The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through Policy Commitment via Trade Agreements and Investment Treaties?

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ABSTRACT: The flow of foreign direct investment (FDI) into developing countries is a critical source of growth. The political factors that affect these flows are not well understood. This paper examines how a country's participation in three kinds of international political institutions affect its FDI inflows: GATT/WTO, preferential trade agreements (PTAs), and bilateral investment treaties (BITs). Each of these international institutions provides a direct or indirect mechanism for reassuring foreign investors that the country will protect its property rights. They enable governments to make more credible commitments to foreign private investors about the treatment of their assets and more generally about the country's maintenance of economically liberal policies because these international commitments are costly to renege on. Statistical analyses for some 120 developing countries since 1970, as well as recent qualitative evidence, support this argument. Developing countries which belong to the WTO and participate in more PTAs or BITs experience greater FDI inflows than otherwise, controlling for many other factors. Joining international agreements then can provide a mechanism for attracting FDI and enhancing economic growth in poor countries.

1. Introduction

Foreign direct investment by multinational firms—so called FDI—has come to be seen as a major contributor to economic growth for developing countries (e.g. Aitken and Harrison 1999; Balasubramanyam, Salisu, and Sapsford 1996; Borensztein, Gregorio, and Lee 1998; Farrell et al. 2003).[1] FDI is considered desirable because it can add productive resources to a country, often bringing with it new technology and training for workers. It also provides much-needed capital: FDI inflows represent the largest net resource flow into the developing countries (UNCTAD 2003:4). After many years of apprehension, developing countries have recently become interested in attracting such investment, and there is now considerable competition for FDI among developing countries.[2] But multinational corporations (MNCs) may be wary of placing their capital in such countries due to the "obsolescing bargain" (Vernon 1971): Once a firm undertakes a foreign direct investment, some bargaining power shifts to the host country, because the investment is by definition not perfectly mobile and depends upon local property

[1] "Foreign direct investment (FDI) is defined as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy ([the] foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor …" (UNCTAD 2003:231)

[2] A large literature exists on the benefits and costs of FDI from the perspective of the recipient country, or host (e.g. Bergsten, Horst, and Moran 1978; Biersteker 1978; Hymer 1976; Knickerbocker 1976; Lipsey 2002; Moran 1998). In the 1960s and 1970s developing countries often shied away from such foreign investments because of the loss of control and increase in dependency associated with it. More recently, there has been a "sea change" in attitudes toward FDI among policymakers in multilateral organizations (World Bank, IMF, etc.) and, most important *in developing countries*. Most developing countries now actively seek FDI. We do not explore the reasons for these changes (examined e.g. by Kobrin and Wu 2005; Simmons and Elkins 2004); we simply start from the observation that most developing countries desire to have more, rather than less, inward FDI.

rights. Countries wishing to attract inward FDI must therefore find ways to reassure private investors that their investments are secure and can prosper. How might they do so?

FDI flows have grown rapidly over the past few decades. In 2002, for example, roughly $651 billion of FDI inflows occurred. Growth in FDI has been strong, exceeding 20% annually since the 1980s with a surge of over 40% in the late 1990s (UNCTAD 2003:3). Although most FDI occurs between developed countries, developing countries have experienced large inflows as well. While there has been a strong upward trend, striking differences, not just across countries, but also in the timing of FDI inflows into a given developing country are apparent. What might explain such variation in FDI inflows and specifically the timing of inward FDI into a given country?

To answer these questions, we examine political factors that may affect FDI flows into developing countries. Political variables are much less well studied than economic ones, but are at least as important. Since we identify secure property rights as foreign investors' key concern, we focus on the possibility that developing countries may employ international strategies to reassure and hence attract foreign investors. They may enter into international agreements that commit the country to liberal economic policies seen as desirable by foreign investors. Specifically, we concentrate on three kinds of international institutions that may ameliorate the concerns of investors that host governments might expropriate or otherwise reduce the value of their investment. We focus on these international institutions because domestic policies as such can be changed quite easily (accommodating conditions in the country's decisionmaking body permitting), especially when the change is at the expense of foreign private actors. Governments can make a more credible commitment of present and future economic policies, we submit, with the help of these international institutions.

Bilateral investment treaties (BITs) have grown in number and reach, and they provide a mechanism for a developing country's government to reassure foreign investors. These agreements aim to secure the property rights of foreign investors, institutionalize their participation in the host economy, and assure them of the government's commitment to a liberal economic policy. Such agreements help create a more favorable environment for foreign investment.

Two other types of international institutions may help in making commitments to a liberal economic policy more credible: the multilateral trade agreement known until 1994 as the GATT (now the World Trade Organization, WTO) and preferential trade agreements (PTAs). Joining GATT/WTO may make a country more attractive as a destination for FDI since many foreign investors also need to access to world markets for inputs and outputs. Furthermore, being a member of this international institution may indirectly induce greater FDI since it may reassure international investors of the host government's policy preferences for openness toward world markets in general and more liberal policies at home, even though GATT/WTO contains few specific provisions regarding the treatment of FDI as such.[3] PTAs may similarly serve to guarantee even greater access to (a smaller number of) foreign markets and thus make a potential host country more attractive for FDI. These international trade agreements may thus have direct effects through the trade flows they enable and indirect ones through the confidence they create in investors' minds about government policy.

After exploring our theoretical argument in greater detail, we conduct statistical analyses on data for some 120 developing countries over the period from 1970 to 2000. This allows us to

[3] The WTO contains clauses pertinent to investment, the so-called Trade Related Investment Measures (TRIMS) agreements in which country pledge not to adopt investment policies that interfere with trade flows.

examine whether political variables matter after controlling for other, especially more purely economic, causes of FDI. Indeed, politics matters for foreign investors: We show that joining the WTO, PTAs, and BITs induces greater inflows of FDI into a given country, even when controlling for many other influences. A series of robustness tests confirms these findings.

Our research seeks to contribute to several current debates. First, in their recent review of IPE as a field, Frieden and Martin (2002) identified *foreign direct investment* as one of the aspects of economic globalization most in need of political analysis. We hope to contribute to this growing but still early debate by focusing on the role that international political institutions play in explaining FDI flows into developing countries. Second, the broader literature on *institutions in world politics* has shifted from the question of whether they matter to the more fruitful debate over how institutions matter. Our research contributes to this debate by examining whether developing countries can use international institutions to make more credible commitments to a liberal economic policy. Third, Andrew Rose's econometric analyses, showing that bilateral trade flows experience no significant increases when countries join the GATT/WTO, have sparked a debate over the *benefits of GATT/WTO membership* (Rose 2004; Tomz, Goldstein, and Rivers 2004). We hypothesize and show that there are economic incentives for GATT/WTO membership (and more generally for membership in PTAs) even if such memberships do not increase trade significantly.

2. Economics and Politics of Foreign Direct Investment

2.1. Existing Theoretical and Empirical Work on FDI in Economics and Political Science

Most of the existing research on FDI—and the multinational corporations who carry it out—has focused on economic factors. This research has examined the motivations for FDI and

its costs and benefits for host and home countries as well as private investors. Two types of FDI have been recognized. Horizontal FDI (also known as "market-seeking" or "resource-seeking" FDI) refers to an arrangement where a firm maintains production facilities in multiple countries, and each facility transforms raw or intermediate inputs into more finished products, often for sale in the local (domestic) market where the investment is located. Transport costs, tariffs, and non-tariff barriers are classic motivations for horizontal FDI (e.g., Caves 1996; Markusen 1984). Horizontal FDI therefore tends to occur when MNCs cannot export easily to a market and must enter that market by buying or building production facilities there; it is a substitute for trade.

Vertical FDI (also known as "efficiency-seeking" FDI) refers to an arrangement where at least two stages of production exist and can be geographically separated to take advantage of location-specific differences in factor endowments. Lower wages at comparable skill levels, or the availability of inputs (incl. natural resources) that can be more easily used locally than transported elsewhere, are classic motivations for vertical FDI. This FDI is part of the firm's global production chain, and the goods produced by a given local subsidiary are usually intended as inputs into other production facilities, often after export to other countries.[4] Vertical FDI thus is a complement to trade (e.g., Helpman and Krugman 1985). Theory suggests that most of the FDI inflows into OECD countries are more of the horizontal type; FDI inflows into the developing world more of the vertical type (e.g., Bloningen and Wang 2004).

Economists have focused on the size and character of the host market and the nature of the MNC to explain individual decisions to invest abroad and the aggregate FDI flows and stocks resulting from these decisions. Their research suggests that the size of the market in the potential

[4] Recent research suggests that some vertical production chains rely decreasingly on FDI (Gereffi and Korzeniewicz 1994).

host country matters for FDI, as well as levels of economic development and economic growth (e.g., Gastanaga, Nugent, and Pashamova 1998).[5]

While scholars have spent much time and effort examining the economic factors affecting FDI, they have explored political factors much less. Three political factors, however, have been the focus of a growing body of research: political instability, constraints imposed on policy change by veto players in domestic political institutions, and regime type (democracy). The findings are mixed on political instability but suggest that having more veto players or a more democratic system of government is conducive to attracting FDI (see discussion in 5.2 below).

Some domestic political factors have thus been explored, mostly in very recent research. International political factors, however, have been even less studied. We focus in particular on international political institutions.

2.2. FDI and International Institutions as a Commitment Device

FDI involves the acquisition or creation of productive capacity, which implies a long-term perspective and involves some assets that are specific to the location and cannot be moved in the short run without considerable loss. Effective property rights safeguard such investments. Such property rights have a long history in most of today's advanced industrialized countries, where they have arisen out of extended social conflict (Levi 1988; North and Thomas 1973), but few developing countries have long-established property rights regimes. Potential foreign investors should therefore be expected to be wary about committing significant investments to a developing country. Outright expropriation of foreign investments has become less likely over

[5] Moreover, lower corporate tax rates attract investment according to various studies, although scholars disagree about appropriate measurements (Desai, Foley, and Hines 2002; Gastanaga, Nugent, and Pashamova 1998; Hines 2001; Mody, Razin, and Sadka 2003). Natural resource endowments also tend to be associated with greater FDI.

time, though it remains a possibility. More important, however, are the myriad mechanisms that exist for changing the terms of an investment and thus reducing its profitability and/or changing its ownership. Governments can pose far more subtle threats to property rights through changes in taxation, tariffs, and fees, as well as toleration of crime and intellectual property theft. Regulatory interventions of various types may force MNCs to buy inputs, borrow capital, etc. from particular domestic suppliers. While drastically obsolescing bargains may be rare, such indirect threats to a foreign MNC's investments are real (e.g., Fieldhouse 1986; Tarzi 1991). As a recent article in the *Economist* magazine points out in discussing the perils of foreigners investing in China:

> Navigating the country's opaque bureaucracy and maze of ever changing rules, finding trustworthy local partners … and battling outright piracy and fraud continue to take up more time, energy and money than in any other major market, …a fact [which explains why] more and more planned [foreign] investments never materialize.[6]

MNCs, when considering where to invest, have to assess the likelihood of such political changes, which diminish the value of their investments. They should prefer an environment where liberal economic policies—especially strong property rights protections and limited government intervention—exist and can be expected to prevail. We therefore posit that the central political problem for LDC host governments who want to attract FDI is how to assure foreign investors of their commitment to liberal economic policies and hence the security of their investment.

How might governments reassure foreign investors and thus attract FDI? We argue that governments can use international institutions to make their commitments to liberal economic

[6] *The Economists* "Fools Rush In," August 7, 2004: 50.

policies more credible and reassure potential foreign investors that their investments are secure, because commitments undertaken via international institutions are more costly to break.

The logic underpinning this argument is that international institutions, while not determining government behavior, affect the incentives that governments face when choosing between alternative policies by changing the relative cost of the policy choices (making some more costly than they would be in the absence of the institutions, Keohane 1989:5f, passim). When an international agreement, formal treaty or international organization enshrines its signatories/members' commitment to a certain set of policies, then a change in those policies has not only domestic ramifications, but also constitutes a breach of international commitments. This makes reneging on such commitments more costly for several reasons. Compliance with these institutionalized obligations tends to be monitored by the other parties' to the agreement (and potentially by the staff of international organizations) more closely and continually than policy commitments undertaken strictly domestically. Cheating, i.e., reneging on the commitment, therefore is more likely to be made public by foreign governments, IOs, and domestic groups that benefit from the policy and whose monitoring and notification activities are legitimated by the international commitment (Cortell and Davis 1996). This should increase the visibility of non-compliance and open the government to punishment for reneging on their commitments from foreign governments and domestic actors (Mansfield, Milner, and Rosendorff 2002; McGillivray and Smith 2000). Moreover, since more formal institutions embody "principles, norms, rules … around which actors' expectations converge" (Krasner 1983:2), they might affect the confidence that foreign investors have in the government's policies and the future attractiveness of the country for foreign business. Violating one's internationally institutionalized commitments thus might inflict reputational damage on the country. For all of

these reasons, participation in international agreements, treaties and organizations that institutionalize the country's commitment to property rights and a liberal economic policy should make this commitment more credible.

We consider three specific international institutions. First, bilateral investment treaties (BITs) offer a means for making direct and credible commitments to foreign investors. These agreements institutionalize the conditions for the treatment of investment by the two countries that are the parties to a given treaty. They may also lower barriers to capital mobility among them. Foremost, they seek to reassure foreign investors that they will be treated consistently and their investment protected. "[BITs] seek to make the regulatory framework for FDI more transparent, stable, predictable and secure—and thus more attractive for foreign investors. If [they] liberalize FDI entry and operations, they reduce obstacles to FDI" (UNCTAD 2003:83). While BITs differ considerably, they tend to focus on three key areas: the entry and establishment conditions for MNCs, the treatment of FDI once invested, and the creation of dispute settlement mechanisms.[7] The first BIT was signed in 1959, and their number has grown rapidly, to more than two thousand in 2002. Most countries are now involved in at least one BIT, but there is considerable variation in the number of BITs not just across countries, but also over time.[8]

[7] According to UNCTAD: "The scope and content of BITs have become more standard over the years. Today, the main provisions deal with the scope and definition of foreign investment; admission and establishment; national treatment in the post-establishment phase; MFN treatment; fair and equitable treatment; guarantees and compensation in the event of expropriation; guarantees of free transfers of funds and repatriations of capital and profits; and dispute settlement provisions, both State-State and investor-State" (2003:87).

[8] If all members of the UN signed bilateral agreements with all others, there would be some 18,000 such agreements.

Only a few studies have been done on the effect of BITs on investment flows, and the results have been mixed (Burkhardt 1986; Grosse and Trevino 2002; Hallward-Driemeier 2003; UNCTAD 1998). Yet, there are strong reasons to expect that BITs affect FDI flows, even beyond the two countries involved in a given BIT. BITs create a stable and transparent policy environment for FDI; "they provide important signals concerning a country's investment climate" (Brewer and Young 1998:30). Moreover, because reneging on such commitments made internationally is more costly than simply changing policy at home, they make those commitments more credible. Ideally, one might want to consider the specific provisions of (and maybe practice under) each BIT, but in the absence of such detailed data, there are still reasons to expect that BITs will increase FDI inflows[9]—and since each BIT increases the number of parties monitoring a government's policies, the effect on FDI should be proportional to the number of BITs.

While it is well known that the trade and investment flows are often tightly linked, the relationship between participation in trade agreements and organizations (such as the GATT/WTO and PTAs) and FDI flows has not been explored systematically to our knowledge. All of these international agreements seem to be of importance, given that they make the commitments institutionalized through these agreements and IOs more credible. Specifically, governments in these agreements usually agree to liberalize their trade policy, opening their markets to all of the agreement's members. Signing such trade agreements may increase inward FDI flows directly and indirectly. In thinking about where to invest, investors maybe interested in a country's trade policy for several reasons. First, for firms that see the country as one location in their global production chain, having open markets is critical. They need to be able to import raw materials and other inputs, as well as export semi-finished or finished products.

[9] We thank Joseph Grieco for fruitful discussions on this issue.

Second and more important, such a formal commitment to an economically liberal policy on trade may indicate to investors that the country is more likely to treat the foreign investment fairly. The trade agreement suggests to potential investors that a more receptive investment climate exists since such commitments increase the likelihood that the government will maintain or strengthen economically liberal policies domestically to maximize the benefit from these international agreements.

Joining the WTO, and before it the GATT, should have a powerful effect because the organization has many member countries. Hence joining means making a commitment to many other countries to pursue a liberal trade and general economic policy. All of these other WTO members could punish the country if it reneged on its commitment, making this policy choice more costly and therefore less likely (Bagwell and Staiger 2002).

PTAs provide an opportunity for credible commitments as well. PTAs often involve only a few partner countries, which commit themselves to a level of liberalization that usually goes beyond the current level in GATT/WTO. By offering a less extensive but more intensive version of the benefits hypothesized for GATT/WTO, signing a PTA should also increase the amount of FDI inflows. Some PTAs even include provisions regarding the treatment of FDI.[10] For the same reasons discussed for BITs, a greater number of PTAs should boost FDI.

In sum, these three international political factors affect the environment for investment in a country. If a government chooses to open the country's capital account, it lowers the cost of FDI and therefore makes the country a more attractive location for foreign investors. By joining international investment and trade agreements that institutionalize the government's commitment to a liberal policy toward trade and investment, the government makes such commitments more

[10] An analysis of the content of the agreements would be interesting, but is beyond the scope of this paper.

credible, because shifting away from a liberal economic policy now not only requires domestic policy change but also involves reneging on international agreements. These arguments yield three testable hypotheses:

H_1: The greater the number of BITs to which a country is a party, the greater will be the FDI inflows that it experiences.

H_2: Joining the WTO will increase the flow of FDI into a country.

H_3: The more PTAs a country joins, the more FDI will it receive.

3. Empirical Analysis

3.1. Sample

To test these hypotheses, we conduct a statistical analysis of inward foreign direct investment for a large panel of developing countries. Our dataset for the quantitative analysis consists of all developing countries with a population of more than 1 million, for which FDI data is available. International organizations like the World Bank and the UN Conference on Trade and Development (UNCTAD) began collecting comprehensive annual data on foreign direct investment into developing countries in the 1970s. This yields time series that are too short to justify the usual assumptions about asymptotics for analyses within single countries, and we therefore pool data from all developing countries that report FDI data to UNCTAD (the source of the most comprehensive FDI database).

We restrict our sample to non-OECD countries because there are strong theoretical reasons to believe that FDI into developing countries (LDCs) is a function of a different set of factors than FDI into advanced industrialized countries, and because Blonigen and Wang (2004) show empirically that pooling data from developing and developed countries leads to bias and

other estimation problems when examining the factors affecting FDI.[11] In addition, we restrict our sample to countries with a population of more than 1 million, in keeping with the custom in much of the literature to safeguard against structural relationships often differing for very small countries.[12] Our resulting panel of up to 2548 observations contains data from about 120 of the 129 such non-OECD countries in existence between 1970 and 2000 and an average time series (*T*) of about 20 years.

3.2. Operationalization of the Key Variables and Hypotheses

Our dependent variable, FDI, is a measure of annual foreign direct investment inflows into a given country as a percentage of GDP. We analyze *inward* FDI rather than inward minus outward FDI ("net FDI"), because we are interested in how politics affects the decisions of foreign investors to invest in a given developing country—which may differ from why citizens of that country invest domestically or abroad. We use inward FDI as a percentage of GDP to eliminate the need to deflate our dependent variable and make it comparable across countries and across time (see data appendix for details).

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[11] In particular, the threat of a fundamental deviation from economically liberal policies has not been a serious concern in the OECD during the time period covered by our analysis. We include all country-years in which a country is not an OECD member, even if it later joined.

[12] This restriction has three further advantages for our analysis: First, very small countries often display extreme values on a per-capita or %-of-GDP basis and wide swings, which make them outliers or even influential points when they are included along with larger countries. Second, data coverage is much poorer for countries with a population of less than 1 million (most of the observations would therefore be lost anyway through listwise exclusion), and casual inspection of the data suggests that data are missing in a non-random fashion. Finally, it omits a number of very small advanced industrialized countries, which are on par with OECD countries but due to their small size are not members of the OECD (and therefore were not excluded by the first exclusion).

Our first measure of international institutions is *CUMULATIVE BITS*, which is the number of bilateral investment treaties to which the country is a signatory. Since we have argued that BITs should indicate a commitment to economically liberal policies that are friendly toward FDI, we expect a positive coefficient for this variable.

To assess the effect of international trade institutions, we consider first the effect of (formal) membership in GATT (WTO after 1994), using the dichotomous measure *GATT/WTO MEMBERSHIP*. Since we have argued that GATT/WTO membership should constitute a costly commitment to liberal economic policies—with firm commitments to a liberal trade policy, which is especially important for vertical FDI—we expect a positive coefficient for this variable. Our second measure of trade agreements is *CUMULATIVE PTAS*, which records the number of trade agreements to which a country is a party by the end of the given year. Here, too, we expect a positive coefficient.

3.3 Statistical Analysis: The Politics and Economics of FDI

We start our analysis with a model of purely economic controls (included in all subsequent estimations) to safeguard against assigning explanatory power to political factors due to the omission of economic variables. First, as noted in section 2.1, the size of the host market has often been cited as important, though there is a debate over whether market size matters for vertical as well as horizontal FDI. We control for this factor by including in our model the variable *MARKET SIZE*, which is the log of the country's population, although we do not have a clear expectation regarding the coefficient. [13] Studies of FDI measured in currency units often find evidence that bigger markets are better, but when FDI is measured as a percentage of GDP, its bivariate correlation with market size is negative. Overall the evidence is mixed (see e.g.,

[13] As part of our robustness checks, we also considered alternative measures for each of the economic controls.

Bloningen and Wang 2004; Hanson, Mataloni, and Slaughter 2003; Nigh 1985). The inclusion of country fixed effects may render this variable insignificant since more than 97% of the variance in market size is cross-sectional.

Second, the level of economic development has been found to affect FDI, so we include the measure *ECONDEV*—per capita GDP in constant (1995) dollars. Countries with a higher GDP per capita have been found to attract more investment, at least in part probably because of their better infrastructure. Yet, this effect appears to be tempered by the fact that poorer countries have more unskilled labor, which MNCs often seek for their global production chains (e.g., Bloningen and Wang 2004; Brainard 1997; Hanson, Mataloni, and Slaughter 2003; Yealpe 2001). Here, too, more than 97% of the variance is cross-sectional, but we nonetheless include the variable as a control.

Third, fast growing countries tend to attract FDI, since investors believe that they will become more stable and more able to buy the goods produced (e.g., Gastanaga, Nugent, and Pashamova 1998). As our measure of economic growth, we use the percentage change in the country's real GDP from the previous year, *GDP GROWTH*.

Since a change in any independent variable may take some time to affect FDI, and because the recorded FDI is cumulative for the entire year whereas some of the independent variables measure the situation on December 31 of the given year, we lag all independent variables by 1 year. Our initial economic control model therefore is:

$$FDI_{it} = \alpha + \gamma_1(\text{Market Size})_{i(t-1)} + \gamma_2(\text{EconDev})_{i(t-1)} + \gamma_3(\text{GDP Growth})_{i(t-1)} + \delta_i + \varepsilon_{it}$$

… where δ_i indicates country fixed effects implemented via a set of *n*-1 country dummies: Preliminary analyses showed that the coefficients estimated via within-estimation and between-estimation differed greatly, even for this basic control model, indicating that neither simple OLS

on the pooled sample (without country fixed effects) nor random effects estimation is appropriate. Since our main theoretical interest is whether trade and investment agreements affect a given country's attractiveness to foreign direct investors, we therefore estimate the model with country fixed effects ("within-estimation"—for a more detailed discussion, see e.g., Wooldridge 2002).

Since within estimation of panel data is essentially a pooled estimation of time series, we need to be attentive to the potential pitfalls of time series estimation, especially the risk of spurious correlation that arises when regressing a dependent variable with a trend on any independent variable with a trend (e.g., Davidson and MacKinnon 1993:670-673). FDI clearly shows an upward trend over the time period examined here, so panel models of FDI must be attentive to the potential for trend-induced spurious correlation. If we are willing to assume a common relationship between the variables across the cross-sectional units of the panel (as we must when estimating panel models, see Beck and Katz 1995), then testing for trend by regressing each variable on a trend term (e.g., Chatfield 1996) generalizes from standard time series to panel data. Since we have found that allowing for country-specific intercepts is warranted, we implement the test for trends in the panel setting with fixed effects and use the de-trended variables as appropriate.[14]

[14] The use of detrended variables, whenever warranted, is indicated in the notes to the tables or by the suffix "det;" otherwise we use the residual from regressing the variable on the country dummies (only), which yields a transformed variable with country-means of zero and within-country variance only ("wvo"). By design, these transformed variables have country-mean zero. Multicollinearity is not a serious problem with these transformed variables: absolute values of bivariate correlation coefficients are below 0.2 for most variables and 0.39 at the maximum. The summary statistics for the transformed variables (as used in models 1-5) are reported in the data appendix.

We can use OLS on these de-trended and de-mean-ed variables, but there is still a chance of heteroskedasticity and autocorrelation in the errors. We therefore use the standard errors for within estimators proposed by Arellano (1987), which are robust to both heteroskedasticity and autocorrelation and yield the most conservative inferences (tending toward the type II error of finding no statistical significance on significant regressors, see Kézdi 2002).[15] Throughout, we use two-tailed tests to assess statistical significance.

Findings

Regressing the de-trended and de-mean-ed FDI on the three (equally transformed) economic variables that constitute our economic control model (model 1), we find that these variables explain 2.4% of the remaining variance in FDI, after country fixed effects and the trend term have explained 38.9% of the variance (in the sample for models 1 to 5). We estimate a negative, statistically significant effect for market size in the previous year, consistent with bivariate correlations between market size and FDI measured as a percentage of GDP. Economic development is not statistically significant, suggesting that—once we control for economic growth and country fixed effects—the level of economic development matters little to foreign direct investors.[16] GDP growth is estimated to have a strongly statistically significant positive coefficient, confirming the finding of prior research in economics that foreign direct investors are more likely to invest in a given country when economic growth rates are high.[17]

[15] We consider alternative estimation techniques, such as feasible generalized least squares estimation (GLS) and OLS with panel corrected standard errors below in section 5.1. Arellano (1987) errors can be implemented in Stata by specifying the "cluster(countryvar)" option, where countryvar is a numerical country identifier variable.

[16] Note that more than 97% of the variance in market size and econ. development is cross-sectional.

[17] We discuss the substantive significance of the estimated coefficients in the context of model 4, below.

We now successively add to this base-line model the political variables discussed above. In model 2, we add our measure of BITs. The statistically significant positive coefficient, estimated for this variable, supports our hypothesis that signing bilateral investment treaties indicates to foreign investors that the country is generally committed to a liberal economic policy, including respect for property rights, and thus makes the country more attractive for FDI.

[TABLE 1 ABOUT HERE]

Turning to trade agreements, we examine first the effect of GATT/WTO membership by adding this variable in model 3. The statistically significant positive coefficient indicates that GATT/WTO membership indeed boosts a country's net FDI inflows, as we had hypothesized. This finding challenges Andrew Rose's (2003) claim, based on dyadic data only, that GATT/WTO membership has no effect on foreign direct investments.

In model 4, we furthermore add cumulative PTAs. The highly statistically significant positive coefficient suggests that foreign direct investors indeed see PTAs as a costly commitment to a liberal economic policy, which boosts the country's FDI inflow. The addition of the PTA variable slightly reduces the substantive and statistical significance of BITs and GATT/WTO membership—as it should, given that the logic of our argument implies that these international institutions are partial substitutes with respect to FDI. Market size is now not statistically significant anymore, while GDP growth retains its positive and significant coefficient. Variance explained increases successively with the addition of these international political variables.

To convey a sense of the substantive effects estimated for model 4, table 2 reports the changes in the dependent variable (de-trended FDI inflows) estimated for a one standard deviation change in each of the independent variables, while holding the others constant. These

estimates suggest that a one standard deviation increase in each of the international institutional variables (GATT/WTO membership, PTAs, or BITs) boosts FDI inflows by 10% or more of a standard deviation in FDI.

[TABLE 2 ABOUT HERE]

4. Domestic Preferences/Policy as Alternative Explanations

What other factors might provide alternative explanations for these findings? Downs, Rocke, and Barsoom (1996) have argued—consistent with Realist views—that we observe compliance with international agreements first and foremost because states tend to sign only treaties and agreements that commit them to doing what they are already doing or had wanted to do anyway. International agreements would then merely indicate unobserved policy preferences of governments but would not as such explain changes in FDI. Alternatively, one might expect—consistent with the domestic politics perspective on IPE—that governments with a liberal economic policy agenda will change policy and simultaneously seek international agreements on trade and investment consistent with their policy stance.[18] This argument would provide an alternative explanation for our findings if foreign investors were responding solely to coincident changes in domestic policy. Common to both arguments is that they suggest that the positive correlation between international institutions and FDI inflows is spurious.

GATT/WTO and many international trade and investment agreements, however, require policy change *prior to* becoming a party to the treaty or organization. If foreign investors were merely responding to these domestic policy changes, there should be little further change in FDI inflows from actual participation in the agreement, but we clearly find such effects. Moreover,

[18] We thank Judith Kelley for fruitful discussions of this argument.

anecdotal qualitative evidence, discussed below, suggests that foreign investors indeed respond to internationally institutionalized commitments for the reasons hypothesized above.

Nonetheless, domestic policy may well affect FDI inflows. As a recent UN study notes, "National policies are key for attracting FDI, increasing benefits from it and assuaging the concerns about it" (UNCTAD 2003:85). We consider four measures of such policies: trade openness, capital account openness as well as the Sachs-Warner economic openness index and the "good policy" index developed by Craig Burnside and David Dollar (2000), both extended by William Easterly, Ross Levine, and David Roodman (2003). But even if trade flows freely, the capital account is open, and a government's economic policies are sound from a neoliberal perspective, the government's stated commitment to maintaining these policies may not be very credible if it can change such domestic policies quite easily. International institutions should therefore remain significant even when these policy measures are taken into account.

Our measure of trade openness, trade openness is based on actual trade flows: *TRADE* is the sum of exports and imports as a percentage of GDP. Theoretical expectations vary, depending on the type of FDI: Low levels of trade openness may spur horizontal FDI that seeks to overcome trade barriers to gain access to the host country market. However, high levels of trade openness make a country a more attractive location for vertical FDI. Because most actual FDI constitutes a mix of horizontal and vertical FDI and we lack the data to allow us to separate these two ideal types of FDI neatly from each other, many existing studies show weak or inconclusive results (e.g., Brainard 1997; Hanson, Mataloni, and Slaughter 2003; Lipsey and Weiss 1984; Pantulu and Poon 2003). For developing countries, though, we anticipate that vertical FDI is much more prevalent, which should result in a positive coefficient for trade openness. In model 5 (see Table 3), we add trade openness to model 4; the significant positive

coefficient indirectly supports our expectation that FDI into developing countries is largely vertical FDI, seeking cost savings, especially due to lower labor costs. Greater trade openness thus on balance boosts FDI. The inclusion of this policy variable in the model reduces the estimated substantive effect of BITs and GATT/WTO membership and increases the estimated effect of PTAs; yet, the changes are substantively small and all international institutions remain highly statistically significant.

Policies directly affecting the ease of bringing funds into and out of the country might be expected to affect FDI both directly and indirectly, and several studies have shown capital controls to have a significant negative effect on FDI (e.g., Desai, Foley, and Hines 2004; Gastanaga, Nugent, and Pashamova 1998). Moving investment and profits in and out of the host country is more costly and hence less desirable, the more restrictions there are on acquisition or sale of real estate and machinery, credit operations, money market transactions, and other cross-border financial transactions.

Our measure, *CAPACCTOPENNESS*, is the "capital account openness index (caoi)" as encoded by Nancy Brune, where higher values indicate higher degrees of openness, so that the above logic leads us to expect a positive coefficient for this variable. The positive and statistically significant positive coefficient estimated when adding this variable in model 6 (and when simultaneously including the trade openness measure in model 7) suggests that greater openness indeed makes countries more attractive to foreign direct investors. The estimated coefficients for the international institutions decline, compared to models 4 and 5 (and GATT/WTO is now significant only at the 0.1 level), though most of these changes appear to be function of the loss of about 12% of our sample (299 observations, mostly due to lack of CAOI

data on 4 countries and the years 1970-1973, which had been included in our estimates for models 1-5; see model 4' in Table 3).

[TABLE 3 ABOUT HERE]

We next considered the Sachs-Warner index of economic openness as updated by Easterly *et al*., which is a measure of liberal economic orientation and policies of the government (see data appendix for details). Dichotomous by design, this measure is necessarily somewhat crude; it did not come close to statistical significance in any of our regressions, regardless of what other policy variables were included.

More fine-grained and detailed is the Burnside and Dollar index of good policy, again as updated by Easterly, Levine and Roodman. *ELR POLICY* combines the components of Sachs-Warner measure of economic openness with measures of macroeconomic policies that are considered desirable from a liberal economic perspective (budget surplus, low inflation). Since GATT/WTO and PTAs oblige countries to lower their tariffs, the direct trade-related effect of these international institutions should be captured in part by this measure (thus deflating the estimated effect of these institutions). Since higher values indicate better policy, we expect a positive coefficient.

Unfortunately, data availability for the index is limited to 82 of our original 122 countries (29% of observations), and there are strong reasons to suspect that reliable data on economic policy is missing in a non-random fashion, making it likely that the estimates for this more limited sample will be biased. We nonetheless report the main findings in Table 3: Model 4" reports the estimates for model 4 for this more limited sample; a substantively and statistically weaker estimated effect for GATT/WTO membership is the most notable difference. When we add in model 8 the good policy index, for which we estimate a highly significant positive

coefficient, the estimated coefficients for the international institutions decline—but they unambiguously retain statistical significance, with the exception of GATT/WTO. The simultaneous inclusion of the capital account openness index (CAOI, at the cost of a further 150 observation) rendered CAOI insignificant, but our measure of trade openness (added in model 9) remains significant, without resulting in notable further changes in the estimated effect of the international institutions.[19]

In sum, domestic policy matters for FDI. Including it in our regressions reduced the estimated effect of international institutions, as might be expected when governments that are willing to make more costly international commitments also pursue economically liberal policies at home. Taking into account domestic policy, however, does not render international institutions unimportant. With the inclusion of the Burnside-Dollar-ELR good policy index, the estimated effect of GATT/WTO membership is reduced to the point where it is no longer statistically significant, but this appears to be largely a function of the reduction in sample size due to missing data on policy; in other models, GATT/WTO remains significant at least the 0.1 level. BITs remain substantively and statistically significant regardless of which policy measures are included, as do PTAs, which continue to have a strongly positive effect on FDI inflows even when policy measures are included that control for the direct trade-related effects.

[19] Due to the potential bias introduced by the loss of more than 1/3 of countries and almost 1/3 of our sample in models 8 and 9, we proceed for further analysis on the basis of model 7 but also conducted the subsequent analyses for models 4, 5, and 9 and report divergent findings bellow.

5. Robustness Checks

To probe the soundness of these findings further, we conducted three further sets of robustness checks. First, we re-estimated the models omitting one country at a time and distinct groups of countries. Our particular interest here was East Asia, to safeguard against the possibility that countries from this region might be unduly driving our results, since they arguably have experienced highly unusual levels of FDI inflows.[20] While the omission of China reduces the estimated effect of BITs, the omission of the four Asian "tigers" or larger groups of East Asian countries leaves our findings essentially unchanged. Second, we tested the robustness of our findings to the use of alternative estimation methods. Third, we tested the robustness of our findings to the inclusion of additional political variables. These results are discussed below and in tables 4 and 5.[21]

5.1. Robustness to the Use of Alternative Estimation Methods

As discussed above, OLS with clustered standard errors, as proposed by Arellano (1987) yields under most conditions of within estimation the most conservative estimates of any hypothesized effects (see also Wawro and Kristensen 2004). Since this approach is still only rarely used in political science and may lead to type II errors, however, we estimate model 7 using several alternative estimation techniques. We first estimate the model by basic (fixed effects) OLS with regular standard errors. Re-estimating the model with Huber White

[20] We thank Joanne Gowa for this suggestion.

[21] We also considered alternative measures of market size and economic development: GDP in constant dollars for market size and per capita GDP in purchasing power parity terms, literacy, or the percentage of the population living in urban settings for economic development. Some of these measures exhibited higher levels of multicollinearity than the measures reported here, but none of them substantially changed our main results.

heteroskedasticity-robust standard errors yields almost identical results, but the Breusch-Godfrey test for autocorrelation in the errors (which again generalizes from standard time series analysis) indicates first order (but no higher order) serial correlation of the error terms. This finding suggests that regular OLS is not appropriate for our data, though we report it in the first column of Table 4 to allow readers to see the results.

To take account of the autoregressive process generating the error term, we re-estimate the model using feasible generalized least squares, once allowing for an AR(1) process that is common across the units (countries), and once allowing for a country-specific AR(1) process. The results are reported in Table 4.

In a series of papers based on Monte Carlo simulations, Nathaniel Beck and Jonathan Katz (2001; 1995; 1996) have argued that GLS for panel data tends to make the analyst "over-confident" in the sense of committing type I errors, i.e., overestimating statistical significance for the included regressors due to underestimating the standard errors. We therefore re-estimate the model with Beck and Katz's "panel corrected standard errors" (PCSE, using Prais-Winsten to take into account the AR(1) process). These estimates are reported in the last column of Table 4.

The key finding from these alternative estimations of the full model is that our results are not an artifact of the use of any particular estimation technique. The substantive findings for our political variables of interest (BITs and two measures of trade agreements) are largely robust to the use of these alternative estimation methods: The estimated effect increases slightly for BITs and decreases somewhat for the GATT/WTO and PTAs. Most importantly, the statistical significance of the estimated coefficients for these variables actually increases with the use of *any* of these estimation techniques, compared to the use of OLS with Arellano (1987) type standard errors (compare model 7 in Table 3).

[TABLE 4 ABOUT HERE]

5.2 Robustness to Inclusion of Other Variables

The existing quantitative and qualitative literature and our own discussion have suggested a number of additional factors that might explain within-country variation in FDI. By adding them to the full model (7), we test whether there is any evidence of a significant effect for each of those variables after controlling for international institutions and whether their inclusion changes any of our substantive findings.[22] We continue to use OLS fixed effects estimation with Arellano's (1987) heteroskedasticity and serial correlation consistent standard errors as the most conservative estimation technique.

Democracy: A number of recent works in IPE find that democracy makes inter-governmental cooperation on trade and economic policy significantly more likely (e.g. Mansfield, Milner, and Rosendorff 2000), but it is less clear whether political democracy in a given country would make that country more attractive to the *private* sources of foreign direct investment, i.e. multinational corporations. Much of the earlier literature in fact argued that FDI was attracted by autocracies' ability to suppress labor demands and by the absence of policy uncertainty that is a function of elections (Bornschier and Chase-Dunn 1985; London and Ross 1995; Meyer 1996; O'Donnell 1979 (1973)), while others found no significant effects for regime type (e.g. Oneal 1994) or suggested more complex causal relationships (Kahler 1981). In the recent literature on FDI, Witold Henisz first examined domestic political institutions, suggesting

[22] We report below the results of adding each variables separately. We also included them jointly in various combinations to ensure that findings of statistical insignificance (or the rarer significance) were not the result of mis-specification due to the omission of any of the other variables. In no case did the substantive conclusion change as a consequence of simultaneously adding multiple variables and we therefore present only the simplest models.

that the number of veto players in a country's political system affects foreign direct investment. Since veto players act as constraints on policy change and thus increase the predictability of the political context in which multinational corporations operate, countries with a higher number of veto players-based political constraints should be expected to attract more FDI. Recent empirical analyses largely support this view (e.g., Bergara, Henisz, and Spiller 1997; Henisz 2000; Henisz and Zelner 2001) (see also Kaufmann, Kraay, and Zoido-Lobatón 1999; Pinto 2003). Nathan Jensen has confirmed and extended this work, using both dichotomous measures of democracy and more fine-grained ones like the Polity index. He finds that democracies indeed attract more FDI than autocracies, based on extensive statistical analyses of the effect of democracy on the cross-national and over time distribution of FDI (Jensen 2003) (see also Feng 2001)—though Quan Li and Adam Resnick suggest that the democracy effect becomes statistically insignificant when controlling for property rights protection separately, albeit based on an analysis of a much smaller sample of countries (Li and Resnick 2003).

To test the constraints logic directly, we use Henisz' measure *POLITICAL CONSTRAINTS*, "polcon III," from his 2002 dataset (see Henisz 2002), which measures the presence of preference-weighted institutionalized veto point. More directly tied to broader and contemporary notions of liberal democracy are three other measures of democracy: Alvarez, Cheibub, Limongi, and Przeworski's dichotomous measure of democracy, *ACLP*; the widely employed 21-point summary measure of regime type, *POLITY*, constructed by Gurr *et al*, where high values indicate democracy; and Freedom House (FH)'s three-point "Freedom" score, *FREEDOMHOUSE DEMOCRACY*, where higher values indicate *less* democracy.

We add each of these measures separately (lagged by one year, as all independent variables) and report in the first two columns of Table 5 the results for political constraints and

the Freedom House measures (as the two democracy measures with the most statistically significant estimated coefficients). The estimated coefficient for political constraints has a positive sign, as the logic of veto points would suggest, but it misses conventional levels of statistical significance (model 10). The three measures for democracy fare no better. The coefficients estimated for ACLP and Polity are not even remotely statistically significant. The negative coefficient estimated for the Freedom House measure (model 11) indicates higher levels of FDI when countries are more democratic, but even this coefficient does not come close to conventional levels of statistical significance. We conclude from these findings that—after controlling for economic factors, trade and current account openness, as well as international institutionalized commitments to liberal economic policies—neither political constraints nor democracy has a statistically significant effect on FDI inflows.[23]

Political Violence & Events Suggesting Political Instability: Empirical studies of firms' decisions whether—and where—to invest abroad as well as some statistical analyses of aggregate FDI flows have long suggested that foreign direct investors shy away from countries where political instability and violence render the economic and political context hard to predict (e.g. Basi 1963; Brunetti, Kisunko, and Weder 1997; Feng 2001; Goodrich 1992; Jun and Singh 1996; Schneider and Frey 1985; UN 1992). Political instability, however, has been hard to define, and many different definitions and measures exist, so far without convergence around a common notion, which might explain why some studies find strong effects while others suggests that the relationship is statistically or substantively insignificant (e.g., Delios and Henisz 2003;

[23] Note, however, that this does not mean that regime type does not matter. We find, for instance, a strong positive relationship between trade and FDI, and previous research has shown democracies to be significantly more likely to trade with each other (e.g., Mansfield, Milner, and Rosendorff 2000). Moreover, democracies may be better able to make credible policy commitments (e.g., Fearon 1994; Martin 2000). We will return to this issue in the conclusion.

Gastanaga, Nugent, and Pashamova 1998; Gelos and Wei 2002; Henisz and Macher 2004; Kobrin 1976; Nigh 1985). We have constructed a summary measure called *POLINSTABILITY*, which is the sum of the number of coups, political assassinations, general strikes, guerilla warfare events, government crises, purges, riots, revolutions, and anti-government demonstrations recorded in Arthur Banks' political events dataset. In model 12, we add this variable as a regressor to model 7. The statistically significant negative coefficient estimated for this variable suggests that political instability and violence indeed reduces FDI; the substantive effect is small, but noteworthy. Importantly, adding this variable to our model barely changes the estimated coefficients and standard errors for our measures of international institutions—BITs, GATT/WTO, and PTAs—though BITs now just misses statistical significance at the 0.05 level (P-value of 0.052).

[TABLE 5 ABOUT HERE]

Wars: Given foreign direct investors' adverse reaction to political violence, we might expect them also to shy away from countries when they experience civil war or engage in an interstate war (though countries might at those times already have inhospitable conditions for FDI). We consider three measures of interstate war. First, we consider *PRIO INTERSTATE CONFLICT*, the measure of interstate wars weighted by the severity of the conflict from the Oslo/Uppsala International Peace Research Institute (PRIO). Second, we consider the Correlates of War (COW) dataset's measure of inter-state war, *COWINTERSTATEWAR*, which indicates the portion of the year during which the country was engaged in war with another state. Since the logic of the argument actually suggests that it should be especially wars fought on the country's own territory that deter foreign investors, we considered, third, a measure of the portion of the

year during which the country participates in a war that takes place on its own territory, *COW INTERSTATEWARHOME*.

We estimate a negative coefficient for the PRIO measure, consistent with our theoretical expectations that war reduces FDI, but it does not reach statistical significance (while leaving the findings for our main variables of interest virtually unchanged). The estimated coefficient for COW interstate wars also is statistically far from conventional levels of significance—and has the wrong sign. Only for our third measure of interstate wars do we estimate a statistically significant coefficient (model 13).[24] This coefficient is *positive*, though substantively small, which surprisingly suggests higher FDI during periods of war. The estimated coefficients and statistical significance of our main variables of interest remain unchanged—except for BITs, for which the estimated effect is almost doubled in magnitude and further increased in statistical significance (largely a consequences of the COW-induced truncation of the time period for the estimation: the COW dataset currently ends in 1997).

Finally, we consider three measures of civil war (on the country's territory). First, we consider *PRIOCONFLICTWITHIN*, a measure of the severity of any armed conflict that is not an interstate conflict but takes place on the country's territory. Second, we consider a measure derived from the State Failure (SF) dataset, *SF CIVILWARSCALED*, which records the area of the country affected by an "ethnic" or "revolutionary" civil war, weighted by the portion of the year for which the conflict lasted. Third, we derive from the COW dataset a measure that we call *COW CIVILWAR*, which records whether a state experiences a civil war on its own territory.[25]

[24] As previously, we report in Table 5 only the estimates for the statistically most significant measure of war.
[25] Unlike COW's original variable for intra-state war, this variable does not record instances in which a state intervenes in a civil war taking place on another country's territory.

We estimate negative coefficients for each of the three measures, as expected, but the estimated effect is substantively very small and statistically insignificant for both the State Failure and the PRIO measures. Our variables of interest are essentially unchanged by the inclusion of these variables. For the COW-based civil war measure, we estimate a still small but noteworthy effect, which is statistically significant at the 0.1 level (see model 14). As when using the COW interstate war measures, we find a boost in the estimated coefficient for BITs and a reduction in the statistical significance of both the GATT/WTO and the capital account openness variables. Our overall conclusion, however, remains unchanged.

In model 15, we include simultaneously all variables that appeared significant at the 0.1 level or better in the robustness checks. The most noteworthy findings are that the thrust of the estimated effects for our main variables of interest remains unchanged and all of the variables retain high to moderate statistical significance—except for GATT/WTO membership, which now just misses conventional levels of statistical significance. The estimated effect of the additional political variables is reduced by their simultaneous inclusion.

4. Assumptions and Causal Mechanisms

The empirical tests provide strong confirmation of the three central hypotheses that we advanced. Signing international investment and trade agreements induces FDI flows into developing countries. Belonging to the WTO, being a member of more BITs and more PTAs all increases the inflow of FDI, holding many other factors constant. These findings are robust to changes in the model specification and estimation techniques. One motivation then for countries to join the WTO and PTAs may have less to do with trade itself than with increasing FDI inflows, which can be an important stimulus to economic growth.

Before concluding, though, we want to discuss possible tests of the micro-logic of our argument. We have started from the assumption that the security of her property rights is a potential foreign investor's first and foremost concern when she ponders investing in a developing country. While assumptions are never "true" and mostly heuristic, patently false assumptions are unlikely to lead to models that are theoretically insightful and useful for policy (Coase 1982), so it is sensible to ask whether this starting assumption is reasonable. Indeed, we find strong empirical support for the centrality of property rights concerns. In a survey of its members in the late 1990s, the U.S. chamber of commerce found property rights to rank first among the factors noted by U.S. businesses as important to their allocation of investment abroad (U.S. Chamber, "12 Rules for Investors"). And this does not appear to be just an American preoccupation: In a series of interviews with German senior managers on, *inter alia*, the factors that make for a good investment climate in a given country, interviewees tended to distinguish first between countries where physical and intellectual property is essentially secure and countries where it is not. For the latter category, in which interviewees tended to include most countries outside Western Europe and North America, measures that would enhance property rights guarantees were always the first concern.[26]

Whose property rights matter, though? It may be argued that investors care only about the security of their own property rights, rather than property rights in general. In fact, one might speculate that if a government is pressed for resources, investors might prefer a blatant violation of someone else's property rights (such as the expropriation of their assets) over an across-the-board increase in taxes or fees.[27] A content analysis of the *Wall Street Journal*'s and *Financial*

[26] The interviews were conducted by one of the authors in 2000-2002.

[27] We thank Jeff Frieden for this point.

Times' coverage of the recent expropriation of Yukos assets by the Russian government is insightful on this point: While the expropriation was at first presented primarily as a problem for those holding Yukos stock, it soon came to be seen as a more general threat to all current or planned investments in Russia. This issue warrants further research, but the Yukos episode so far suggests that foreign investors care about the general approach of the government toward private economic actors and their investments, rather than just acting on promises made to them about the treatment of their individual assets.

How plausible is the hypothesized causal mechanism? Systematic series of interviews with government officials regarding their motivation for seeking BITs, PTAs, and WTO membership, and with senior decisionmakers in MNCs about their interpretation of a country joining one or several of these agreements, are beyond the scope of this paper, but there is anecdotal evidence in favor of the causal mechanism we hypothesized. On the government side, a former advisor to the Chinese government in its bid to join the WTO has told us, for instance, that they spent more time talking about its effects on FDI than on trade. And a recent UN study notes: "One of Mexico's objectives in NAFTA was to increase the economic benefits from FDI… NAFTA…raised the confidence of the United States and Canadian investors and so encouraged their investment in Mexico" (UNCTAD 2003:110). Leaders in central America have suggested a similar logic for why they are interested in joining a free trade agreement with the US (CAFTA, LA Times, May 22, 2005). A similar logic appears to apply to BITs: Discussing why Thailand had signed seven in one year, a recent article noted that "[BITs] signal to the business community worldwide and to [a country's] own investors [the government's] commitment to provide a predictable and stable legal framework for investors… and thereby boost FDI flows" (*Business Day* (Thailand), Feb. 22, 2000).

Similarly, on the private sector side, some of the above-mentioned interviewees from internationally invested German firms favorably mentioned the PTAs formed by the East European countries with the EU in the 1990s. And based in part on interviews with foreign investors, the recent UN report on worldwide investment flows notes that:

> FDI flows to the ASEAN subregion have increased steadily, particularly since the signing of the AFTA (ASEAN Free Trade Agreement)… In the Southern Asian Association for Regional Cooperation (SAARC) Preferential Trading Arrangement subregion, FDI has been increasing since the signing of the agreement in 1993 … These [free trade] arrangements provide assurances of market access, involve a deeper tariff-cutting program on a more extensive range of products, address non-tariff barriers, facilitate easier sourcing of production inputs and resources…The attractiveness of the free trade agreements for FDI is enhanced by these measures… (UNCTAD 2003:47).

5. Conclusion

This paper has examined a number of political factors that may affect FDI flows into developing countries. Since FDI may be an important source of growth for poorer countries, understanding the role of these political factors is essential. We have focused on international institutions that have been neglected in previous research, and have found that governments in the developing world, if they seek to attract FDI, can use these institutions—BITs, PTAs, and the WTO—to credibly commit to liberal economic policies in trade and finance in order to boost flows of foreign direct investment into their countries. Such actions appear to have a substantively and statistically significant impact on FDI inflows.

Previous research has ignored these factors or in the few cases where it has examined them found that they do not matter. For instance, Rose in a note claims that membership in the GATT/WTO has no measurable impact on FDI flows between pairs of countries, though being in a regional PTA together does increase bilateral FDI flows in one of his two models (2003). His data are quite different from ours: he considers only bilateral FDI flows between OECD

countries from 1985 to 1999 (and general financial flows between the US and other countries since 1988). Our research calls into question his finding regarding GATT/WTO membership and suggests that his tentative finding regarding PTAs holds more generally: Being a member of the GATT/WTO increases FDI, as does being in a PTA. Both of these types of international agreements, while ostensibly about trade, commit a government to a more liberal economic policy regime in general, which creates an environment more favorable to FDI; furthermore, international institutions make this commitment more public and costly to change. Foreign governments that are parties to such international political agreements, plus those domestic groups that gain from it, are very likely to monitor government behavior and sound an alarm if the government reneges, which opens the government to swifter, broader punishment. The greater credibility of the government's policy commitment in turn boosts FDI. This effect on FDI might explain why developing countries have been eager lately to join the WTO, even if (arguably) it has not promoted trade for them. It may also be a reason that developing countries have been willing to join PTAs with rich countries, which deepen their trade dependence on these countries; the benefits gained through increased DFI may outweigh the trade dependency costs (e.g., McLaren 1997). International trade agreements may thus foster foreign investment directly and indirectly.

Our analysis also suggests that countries can fruitfully use international investment treaties to induce foreign investment. Some earlier research concluded that BITs were not helpful for this purpose when only dyadic relationships are considered (e.g., Hallward-Driemeier 2003). Our argument suggests that BITs work much like trade agreements in acting to make more credible a government's commitment to providing a favorable environment for foreign investment, not just for foreign investors from the country with which it has signed a given BIT.

Unlike trade agreements, however, BITs also have direct effects on investment flows since they oblige the host country to a policy favorable to foreign investors and their property rights. The research presented here unfortunately cannot distinguish between the direct and indirect effects of international institutions; we hope to find measures that will allow us to do this in future research.

Our findings suggest a number of further fruitful avenues for future research. First, complementing our quantitative analysis with systematic qualitative analyses to probe the plausibility of the hypothesized causal mechanisms would be useful. Do governments think that joining such international agreements can communicate to foreign investors their commitment to a favorable investment environment? Do they join in part because they desire more FDI? As noted above, we are also particularly interested in foreign investors' perceptions: Do they view a government that joins a PTA or the WTO as more credibly committed to protecting its investment than ones that do not?

Second, our analysis has paid little attention to differences in domestic political institutions. Yet, international institutions may constitute a more effective constraint upon governments when domestic groups—acting in their own particularistic interest—push for government compliance with the country's international obligations (e.g. Cortell and Davis 1996). Similarly, a specific policy stance may be more credible if it is harder to change, so that measures such veto points or democracy, while not significant by themselves, might interact with policy measures such as capital account openness. Research in this vein would contribute to the growing literature showing that differences in domestic institutions explain a significant part of the variation in international outcomes, both in the governmental and non-governmental realm

(e.g. Mansfield, Milner, and Rosendorff 2000; 2002; Mattli and Büthe 2003; Milner and Rosendorff 1997).

Finally, our research joins the debate in international relations over the impact of international institutions. It shows that international institutions, such as GATT/WTO and PTAs, may matter in the international political economy in ways that are not generally recognized. Such indirect effects of international institutions constitute a promising area for further research.

Data Appendix:

FDI: Annual data for inward flows of FDI (as a percentage of GDP) from the online version of UNCTAD's *Handbook of Statistics* (www.unctad.org), which has the most comprehensive coverage for LDCs of all available sources of FDI data; it standardizes and combines published and unpublished data from multiples sources (see UNCTAD 2003:232). UNCTAD defines inward FDI flows as the net of all investments by non-residents in the reporting economy in three categories: (1) original investments of equity capital, (2) reinvestment of earnings (i.e., "the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates or earnings not remitted to the direct investor"), and (3) intra-company loans (from a foreign "parent" to a subsidiary within the country) (UNCTAD 2003:231f). It reports inward FDI flows "net," i.e., the sum of withdrawals of capital by foreign investors is subtracted from the amount of FDI flowing into the country.

Cumulative BITs: Total number of bilateral investment treaties that the country has signed by the end of the year. Monadic measure developed from UNCTAD's dyadic list of BITS signed between 1959 and 1999 (UNCTAD 2000) by counting at most one BIT per dyad and summing for each country all BITs signed in the current and all prior years. For the developing countries in our sample, this variable ranges from 0 to 91.

GATT/WTO Membership: Coded 1 for every year in which a country is a member of GATT or WTO, zero otherwise

Cumulative PTAs: Total number of preferential trade agreements to which the country is a party at the end of the year. From Jon Pevehouse, based on his dyadic dataset of PTAs. For the developing countries in our sample, this variable ranges from 0 to 12.

Market Size: Natural log of the country's population for the year (as all economic controls, from World Bank's *World Development Indicators* (WDI), downloaded/updated 1 Aug. 2004).

Economic Development: Natural log of per capita GDP in constant 1995 dollars (from WDI)

GDP growth: Annual growth rate of real GDP in percent (from WDI)

Table A1
Descriptive Statistics of Variables as Used in Models 1 to 5 (Deviation from Country Mean and De-Trended, *N*=2548)

	mean	standard deviation	minimum	maximum
FDI_{det}	0	2.32	-25.4	31.8
Cumulative $BITs_{det}$	0	6.34	-30.0	52.1
GATT/WTO $membership_{det}$	0	0.222	-0.820	0.840
Cumulative $PTAs_{det}$	0	0.996	-7.58	7.11
Market $Size_{det}$	0	0.0622	-0.346	0.299
$EconDev_{det}$	0	0.193	-0.896	0.878
GDP $growth_{der}$	0	5.91	-53.4	52.1
$trade_{det}$	0	14.9	-112	99.1

Values from t-1 are used for all independent variables.

Policy Controls

Trade Openness: Sum of exports and imports as a percentage of GDP (from WDI).

Capital Account Openness Index: Degree of openness of the capital account, based on 9 components (types of capital account transactions). 1973-1999 time series developed by Nancy Brune (for details see Brune et al. 2001), based on initial work by Barry Johnston *et al* (1999) and building on the measure by Dennis Quinn. Higher values indicate higher degrees of openness.

Sachs-Warner Openness Index: Dichotomous measure of economic openness, based on five criteria: black market exchange rate premium > 20%; existence obligatory export marketing for major export product(s); socialist state/government; import tariffs > 40%; non-tariff import restrictions equivalent to >40% tariff. Country coded 0 if considered "closed" on any of the five criteria; 1 ("open") otherwise. Updated by Easterly, Levine, and Roodman (2003:18f).

ELR Policy: Burnside and Dollar "good policy" index, updated by Levine *et al*. Regression-weighted measure of macro-economic policy outcomes, based on Sachs-Warner components, government budget balance (surplus), and inflation (low, or details, see Burnside and Dollar 2000:851f; Easterly, Levine, and Roodman 2003).

Political Controls

Political Constraints: Witold Henisz' measure of effective legislative branches of government outside of the executive's control, the extent to which these branches are controlled by the same political party as the executive, and the homogeneity of preferences within these branches. Continuous variable with a hypothetical range from 0 to 1. When political constraints equals 0, there is a complete absence of veto players in state *i*. Higher values indicate the presence of effective branches of government to balance the power of the executive. For example, in the US, political constraints takes on larger values during periods of divided government. See Henisz (2002:363) for details.

ACLP: Dichotomous measure of democracy. Codes a regime as democratic if and only if high political officers are chosen through fair and free contested elections where alternation of leaders occurs (for details see Alvarez et al. 1996; Przeworski et al. 2000). [28]

Polity: 21-point summary measure of regime type that takes on values ranging from -10 for a highly autocratic state to 10 for a highly democratic one, constructed by Gurr *et al* and Jaggers and Gurr from Polity III and Polity IV data. For more information and the data, see http://www.cidcm.umd.edu/inscr/polity/index.htm

Freedom House Democracy: 3-point annual measure of political rights and civil liberties, where higher values indicate *less* freedom (and democracy, if one accepts FH's assumptions and assessments; see http://www.freedomhouse.com/ for details). The measure has been often criticized for Freedom House's refusal to provide disaggregated data that would allow researchers to check the measure's validity (e.g. Munck and Verkuilen 2002), but it is widely used and has broad coverage, beginning in 1972.

[28] This measure is quite blunt since it assumes that the democratic transition occurs completely in one year. It also makes no distinction between types of autocracies or levels of democracy, but it is highly correlated with other measures of democracy (for comparative assessments, see e.g. Elkins 2000; Munck and Verkuilen 2002).

Political Instability: Sum of the number of coups, political assassinations, general strikes, guerilla warfare events, government crises, purges, riots, revolutions, and anti-government demonstrations recorded in Arthur Banks' political events dataset (see Banks 1999).

Prio Interstate Conflict: Takes values from 0 to 3, where 0 indicates the absence of interstate conflict; 1 that the country is engaged in a "minor conflict" (more than 25 batttle-related deaths per year for every year of the conflict, but less than for the higher categories); 2 that the country is engaged in an "intermediate conflict" (more than 25 battle deaths per year and a total of more than 1000 battle deaths for the conflict as a whole); and 3 indicates that the country is engaged in a war, conventionally defined, i.e., involving more than 1000 battle deaths per year. For details and data, see http://www.prio.no/page/Project_detail/9244/42133.html, accessed June 2004. We treat this variable as being on an ordinal scale.

COW Interstate War: Measure of the portion of the year during which the country participates in a war that takes place on its own territory (coded 0 if country is at peace for the entire year). See http://cow2.la.psu.edu for details and data.

COW InterstateWar Home: Measure of the portion of the year during which the country participates in a war that takes place on its own territory. Constructed by multiplying the Interstate War variable with COW's dichotomous measure of whether the war in which a given country participates takes place on its own territory or not.

Prio Conflict Within: Measure of the severity of any armed conflict on the country's territory that is not an interstate war, using the above 0-3 scale. For details and data, see http://www.prio.no/page/Project_detail/9244/42133.html

SF Civilwar Scaled: Measure of the area of the country affected by an "ethnic" or "revolutionary" civil war (by SF's definitions), weighted by the portion of the year for which the conflict lasted (http://www.cidcm.umd.edu/inscr/stfail, accessed June 2004).

COW Civil War: Measure of the portion of the year during which the country is involved in a an intra-state war, excluding those where a country intervenes in a civil war taking place on another country's territory. See http://cow2.la.psu.edu for details and data.

Table 1
From Economic Base-line Model to Full Political-Economic Model

	Model 1	*Model 2*	*Model 3*	*Model 4*
cumulative $BITs_{t-1}$		.0549***	0.0545***	0.0428***
		(.0129)	(.0123)	(.0125)
GATT/WTO $membership_{t-1}$			1.31***	1.15***
			(.408)	(.409)
cumulative $PTAs_{t-1}$				0.228***
				(.0772)
Market Size:	-3.99***	-2.36*	-2.33*	-1.86
$ln(population)_{t-1}$	(1.41)	(1.33)	(1.33)	(1.24)
EconDev:	-0.131	-0.556	-0.643	-0.384
$ln(gdp\_pc\_95d)_{t-1}$	(.530)	(.524)	(.501)	(.495)
GDP $growth_{t-1}$	0.0387***	0.0349***	0.0335***	0.0305***
	(.0106)	(.0104)	(.00997)	(.00975)
constant	$-1.14e^{-9}$	$-1.04e^{-9}$	$1.14e^{-9}$	$1.29e^{-9}$
	($1.22e^{-9}$)	($1.23e^{-9}$)	($1.22e^{-9}$)	($1.23e^{-9}$)
R^2	+0.0238	+0.0420	+0.0576	+0.0654

OLS within estimates with Arellano (1987) robust standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. *N* = 2548; *n* = 122; 1970-2000, subject to data availability. All variables de-trended. Country fixed effects implemented at de-trending via "areg" command, with "absorb(country)" in Stata 8.2.

Table 2
Estimated Substantive Effects, Model 4

	change in FDI as a % of GDP resulting from a one std deviation change in each of the regressors	… which amounts to a _% of a standard deviation
cumulative $BITs_{t-1}$	0.271	12%
GATT/WTO $membership_{t-1}$	0.255	11%
cumulative $PTAs_{t-1}$	0.227	10%
$(Market\ Size)_{t-1}$	-0.116	5%
$EconDev_{t-1}$	-0.0742	3%
GDP $growth_{t-1}$	0.180	8%

Estimated effects rounded to three significant figures; percentage rounded to full percentages.

Table 3
Robustness of Findings to Inclusion of Policy Variables

	Model 5	Model 4'	Model 6	Model 7	Model 4''	Model 8	Model 9
cumulative $BITs_{t-1}$	0.0388*** (.0127)	0.0327** (.0133)	0.0320** (.0137)	0.0279** (.0138)	0.0425** (.0163)	0.0374** (.0164)	0.0362** (.0158)
GATT/WTO $membership_{t-1}$	1.03*** (.388)	0.748** (.360)	0.695* (.376)	0.620* (.366)	0.620* (.357)	0.433 (.390)	0.380 (.385)
cumulative $PTAs_{t-1}$	0.235*** (.0768)	0.260*** (0.0884)	0.218** (.0833)	0.226*** (.0839)	0.290*** (.0992)	0.256*** (.0905)	0.257*** (.0875)
$trade_{t-1}$	0.170*** (.00624)			0.0185*** (.00606)			0.0199*** (.00571)
CapActOpen-nessIndex$_{t-1}$			0.172** (.0700)	0.149** (.0652)			
ELR $Policy_{t-1}$						0.287*** (.0978)	0.261*** (.0867)
Market $Size_{t-1}$	-1.87 (1.31)	-2.71* (1.49)	-2.27 (1.38)	-2.50* (1.41)	-2.53 (1.83)	-2.24 (1.76)	-2.68 (1.68)
$EconDev_{t-1}$	-0.600 (.485)	-0.114 (.526)	-0.0432 (.512)	-0.271 (.508)	-0.619 (.700)	-0.572 (.720)	-1.16* (.610)
GDP $growth_{t-1}$	0.0306*** (.00993)	0.0278** (.0107)	0.0272** (.0106)	0.0263** (.0106)	0.0377*** (.0102)	0.0321*** (.00984)	0.0345*** (.00954)
constant	$1.22*e^{-9}$ ($1.50*e^{-9}$)	$-1.82*e^{-10}$ ($1.36*e^{-9}$)	$-1.37*e^{-10}$ ($1.38*e^{-9}$)	$3.66*e^{-12}$ ($1.40*e^{-9}$)	$1.22*e^{-10}$ ($9.18*e^{-10}$)	$–4.38*e^{-11}$ ($8.98*e^{-9}$)	$-6.99*e^{-10}$ ($1.44)*e^{-9}$
n	122	118	118	118	82	82	82
time period	1970-2000	1974-2000	1974-2000	1974-2000	1970-2000	1970-2000	1970-2000
N	2548	2249	2249	2249	1803	1803	1800
R^2	+0.0767	+0.0550	+0.0622	+0.0746	+0.0813	+0.0924	+0.1156

OLS within estimates with Arellano (1987) type standard errors in parentheses. * p < 0.1; ** p < 0.05; *** p < 0.01. All variables de-trended. Country fixed effects implemented at de-trending via "areg" command, with "absorb(country)" in Stata 8.2. Note that R^2 information is not fully comparable across models due to changes in sample size.

Table 4
Alternative Estimations of the Full Model (Model 7)

	basic OLS	*GLS (common AR(1))*	*GLS (country-spec. AR(1))*	*PCSE (common AR(1))*
cumulative $BITs_{t-1}$	0.0279***	0.0292***	0.0342***	0.0351***
	(.00853)	(.00442)	(.00428)	(.0103)
GATT/WTO $membership_{t-1}$	0.620***	0.686***	0.419***	0.577*
	(.212)	(.115)	(.104)	(.297)
cumulative $PTAs_{t-1}$	0.226***	0.122***	0.140***	0.141**
	(.0539)	(.0233)	(.0203)	(.0664)
$trade_{t-1}$	0.0185***	0.00400**	0.00710***	0.00619
	(.00339)	(.00181)	(.00168)	(.00715)
CapAcctOpenness $Index_{t-1}$	0.149***	0.144***	0.108***	0.150***
	(.0413)	(.0220)	(.0204)	(.0396)
Market $Size_{t-1}$	-2.50***	-1.11**	-1.42***	-2.79***
	(.907)	(.494)	(.485)	(1.07)
Econ Dev_{t-1}	-0.271	-0.319**	0.108	-0.364
	(.297)	(.150)	(.167)	(.402)
GDP $growth_{t-1}$	0.0262***	0.00474*	0.00340	0.0103
	(.00802)	(.00256)	(.00213)	(.00807)
constant	$3.66*e^{-12}$	0.00423	0.00600	-0.0162
	(.0457)	(.0244)	(.0223)	(.100)
n	118	116	116	118
N	2249	2247	2247	2249

Standard errors in parentheses. * p < 0.1; ** p < 0.05; *** p < 0.01. Analysis covers 1974-2000, subject to data availability. All variables de-trended. Country fixed effects implemented at de-trending via "areg" command, with "absorb(country)" in Stata 8.2.

Table 5
Robustness of Findings to Inclusion of Other Variables

	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
cumulative $BITs_{t-1,det}$	0.0258* (.0141)	0.0282** (.0136)	0.0273* (.0139)	0.0512*** (.0156)	0.0506*** (.0155)	0.0504*** (.0156)
GATT/WTO $membership_{t-1,det}$	0.577 (.362)	0.628* (.364)	0.627* (.368)	0.542* (.308)	0.500 (.313)	0.507 (.316)
cumulative $PTAs_{t-1,det}$	0.206** (.0836)	0.228*** (0.0845)	0.220** (.0841)	0.220** (.0960)	0.222** (.0961)	0.215** (.0968)
$trade_{t-1,det}$	0.0188*** (.00606)	0.0186*** (.00605)	0.0186*** (.00607)	0.0166** (.00707)	0.0161** (.00704)	0.0162** (.00711)
CapActOpen-$nessIndex_{t-1,det}$	0.142** (.0638)	0.152** (.0650)	0.150** (.0646)	0.143* (.0739)	0.135* (.0738)	0.138* (.0737)
Political Con-$straints_{t-1,det}$	1.03 (.694)					
FreedomHouse $Democracy_{t-1,det}$		-0.166 (.155)				
Political $Instability_{t-1,det}$			-0.0211** (.0102)			-0.0116 (.00920)
COW Interstate $War\ Home_{t-1,wvo}$				0.485** (.232)		0.439* (.237)
COW Civil $War_{t-1,det}$					-0.521* (.285)	-0.495* (.290)
Market $Size_{t-1,det}$	-2.21 (1.42)	-2.34* (1.39)	-2.53* (1.41)	-2.12 (1.50)	-2.35 (1.53)	-2.36 (1.53)
$EconDev_{t-1,det}$	-0.256 (.501)	-0.251 (.509)	-0.271 (.507)	-0.301 (.519)	-0.335 (.523)	-0.328 (.524)
GDP $growth_{t-1}$ ‡	0.0269** (.0107)	0.0261** (.0106)	0.0242** (.0106)	0.0276** (.0115)	0.0252** (.0108)	0.0241** (.0110)
constant	1.28*e^{-9} (1.18*e^{-9})	5.33*e^{-11} (1.41*e-9)	-3.29*e^{-9**} (1.38*e^{-9})	9.98*e^{-10} (1.33*e^{-9})	1.22*e^{-9} (1.37*e^{-9})	-7.04*e^{-10} (1.31)*e^{-9}
n	118	118	118	117	117	117
time period	1974-2000	1974-2000	1974-2000	1974-1998	1974-1998	1974-1998
N	2239	2249	2246	2034	2034	2031
R^2	+0.0769	+0.0755	+0.0754	+0.0852	+0.0876	+0.0877

OLS within estimates with Arellano (1987) type standard errors in parentheses. * p < 0.1; ** p < 0.05; *** p < 0.01. Country fixed effects implemented at de-trending via "areg" command, with "absorb(country)" in Stata 8.2. ‡ Variables de-trended as indicated; GDP growth enters into models 10-12 detrended, into models 13-15 with within-country variance only (see discussion in section 3.2). Note that R^2 information is not fully comparable across models due to changes in sample size.

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