Self-interest, foreign need and good governance:

Are bilateral investment treaty programs similar to aid allocation?*

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Bilateral investment treaties (BITs) have become the most important legal mechanism for the encouragement and governance of foreign direct investment (FDI) in developing countries. Yet practically no systematic evidence exists on what motivates capital-exporting developed countries to sign BITs earlier with some developing countries than with others, if at all. The theoretical framework from the aid allocation literature suggests that developed countries pursue a mixture of self-interest, foreign need and, possibly, good governance. We find evidence that both economic interests of developed countries' foreign investors and political interests of developed countries determine their scheduling of BITs. However, foreign need as measured by per capita income is also a factor, whereas good governance by and large does not matter. These results suggest that BIT programs can be explained employing the same framework successfully applied to the allocation of aid. At the same time, self-interest seems to be substantively more important than developing country need when it comes to BITs.

1. INTRODUCTION

Bilateral investment treaties (BITs) have become an increasingly popular device for the encouragement of foreign direct investment (FDI) flows to developing countries. Starting in the late 1950s, BITs have seen a surge in the last two decades and have now become 'the most important international legal mechanism for the encouragement and governance' of FDI in developing countries (Elkins, Guzman and Simmons 2004:0).[1] Yet, surprisingly, we know very little about what drives countries to negotiate and conclude BITs. Elkins et al. (2004) pool all BITs between developed and developing countries and try to explain the spread of BITs by the increased competition for FDI among developing countries.[2] Developing countries are more likely to sign BITs with developed countries if their competitors have done so already. However, the pooling of all BITs can mask important differences across BIT signatories. Contrary to and thus complementing their analysis, which looks at BITs very much from the perspective of all developing countries, this study investigates BIT programs from the perspective of developed countries. Using a theoretical framework similar to the one familiar from the aid allocation literature (donor interest, recipient need and good governance), it aspires to answer the following questions: Why do certain developed countries sign BITs with some developing countries, but not with others, and sign with some at an earlier stage than with others? Do developed countries only pursue their own country's self-interest

[1] There are practically no BITs between developed countries.

[2] In the context of this article, the category of developed countries refers to the members of the Organisation of Economic Co-operation and Development (OECD), with the exception of Mexico, Turkey and South Korea. Developing countries is the category for all other countries.

in choosing among potential BIT partners or do they take the developing country's need and the quality of its governance into account as well?

Developed countries cannot determine to which foreign country their investors, mainly multi-national corporations (MNCs), channel their outward investment. However, they can try to influence the allocation decisions by rendering investment more attractive in certain locations. BITs represent an important mechanism in that respect, as we will demonstrate below. While the allocation of FDI is based on decisions by MNCs over which developed countries' governments have only limited influence, BITs are state-to-state treaties over which governments have full control as part of their foreign policy. It follows that it is possible to apply the theoretical framework of developed country self-interest, developing country need and good governance to the scheduling of BITs, whereas it makes no sense to apply this framework to the allocation of FDI itself.

This article is structured as follows: The next section portrays the rise of BITs and discusses their importance, followed by a discussion of determinants of BIT scheduling. Results are reported after a presentation of the research design and are followed by a conclusion.

2. THE RISE OF BITS AND THEIR IMPORTANCE

BITs are a phenomenon that arose at the end of the 1950s. Some trace their history back to the treaties of friendship, commerce, and navigation (FCN) concluded by the United States (US) over centuries (Salacuse, 1990). The FCN treaties had the expansion of international trade and the improvement of US foreign relations as their prime purpose, even though some investment provisions were later added (Guzman,

1998). They were also more designed to protect US citizens abroad rather than foreign investment per se. BITs on the other hand are more clearly focused on foreign investment protection. Germany, having lost most of her foreign investment during the Second World War, signed the very first BIT with Pakistan in 1959. After that, it took almost two decades before BITs gained momentum. By the end of the 1960s there were 75 treaties, which rose to 167 by the end of the 1970s and to 389 by the end of the 1980s. The number of BITs worldwide began to grow rapidly in the 1990s and by 2004 there would be 2,392 BITs worldwide (UNCTAD, 2004a).

The basic provisions of a bilateral investment treaty (BIT) typically guarantee certain standards of treatment for the foreign investor (see Dolzer and Stevens, 1995; UNCTAD, 1998). By entering into a BIT, signatories agree to grant certain relative standards of treatment such as national treatment (foreign investors may not be treated any worse than national investors, but may be treated better and, in fact, often are) and most-favored nation treatment (privileges granted to one foreign investor must be granted to all foreign investors). They also agree to guarantee certain absolute standards of treatment such as fair and equitable treatment for foreign investors in accordance with international standards after the investment has taken place. BITs typically ban discriminatory treatment against foreign investors, include guarantees of compensation for expropriated property or funds and the free transfer and repatriation of capital and profits. Furthermore, the BIT parties agree to submit to binding dispute settlement should a dispute concerning these provisions arise (UNCTAD, 1998). Ostensibly, these provisions should secure some of the basic requirements for credible protection of property and contract right that foreign investors look for in host countries. They should also protect foreign investors against political and other risks highly prevalent in many developing countries.

Many developing countries have adopted domestic legal changes with a view toward encouraging a greater FDI inflow (UNCTAD, 2004b). However, these domestic legal rules cannot substitute for the commitment device offered by entering into a legally binding bilateral treaty. BITs provide an answer to the basic "hold-up" or "dynamic inconsistency" problem that faces developing nations attempting to attract FDI. The dynamic inconsistency problem arises from the fact that although host countries have an incentive to promise fair and equitable treatment beforehand in order to attract foreign investment, once that investment is established and investors have sunk significant costs, the host country's incentive is to exploit or even expropriate the assets of foreign investors. Even those host countries that are willing to forego taking advantage in these circumstances might find it very difficult to credibly commit to their position. BITs, and their binding investor-to-state dispute settlement provision in particular, are meant to overcome the dilemma facing host countries who are willing to denounce exploiting foreign investors after the investment has already been undertaken. Interestingly, at the same time as BITs flourished in the 1980s and 1990s, outright expropriations of foreign investors, which were common during the 1960s and 1970s, practically ceased to take place (Minor, 1994).

In concluding BITs, developing countries are therefore 'trading sovereignty for credibility' (Elkins et al., 2004:4). In fact, virtually any public policy can potentially be challenged through the dispute settlement mechanism as long as it affects foreign investors. Often, foreign investors need not have exhausted domestic legal remedies and can thus bypass or avoid national legal systems, reaching straight for international arbitration, where they can freely choose one of the three panelists, their consensus is needed for one other panelist and where they can expect that the rules laid out in the BITs are fully applied (Peterson, 2004). This contrasts with domestic courts, where

investors have no say on the composition of judges and where domestic rules might trump those contained in the BIT.

Of course, not all BITs are identical. Some developed country investors like the United States often insist on some limited rights of its investors to establish investment in host countries in the first place, whereas investors' rights in most BITs are restricted to fair and equitable treatment after the investment has already taken place and provide no right of investment (UNCTAD, 1999). United States BITs often prohibit certain performance requirements such as local content, employment and export requirements, whereas BIT programs of other developed countries do not contain such provisions (Vandevelde, 1998; OECD, 2004a). Conversely, some developing countries such as China and Eastern European countries have successfully managed to restrict the compulsory dispute settlement provisions to disputes concerning expropriation or the compensation thereof (Peters, 1996:107). The United Kingdom granted China limitations on national treatment for British investors in the mid-1980s, while insisting on full national treatment in its BITs with African countries during the same period of time (Peterson, 2004). However, by and large BITs tend to be rather similar in their general principles.

BITs are costly to developing countries as they 'seriously restrict the ability of host states to regulate foreign investment' (Vandevelde, 2000:499). Indeed, some argue that collectively developing countries have no interest in BITs, which would explain their resistance against negotiating and signing BITs at multilateral fora such as the United Nations Conference on Trade and Development (UNCTAD) (Guzman, 1998). However, individually, developing countries also have a strong interest in signing BITs – a good example of the classical prisoner's dilemma. What makes BITs of interest to developing countries, at least if concluded individually, are the potential benefits

following from signing such treaties. The clearest benefit lies in the potential increase in inward FDI. Hallward-Driemeier (2003) and Tobin and Rose-Ackerman (2005) found no evidence that BITs play any role in the allocation of FDI to developing countries. If true, this would mean that the enormous amount of effort and time both developed and developing countries have invested in concluding BITs has basically been wasted. However, Neumayer and Spess (2005) in a larger and more representative sample provide robust evidence that developing countries, which have signed a larger number of BITs with developed countries, receive more FDI inflows both in absolute amount and as a share of FDI flows going to developing countries. In addition, there can be other benefits of BITs to developing countries such as a prerequisite for bilateral free trade agreements with developed countries or as providing reform-minded governments with a signaling and commitment device.

BITs are thus of great importance to developing countries, mainly for their desire to attract more foreign investment in order to spur their economic development. FDI has become increasingly important to developing countries as development aid has decreased due to tighter governmental budgets and decreased willingness of developed countries to assist. Only very recently have aid flows slightly increased again in the wake of the so-called Monterrey Consensus (OECD, 2004b). However, in 2003 FDI was the largest component of the net resource flows to developing countries and this is bound to remain the case for some time to come.

Although the developed countries remain both the dominating source and the major recipient of FDI, their dominance has decreased over time with developing countries in 2003 receiving almost 31% of total FDI as opposed to only about 20% in the 1980s (UNCTAD, 2004b). Indeed, FDI inflows per unit of GDP are much higher in many developing countries than in developed ones (ibid.). It is often asserted, however, that

international investment flows, contrary to development aid, benefit mainly about a dozen developing countries in Latin America, Asia and Eastern Europe whereas the vast majority of poor countries, especially in Africa, are left out. This assertion is correct in the sense that countries like Brazil, Mexico, Chile and Venezuela in Latin America, Azerbaijan, China, Singapore, Malaysia, and India in Asia as well as the Czech Republic, Poland and Hungary in Eastern Europe together received 68 per cent of the FDI flows to developing countries in 2003 and more than 16 times more than the combined FDI to all least developed countries together (UNCTAD, 2004b, annex table B.1). However, the picture is much less uneven if one looks at FDI as a percentage of gross fixed capital formation rather than at FDI expressed in absolute figures. This percentage was 13.9 for Africa in 2003, actually higher than the developing countries average of 10 per cent or that of mainland China, the single most important FDI recipient in absolute terms, at 12.4 per cent (UNCTAD, 2004b, annex table B.5).

3. DETERMINANTS OF BIT SCHEDULING

Given the enormous importance that BITs have for encouraging FDI and protecting foreign investors from developed countries, the question arises what motivates developed countries to conclude BITs with some developing countries, but not others, and with some earlier than with others? To answer these questions, we will borrow from the theoretical framework used in the aid allocation literature. Ever since McKinlay and Little (1977), it has become common in this literature to distinguish between factors of donor interest and recipient need, both of which are expected to influence the allocation of aid to developing countries (see, for example, Trumbull and Wall, 1994; Schraeder, Hook and Taylor, 1998; Alesina and Dollar, 2000). What is less

commonly known is that McKinlay and Little already tested for the role of what they called 'political stability and democracy' on aid allocation. The focus of many later aid allocation studies on aspects of good governance, particularly democracy and human rights (see, for example, Cingranelli and Pasquarello, 1985; Carleton and Stohl, 1987; Poe, 1992; Svensson, 1999; Neumayer, 2003), can therefore also be traced back to McKinlay and Little (1977). Can this framework be transplanted to the scheduling of BITs?

What kinds of self-interest could a developed country promote in signing a BIT? BITs promote the economic interests of foreign investors, so unsurprisingly these investors push for BITs to be signed. As Ramamurti (2001:37) has put it: 'MNCs would be well advised to continue lobbying their home governments to sign more bilateral investment treaties with developing countries'. Foreign investors are particularly interested in gaining investor protection in countries that promise a high rate of return to FDI. From studies on the allocation of FDI (Chakrabarti, 2001; Noorbakhsh, Paloni and Youssef, 2001; Li and Resnick, 2003; Jensen, 2003), we can derive that they are particularly interested in investing in developing countries with a large economy, with high per capita incomes, with a good level of human skills, endowed with large natural resource deposits and in countries that are open to trade so that intermediate products can be easily imported and the produced goods and services can be exported to world markets. While these are private companies' interests, most developed country governments are known to promote their companies' interests in multilateral fora, such as the World Trade Organization (WTO), the International Monetary Fund (IMF) and the World Bank (Ramamurti, 2001). Also, in visits to foreign countries they are often accompanied by representatives from their country's business groups. This leads to our first hypothesis:

H1: Developed countries are more likely to sign BITs with developing countries in whose markets developed country investors have an economic interest.

But BITs are about more than economics only, they are about more than paving the way for a developed country's investors. They establish a new relationship between the state parties with rights and obligations. Indeed, even if rarely used, BITs almost always contain a provision for state-to-state dispute settlement (UNCTAD, 2003). It can therefore be presumed that developed countries are keen to sign BITs with developing countries, in which they have political interests as well, including military-strategic ones. This fits well into a (neo-)realist conception, in which powerful developed countries engage in bilateral co-operation according to their own country's self-interest, broadly defined, which resembles the donor interest explanation of the allocation of overseas development assistance (ODA) by developed countries (Neumayer 2003). The second hypothesis is therefore:

H2: Developed countries are more likely to sign BITs with developing countries in which they have political interests.

Elkins et al. (2004) argue instead that the scheduling of BITs is not determined by developed countries, but by developing countries, which have periods of program activity in which they sign BITs with developed countries. There are, however, a number of reasons that would suggest that the scheduling of BITs is also, if not mainly, determined by developed countries and their interests. To start with, BITs are a rather one-sided game in which developing countries make many concessions, whilst

developed countries typically refuse to do much. For example, they have 'steadfastly refused to agree to any provision obligating them to encourage or induce their nationals to invest in the foreign state' (Salacuse, 1990:661). The focus of provisions in BITs 'has always been the rights of the investors, and concomitant obligations of the host governments' (von Moltke, 2004:iii). Furthermore, developed countries typically have a model BIT and they have invested much time and effort into its development. In the words of Salacuse (1990:661 and 662): 'The movement to conclude BITs has been initiated and driven by Western, capital-exporting states'. Developing countries have no such model BIT. Instead, they are expected to sign, with few modifications, the standard BIT of their developed country partner. A strong influence of developed countries' interests on the scheduling of BITs is not contradicted by the fact, pointed out by Elkins et al. (2004), that the BIT programs of developed countries do not look like clusters or peaks in certain years, but are more evenly spread over a longer period of time. Developed countries might simply choose some developing countries as BIT partners first according to their self-interest. As returns to FDI in certain locations decrease and, more generally, developed countries' self-interests evolve and change over time, further countries are invited to become BIT partners. Our empirical specification, which models time until signature, is capable of capturing these nuances.

A good test is to see whether developed country interests play an important role in the timing of their BIT signings. If they do, then it would seem that BIT schedules are to no small degree determined by developed countries. This is not to say that developing countries have no influence at all. After all, they can always refuse to sign a BIT. Also, as UNCTAD (1998:22) notes, developing countries somewhat changed their attitude in the 1990s toward actively seeking BITs with other countries, including developed ones, instead of merely passively responding to invitations by developed

countries. But the developed country as well can refuse to engage in negotiations and without doubt it is in a stronger position, being the source, not the recipient, of the expected FDI flow increase.[3]

And yet, from the allocation of aid we know that developed countries are not entirely driven by selfish motivations. Instead, they also take the need of developing countries into account. Would we expect that recipient need also impacts BIT schedules? Not necessarily so. Development assistance or aid giving are clearly based, at least in part, on altruistic or moral justifications, not least in the eyes of the tax-paying developed countries' publics (Noël and Thérien, 1995). Despite the great importance of FDI to developing countries, the promotion of FDI via BITs might be regarded as something that should serve the developed country's own economic and political interest rather than foreign need. Certainly, there is no similar pressure from the public and non-governmental organizations (NGOs) with a development mission that BITs should take recipient need into account as there is for the allocation of aid. From these considerations, we derive the next hypothesis:

H3: Developed countries are <u>not</u> more likely to sign BITs with developing countries that are in greater need of FDI.

[3] The latest trend is for developing countries to conclude BITs amongst themselves. This is somewhat at odds with both Elkins, Guzman and Simmons' (2004) as well as this author's interpretation of the determinants of BIT scheduling. However, it should be noted that this has been a very recent development and that the vast majority of BITs is concluded between a developed and a developing country.

Finally, as concerns the possible role of good governance, for the allocation of aid, most of the existing literature has focused on the case of US development assistance, particularly with respect to democracy and human rights (see, for example, Cingranelli and Pasquarello, 1985; Carleton and Stohl, 1987; Poe, 1992; Abrams and Lewis, 1993; Apodaca and Stohl, 1999). Due to different research designs, studies naturally come to different conclusions, but most of these studies confirm that more democratic and countries with a better human rights record are somewhat more likely to receive US aid and are likely to receive a higher level of aid. Few studies look at aid allocation by other donor countries (see, for example, Sevensson, 1999; Alesina and Dollar, 2000; Neumayer, 2003). Most find some evidence that Canada, Denmark, the Netherlands and Sweden, a group of countries sometimes referred to as the like-minded countries, as well as Germany, the UK and some other donors also reward democracy and respect for human rights. When it comes to BIT schedules, however, the question is again whether there is any willingness on the part of developed countries to make good governance a prerequisite for the benefit of becoming a BIT partner. Contrary to aid allocation, for which there are many public statements by donors that they will take good governance into account (e.g., OECD, 1994) even though they might not do so in actual reality, to my knowledge there are no similar statements when it comes to BITs. Of course, some argue that democracy and other aspects of good governance promote private investment in developing countries (Feng, 2001; Globerman and Shapiro, 2002; Jensen, 2003) so that foreign investors might have an interest in their country signing a BIT with democratic developing countries. However, democracy's effect is ambiguous both in theory and empirical evidence (Li and Resnick, 2003). Also, in Feng (2001), democracy's effect works mainly through the build-up of human capital, which we control for directly, whereas Jensen (2003) argues that democracy lowers country risk,

which is of course the very purpose of BITs, such that there might not be any remaining independent effect for democracy left. We therefore formulate as our final hypothesis:

H4: Developed countries are not more likely to sign BITs with developing countries that are more democratic or more protective of human rights.

4. RESEARCH DESIGN

The dependent variables

With 23 OECD countries, it would be impossible to look at each developed country's BIT program individually. We therefore adopt two approaches of estimation. In the first approach, we look at the cumulative number of BITs a developing country has signed with any of the OECD countries. The first dependent variable is therefore a strictly positive count variable. In the second approach, we look at individual BIT programs of the seven most important foreign investors in developing countries according to UNCTAD figures, namely (in brackets the year the first BIT was signed): France (1960), Germany (1959), Italy (1964), Japan (1977), the Netherlands (1963), the United Kingdom (1975), and the United States (1982). The appendix provides a detailed list of BIT partners of these developed countries together with the year of signature.[4] The dependent variable for each individual developed country whose BIT program we look at is of the event history type (Box-Steffensmeier and Jones, 1997). It captures the time that elapses between the start of its BIT program and the signature of

[4] Due to missing data on explanatory variables, not all BITs enter the estimations.

a BIT with a particular developing country.[5] Developing countries become "at risk" of signing a BIT at the start of the developed country's BIT program or the year of their national independence, if later. They exit the sample at the time of BIT signature. In the very few cases, in which developing countries have signed a BIT twice (presumably with some modifications to its contents), we take the date of first signature. If no BIT is signed, countries remain "at risk" of signing a BIT until 2001, the end of our study period. Such observations are said to be right-censored. Data are taken from UNCTAD (2000, 2004a).

The estimation techniques

For our first approach, because the dependent variable is a discrete, strictly positive count variable, ordinary least squares (OLS) is not well suited as a regression technique, because its underlying distributional assumption is that of a normally-distributed continuous variable. We therefore use the negative binomial regression with standard errors that are robust toward arbitrary heteroskedasticity, which contrary to the Poisson model does not assume that the conditional mean and the variance functions of the dependent variable are equal.[6] In addition, observations are assumed to be

[5] We look at signature rather than ratification for a number of reasons. First, the ratification date is often not given in our sources, either because it is unknown or because the BIT has never been ratified. Second, some countries find it difficult to ratify international treaties for constitutional and other domestic political reasons. For our purposes, the signature of a BIT is what matters as it signals the willingness of one country's government to enter into a bilateral relationship with another country's government.

[6] A likelihood ratio test rejects the Poisson regression model assumption with a chi-sq test statistic of 880.46 ($p<0.0000$).

independent across developing countries, but not necessarily within member states over time. That is, observations are allowed to be clustered on countries, which makes sense given that we observe the number of BITs on the same countries over time. Furthermore, we include year-specific time dummy variables to account for global changes in the likelihood of signing BITs unrelated to our explanatory variables and common to all developing countries.

To estimate our event history models we employ the Cox (1975) proportional hazards estimator. Cox's estimator assumes that there is a time-variant underlying baseline hazard of a certain event occurring at any point in time. In the medical sciences, the event is often death, in engineering it is often the failure of an appliance, but in principle it can be anything. In our case, the event of interest is the signing of a BIT with a developing country and what is modeled is the duration time until signature. Explanatory variables raise or lower the baseline hazard by a proportional amount, which is why it is called a proportional hazard model. The estimated coefficients are not directly comparable to the ones from a simple ordinary least squares (OLS) or probit/logit estimator, but their intuitive meaning is similar: A coefficient with positive sign raises the likelihood of BIT signature, whereas the opposite is the case for a coefficient with a negative sign.

More formally, the hazard rate in a given year is the probability of signature in that year, contingent on the country not having signed a BIT with the developed country in the previous year. Let $\rho(t)$ be the probability of signature at time t (given that the country has not signed a BIT before t); this is the *hazard* of signature. Denoting $\rho_0(t)$ the exogenous *baseline hazard*, which reflects those time-dependent factors affecting $\rho(t)$ that are common to all countries, the Cox proportional hazard estimator assumes that

$$\rho(t) = \rho_0(t)\exp(\boldsymbol{\beta}^T \mathbf{x}(t)), \tag{1}$$

where $\mathbf{x}(t)$ is a vector of covariates shifting the baseline hazard, and $\boldsymbol{\beta}^T$ is a vector of parameters to be estimated. Notice that covariates change over time.

A partial Maximum Likelihood estimation is carried out, where the partial likelihood function is constructed as follows. Assume that all events of failure or, in our case, signature can be ordered along a continuous time dimension. We want to calculate the probability that, contingent on an event taking place at time t_i, it is country i that signs a BIT. The contingent probability that country i signs a BIT at time t_i equals

$$\hat{\rho}_i(t_i) = \frac{\rho_i(t_i)}{\sum_{j|t_j \geq t_i} \rho_j(t_i)} = \frac{\exp(\boldsymbol{\beta}^T \mathbf{x}_i(t_i))}{\sum_{j|t_j \geq t_i} \exp(\boldsymbol{\beta}^T \mathbf{x}_j(t_i))}. \tag{2}$$

The numerator denotes the hazard at time t_i that country i would sign a BIT divided by the sum of all the hazards for all the countries who were at risk at time t_i. Note that the baseline hazards cancel each other out as they enter both the numerator and the denominator. The partial likelihood function to be maximized with respect to the vector $\boldsymbol{\beta}^T$ is then simply

$$\mathrm{L} = \prod_{t_i} \hat{\rho}_i(t_i), \tag{3}$$

that is, each observed signature contributes one term like (2) to the partial likelihood – see Collett (1999) for more details.

One of the great advantages of the Cox estimator is that there is no need to estimate the underlying determinants of the baseline hazard, which depend, possibly in a complex way, on unobserved variables. The only requirement of the estimator is that the explanatory variables raise or lower the baseline hazard by a constant proportional amount, an assumption, which can be readily tested. As a semi-parametric model, the Cox estimator depends on less-restrictive assumptions than the fully parametric Exponential, Weibull, Gamma, or other estimators, which lead to more precise estimates only if the underlying probability distribution assumes a specific corresponding functional form (Collett, 1999). For dealing with "ties", that is, when several countries sign a BIT with a developed country in the same year, we employ the so-called Efron method, which is an approximation of the exact marginal likelihood.[7] All estimations are based on a robust variance estimator and observations are assumed to be clustered, that is, they are assumed to be independent only across developing countries, but are allowed to be correlated within countries over time.

The explanatory variables

A whole range of variables that cover different aspects of developed countries' investors' economic interest are used to test hypothesis 1. These variables are mainly drawn from the empirical evidence on what host country characteristics render investment attractive to foreign investors – despite the fact that the empirical literature truly agrees on only few factors (Chakrabarti, 2001). Unless otherwise noted, all data are taken from World Bank (2003). Firstly, we use a developing country's total gross

[7] We experimented with various methods for dealing with ties, which showed that the choice of method hardly affects our estimation results.

domestic product (GDP) in constant dollars of 1995 as well as per capita income, both in logged form, as measures of market size (*ln GDP* and *ln GDP p.c.*). The bigger the market, the more attractive it is for foreign investors to enter the market. Second, FDI is often undertaken with the intention of exporting the produced goods to the world market. Also, some primary and intermediate goods need to be imported to produce the goods in foreign owned companies at the highest quality and lowest price. Countries that are more open to trade are therefore more attractive destinations for FDI and we use the sum of exports and imports divided by a country's GDP as a measure of its trade openness (*%trade*). Note, however, that the effect of trade openness on FDI is not unambiguous (Taylor, 2000) since high trade barriers could make it in a company's best interest to locate production within the host country in order to circumvent the import barriers. Third, besides market size, the skills and human capital of a developing country represent an important attractor of FDI (Noorbakhsh et al. 2001). We therefore include the gross secondary enrolment ratio as a proxy variable for educational level achieved (*%secondary-edu*). Ideally, one would like to measure educational attainment directly. However, data from Barro and Lee (2001) have more gaps than the enrolment ratio. In sensitivity analysis, we also include two measures of resource abundance to account for the fact that some countries receive FDI into their primary sector. The first measures fuel, ores and mineral exports as a share of total merchandise exports. The second measures rents from fossil, mineral and metal resource extraction relative to gross national income. Both variables lack data for many countries and years and are therefore included in sensitivity analysis, but not included in the main estimations.

Next are variables of developed country political interest, which are relevant for testing hypothesis 2. First, where relevant we use a variable measuring the number of years a developing country has been a colony of the developed country over the period

1900 to 1960 (*years colony*) (data from Alesina and Dollar, 2000). Former colonial powers usually have remaining interests in their former colonies. Second, since we expect that it is in donors' interest to sign BITs with "friendly" and "close" countries, we use a political similarity variable that draws from voting behavior in the UN General Assembly. Signorino and Ritter (1999) have developed a measure of political similarity, which conceptualizes two political positions as falling within a space defined by all possible political positions. The measure falls in the interval -1 to 1, where -1 means that two political positions are as far apart in the space as possible (complete dissimilarity) and 1 means that the two political positions are identical (complete similarity). Gartzke, Jo and Tucker (1999) use this measure to provide estimates of the similarity of political positions as revealed by the voting behavior in the UN General Assembly (*political similarity*).[8] Third, to see whether developed countries are more likely to sign BITs with developing countries, in which they have a military-strategic interest, we include a variable measuring the amount of US military grants to this country as a share of total US military grants allocated (*%US military grants*) (data from USAID, 2004). The idea behind using this variable is that countries that receive high United States military grants can be regarded as allies to Western countries and strategically important countries. Ideally, we would have liked to include similar information from other developed countries as well, but no sufficient data exist. Fourth, some OECD countries might want to promote a sphere of influence among

[8] For Germany, no data were available after 1991. They were substituted with the relevant variable for Austria. The idea is that Austria proxies Germany's political positions well given that it shares the same language and a similar culture with its bigger neighbor. Also, since this variable has only been coded until 1996, the 1996 value was taken over for the rest of the period for all countries. Results are hardly affected if we restrict the estimations to the period up to 1996 instead.

countries geographically close to them for strategic reasons. We therefore include the natural log of the geographical distance (*ln distance*) between the OECD country's and the developing country's capital (Haveman, 2000).

As concerns hypothesis 3, the single most common, arguably most relevant indicator and frequently only variable of developing country need used is a country's level of per capita income. Ideally, it represents the power of the average citizen to purchase the goods and services for the benefit of his or her welfare. The lower this power is, the poorer on average a country is and therefore the more in need of aid or FDI. Given that per capita income is also a variable of developed country investors' economic interest, which would lead us to opposite expectations, a negative and statistically significant coefficient sign for the per capita income variable would provide strong evidence that developing country need is of importance to developed countries in their choice of BIT partner as it would signal that need is dominating this specific aspect of developed country investors' economic interest. In our context, one further obvious candidate of developing country need is the existing stock of FDI the country has relative to its GDP. Countries with a small FDI stock are in greater need. Unfortunately, FDI data reported by UNCTAD (2004a) are only available from 1970 onwards. We therefore use the FDI stock variable only in sensitivity analysis.

With respect to hypothesis 4, we include the well-known Polity data (Marshall, Jaggers and Gurr, 2003) as our measure of *democracy*. A human rights measure based on data from the Purdue Political Terror Scales (Gibney, 2004) is only available for the period after 1980 and therefore not included in the main estimations, but in sensitivity analysis. It averages the scale based on information from the US State Department with that based on amnesty international reports.

In terms of control variables, considering that BITs function as substitutes for good domestic institutional quality and as insurance against political risk, one would ideally want to control for the fact that developed countries might see less reason to conclude a BIT with developing countries with better institutions since there is less reason to seek an external credibility device for such countries. The problem is that standard measures of institutional quality from, for example, the World Bank's governance database or the International Country Risk Guide (ICRG) are not available over a long period of time. We therefore follow Elkins et al. (2004) and include a dummy variable for common law countries (*common law*), taken from La Porta, Lopez-de-Silanes, Shleifer and Vishny (1999). Common law countries are regarded as being more protective of property rights, having better investor protection, greater judicial independence and more developed capital markets. Developed countries might therefore see less need to conclude a BIT with common law countries.

Table 1 provides summary descriptive variable statistics. Note that the information in table 1 refers to the sample used in the first approach with the cumulative number of BITs as the dependent variable since sample size differs from country to country in the second approach. For the first approach, where variables differ across the OECD partner countries, average values were taken. For example, the distance variable reflects the natural log of the average distance of developing countries to OECD countries. The exception is the colonial status, which refers to the number of years a developing country has been a former colony of <u>any</u> OECD country. For the second approach, where we look at individual OECD country BIT programs we can of course use the specific rather than average values, i.e., distance, political similarity, and former colonial status of the specific OECD country looked at.

< Insert table 1 around here >

5. RESULTS

We start with presenting results in table 2 for the first approach with the cumulative number of BITs as the dependent variable. Results partly confirm hypothesis 1. Developing countries with some characteristics that find the economic interest of developed countries' investors are estimated to have signed a higher number of BITs with OECD countries. Specifically, a larger market size and an economy that is more open to trade are estimated to have a higher cumulative number of BITs. However, the educational level is insignificant and per capita income is statistically significant, but with a negative coefficient sign – a result to which we come back shortly. Results fully confirm hypothesis 2 concerning the political interests OECD countries pursue with their BIT programs. Former colonies, politically similar and developing countries more closely located to developed countries as well as receiving a higher share of US military aid have signed more BITs. Hypothesis 3 is rejected: Poorer developing countries have signed more BITs as the theoretical concept of developing country need would suggest, not less BITs as developed countries' investors' economic interests would suggest. Results confirm hypothesis 4 since the democratic status of developing countries has no statistically significant impact. Common law countries have a lower number of BITs, as expected.

< Insert table 2 around here >

Next, the question is whether the results presented so far, which hold for a sample that includes all BITs with OECD countries, also hold for individual countries or whether there are important differences among the major capital exporting countries. To answer this question, we move on to our second approach. Column I of table 3

reports results for the BIT program of Germany. Developing countries that have a larger market size, are more open toward foreign trade and boast a better educational level stand a higher chance of signing a BIT (early on) with Germany. But politics matters in addition to economics: Former colonies of Germany and developing countries with similar political positions as revealed by their voting behavior in the UN General Assembly are also more likely to sign a BIT (early on). A country's military-strategic importance as proxied by United States military grants and its geographical distance do not matter. Neither does the type of legal system. Germany's BIT program is therefore clearly influenced by economic and political interests. At the same time, however, the negative and highly statistically significant coefficient sign of the per capita income variable shows that developing country need is also taken into account as Germany is more likely to sign a BIT with poorer than richer countries. The regime type of developing countries does not matter.

Column II looks at the British BIT program. As was the case with Germany, larger market size, educational level and trade openness render a developing country more attractive to the United Kingdom as BIT partner. The UK pursues different political interests than Germany, however. Neither political similarity nor former colonial links matter, but developing country's with higher military-strategic importance are more likely BIT partners. As with Germany, Britain is more likely to sign (early on) a BIT with poorer developing countries. Democracy and the type of legal system do not matter.

France is the developed country looked at next, for which results are reported in column III. Market size, educational level and trade openness matter in line with expectations. When it comes to political interests, France is in between Britain and Germany: Similar to the UK, former colonial links do not matter and the military-

strategic importance of a developing country boosts its chances of signing a BIT with France. Similar to Germany, politically similar developing countries are more likely BIT partners. Like Germany and Britain, France does not give preference to geographically closer countries and France is also more likely to sign a BIT with poorer rather than richer developing countries. Common law countries are less likely BIT partners of France, but as with Germany and the UK, the developing country's regime type does not matter.

For Italy as well, both economic and political interests matter (column IV). Larger market size and a higher educational level render a developing country more attractive as BIT partner, but not its extent of trade openness. The military-strategic importance of a developing country is insignificant. Like Germany, Italy gives preference to former colonies and politically similar countries. The same is true for poorer countries, suggesting that like the other developed countries, Italy too takes a developing country's need into account. Democracy is marginally significant, but the negative coefficient sign is contrary to expectation as more democratic countries are less likely to be Italy's BIT partner. The type of legal system does not matter.

Japan is the first developed country with a preference for geographically close countries (column V). Larger economies and countries with a higher share of US military grants are also more likely BIT partners as are poorer countries. Nothing else is statistically significant. The reader should note, however, that the results for Japan need to be treated with some caution as there are only few BIT partners, which renders the estimation inefficient and results are heavily influenced by these few observations.

Results for the United States are reported in column VI. Note that while the US has had a few former colonies (the Marshall Islands, Micronesia, Palau and the Philippines), none of these countries has signed a BIT with the US. The former colony

variable would thus predict failure to conclude a BIT with the US perfectly and is therefore excluded from the model. Like Japan, the US gives preference to geographically close countries. Neither total market size nor a developing country's extent of trade openness matter. Countries with a higher educational level are more likely BIT partners, however. So are countries of military-strategic importance receiving a higher share of US military grants, as one would expect. As with all the other developed countries, the US is more likely to sign a BIT with a poorer than with a richer developing country. Common law countries are less likely partners and regime type does not matter.

Few aspects of interest impact upon the Dutch BIT program, for which results are reported in column VII. Countries with larger market size and former Dutch colonies are more likely to have signed (early on) a BIT with the Netherlands. However, none of the other interest variables matter. Poorer developing countries are more likely BIT partners. Neither the type of legal system nor regime type matter.

< Insert table 3 around here >

Statistical significance is not equivalent to substantive importance. Just how important are the various variables? In table 4 we compare the effect of a one standard deviation (SD) increase in one of the explanatory variables on the total count of BITs, with reference to the results reported in table 2, as well as on the hazard of BIT signature with individual developed countries, with reference to the results reported in table 3. Table 4 shows that a one standard deviation increase in economic size raises the expected total count of BITs by 77.4 per cent, by far the strongest effect of all the explanatory variables. This is followed in terms of substantive importance by per capita income and trade openness as well as the common law dummy variable. In comparison, the variables that capture political interests are relatively less important. The combined

substantive impact of donor interest is clearly stronger than the effect of developing country need, as approximated by developing country per capita income. This message basically carries over to the analysis of individual BIT programs as well. The percentage increase in the hazard of BIT signature can be computed as ((exp(SD*coefficient)-1)*100). Table 4 shows that a one standard deviation increase in per capita income lowers the hazard of signature by somewhere between 35.4 and 68.2 per cent. Of the developed country interest variables, the economic variables seem to be of dominating substantive importance. One standard deviation increases in total economic size and in the level of educational achievement have quite strong effects on the hazard of BIT signature. The political interest variables, particularly the military-strategic variable, have a comparatively smaller effect, except for Japan. Clearly, in all cases the combined substantive effect of the variables capturing developed country's self-interest is stronger, and often much stronger, than the effect of developing country need.

< Insert table 4 around here >

6. SENSITIVITY ANALYSIS

Global tests for the underlying proportional hazards assumption based on Schoenfeld residuals reported in table 3 reject the assumption at conventional levels for the BIT programs of Germany, the Netherlands and the US. Even when global tests fail to reject the assumption, tests of the individual co-variates can still reject the proportional hazards assumption for specific variables. We therefore interacted all variables, for which individual tests rejected the assumption at the 5 per cent level with the log of years since the start of the BIT program of each country, which is a standard procedure

for dealing with non-proportionality (see Box-Steffensmeier, Reiter and Zorn, 2003). Doing so suggests modifications to the results reported above as follows:[9] For Germany, the positive effect of trade openness is slowly diminishing over time without ever turning negative. Once non-proportionality is allowed for, geographical distance starts to matter for the German BIT program: More proximate countries are estimated to be more likely signatories in the beginning, but the effect is diminishing over time and for the last decade or so more distant countries are estimated to have become more likely signatories. For the UK, the effect of the military-strategic importance of a country is very strongly positive in the beginning of the BIT program, diminishing rapidly over time and becomes negative in the latter half of the 1990s. For France, the Schoenfeld residuals tests did not call for interacting any variables. As concerns the Italian BIT program, the test results called for interacting the UN roll vote and the common law variables with time, but neither interaction effect was statistically significant. For Japan, with the exception of the very early years, the preference for geographically close BIT partners is confirmed and is found to be increasing over time. The statistically insignificant result of economic size found for the BIT program of the US was found to be the result of the proportionality assumption. Once it is interacted with time, larger economies are first more likely BIT partners, but then from about the mid-1990s less likely partners. With the exception of the early years, the positive effect of a country's level of education is confirmed and the effect is increasing over time. For the Dutch BIT program, the insignificance of the trade and the geographical distance variables in the main estimations is due to the proportionality assumption. Once non-proportionality is allowed for, preference is given to more trade-open countries and

[9] All non-reported results available upon request.

geographically closer countries, but the effect is diminishing over time and eventually reversed approximately in the mid-1990s.

In further sensitivity analysis, we added the human rights variable to the models. It is statistically insignificant for the estimation with the cumulative number of BITs as dependent variable, but the UK, the US and France are less likely to conclude a BIT with a developing country engaged in gross human rights violations. Next, we included the existing stock of FDI relative to GDP as well as each of our two measures of resource intensity in the estimations. Typically, none of these additional variables assumed statistical significance, leaving the results mainly unchanged. We also included a dummy variable for Latin American countries to account for the fact that, initially at least, this group of countries was reluctant to sign BITs as they were strong proponents of the so-called Calvo Doctrine[10], which favored domestic final jurisdiction and opposed international arbitration. They were also supporters of ideas surrounding a 'New International Economic Order' (UNCTAD, 1998:8f.), which goes against many provisions contained in BITs. Latin American countries have fewer BITs with OECD countries conditional on the other explanatory variables, but for the individual BIT partners looked at here, we find a statistically significant negative effect only for the UK and Japan. One might wonder whether communist countries are systematically less likely to become BIT partners due to the capitalist and market-oriented foundation of such treaties. However, many Eastern European countries like Bulgaria, Romania and Yugoslavia have been willing to sign BITs even though they were still under communist rule and other countries that are still communist (notionally at least), such as China and Vietnam, have also been keen BIT signatories. From a developed country perspective, it can even be attractive to sign a BIT with these countries as they often

[10] Named after the Argentine diplomat and historian Carlos Calvo, 1824-1906.

have market potential, enormous rates of return to investment, but fail to provide a well developed and reliable legal system. Including a dummy variable for communism, based on and extending information contained in Kornai (1992), suggested that Germany and Italy were more likely to sign BITs with communist countries, but such countries did not have a statistically significantly different number of total BITs with OECD countries, nor were other individual OECD countries looked at here more or less likely to sign BITs with countries under communist rule.

Military-strategic interest is a concept that is difficult to measure. Above, we noted that the use of US military aid as a proxy variable is far from ideal. We therefore tried other variables such as military expenditures relative to GDP and general arms imports relative to total imports, but in addition to lower availability, these variables never assumed statistical significance in line with theoretical expectations. The same is true for a dummy variable for non-communist countries contiguous to communist countries. Some studies of the aid allocation literature have found significant differences between the Cold War and post-Cold War period (see, for example, Meernik, Krueger and Poe, 1998). In particular, it is found that military-strategic interests were no longer relevant in the post-Cold War period. When we divided the sample from our first approach with the cumulative number of BITs as the dependent variable into one sub-sample up to and including 1989 and another one from 1990 onwards, then we also find that military-strategic interest as approximated by the share of US military aid is clearly statistically significant in the Cold War sub-sample, but is nowhere near statistical significance afterwards with the remaining variables largely unaffected. Splitting samples in similar fashion for the individual BIT programs of France, the UK and the US revealed that such interests are statistically significant in the Cold War sub-sample, but not for the post-Cold War period in the case of France and the UK, whereas they

remain significant for the US throughout. Note that for Japan, for which we found military-strategic interests also to matter in the full sample, no sub-sample analysis can be undertaken since the country had signed only three BITs in the Cold War period.

7. CONCLUSION

Developing countries are partners to more BITs with OECD countries if they have characteristics that make them economically attractive to developed countries' investors and politically attractive to developed countries' governments. At the same time, poorer developing countries have more, not fewer, BITs, which suggests that developing country need also plays a role in developed countries' BIT programs. Good governance in the form of either democracy or human rights protection does not matter.

When we looked at individual country BIT programs rather than all BITs with developed countries taken together, we found that what is true at the aggregate level by and large holds true for individual developed countries that are the most important capital exporters to developing countries as well. In particular, all of them pursue a mixture of economic and political interests, take developing country need into account and ignore regime type in developing countries. As concerns economic interests, market size and a developing country's achieved educational level seem to be the most important factors. Political interests are more varied, however. Political similarity matters only to Germany, France and Italy. Interestingly, France and the United Kingdom, which had a great many former colonies, do not give preferential treatment to their former colonies. This stands in contrast to the two countries' aid allocation, which is heavily biased toward their former colonies (Alesina and Dollar, 2000; Neumayer, 2003). One possible explanation could be that the great number of former

French and British colonies comprise a group too varied to deserve general preferential BIT treatment from the perspective of their former colonial rulers. The European countries with few former colonies (Germany, Italy and the Netherlands) all provide preferential treatment to their former dependent countries. But the US and Japan do not. Indeed, the US has not signed a BIT with any of its former colonies. A possible explanation is that with the exception of the Philippines, former US colonies are all small Pacific island countries that are hardly interesting to US investors. Japan has signed one BIT with a former colony, namely South Korea, but did so only late in 2001. Japanese relations with its former colonies are of course notoriously difficult.

Some developed countries are more likely to sign a BIT with a developing country of military-strategic interest to the West. Not surprisingly, this is true for the big developed countries with global military ambitions, namely France, the United Kingdom and the United States. It is not true for the other Western European countries without such military ambitions, namely Germany, Italy and the Netherlands, but it is also true for Japan. This might seem surprising, but the aid allocation literature similarly finds that Japan, despite or perhaps because of the smallness of its military and defense budget, is willing to give preferential treatment to countries of Western military-strategic interest (Katada, 1997; Neumayer, 2003). Japan and the US are the only two countries to give preference to geographically close developing countries, which mirrors similar findings of the promotion of regional spheres of influence from the aid allocation literature.

Strikingly, all developed countries looked at are more likely to sign a BIT with poorer than richer developing countries, despite the fact that their economic interest would call for the reverse. This would suggest that they do take developing country need into account. Similar to aid allocation, BIT programs can therefore be interpreted

as fulfilling the same two basic functions of self-interest and foreign need. Contrary to aid allocation, good governance in the form of democracy does not play any role in BIT programs. Countries with greater human rights violations do not have fewer BITs overall, but such countries are less likely to have a BIT with France, the UK and the US.

In terms of substantive importance rather than merely statistical significance, the variables capturing developed countries' self-interests are clearly more important than developing country need. This stands in some contrast to the allocation of aid, for which donor interest does not clearly outperform recipient need in terms of substantive effect (Neumayer, 2003). It is perhaps not surprising that BIT programs are more interest-oriented, particularly according to economic interest, than overseas development assistance, ostensibly meant to aid the poor.

In terms of future research, explaining why some developed countries have signed more BITs in total numbers than others and why some have started earlier than others with their BIT program is beyond the scope of the present article, but is a promising area of study. One plausible reason why the US has started to sign BITs at a relatively late stage compared to the other big developed countries is that, as mentioned above, it famously often insists on certain standards prior to the investment in the developing country (UNCTAD, 1999). This raises the costs of entering into a BIT for a developing country with the US, perhaps to an extent that the expected benefits of increased FDI flows no longer exceed the costs. Another reason is that it took some time for the country to accept that the global trend was moving toward the BITs pioneered by European countries and that the FCN treaties, favored by the United States, were simply outdated.

In conclusion, the BIT programs of developed countries are clearly influenced by both economic and political interests of the developed country partner. At the same time, they are also influenced by developing country need. The BIT programs, which despite their immense importance have been largely ignored by development and international relations scholars, can thus be understood and interpreted within the same theoretical framework familiar from and successfully employed in the aid allocation literature. However, self-interest seems to be substantively more important than developing country need and good governance, which plays some, if often inconsistent, role in the allocation of aid by and large does not matter for BIT programs.

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Table 1. Summary descriptive variable information.

Variable	Obs	Mean	Std. Dev.	Min	Max
Sum of BITs	3250	3.02	4.02	0	19
ln GDP p.c.	3250	6.87	1.19	4.44	10.65
ln GDP	3250	22.59	1.71	18.49	27.76
%trade	3250	68.82	45.82	3.68	392.51
%secondary-edu	3250	37.78	27.77	1	112
years colony	3250	33.99	27.48	0	60
political similarity	3250	0.40	0.24	-0.59	0.95
%US military grants	3250	0.01	0.05	0	0.97
ln distance	3250	8.33	0.58	6.44	9.39
democracy	3250	-0.91	7.02	-10	10
common law	3250	0.32	0.47	0	1

Table 2. Cumulative BITs of developing countries with any OECD country.

ln GDP p.c.	-0.353
	(3.70)***
ln GDP	0.335
	(6.62)***
%trade	0.005
	(4.88)***
%secondary-edu	0.005
	(1.35)
years colony	0.006
	(1.72)*
political similarity	0.807
	(3.91)***
%US military grants	0.695
	(2.01)**
ln distance	-0.291
	(2.88)***
democracy	0.007
	(0.73)
common law	-0.657
	(3.75)***
Observations	3250
Countries	121
Wald $\chi^2(51)$	621.0
Probability > χ^2	0.0000
Log likelihood	-6062.8

Notes: Analysis is by negative binomial regression. Observations are assumed to be independent across, but not necessarily within countries (clustering). Absolute z-values in parentheses. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively.

Table 3. The BIT programs of selected individual developed countries.

	I Germany	II UK	III France	IV Italy	V Japan	VI US	VII Netherlands
ln GDP p.c.	-0.483	-0.554	-0.403	-0.552	-0.962	-0.736	-0.367
	(4.10)***	(3.76)***	(2.69)***	(3.05)***	(1.79)*	(3.47)***	(2.40)**
ln GDP	0.238	0.370	0.282	0.546	0.509	0.077	0.446
	(3.40)***	(3.72)***	(3.00)***	(5.64)***	(2.15)**	(0.59)	(3.72)***
%trade	0.008	0.014	0.006	0.001	-0.007	0.005	0.005
	(2.66)***	(4.43)***	(1.76)*	(0.22)	(0.57)	(1.02)	(0.95)
%secondary-edu	0.014	0.020	0.029	0.025	0.001	0.036	0.010
	(2.41)**	(3.73)***	(4.61)***	(3.96)***	(0.04)	(4.95)***	(1.33)
years colony	0.082	0.003	0.002	0.074	-0.634		0.047
	(2.40)**	(0.28)	(0.24)	(6.46)***	(0.82)		(3.08)***
political similarity	1.707	0.223	2.036	2.689	4.913	0.865	0.749
	(2.16)**	(0.39)	(1.87)*	(2.94)***	(1.55)	(1.27)	(0.91)
%US military grants	-9.382	3.640	3.613	1.704	13.472	3.699	1.757
	(0.69)	(1.87)*	(2.33)**	(1.31)	(2.04)**	(3.69)***	(1.12)
ln distance	-0.211	0.236	0.234	-0.202	-2.410	-0.837	-0.241
	(1.18)	(1.17)	(1.27)	(1.18)	(2.06)**	(2.09)**	(0.91)
democracy	-0.020	0.005	-0.026	-0.041	0.079	0.013	0.028
	(1.16)	(0.31)	(1.43)	(1.89)*	(1.57)	(0.46)	(1.33)
common law	-0.274	-0.359	-0.635	-0.295	-0.121	-1.651	-0.447
	(1.07)	(0.55)	(1.97)**	(0.94)	(0.13)	(2.54)**	(1.31)
Observations	1730	1583	2437	2773	2407	1604	2471
# BIT signatures	82	71	67	59	9	35	61
Log pseudo-likelihood	-288.4	-272.0	-249.9	-218.4	-25.8	-133.5	-233.1
Global χ^2 of proportional hazard assumption (p-value)	25.13 (0.0051)	10.66 (0.3848)	12.37 (0.2613)	14.39 (0.1561)	8.19 (0.6103)	16.90 (0.0503)	20.65 (0.0236)

Notes: Analysis is by Cox proportional hazard estimation. Observations are assumed to be independent across, but not necessarily within countries (clustering). Absolute z-values in parentheses. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively.

Table 4. Percentage increase in total count and hazard of BIT signature, respectively, following a one standard deviation increase in explanatory variable.

	Total count	Germany	UK	France	Italy	Japan	US	Netherlands
ln GDP p.c.	-34.3	-43.72	-48.28	-38.10	-48.15	-68.17	-58.35	-35.39
ln GDP	77.4	50.23	88.27	61.97	154.38	138.78	n.s.	114.40
%trade	26.9	44.28	89.93	31.64	n.s.	n.s.	n.s.	n.s.
%secondary-edu	n.s.	47.52	74.26	123.74	100.22	n.s.	171.75	n.s.
years colony	17.7	24.99	n.s.	n.s.	17.85	n.s.	n.s.	0.80
political similarity	21.5	43.11	n.s.	44.26	62.26	n.s.	n.s.	n.s.
%US military grants	3.5	n.s.	19.96	19.80	n.s.	96.13	20.32	n.s.
ln distance	-15.6	n.s.	n.s.	n.s.	n.s.	-75.87	-30.23	n.s.
democracy	n.s.	n.s.	n.s.	n.s.	-25.01	n.s.	n.s.	n.s.
common law	-26.3	n.s.	n.s.	-25.80	n.s.	n.s.	-53.97	n.s.

Note: n.s. means that the coefficient was estimated as not statistically significantly different from zero in tables 2 or 3.

Appendix. Bilateral Investment Treaty schedules (up to 2001).

Country	France	Germany	Italy	Japan	Netherlands	UK	US
Albania	1995	1991	1991		1994	1994	1995
Algeria	1993	1996	1991				
Angola			1997			2000	
Antigua and Barbuda		1998				1987	
Argentina	1991	1991	1990		1992	1990	1991
Armenia	1995	1995	1998			1993	1992
Azerbaijan	1998	1995	1996			1996	1997
Bahrain						1991	
Bangladesh	1985	1981	1990	1998	1994	1980	1986
Barbados		1994	1995			1993	
Belarus	1993	1993	1995		1995	1994	1994
Belize						1982	
Benin		1978			2001	1987	
Bolivia	1989	1987	1990		1992	1988	1998
Bosnia-Herzegovina		2001	2001		1998		
Botswana		2000					
Brazil	1995	1995	1995		1998	1994	
Brunei		1998					
Bulgaria	1989	1986	1988		1999	1995	1992
Burkina Faso		1996			2000		
Burundi		1984				1990	
Cambodia	2000	1999					
Cameroon		1962			1965	1982	1986
Cape Verde		1990	1997		1991		
Centr. Afr. Republic	1960	1965					
Chad	1960	1967	1969				
Chile	1992	1990	1993		1998	1996	
China	1984	1983	1985	1988	1985	1986	
Colombia						1994	
Congo, Dem. Rep.	1972	1969					1984
Congo, Rep.	1960	1965	1994			1989	1990
Costa Rica	1984	1994			1999	1982	
Cote d'Ivoire		1966	1969		1965	1995	
Croatia	1996	1997	1996		1998	1997	1996
Cuba	1997	1996	1993		1999	1995	
Czech Republic	1990	1990	1990		1991	1990	1991
Dominica		1984				1987	
Dominican Republic	1999						
Ecuador	1994	1965			1999	1994	1993
Egypt	1974	1974	1989	1977	1976	1975	1986
El Salvador	1978	1997			1999		1999
Equatorial Guinea	1982						
Eritrea			1996				
Estonia	1992	1992	1997		1992	1994	1994
Ethiopia		1964	1994				
Gabon	1974	1969	1968				
Georgia	1997	1993	1997		1998	1995	1994

Ghana	1999	1995	1998		1989	1989	
Greece		1961					
Grenada						1988	1986
Guatemala	1998				2001		
Guinea		1962	1964				
Guyana		1989				1989	
Haiti	1984	1973				1985	1983
Honduras	1998	1995			2001	1993	1995
Hong Kong	1995	1996	1995	1997	1992	1998	
Hungary	1986	1986	1987		1987	1987	
India	1997	1995	1995		1995	1994	
Indonesia	1973	1968	1991		1968	1976	
Iran		1965	1999				
Israel	1983	1976					
Jamaica	1993	1992	1993		1991	1987	1994
Jordan	1978	1974	1996		1997	1979	1997
Kazakhstan	1992	1992	1994			1995	1992
Kenya		1996	1996		1970		
Korea, Dem. Rep.			2000				
Korea, Rep.	1977	1964	1989	2001	1974	1976	
Kuwait	1989	1994	1987		2001		
Kyrgyz Republic	1994	1997				1994	1993
Laos	1989	1996				1995	
Latvia	1992	1993	1997		1994	1994	1995
Lebanon	1996	1997	1997			1999	
Lesotho		1982				1981	
Liberia	1979	1961					
Lithuania	1992	1992	1994		1994	1993	1998
Macedonia	1998	1996	1997		1998		
Madagascar		1962					
Malawi							
Malaysia	1975	1960	1988		1971	1981	
Mali		1977					
Malta	1976	1974	1967		1984	1986	
Mauritania		1982					
Mauritius	1973	1971				1986	
Mexico	1998	1998	1999		1998		
Moldova	1997	1994	1997		1995	1996	1993
Mongolia	1991	1991	1993	2001	1995	1991	1994
Morocco	1975	1961	1990		1971	1990	1985
Mozambique					2001		1998
Namibia	1998	1994					
Nepal	1983	1986				1993	
Nicaragua	1998	1996			2000	1996	1995
Niger		1964					
Nigeria	1990	2000			1992	1990	
Oman	1994	1979	1993		1987	1995	
Pakistan	1983	1959	1997	1998	1988	1994	
Panama	1982	1983			2000	1983	1982
Papua New Guinea		1980				1981	

Paraguay	1978	1993	1999		1992	1981	
Peru	1993	1995	1994		1994	1993	
Philippines	1976	1997	1988		1985	1980	
Poland	1989	1989	1989		1992	1987	1990
Portugal		1980					
Qatar	1996	1996					
Romania	1976	1979	1977		1994	1976	1992
Russia	1989	1989	1989	1998	1989	1989	1992
Rwanda		1967					
Saudi Arabia		1996	1996				
Senegal	1974	1964			1979	1980	1983
Sierra Leone		1965				1981	
Singapore	1975	1973			1972	1975	
Slovak Republic			1998				
Slovenia	1998	1993	2000		1996	1996	
Somalia		1981					
South Africa	1995	1995	1997		1995	1994	
Sri Lanka	1980	1963	1987	1982	1984	1980	1991
St. Kitts and Nevis		1985					
St. Lucia		1986				1983	
Sudan	1978	1963			1970		
Swaziland		1990				1995	
Syria	1977	1977					
Tajikistan							
Tanzania		1965	2001		1970	1994	
Thailand		1961			1972	1978	
Togo		1961					
Tonga						1997	
Trinidad and Tobago	1993					1993	1994
Tunisia	1972	1963	1985		1963	1989	1990
Turkey		1962	1995	1992	1986	1991	1985
Turkmenistan	1994	1997				1995	
Uganda		1966	1997		1970	1998	
Ukraine	1994	1993	1995		1994	1993	1994
United Arab Emirates	1991	1997	1995			1992	
Uruguay	1993	1987	1990		1988	1991	
Uzbekistan	1993	1993	1997		1996	1993	1994
Venezuela		1996	1990		1991	1995	
Vietnam	1992	1993	1990		1994		
Yemen	1984	1974			1985	1982	
Yugoslavia	1974	1989			1976		2001
Zambia		1966					
Zimbabwe		1995	1999		1996	1995	