	0.13	2.12	
35	0.24	0.11	2.11	1
40	0.20	0.10	2.09	3
45	0.16	0.08	2.06	7
50	0.12	0.06	1.99	4
55	0.08	0.04	1.86	9
60	0.04	0.03	1.44	9
65	0.00	0.02	-0.25	5
70	-0.05	0.02	-1.91	4
75	-0.09	0.04	-2.18	
80	-0.13	0.06	-2.23	
85	-0.17	0.08	-2.23	
90	-0.21	0.09	-2.23	
95	-0.25	0.11	-2.23	
100 (low risk)	-0.29	0.13	-2.23	

The results obtained when separating BITs out by home country economy need further explanation. There could be a number of reasons, both positive and negative for the observed positive relationship between private investment and BITs with high income countries. We can think of two possible alternatives. If the treaties stimulate FDI, this positive result could be the consequence of positive spillovers from foreign investment. However, our results in the prior section on FDI suggest that this is not happening as a share of total FDI. Alternatively, this result could indicate increased investment from the existing domestic business class, more confident in the maintenance of the property rights status quo. The negative result on BITs signed with developing economies could be the result of increased investment and competition from neighboring countries substituting for existing domestic investment. These results suggest that it is important to see if any relationship exists between BITs and property rights. Our results are preliminary, but give us an approximation of the relationship.

ii. *Property Rights*

Our final estimation looks at the effect of BITs on property rights. We hypothesize that one potential cost of BITs could be property rights stagnation. Foreign investors, assured of a secure environment under BITs may no longer be concerned with improvements to the overall investment environment, and thus, pressure to improve property rights in host countries dissipates.

To estimate the effect of BITs on property rights, we again begin with the base specification of the determinants of property rights. This model is difficult to specify given the subjective nature of the available measures of property rights. A number of qualitative statistics exist, as well as proxy measures such as credit to the private sector as a percentage of GDP. Proxy measures generally correlate highly with investment. We operationalize property rights using factors from the ICRGs political risk rating (used in the earlier analyses). Specifically, we combine the indicators that ought to have the strongest effect on an investor's decision to invest in his property: the investment profile of a country (measured as a combination of the viability of contracts, probability of expropriation, and the ability to repatriate profits), its level of law and order, and its level of corruption.

Although a great deal of evidence exists on the effects of property rights on economic growth and stability, the determinants of strong property rights are hard to estimate. Measures of economic growth and government stability will likely serve as the primary determinants of property rights. However, although these factors may influence the strength of property rights in a country, stronger property rights will also have a positive influence on economic factors. We include a variable for socio-economic indicators of the population drawn from the ICRG dataset. We account for overall social conditions through ICRG's composite index that measures conditions that may constrain government action, unemployment, consumer confidence and poverty. Finally, we include natural resources as likely determinants of property rights. Although higher levels of natural resources could have a positive effect on FDI inflows, their effect on property rights should be zero or negative. As our above results indicate, poor protection of property rights discourages FDI. However, countries with higher levels of natural resources should have less need to protect property rights because FDI will flow towards natural resources regardless of the property rights regime. However, our own results, reported above, did not find natural resource endowments to be a significant determinant of FDI.

We employ an independent variable, fixed-effects time series model with panel corrected standard errors. In this case we have a larger sample size with greater variation across time than in our prior estimations. (We also ran the random effects model, but came up with nearly identical results.) We instrument for economic growth factors with lagged values of the regressors to limit inconsistency arising from simultaneity bias. The model is identical to our earlier fixed effects regressions with instrumental variables except that some of the included variables are different.

Table 8
Property Rights and Bilateral Investment Treaties (1980-2000)

Dependent Variable: Property Rights

	Base Case	2	3
BITs signed with high income			0.004 (0.05)
BITs signed with low income			0.03 (0.02)
Total BITs		0.02 (0.01)	
Natural log GDP per capita	0.68** (0.19)	0.65** (0.19)	0.65** (0.19)
Growth	-0.002 (0.024)	-0.005 (0.025)	-0.005 (0.025)
Natural Resources	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Socio economic indicator	1.09** (0.11)	1.06** (0.11)	1.06** (0.11)
Time Counter	0.88** (0.11)	0.77** (0.12)	0.78** (0.13)
Intercept	-4.85** (1.51)	-3.96** (1.59)	-3.99** (1.59)
Country N	68	68	68
R-squared	0.550	0.557	0.558
Root MSE	1.875	1.864	1.866

In our base case, we find that GDP per capita, our indicator of the socioeconomic structure, and time are the primary determinants of property rights. Growth and natural resources do not have statistically significant results in any of our regressions. The negative sign on natural resources is interesting, but may simply be a result of resource rich countries tending to have political systems with weaker institutions. Specifically, we find that an increase of one percent in GDP per capita leads to an increase of .68 on the property rights scale. Similarly, an increase of 1 in the socio-economic indicator leads to an increase of one in the property rights scale, and for every additional 5 year period, property rights increase by .88. Adding BITs to our model had no effect on the results. Perhaps the most interesting result is the importance of time for improving property rights. Although some of the time effect may reflect the effects of BITs, in general, countries tend to be moving towards greater protection of property rights, all else equal. Thus, from this preliminary specification we cannot say that BITs have any significant effect on domestic property rights. There do not seem to be spillovers, either negative or positive, on domestic institutions.

V. Conclusions

With the advent of BITs, foreign investors are assured of a strong, binding property rights system outlined in international or industrialized country law. Local players in the business sector, however, are left with the often-unstable property rights system of their home country. If foreign investors can bypass local law and lower their risk through BITs, developing country governments may have lost a major incentive to strengthen their domestic property rights regimes. Thus, BITs can have both costs and benefits for emerging economies. Our analysis takes a first step towards understanding the conflicting impacts of BITs on the domestic business environment.

Overall, we conclude that the relationship between BITs and FDI is weak. In general, BITs appear to have little impact on FDI. There does appear to be a complex interaction between the level of political risk, BITs, and FDI, but the results leave one uncertain about exactly the mechanism involved. Perhaps it is different in different countries. In our analysis of US investment we find little relationship between the existence of a BIT with the United States and the level of US FDI. For high risk countries where there is a relationship, it is weakly negative.

Analyzing the relationship between BITs and the domestic investment environment is important because we seek to understand whether the treaties might be disadvantageous for domestic investors. Overall, there seems to be a positive relationship between BITs and private domestic investment. Thus, although the treaties may advantage foreign investors over domestic investors, they do not appear to dampen domestic investment, in general. In contrast, we found that disadvantages might arise in countries where political risk is low. However, these are countries where BITs do not play a very significant role. Furthermore, although our analysis is preliminary, no relationship seems to exist, either positive or negative, between BITs and domestic property rights.

The reasons behind stalled reform and weak law enforcement in developing countries are numerous, and BITs are certainly not the primary cause. At the same time, it appears that a tool designed to reduce risk and increase foreign investment to low- and middle-income countries has

no measurable impact on the overall investment environment. Signing BITs with high-income countries does seem to have a positive impact on private domestic investment, but the causation does not flow through the domestic legal environment. Instead, the effect may reflect joint ventures or other direct spillovers from FDI for local entrepreneurs. BITs may even limit domestic investment in countries with relatively good institutions perhaps by crowding out local investors. Obviously, much work needs to be done to assess the repercussions of BITs. Further work needs to disaggregate investment decisions to see if different types of FDI are more or less affected by BITs and, perhaps more importantly, to determine if differences in the content of BITs affect the overall business environment.

Figure 1a

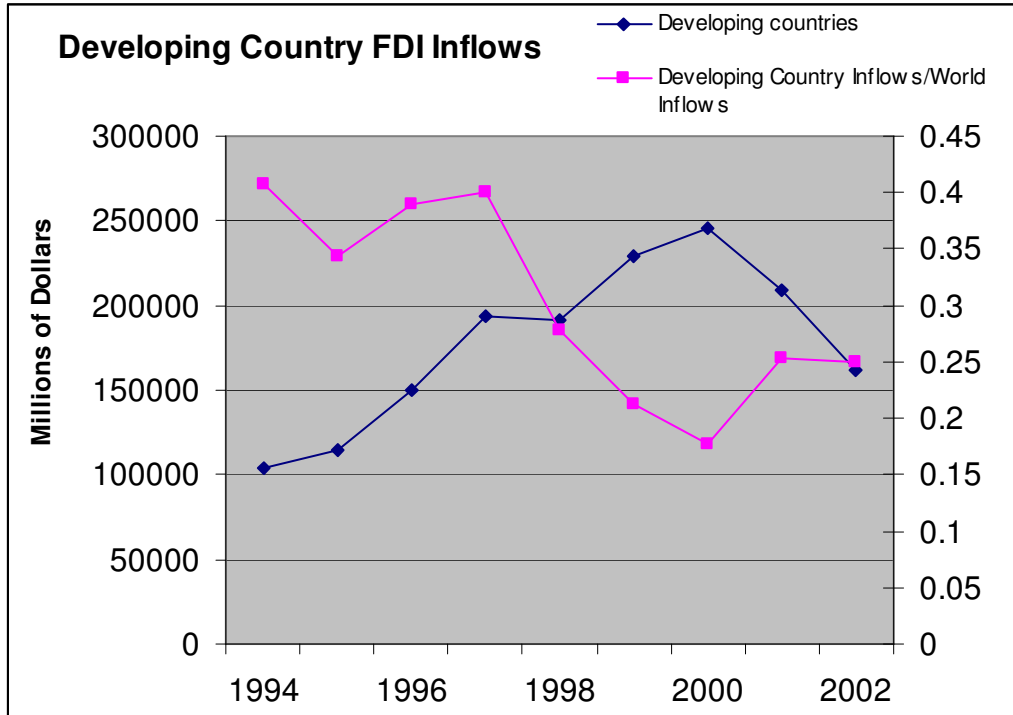


Figure 1b

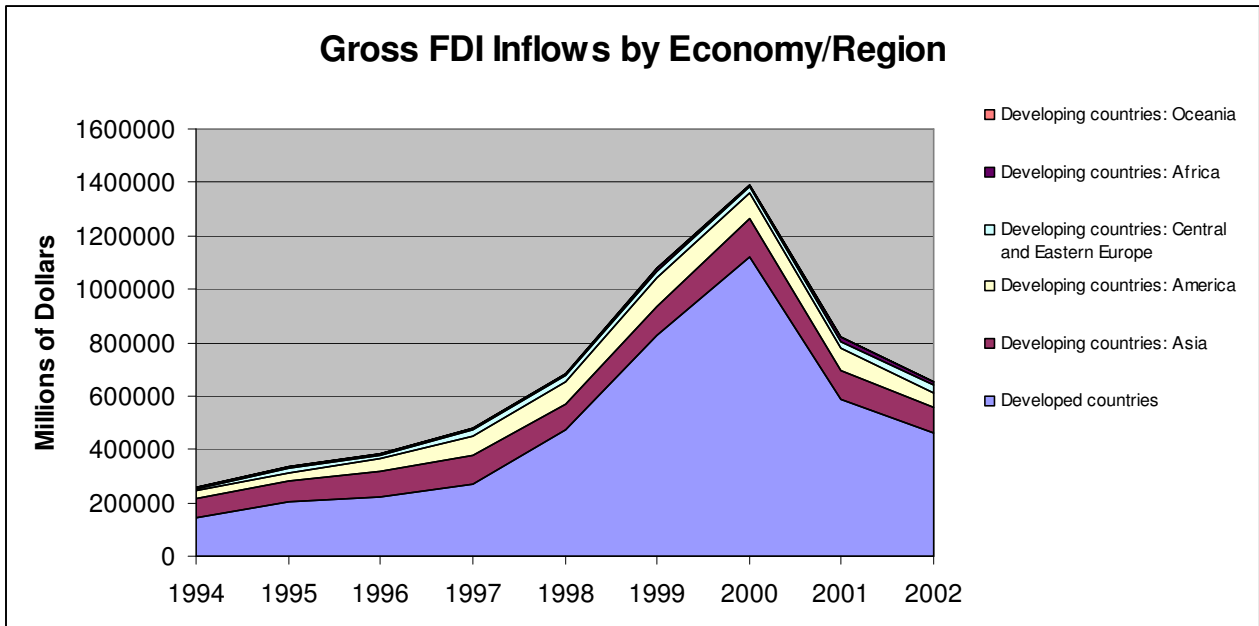


Figure 2

Figure 1b

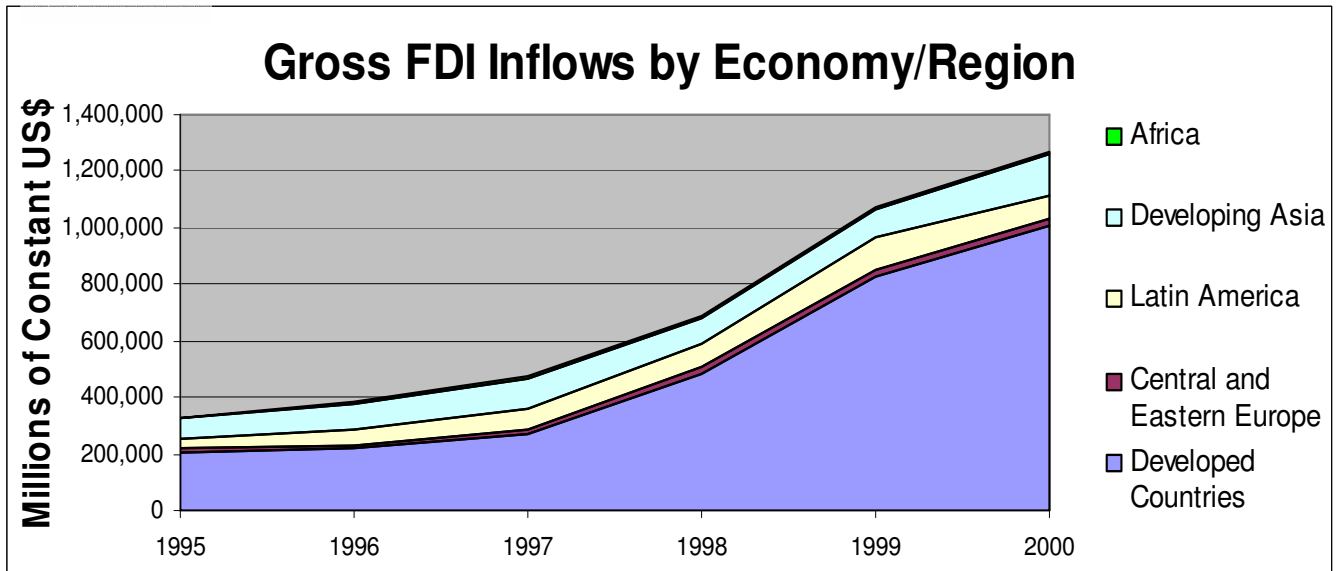
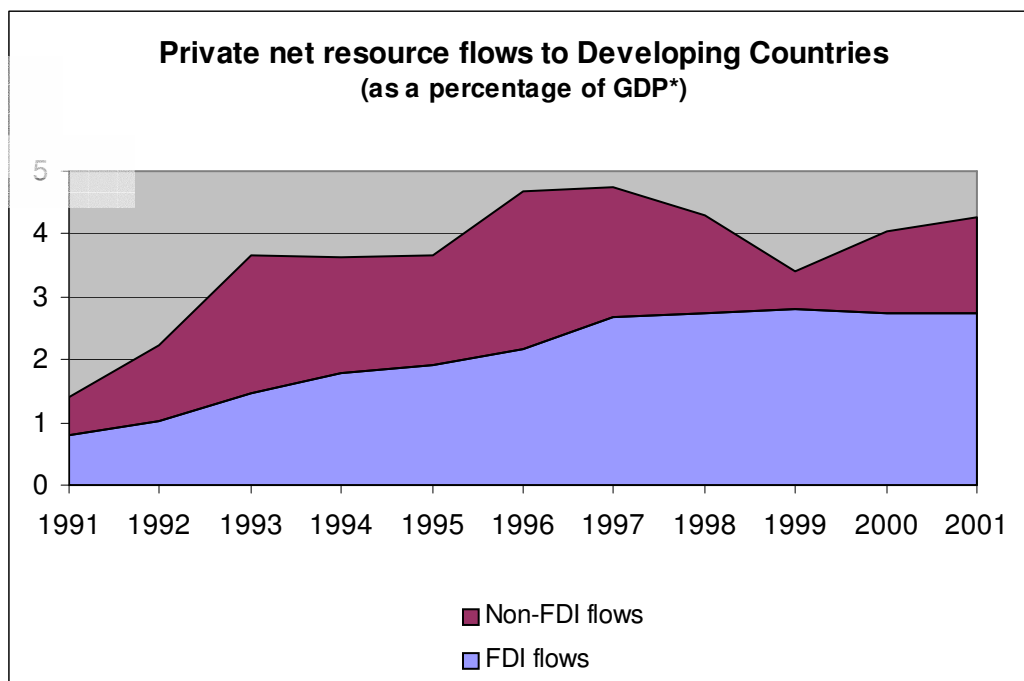


Figure 2



Source: IMF International Financial Statistics.

Non FDI Flows include portfolio flows and commercial bank loans

*Percentage measured relative to GDP of all developing countries as a group (developing countries listed in footnote 7).

Figure 4

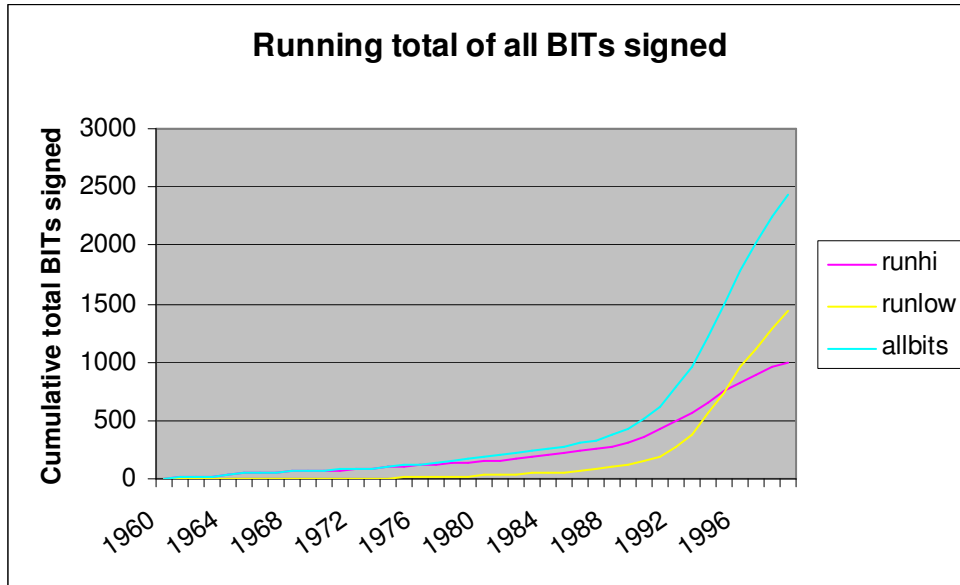


Figure 4

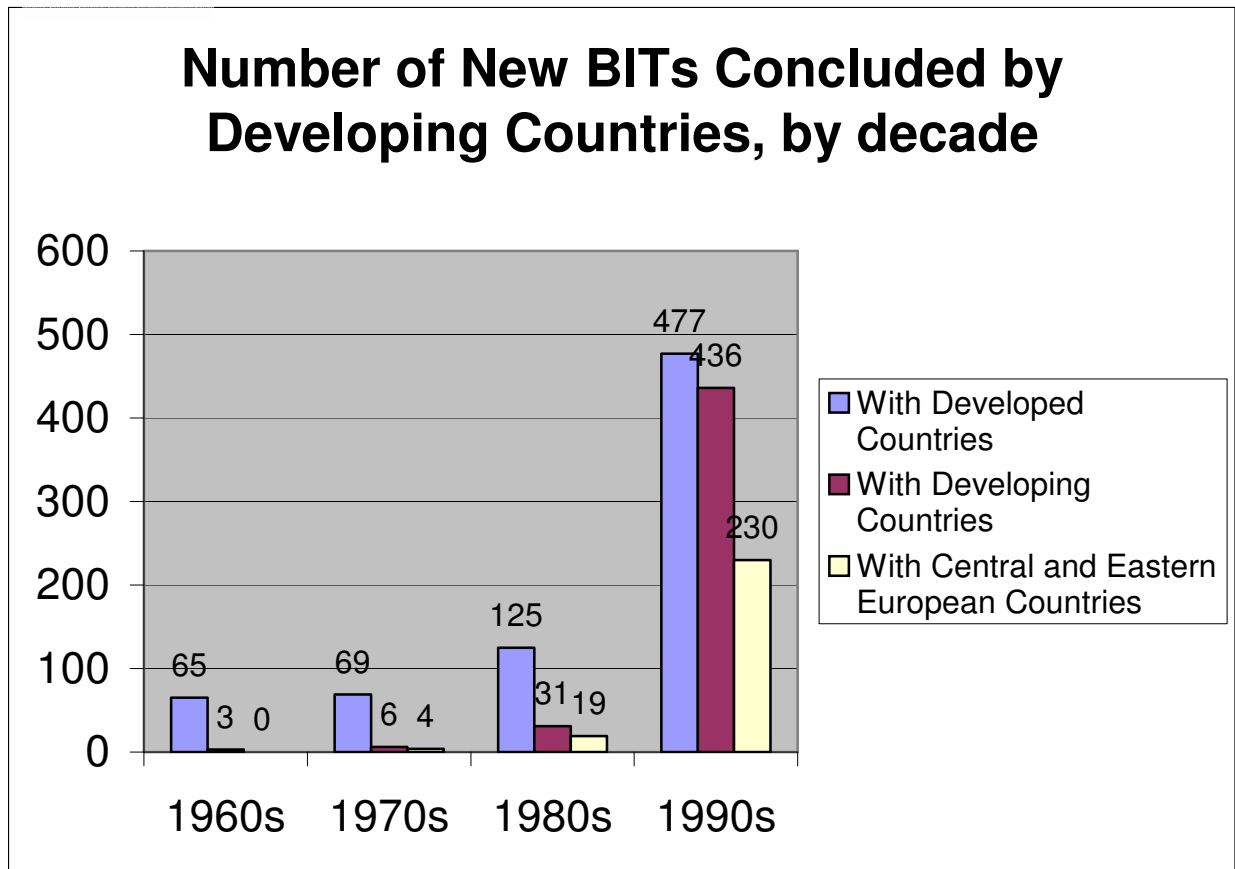


Figure 5

Appendix A. World Bank Income Classifications:

The World Bank income classifications are divided according to 2000 GNI per capita, calculated using the World Bank Atlas method. The groups are: low income, \$755 or less; lower middle income, \$756-\$2,995; upper middle income, \$2,996-\$9,265; and high income, \$9,266 or more (see <http://www.worldbank.org/data/databytopic/class.htm> for more information).

Low-income economies (63)

Afghanistan
Ghana
Nicaragua

Angola
Guinea
Niger

Armenia
Guinea-Bissau
Nigeria

Azerbaijan
Haiti
Pakistan

Bangladesh
India
Rwanda

Benin
Indonesia
Sao Tome and Principe

Bhutan
Kenya
Senegal

Burkina Faso
Korea, Dem Rep.
Sierra Leone

Burundi
Kyrgyz Republic
Solomon Islands

Cambodia
Lao PDR
Somalia

Cameroon
Lesotho
Sudan

Central African Republic
Liberia
Tajikistan

Chad
Madagascar
Tanzania

Comoros
Malawi
Togo

Congo, Dem. Rep
Mali
Uganda

Congo, Rep.
Mauritania
Ukraine

Cote d'Ivoire
Moldova
Uzbekistan

Eritrea
Mongolia
Vietnam

Ethiopia
Mozambique
Yemen, Rep.

Gambia, The
Myanmar
Zambia

Georgia
Nepal
Zimbabwe

Lower-middle-income economies (54)

Albania
Guatemala
Paraguay

Algeria
Guyana

Peru

Belarus
Honduras
Philippines

Belize
Iran, Islamic Rep.
Romania

Bolivia
Iraq
Russian Federation

Bosnia and Herzegovina
Jamaica
Samoa

Bulgaria
Jordan
Sri Lanka

Cape Verde
Kazakhstan
St. Vincent and the Grenadines

China
Kiribati
Suriname

Colombia
Latvia
Swaziland

Cuba
Lithuania
Syrian Arab Republic

Djibouti
Macedonia, FYR
Thailand

Dominican Republic
Maldives
Tonga

Ecuador
Marshall Islands
Tunisia

Egypt, Arab Rep.
Micronesia, Fed. Sts.

Turkmenistan

El Salvador

Morocco

Vanuatu

Equatorial Guinea

Namibia

West Bank and Gaza

Fiji

Papua New Guinea

Yugoslavia, Fed. Rep.

Upper-middle-income economies (38)

American Samoa

Grenada

Poland

Antigua and Barbuda

Hungary

Puerto Rico

Argentina

Isle of Man

Saudi Arabia

Bahrain

Korea, Rep.

Seychelles

Botswana

Lebanon

Slovak Republic

Brazil

Libya

South Africa

Chile

Malaysia

St. Kitts and Nevis

Costa Rica

Mauritius

St. Lucia

Croatia

Mayotte
Trinidad and Tobago

Czech Republic
Mexico
Turkey

Dominica
Oman
Uruguay

Estonia
Palau
Venezuela, RB

Gabon
Panama

High-income economies (52)

Andorra
Germany
New Caledonia

Aruba
Greece
New Zealand

Australia
Greenland
Northern Mariana Islands

Austria
Guam
Norway

Bahamas, The
Hong Kong, China
Portugal

Barbados
Iceland
Qatar

Belgium
Ireland
San Marino

Bermuda
Israel
Singapore

Brunei
Italy
Slovenia

Canada
Japan
Spain

Cayman Islands
Kuwait
Sweden

Channel Islands
Liechtenstein
Switzerland

Cyprus
Luxembourg
United Arab Emirates

Denmark
Macao, China
United Kingdom

Faeroe Islands
Malta
United States

Finland
Monaco
Virgin Islands (U.S.)

France
Netherlands

French Polynesia
Netherlands Antilles

Appendix B: ICRG Political Risk Rating

“The aim of the political risk rating is to provide a means of assessing the political stability of the countries covered by ICRG on a comparable basis. This is done by assigning risk points to a pre-set group of factors, termed political risk components. The minimum number of points that can be assigned to each component is zero, while the maximum number of points depends on the fixed weight that component is given in the overall political risk assessment. In every case the lower the risk point total, the higher the risk, and the higher the risk point total the lower the risk.”

“To ensure consistency, both between countries and over time, points are assigned by ICRG editors on the basis of a series of pre-set questions for each risk component.”

ICRG Political Risk Components

Component	Definition	Maximum Points
Government Stability:	Ability to stay in office and to carry out its declared programs, based on measures of government unity, legislative strength and popular support	12
Socioeconomic Conditions:	that may constrain government action: unemployment, consumer confidence, poverty	12
Investment Profile:	Contract viability/expropriation, profits repatriation, and payment delays	12
Internal Conflict:	impact of political violence on governance: civil war/terrorism/political violence, civil disorder	12
External Conflict:	risk to government of external actions from non-violent external pressure such as trade restrictions or withholding of aid to violent pressure, based on war, cross-border conflict, foreign pressures	12
Corruption:	Financial corruption such as bribes connected with licenses, regulation and taxes, focuses more on "actual or potential corruption in the form of excessive patronage, nepotism, job reservations, favor for favors, secret party funding, and suspiciously close ties between politics and business.	6
Military in Politics		6
Religious Tensions		6
Law and Order:	strength and impartiality of the legal system and popular observance of the law	6
Ethnic Tensions:	racial, nationality of language divisions	6
Democratic Accountability		6
Bureaucracy Quality		4
Total		100

Appendix C: Countries included in regressions

FDI: Included Countries	US Bilateral FDI: Included Countries
ALGERIA	ALGERIA
ARGENTINA	ARGENTINA
Bangladesh	BANGLADESH
BOLIVIA	BOLIVIA
BRAZIL	BOTSWANA
CAMEROON	BRAZIL
CHILE	CAMEROON
COLOMBIA	CHILE
COSTA RICA	CHINA
DOMINICAN REP.	COLOMBIA
ECUADOR	COSTA RICA
EGYPT	DOMINICAN REPUBLIC
EL SALVADOR	
GABON	ECUADOR
GAMBIA	EGYPT
GHANA	EL SALVADOR
GUATEMALA	GHANA
GUYANA	GUATEMALA
HAITI	GUYANA
HONDURAS	HAITI
INDIA	HONDURAS
INDONESIA	HUNGARY
IRAN	INDIA
JAMAICA	
JORDAN	INDONESIA
KENYA	IRAN
MALAWI	KENYA
MALAYSIA	MALAYSIA
MEXICO	
MOROCCO	MALI
NICARAGUA	MEXICO
NIGERIA	NICARAGUA
PAKISTAN	NIGER
PANAMA	PAKISTAN
	PANAMA
PARAGUAY	PAPUA NEW GUINEA
PERU	PARAGUAY
PHILIPPINES	PERU
SENEGAL	PHILIPPINES
	SENEGAL
SOUTH AFRICA	SOUTH AFRICA
SRI LANKA	SRI LANKA
SYRIA	THAILAND
THAILAND	TOGO
TOGO	TRINIDAD & TOBAGO
TRINIDAD & TOBAGO	TUNISIA
TUNISIA	TURKEY
TURKEY	URUGUAY
UGANDA	VENEZUELA
URUGUAY	ZAMBIA
VENEZUELA	ZIMBABWE

ZAMBIA
ZIMBABWE

Appendix C (Cont'd.)

Private Investment: Included Countries	Property Rights: Included Countries	
ALGERIA	ALGERIA	PARAGUAY
ARGENTINA	ARGENTINA	PERU
BANGLADESH	BAHRAIN	PHILIPPINES
BOLIVIA	BANGLADESH	SAUDI ARABIA
BRAZIL	BOLIVIA	SENEGAL
CHILE	BOTSWANA	SIERRA LEONE
COLOMBIA	BRAZIL	SOUTH AFRICA
COSTA RICA	BURKINA FASO	SRI LANKA
COTE D'IVOIRE	CAMEROON	SURINAME
DOMINICAN REPUBLIC	CHILE	SYRIA
ECUADOR	CHINA	THAILAND
EGYPT	COLOMBIA	TOGO
EL SALVADOR	CONGO	TRINIDAD & TOBAGO
GUATEMALA	COSTA RICA	TUNISIA
GUINEA-BISSAU	COTE D'IVOIRE	TURKEY
GUYANA	DOMINICAN REP.	UGANDA
HAITI	ECUADOR	URUGUAY
INDIA	EGYPT	VENEZUELA
INDONESIA	EL SALVADOR	ZAMBIA
IRAN	ETHIOPIA	ZIMBABWE
KENYA	GABON	
MADAGASCAR	GAMBIA	
MALAWI	GHANA	
MALAYSIA		GUATEMALA
MEXICO		GUINEA-BISSAU
MOROCCO	GUYANA	
NICARAGUA	HAITI	
PAKISTAN		HONDURAS
PANAMA		HUNGARY
PAPUA NEW GUINEA	INDIA	
PARAGUAY		INDONESIA
PERU	IRAN	
PHILIPPINES	JAMAICA	
SOUTH AFRICA	JORDAN	
THAILAND	KENYA	
TRINIDAD & TOBAGO		MADAGASCAR
TUNISIA	MALAWI	
TURKEY		MALAYSIA
URUGUAY	MALI	
VENEZUELA	MEXICO	
		MOROCCO
		NICARAGUA
	NIGER	

NIGERIA
OMAN
PANAMA

PAKISTAN
PAPUA NEW GUINEA

Appendix D

Description of variables

Variable Name	Description and Source
Dependent Variables	
Foreign Direct Investment (World Inflows)	Measures the total US dollar amounts of foreign direct investment flowing into a country each year, divided by the total amount of World FDI inflows that year. Source: UNCTAD database on FDI
Foreign Direct Investment (US Outflows)	FDI flows as net capital inflows [or outflows(-)] from the United States to the host country in millions of US dollars.
Private Domestic Investment	The difference between total gross domestic investment(from national accounts) and consolidated public investment in millions of US dollars. Source: World Development Indicators
Property Rights	Measured as the sum of three indicators from the ICRG's political risk scale: Investment profile: the sum of the investment profile (measure of the risk of expropriation and contract viability), law and order and corruption. Scale is out of a total possible of 24. Source: International Country Risk Guide
Independent Variables	
Bilateral Investment Treaties, with Equal to the number of treaties signed with high-income countries for a developed countries	particular year. Source: UNCTAD database on bilateral investment treaties.
Bilateral Investment Treaties, with Equal to the number of treaties signed with developing countries for a developing countries	particular year. Source: UNCTAD database on bilateral investment treaties.
Political Risk	Assessment of the “political stability of the countries covered by ICRG on a comparable basis”, by assigning risk points to a pre- set group of risk components. The minimum number of points assigned to each component is zero, while the maximum number of points is a function of the components weight in the overall political risk assessment. The risk components (and maximum points) are: Government stability (e. g., popular support) (12), Socioeconomic conditions (e. g., poverty) (12), Investment profile (e. g., expropriation) (12), Internal conflict (e. g., terrorism or civil war) (12), External conflict (e. g., war) (12), Corruption (6), Military in politics (6), Religion in politics (6), Law and order (6), Ethnic tensions (6), Democratic accountability (6) and Bureaucracy Quality (4). Scale from zero to 100; low scores indicate high political risk. source: International Country Risk Guide

Appendix D(Cont'd)

Variable Name	Description and Source
Log GNP Per Capita	Logarithm of GNP per capita expressed in current U.S. dollars for the period 1970-1995. Source: WDI.
Growth	Growth rate of per capita GDP, measured as the percent change per year in GDP Source: World Development Indicators.
Latitude	The absolute value of the latitude of the country, scaled to take values between 0 and 1. Source: CIA 1996.
Continent	Dummy variables by continent for Africa, Asia, Latin America and Eastern Europe. Variables equal 1 if country is located on that continent. Source: CIA 1996.
Natural Resources	Measures total US dollar amounts of natural fuels and ores exported from individual countries in millions of dollars. Source: IMF's International Financial Statistics Database.
Liquid Liabilities	Defined by the World Development Indicators as "the sum of currency and deposits in the central bank, plus transferable deposits and electronic currency, plus time and savings deposits, foreign currency transferable deposits, certificates of deposit, and securities repurchase agreements, plus travelers checks, foreign currency time deposits, commercial paper, and shares of mutual funds or market funds held by residents." Measured as a percent of GDP Source:Levine-Loayza-Beck Dataset, World Bank
Black Market Premium	Ratio of black market exchange rate and official exchange rate minus one. Source:Levine-Loayza-Beck Dataset, World Bank
Inflation	The log difference of the Consumer Price Index. Source: International Financial Statistics
Population	Log of total population in a country each year in millions. Source: World Development Indicators.
Socio-economic indicator	Rating of socio-economic conditions in a country such as poverty levels and unemployment as part of the political risk measure. Source: ICRG

Appendix E

Summary Statistics: FDI Regressions

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	238	0.31	0.87	-0.16	7.99
Log of Hi Income BITs	238	0.86	0.91	0	3.09
Log of Low Income BITs	238	0.41	0.83	0	3.89
Log of Cumulative Total BITs	238	1.04	1.10	0	4.30
Ln GDP per capita	238	7.96	0.92	4.98	8.96
Political Risk	238	54.55	10.64	26	77
GDP growth	238	1.06	4.35	-12.9	35.8
Inflation	238	51.71	206.89	0.74	2096
Natural Resources	238	20.54	26.17	0	98.61
Latitude Abstract	238	0.18	0.10	0.01	0.39
Ln Population	238	16.4	1.42	13.5	20.6

Summary Statistics: Private Investment Regressions

Variable	Obs	Mean	Std. Dev.	Min	Max
Private Investment	142	13.50	4.78	3.06	32.50
Hi Income BITs	142	3.38	4.11	0	17
Low Income BITs	142	2.33	5.07	0	28
Cumulative Total BITs	142	5.71	8.64	0	43
Ln GDP per capita	142	7.09	0.95	4.90	8.86
Political Risk	142	54.69	11.30	26	77
GDP growth	142	4.07	2.55	-2.37	10.28
Liquid Liabilities	142	34.53	16.57	0.57	90.01
Natural Resources	142	21.04	26.14	0	97.12
Latitude Abstract	142	0.20	0.12	0.01	0.43

Summary Statistics: Property Rights Regression

Variable	Obs	Mean	Std. Dev.	Min	Max
Property Rights	255	11.31	2.76	3	18.60
Cumulative Total BITs	255	9.16	13.96	0	94
Hi Income BITs	255	4.61	4.95	0	24
Low Income BITs	255	4.55	9.71	0	70
GDP growth	255	4.43	4.22	0	25.01
Ln GDP per capita	255	6.98	1.07	4.51	9.36
Natural Resources	255	22.69	27.53	0	98.61
Socio-economic Indicator	255	5.34	1.33	1.40	9

Appendix E (Cont'd)

Correlations: Property Rights

	Property Rights	Total BITs	Hi income BITs	Low Income BITs	Log GDP Growth	Log GDP per capita	Time	Natural Resources	Inflation	Socio-econ. Indicator
Property Rights	1.00									
Total BITs	0.25	1.00								
Hi income BITs	0.22	0.93	1.00							
Low Income BITs	0.25	0.97	0.81	1.00						
GDP Growth	0.00	0.05	0.05	0.04	1.00					
Log GDP per capita	0.40	0.16	0.12	0.16	0.08	1.00				
Time	0.35	0.30	0.31	0.28	0.18	0.15	1.00			
Natural Resources	0.02	0.00	0.00	0.00	0.09	0.27	-0.03	1.00		
Inflation	-0.08	-0.01	-0.01	-0.01	-0.10	0.02	-0.06	0.03	1.00	
Socio-econ. Indicator	0.44	0.17	0.18	0.15	0.06	0.33	-0.30	0.11	-0.09	1.00

Appendix E (Cont'd)

Correlations between Variables: Private Investment

	Private Investment	Hi income BITs	Low Income BITs	Total BITs	Log GDP per capita	Political Risk	GDP Growth Rate	Liquid Liabilities	Time	Inflation	Taxes on goods	Natural Resources	Latitude Abstract	Eastern Europe, FSU	Latin America/Car Africa
Private Investment	1														
Hi income BITs	0.13	1.00													
Low Income BITs	0.06	0.81	1.00												
Total BITs	0.10	0.93	0.97	1.00											
Log GDP per capita	0.37	0.05	0.08	0.07	1.00										
Political Risk	0.24	0.43	0.35	0.40	0.40	1.00									
GDP Growth Rate	0.21	0.03	0.04	0.04	0.03	0.05	1.00								
Liquid Liabilities	0.24	0.04	0.10	0.08	0.37	0.10	-0.02	1.00							
Time	0.18	0.52	0.40	0.47	0.00	0.43	0.05	-0.01	1.00						
Inflation	-0.04	-0.05	-0.03	-0.04	-0.01	-0.08	-0.19	-0.05	-0.06	1.00					
Taxes on goods	0.09	0.08	0.06	0.07	-0.01	0.04	-0.16	-0.05	0.00	0.09	1.00				
Natural Resources	-0.04	0.00	-0.01	-0.01	0.25	0.03	-0.01	0.05	-0.03	0.03	-0.12	1.00			
Latitude Abstract	-0.12	0.10	0.19	0.16	0.24	0.11	0.01	0.28	0.00	-0.02	0.10	0.05	1.00		
Eastern Europe, FSU	-0.01	0.13	0.12	0.13	0.25	0.27	-0.25	0.03	0.00	0.14	0.23	-0.05	0.31	1.00	
Latin America/Car Africa	0.03	-0.07	-0.06	-0.07	0.36	0.07	-0.01	0.02	0.00	0.03	0.16	0.04	-0.11	-0.23	1.00
Africa	-0.24	-0.08	-0.16	-0.14	-0.50	-0.21	0.01	-0.36	0.00	-0.02	-0.19	-0.15	-0.36	-0.30	-0.37

Appendix E (Cont'd)

	FDI/ World FDI	Hi income BITS	Low Income BITS	Total BITS	Log GDP per capita	Political Risk	GDP Growth	Black Market Premium	Openness	Natural Resources	Time	Latitude Abstract	Civil Legal Origin	Latin America/ Car	Africa
FDI/World	1.00														
FDI	1.00														
Hi income BITS	0.16	1.00													
Low Income BITS	0.20	0.81	1.00												
Total BITS	0.19	0.93	0.97	1.00											
Log GDP per capita	0.13	0.08	0.15	0.13	1.00										
Political Risk	0.29	0.43	0.35	0.40	0.44	1.00									
GDP Growth	0.08	0.08	0.05	0.06	0.08	-0.06	1.00								
Black Market Premium	-0.05	-0.06	-0.03	-0.05	-0.05	-0.16	-0.01	1.00							
Openness	-0.16	0.00	0.01	0.01	0.30	0.23	-0.01	-0.02	1.00						
Natural Resources	0.03	0.00	-0.01	-0.01	0.27	0.03	0.09	-0.04	0.08	1.00					
Time	0.02	0.52	0.40	0.47	0.15	0.43	0.18	0.06	0.18	-0.03	1.00				
Latitude Abstract	0.08	0.10	0.19	0.16	0.21	0.11	0.03	-0.01	-0.10	0.05	0.00	1.00			
Civil Legal Origin	-0.01	0.09	0.02	0.05	0.10	-0.01	-0.01	0.05	-0.32	0.13	0.00	-0.03	1.00		
Latin America/Car	0.10	-0.07	-0.06	-0.07	0.42	0.07	0.02	0.03	-0.03	0.04	0.00	-0.11	0.18	1.00	
Africa	-0.15	-0.08	-0.16	-0.14	-0.45	-0.21	0.02	-0.06	-0.05	-0.15	0.00	-0.36	0.00	-0.37	1.00
Total Population	0.40	0.16	0.21	0.20	-0.19	0.04	0.12	0.00	-0.23	-0.05	0.06	0.18	-0.16	-0.08	-0.12

Appendix F

**Rank of Country in FDI inflows Number of countries
out of all developing countries at ahead in ranking without
year of signing the treaty treaty in place**

Country	Date of Signature		
Panama	27-Oct-82	6	5
Senegal	6-Dec-83	24	22
Haiti	13-Dec-83	64	62
Democratic Republic of Congo	3-Aug-84	77	74
Morocco	22-Jul-85	36	33
Turkey	3-Dec-85	19	18
Cameroon	26-Feb-86	99	91
Egypt	11-Mar-86	80	72
Bangladesh	12-Mar-86	50	45
Grenada	2-May-86	39	35
Poland	21-Mar-90	47	40
Tunisia	15-May-90	35	30
Sri Lanka	20-Sep-91	49	38
Czech Republic	22-Oct-91	112	97
Slovakia	22-Oct-91	135	119
Argentina	14-Nov-91	8	6
Kazakhstan	19-May-92	122	102
Romania	28-May-92	36	28
Russia	17-Jun-92	33	27
Armenia	23-Sep-92	97	81
Bulgaria	23-Sep-92	53	42
Ecuador	27-Aug-93	16	12
Belarus	15-Jan-94	73	53
Jamaica	4-Feb-94	21	16
Ukraine	4-Mar-94	137	109
Georgia	7-Mar-94	79	58
Estonia	19-Apr-94	113	87
Trinidad & Tobago	26-Sep-94	28	20
Mongolia	6-Oct-94	126	98
Uzbekistan	16-Dec-94	140	111
Albania	11-Jan-95	74	55
Latvia	13-Jan-95	118	88
Honduras	1-Jul-95	84	61
Nicaragua	1-Jul-95	126	95
Croatia	13-Jul-96	112	82
Jordan	2-Jul-97	120	86
Azerbaijan	1-Aug-97	13	11
Lithuania	14-Jan-98	80	53
Bolivia	17-Apr-98	32	20
Mozambique	1-Dec-98	58	36
El Salvador	10-Mar-99	23	13

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