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ABSTRACT

In this paper we examine the effect of law on foreign direct investment outflows with a specific interest in the relationship between international investment law and domestic private property laws. Our results indicate that FDI investor is indifferent to host country property rights, hence shareholder protection by law is not a significant determinant of FDI outflows. We argue that FDI, in contrast with other types of capital flows, can effectively mitigate the agency problem through majority ownership and control, hence reduce exposure to ex-post expropriation by the affiliate. On the other hand, FDI investor remains exposed to risk of expropriation by the host government and is strongly sensitive to the enforcement of law in the host country. In contrast with recent literature we conclude that there are no causal relationship between bilateral investment treaties and FDI.

ABOUT THE AUTHOR

Dr. Selen Sarisoy Guerin is assistant professor at Vrije Universiteit Brussel and senior researcher at the Institute for European Studies since November 2009. Selen holds a PhD in Economics from Trinity College Dublin. Her research interests include all aspects of EU's trade policy and foreign direct investment, Turkey's economic integration, global imbalances and international capital flows. Selen has worked closely with EU institutions, the World Bank and various policy makers in Korea, Canada, the GCC, Taiwan and Southeast Europe, and has published across a broad spectrum of issues including climate change and trade, deposit insurance and international capital flows, investment and political regime.

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1   Introduction

The aim of this paper is to provide insight into the role played by international and domestic legal institutions in explaining patterns of bilateral foreign direct investment (FDI) flows. North (1981) defines institutions as a set of rules, compliance procedures, and norms designed to constrain the behaviour of the individual. Law and legal system is an indispensible part of a host country's institutions that protect private property rights of an investor. In return property rights protects the security of returns to investment and assets thereby making it possible for an economic activity to be undertaken. La Porta et al (1997, 1998) and Levine (2005) argue that law, property rights and contracting are inseparable. Ultimately the strength of property rights in a country is determined by a legal environment both conducive to private contracting and limiting government expropriation (Levine, 2005).

Enforcement of laws and rules, by courts or market regulators, to protect the private investors is also important[1]. La Porta et al (1998) argue that enforcement of legal rules are important and can sometimes substitute for weak rules. In return legal rules and their enforcement can have a positive effect in attracting FDI through their effect on reducing information asymmetries for the foreign investor and also indirectly through providing more liquid and broad local financial markets. Lerner and Schoar (2005) find empirical evidence that differences in legal enforcement of contracts in developing countries can explain variations in private equity transactions. Particularly they highlight that transaction in high enforcement countries have higher valuations and returns. Demirguc-Kunt and Levine (2001) show that high enforcement countries have broader and more valuable capital markets, more public offerings and other indicators of financial development as well. Antras (2011) argues that in international trade imperfect contract enforcement can have a detrimental effect[2]. Especially in the case of global production networks, the contracting relationship involves agents operating in different legal systems and contracting institutions. As Antras (2011) states "a natural difficulty in resolution of disputes involving international transactions is determining which country's laws are applicable to the contract being signed".

There are few studies that examine the impact of legal institutions on international capital flows [3]. Papaioannou (2005) show that well-functioning institutions are a key driving force for international bank flows. He finds that foreign banks invest in countries with high-quality legal system and incorrupt bureaucracies. Alfaro et al (2008) argue that weak property rights due to poor institutions can lead to lack of productive capacities or uncertainty of returns in an economy. Thus institutional

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[1] The rules that protect investors can be found in company, competition, bankruptcy laws, as well as stock exchange regulations and accounting standards (La Porta et al, 2000).

[2] There is an influential literature explaining the relationship between property rights, incomplete contracts and boundaries of the firm that are first framed by Grossman and Hart (1986) and later developed by Hart and Moore (1990) and Hart (1995). See Antras (2011) for a survey and an extension of these theories in an international context.

[3] In a recent survey of literature on the determinants of bilateral FDI flows, Blonigen and Piger (2011) find that while standard gravity variables, as well as variables controlling for cultural proximity are commonly included among location determinants of bilateral FDI flows, host country institutions are not part of the standard set.

weaknesses create a wedge between expected returns and ex post returns. They find that domestic legal institutions have a direct effect on foreign investment. While Wheeler and Mody (1992) find that the quality of legal systems is not a significant explanatory factor for the location of US affiliates, Lane and Milessi-Ferretti (2008) find that sharing a common legal origin is significantly correlated with bilateral portfolio holdings.

In addition to domestic laws international investment law also plays an important role in the protection of property rights of the foreign investor. According to the widely acknowledged rule in international investment law the property of foreign investors cannot be expropriated without compensation (OECD, 2004). However, in the absence of a multilateral investment agreement developed countries have been demanding that developing countries sign bilateral investment treaties (BIT). Bilateral investment treaties can help reduce legal uncertainty, especially in case of expropriation, by providing arbitration at the International Court of Settlement of Investment Disputes (ICSID) instead of domestic courts. Bilateral investment agreements have been signed at an equally increasing rate as the growth rate in FDI flows [4]. There is small but increasing number of studies on the impact of BITs within trade-related FDI literature. Overall this literature is inconclusive: While several studies indicate that the relationship between BITs and FDI is positive and statistically significant (e.g. Busse et al, 2008; Egger and Pfafferamayr, 2004; Neumayer and Spess, 2005; Salacuse and Sullivan 2004), several others either find a negative or no statistically significant relationship (e.g. Aisbett, 2008; Hallward-Driemeier, 2003 and Tobin and Rose-Ackerman, 2004). To the best of our knowledge, these studies do not take into account the host country private property rights.

The current wave of globalization is driven by large international capital flows that have outpaced growth in merchandise trade and output. One of the most salient features of this wave is the increasing financial integration of developing countries into international capital markets. It is indeed a stylized fact that developing countries have been receiving increasing amounts of private capital flows, especially in the form of foreign direct investment (FDI) since the late-1980s. Despite the increasing financial integration of the developing countries, the Lucas paradox prevails. Lucas (1990) argued that if the assumptions of the neoclassical model were true, all capital should flow from rich to poor countries. In practice, international capital flows from rich countries are directed only toward a few select better performing developing countries, while majority of international capital flows are among the developed countries. Understanding why some countries attract more investment than others is therefore highly relevant to developing countries that need to rely on external finance to achieve long-term growth.

This study is motivated to fill the gap in the international capital flows and foreign direct investment literature by empirically testing the role played by law[5]. The quality of legal institutions is crucial for contract enforcement and resolution of disputes

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[4] Historically BITs were signed between developed and developing countries, but since the 1990s, more and more BITs are signed between developing countries themselves.

[5] FDI, although closely related to international trade, does increasingly involve financial transactions for e.g. in the form of intra-company loans.

involving international transactions not only in goods and services but also in assets. The aim of this paper is to examine the relationship between domestic and international law and their impact on FDI outflows. What is the impact of host country property rights on FDI flows?[6] Do international investment agreements have a positive effect on FDI outflows? Can weak domestic private property rights explain the reason why developed and developing countries sign BITs? To the best of our knowledge the interaction between international and domestic law and their impact on FDI was not addressed before. These questions are relevant for several fields in economics including international macroeconomics, international finance and property rights.

Our results indicate that FDI investor is indifferent to local property rights, hence the contracting environment is not a significant determinant of FDI outflows. This result is in contradiction with other empirical studies that examined bilateral bank flows and equity investment. We argue that FDI is different compared to other types of capital flows as the investor can indeed mitigate the post-establishment expropriation risk by the affiliate through majority ownership and control. On the other hand, FDI investor remains exposed to risk of expropriation by the host government and is strongly sensitive to the enforcement of law in the host country. Hence it is not the quality of the contracting environment in statutes or case law that matter but it is their enforcement. Due to irreversibility of FDI, expropriation both in its traditional form of outright nationalization and its new regulatory form (e.g. a change in tax policy, or reneging on the incentives offered) affects FDI far more adversely than other types of capital flows [7]. Hence our most important empirical finding is that, contrary to Lucas' (1990) argument, sovereign expropriation risk is still relevant today and BITs are treaty-based instruments signed to overcome such capital market imperfections. On a minor note, we did not find evidence of an interaction between BITs and the domestic contracting environment, i.e. domestic private property rights. Our results neither support the argument that BITs complement host country property rights, nor that they are substitutes. Nevertheless, we find that bilateral investment treaties alleviate the sovereign expropriation risk in civil law countries, and hence help attract FDI, but there is no evidence in our sample the same holds true for common law countries.

In the next section we discuss the policy issues of relevance to the legal governance of international capital flows. In section 3 we discuss our theoretical set-up and the details of bilateral investment treaties. Section 4 introduces our methodology, and section 5 presents our empirical findings. Section 6 presents our conclusions.

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[6] Conceptually, shareholder rights represent the most relevant component of private property rights that might affect FDI flows. Hence we use these two terms interchangeably throughout this paper.

[7] See e.g. Asiedu et al (2009).

2 Policy Issues: International Capital Flows, Legal Institutions and Governance

The financial integration of emerging market economies started in the 1970s as a result of a dramatic surge in international capital mobility in response to the oil shock of 1973-1974, as well as the growth of the Eurodollar market (Kaminsky, 2005). International capital flows to emerging markets increased, as syndicated bank lending became available during 1979-1981 mainly to Latin America, a period that ended abruptly because of unprecedented real interest rate hikes. After a period of exclusion from global capital markets, international capital flows resumed in the late 1980s as several emerging market economies went through structural reform processes and liberalization of their capital accounts. In contrast with the bank lending of 1970s and early1980s, the current surge in international capital mobility we observe since the early 1990s is driven mainly by private flows, in the form of foreign direct investment and portfolio investment to Latin America, Asia and transition economies. This change in the structure of developing country external finance was welcome because equity flows offer more risk-sharing than debt-creating flows (Rogoff, 1999; Lane and Milesi-Ferretti, 2001) to the host economy.

The financial integration of emerging market economies is partly due to capital account liberalization and decreasing regulatory barriers to international capital flows, a policy promoted by Article IV of the IMF Articles of Agreement and the OECD Code of Liberalization of Capital Account. The idea was that, similar to the welfare gains arguments from trade liberalization, capital account liberalization would lead to long-term growth through access to finance, efficient allocation of capital and consumption smoothing. Even though the empirical evidence on the growth promoting effects of international capital flows is inconclusive (see e.g. Rodrik (1998) and Bhagwati (1998) for a negative assessment; e.g. Henry (2007) and Frankel (2010) arguing that capital account liberalization can enhance long-term growth prospects) the recent crisis draw attention more to the need to regulate international capital flows.

A recent study by IMF (2010) argues that, even though the international capital flows have become the main channel for transmission of shocks, there is lack of clear understanding about who is institutionally responsible for financial stability. Unlike the WTO that have established rules for trade in goods and services, there are no established rules for international capital flows. Under the current structure, the IMF is responsible for global monetary cross-border transactions, but the most important obligations in its Articles of Agreement are relevant for current not for capital account transactions. Furthermore, while Article IV states that the purpose of the international monetary system is to enable exchange of capital among countries, Article VI permits recourse to capital controls as long as they do not interfere with current account payments (Akyuz and Cornford, 1999).

In 1995 OECD initiated talks for a Multilateral Investment Agreement with the aim to liberalize investment and to establish binding dispute settlement procedures (Hoekmand and Saggi, 2000). This initiative did not take off and talks ended in 1998 with OECD countries agreeing on a package far less reaching than bilateral investment treaties (Sauve, 1998). At the WTO Ministerial in Singapore in 1996 a

working group was formed to discuss trade and investment, however, negotiations failed due to opposition by developing countries. As a result developed countries started signing bilateral investment treaties with developing countries at an increasing rate almost in par with the growth in FDI flows (see Figure 1)[8]. In summary, current legal governance for international capital flows liberalization is based on several international agreement with different objectives and scope such as OECD Code of Liberalization of Capital Movements, the Treaty on the Functioning of the European Union, the General Agreement on Trade and Services (GATS), and between over 2,000 BITs and regional investment treaties or free trade agreements (FTA) with investment chapters such as NAFTA (IMF, 2010). While most scholars focus on the increasing role played by FDI as a more reliable source of external finance for developing countries, only a select group of developing countries, i.e. emerging market economies, have successfully integrated into the FDI market. As the failed attempts for a multilateral investment agreement, both at the OECD and WTO level, shows that not all developing countries are interested in attracting FDI (Hoekman and Saggi, 2001).

The proliferation of bilateral investment agreements presents increasing challenge to the institutions (i.e. IMF and the OECD) in two distinct but not mutually exclusive aspects: for the general i) liberalization and ii) governance of international capital flows. The general stated purpose of BITs is to promote and protect investment. In order to do so, a typical BIT offers post-establishment 'national' and Most Favored Nation (MFN) treatment to the foreign investor, and once established, BIT liberalizes capital account transactions pursuant to the 'investment'. Specifically, the Contracting parties are obliged to permit free transfer of payments including *inflows* such as additional equity flows for the expansion of the investment, or compensation of management and *outflows* such as repatriation of profits, repayment of loans, proceeds from disinvestment, and compensation for any loss and damage. In other words, while BITs offer post-establishment liberalization, they restrict the sovereign rights of the Contracting party to regulate i.e. to control capital flows. As the aim of this study is to empirically test the effect of legal institutions and governance on FDI, our results contribute to policy discussions on legal governance of international capital flows.

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[8] Today bilateral investment treaties are increasingly signed between developing countries as well.

3   Theoretical background

There are two types of risk that a FDI investor faces: 1) risk of expropriation by management 2) sovereign expropriation risk by the host state. Grossman and Hart (1986), and Hart and Moore (1990) show that ownership structure affects parties' exposure to expropriation and the hold-up problem as ownership of an asset gives the owner the right to determine the use of the asset that is by its nature not fully contractible: integration by FDI can alleviate this problem as FDI combines ownership and control, especially in the case of majority-ownership. Empirical evidence shows that majority-ownership of the foreign affiliate seems to be the norm rather than an exception for US parent firms (see Table 1) and this is true regardless of level of development of the host country. According to the incomplete contracting theory (e.g. Antras and Helpman (2008)), the degree to which an investment project is contractible is an important determinant of foreign firms' decision to invest. Another manner in which expropriation can arise is when there is the classic agency problem: when the agent (affiliate) uses the profits to benefit themselves rather than return them to the principle (parent company)[9]. This type of expropriation may arise in the post-establishment period due to information asymmetries. The rights of the investors in either case are defined and protected by the legal system.

Law and finance literature argues that law, property rights and contracting are inseparable (La Porta et al (1997, 1998); Levine (2005)). La Porta et al (1996) show that common law countries give shareholders and creditors relatively the strongest protection and French civil law countries the weakest. On the other hand German and Scandinavian civil law countries offer the highest quality of law enforcement. According to La Porta et al (1996) in countries with weak property rights, investors have to be large to stand up to the management and to extract payments from them. If this holds true we would expect to see larger shares of capital flows in the form of FDI in host states with weak property and shareholder rights. Hausmann and Fernandez-Arias (2000) find that contrary to expectations, the share of FDI is higher in countries with under-developed financial markets, higher risk and weaker institutions.

The quality of legal systems in the host country is also closely related to sovereign expropriation risk. The law and finance literature argue that historically British common law developed as a law of private property, whereas the French civil law developed to give more emphasis on the rights of state and less on private property rights (Levine, 2005). La Porta et al (1999) argue that civil law can be a proxy for building institutions to further the power of the state. From this perspective, civil law countries would have difficulty credibly committing not to interfere with private contracts. In other words, under domestic legal systems with a tradition for weak protection of private property, a government is often tempted by dynamic inconsistencies of its policies. As international capital markets are prone to 'inherent imperfections' the ability of the government to implement its contractual obligations suffer from a credibility problem. As Kydland and Prescott (1977) argued in their seminal work many economic policy decisions are subject to dynamic inconsistency

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[9] The definition of the agency problem can be found in Jensen and Meckling (1976).

problems: FDI investor knows that once established in the host economy, the government will re-optimize its policies at a later date and renege on its contract. Hence expropriation, both in its traditional and regulatory form, is an example of time inconsistency of economic policy. When the host state cannot credibly protect FDI, the investor demands that the host state sign a bilateral investment treaty and give up its sovereign power to make discretionary policies in the future.

In this paper we argue that the existence of large number of BITs in force is a sign that sovereign risk in the form of expropriation is still relevant today. Only the nature of expropriation has changed over the last decades. Disputes on direct expropriation for e.g. the overt nationalization cases seen in Latin America in the 1970s and 1980s have been replaced by disputes regarding foreign direct investment regulation and 'indirect expropriation' (OECD, 2004)[10]. For example, in the *Tecmed S. A. vs Mexico* case (2003), the International Court for Settlement of Investment Disputes (ICSID) awarded actual findings of expropriation because Mexico revoked the operating license of the US company. Similarly, ICSID also decided in the *Metclad vs Mexico* case (2000) that denial of a construction permit contrary to prior assurances constituted expropriation.

In addition to these changes in the context of expropriation, the asymmetry of international capital flows increases the likelihood of expropriation. Developed-to-developed capital flows are characterized by two-way large gross flows. On the other hand developed-to-developing country flows are characterized by large gross flows from developed to developing countries but small gross flows from developing to developed countries. This implies in the absence of a BIT signed by a developed and developing country, that retaliation is not an option in case of expropriation either[11]. Bergstrand and Egger (2011) analyze systematically the determinants of BITs[12]. Besides a set of variables that are commonly used as determinants of FDI, they find that higher risk of expropriation is positively correlated with the probability of signing a BIT, and that the impact of expropriation is direct on the likelihood of a BIT. On the other hand, Aisbett (2009) finds empirical evidence that reduced expropriation risk increases participation in BITs with OECD countries. In the next section, we explain how BITs are supposed to function to promote and protect investment.

3.1   Bilateral investment treaties and domestic legal institutions

While private property rights and contracting are closely related to shareholder and creditor rights in the host country, bilateral investment agreements and international investment law provide protection against expropriation by the state. In this section we start with a detailed explanation of the function of a BIT and its connection with

[10] Indirect expropriation refers to regulatory measures to protect health, environment and other welfare interests of society (OECD, 2004).

[11] Eaton and Gersovitz (1983) introduced the reputation effect expropriation has on future investment but they do not consider enforcement.

[12] Bergstrand and Egger (2011) refer to an earlier empirical study by Swenson (2005) that explains the cumulative number of BITs across-countries by income, expropriation risk and stock of FDI in previous periods.

the domestic legal system. Bilateral investment treaties are signed between two sovereign states (i.e. Contracting Party) to promote and protect investment. Even though three quarters of global FDI are two-way flows among developed countries, these flows are not covered under any BIT[13]. Instead BITs are signed between capital-exporting developed and capital-importing developing countries reflecting power asymmetries. According to the 'power asymmetry' hypothesis of the political economy literature, investment agreements oppose these two groups: the few capital-exporting countries want to protect their investment through international law, whereas a large number of capital-importing countries want to protect their sovereignty (Morin and Gagne, 2007).

The typical BIT starts by defining the 'investment' and 'investor' that are covered. Even though the majority BITs do not use the conventional definition of FDI, with reference to 10 percent equity ownership threshold, legal scholars agree that BITs refer to FDI flows only (Vandevelde, 2010)[14]. Unlike regional trade agreements, BITs did not set out to 'liberalize' investment[15]. Majority of BITs state that Contracting parties "shall encourage and create favourable conditions for investors", but the admission of such investment is "subject to the right to exercise powers conferred by its laws'. Majority of BITs accept FDI conditional upon the fulfilment of national admission procedures. Once established, the BITs ensure that the foreign investor is treated fairly and equitably, as a domestic investor or any other foreign investor. This clause is standard in almost all BITs and this is why BITs and domestic legal systems are inextricably connected.

These provisions give equal legal rights to foreign investors as domestic investors in the case of an investor-investor dispute in the post-establishment period. While majority BITs fall under this category (e.g. EU member state BITs), US BITs and recent Canada BITs can be interpreted to be granting pre-establishment rights to foreign investors, a provision that is seen to be FDI liberalizing as they offer 'national treatment' at the admission stage (OECD, 2004). As over 1,500 of existing BITs are signed by EU member states vs only 48 by the US, we claim that FDI liberalizing effect of BITs are limited globally.

In case of a dispute between an investor and state, the investor can resort to arbitration at the International Court for Settlement of Investment Disputes (ICSID), usually if the investor is not confident of a fair and equitable outcome had it tried to settle the dispute in the national courts of the host country. Today it is a widely acknowledged rule in international investment law that the property of foreign investors cannot be expropriated without compensation. However, in the absence of a BIT between the partners, international investment law leaves the decision on

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[13] One exception is NAFTA that includes a chapter on investment, that is practically a bilateral investment agreement. NAFTA was used as a basis of a ICSID case filed in 2007 by a US petroleum company against Canada.

[14] Austria-India BIT (2001) is an exception that covers at least 51 percent of shares or voting rights.

[15] Our results indicate that the impact of BITs are smaller in magnitude of the treatment effect of FTAs (Baier and Bergstrand, 2007).

compensation to the courts of the host state[16]. Inarguably economically the most important provision of BITs are provisions on compensation in case of expropriation and investor to state dispute settlement mechanism[17]. So far there have been 363 registered cases at the ICSID where majority of the respondents were Latin American sovereign states. The fact that there are several BITs signed between OECD member states, i.e. between developed and emerging market and transition economies, supports the argument that BITs provide a far stronger legal governance compared to the OECD Code thanks to the dispute settlement clause[18].

While studies using international capital flows find a statistically significant relationship between international investment and legal institutions of a host country, they do not take into account the presence of bilateral investment treaties. On the other hand, foreign direct investment literature focuses on the impact of BITs but does not formally address the quality of legal institutions in the host country. In the next section we introduce our methodology to address the research questions outlined in the introduction, specifically identifying the channels through which BITs work.

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[16] The 'prompt, adequate and effective' compensation for the expropriation of foreign investment is known as the 'Hull formula' and was endorsed by several developed countries. In contrast, in the 1960s and 1970s the developing countries supported the Calvo doctrine, an economic policy that claims that jurisdiction in international investment disputes lies with the country where the investment is made. Under this doctrine, a foreign investor cannot appeal for help from his home country as this would violate territorial sovereignty and judicial independence of the host countries. Even though the UN General Assembly resolution rejected the Hull formula in favor of the Calvo doctrine, the Hull formula is often used and accepted as part of the international customary law (OECD, 2004).

[17] There is usually an additional chapter on compensation for losses in case of war, armed conflict, revolution, national state of emergency, etc. that is separate from compensation of losses resulting from expropriation.

[18] The OECD Code is constituted by legally binding rules, but the implementation of obligations by each member state is enforced by peer-pressure.

4 Methodology

4.1 Model

We adopt a modified gravity model to estimate the bilateral FDI flows. Gravity models are increasingly used to explain bilateral patterns of international capital flows as well as bilateral trade flows (e.g. Wei (2000), Martin and Rey (2000), Portes and Rey (2005), Lane and Milesi-Ferretti (2004; 2008)). We estimate the following equation on a panel dataset of 18 OECD countries and 24 emerging market economies over the period 1992-2007.

$$\ln(FDI)_{ijt} = \alpha_{ij} + \delta BIT_{ijt} + X_{jt} + t_t + \eta_{jt} + e_{ijt} \qquad (1)$$

The dependent variable is the natural log of real bilateral FDI outflows from developed country i to developing country j at time t. To estimate the average treatment effect of the BITs , we use four-year non-overlapping averages of bilateral FDI outflows as dependent variable. This helps mitigate the potential problem of serial correlation and hence 'spurious regression problem' as noted by Wooldridge (2002) when using fixed-effects estimator on panel datasets with T>2. The dependent variable is regressed on a BIT dummy variable that takes on the value of 1 if a BIT is in force, and zero otherwise. Out of 432 country-pairs, 167 country-pairs have signed a BIT sometime during 1992-2007. We use a set of control variables that are commonly used in literature. In our benchmark model to control for the size of the host country market we use natural log of real GDP of the host economy. We also use the log of real market capitalization of listed companies in the host country as a proxy for the development of the stock markets[19]. Claessens et al (2001) find a positive correlation between stock market capitalization and FDI. In all estimations we include country-pair fixed-effects, time dummies and source country- time dummies. While country-pair fixed effects control for time-invariant unobserved heterogeneity, source country-time dummies control for unobserved time-varying heterogeneity in the source country. We use time dummies to control for global shocks that affect FDI outflows for each country-pair in a similar fashion and help us remove panel-wide heteroscedasticity (Roodman, 2008). In all tables we report robust standard errors.

4.2 Endogeneity

Following the recent study by Baier and Bergstrand (2007) we estimate the average treatment effect of BITs on foreign direct investment flows using a panel approach and estimate our model with a fixed-effects estimator. It is unlikely that BITs signed between two countries are exogenous random variables and more plausible that countries select into BITs for reasons that are unobservable and maybe correlated with the levels of FDI. Estimation of the partial effects of an endogenous binary variable (BIT) on a continuous endogenous variable (FDI flows) falls under the category of treatment effect literature in econometrics (Baier and Bergstrand 2007).

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[19] All real variables are deflated using the US GDP deflator (base=2000).

Baier and Bergstrand (2007) suggest using fixed-effects panel estimator instead of the IV estimator as the coefficients estimated using this method are only consistent if there is no reverse causality (Heckman, 1997), i.e. that the decision of a country to sign a BIT with a developing country is unrelated to unobservable factors that influence FDI outflows. In addition, it is difficult to find a good instrument for BITs.

So in contrast with most of the earlier literature on BITs, we control for endogeneity of BITs. Wooldridge (2000) suggests that in the presence of unobserved time-invariant heterogeneity, using panel data is preferable to cross-section estimation of the treatment effects. Models estimated with country-pair fixed-effects (α_{ij}) are shown to effectively eliminate the selection (omitted variable) bias (e.g. Razin et al 2003, Helpman et al, 2005) due to time-invariant unobservable heterogeneity. Only a few trade-related FDI studies acknowledge and control the endogeneity of BITs (Egger and Pfafferamayr (2004) and Busse et al (2008) find a statistically robust and positive effect of BITs on FDI, Aisbett (2009) finds that the strong correlation between BIT adoption and FDI outflows disappears when endogeneity is controlled for). In addition, we control for endogeneity that may arise due to time-varying country specific unobservables and augment our model by country- and time-effects (i.e. γ_{it} and η_{jt}), similar to the multilateral resistance terms in theoretically motivated gravity models.

4.3   Empirical strategy

Our main objective in our empirical analysis is first to establish the impact of BITs on FDI outflows and then examine the impact of domestic legal institutions and their interaction with BITs. In the first part of our empirical strategy we try to establish the robustness of the BITs to the inclusion of a large number of explanatory variables. We group these explanatory variables as macroeconomic factors and unilateral liberalization in host countries. Among macroeconomic factors we control for real GDP per capita income, GDP growth and inflation rates. As most emerging market countries went through structural reform processes during the sample period, the macroeconomic fundamentals improved in the 1990s during the surge in FDI flows. The FDI literature (e.g. Head and Ries, 2008; Eaton and Tamura, 1994; Chakrabarti, 2001) shows that FDI is attracted to host countries with higher per capita income and growth rates. In contrast, high level of inflation is a sign for instability of the domestic economy and a source of uncertainty for future returns to investment. In short, we would expect to have positive correlation between FDI outflows and host country income and growth rates and negative correlation with inflation rates. Finally we use log of the level of imports to proxy for information sharing and bilateral trust. Lane and Milesi-Ferretti (2004) show in a theoretical model (log of) imports can perfectly capture the impact of transport costs and consumer preferences on bilateral equity holdings and use bilateral trade to proxy for information sharing that can reduce financial frictions in their empirical analysis. Bilateral trade flows can also be a proxy for bilateral trust between countries. Guiso, Sapienza and Zingales (2009) show that higher bilateral trust between two countries is associated with more trade between the countries. In addition, this effect is stronger for more trust intensive goods. If trust is established between two countries through trade flows, it is more likely that other types of capital flows also follow.

The next step is to isolate the effect of unilateral liberalization that might have an effect on FDI environment from the marginal effect of BITs. First, to control for de jure financial openness of the host country we use the Chinn-Ito (2008) index of capital account openness: the index ranges between 2.5 (most financially open) to -1.84 (least financially open)[20]. As emerging market economies all went through capital account liberalization in the 1990s, it is important to control for unilateral capital account liberalization in the host country. Another control that is used to account for liberalization in the host economy is the process of privatization. As several transition economies went through large privatization projects in the 1990s, the sale of state-owned assets provided an opportunity to attract large sums of FDI inflows as well as signalling a transition to market economy. We use the log of privatization proceeds in USD to isolate the effect of privatization from the effect of BITs. Next we introduce a dummy that takes on the value of 1 if the source and host country have signed a regional trade agreement. Several EU member states have signed BITs around the time of signature of regional trade agreements, for e.g. with Chile (2002) and Mexico (2000). In the case of EU-Chile and EU-Mexico Association Agreements, the regional trade agreements not only liberalized trade in goods but also trade and FDI in services, movement of capital flows and strengthened the protection of intellectual property rights[21]. Finally we use an index of political liberalization that ranges between -10 (autocracies) to +10 (consolidated democracies) to control for the effect of democratization.

In the second part, we isolate the effect of domestic legal institutions with respect to property rights from the marginal effect of BITs on FDI. First we investigate whether countries with weak legal protection for property rights attract more or less FDI flows. Here we use the legal origin as a proxy for the quality of legal institutions and property rights of the host country as developed by La Porta et al (2005) and identify countries as Common, French and German civil law countries (Table 2)[22]. Theoretically, the effect of weak legal institutions on FDI may be either positive or negative as outlined in section 3. Second, we examine the effect of sharing common legal origin as institutional similarity may have a positive effect on FDI flows as well as equity holdings (Lane and Milesi-Ferretti 2008). Finally, we investigate whether BITs substitute for weak domestic legal protection of property rights or not.

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[20] The Chinn-Ito index codifies the tabulation of restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).

[21] Similar to NAFTA, these free trade agreements did not just liberalize trade but also investment, public procurement and trade in services.

[22] There are no Scandinavian civil law origin developing countries.

5   Results

5.1   Bilateral investment treaties and FDI

In the first part of our empirical analysis we find a robust and positive effect between BITs and FDI outflows from developed to emerging market economies. In Tables 3-5 we estimate several different specification of our baseline specification (in Table 3 column 1) with a fixed-effects estimator. As in standard gravity models we augment our model by including several host country specific variables as well as country-pair specific variables controlling for macroeconomic variables and unilateral liberalization policies that may affect FDI flows. Variables that are commonly used to control for information costs and information frictions such as bilateral distance, sharing a common language and common border are captured by the country-pair fixed-effects. We also augment our baseline specification to include source-country time dummies to control for endogeneity that may arise from time-varying source-country heterogeneity[23]. In Table 3 columns 2-4 we introduce real GDP per capita, GDP growth and inflation rate individually and all together in column 5. The coefficient of the BIT dummy ranges from 0.27 to 0.41 corresponding to an average treatment effect (ATE) of 31 percent to 51 percent increase in average FDI outflows after a BIT enters into force. The size variables real GDP and market capitalization of the host are statistically significant except when GDP per capita is included in the specification. GDP per capita, growth and inflation rates are not significant determinants of FDI outflows, however BIT dummy is robust to their inclusion in the model.

In Table 4 column 1-5 we isolate the effect of several measures of unilateral liberalizations that might have an impact on FDI flows. As discussed above financial liberalization index measures the capital account openness of the host country and a priori we expect this variable to have a positive impact on FDI inflows. With the exception of democratization index, privatization, regional trade agreements and log of imports are expected to be positively correlated with FDI. The theoretical impact of democratic institutions on FDI is ambiguous. On the one hand democratic institutions may encourage FDI as they lower the risk of discretionary policies, such as expropriation or contract repudiation (Li 2009). On the other hand, FDI investors may prefer autocratic host countries as they may find it easier to collect their oligopolistic or monopolistic rents (Li and Resnick 2003)[24]. Again the most important result in Table 4 is that BIT dummy is statistically significant and robust to the inclusion of all these policy liberalization variables with ATE ranging from 28 to 32 percent. Among the unilateral liberalization variables, only privatization and trade have a statistically significant and positive effect on FDI. The marginal effect of BIT is

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[23] Using source-country time dummies can control for several source-country characteristics that may have an impact on FDI outflows such as changes in exchange and interest rates. These dummies also bring our model closer to a theoretically motivated gravity model as per Anderson and van Wincoop (2003) by including multilateral resistance terms.

[24] Asiedu and Lien (2010) show in an empirical study that when natural resource endowment of the host country is less than a critical threshold, democracy encourages FDI, otherwise democracy decreases FDI in natural resource rich countries.

statistically significant and positive even when we control for large privatization periods and trade flows.

In Table 5 we test the sensitivity of the coefficient of the BIT dummy to a subsample of host countries and their BITs. For example, several host countries in our sample (Czech Republic, Hungary, Poland, Bulgaria, Slovakia, Slovenia and Romania) have become a member of the European Union, a process that required these countries to align their laws with the EU acquis in order to achieve removal of regulatory barriers and join the single market. Before these countries joined the EU, several old EU member states, US and other developed countries have signed BITs with the new EU member states that are still in force. In Table 5 column 1 we introduce a EU membership dummy variable as well as an interaction term to control for the conditional impact of a BIT given that the host country is a EU member. Our results indicate that EU membership is not a statistically significant determinant of FDI in our sample and BIT dummy is robust to the inclusion of the EU dummy. Several host countries in our sample are also OECD members and that might have an impact on FDI attractiveness of these countries. It is interesting to note that several recent OECD members (e.g. Czech Republic (1995) Hungary (1996) Korea (1996) Mexico (1994) Poland (1996) Slovak Republic (2000)) continued to sign BITs after signing the Convention on the OECD. In column 2 we examine whether our results are driven by the smaller group of OECD-member emerging market countries and their BITs with other OECD members. There is no evidence in our sample that our previous results are driven by these host countries in our sample. Finally we introduce a US dummy variable and an interaction term of BIT signed by the US to control for the potential FDI liberalizing effect of US BITs as discussed above. We do not find any evidence that US BITs have any effect on FDI[25]. Again we find that the BIT dummy is statistically significant and its economic significance is robust to these sensitivity checks.

As a final robustness test, we introduce both source country and host country-time dummies, much as the multilateral resistance terms in theoretically motivated gravity models. Hence in Table 6 column 1 we regress log of average FDI outflows on the BIT dummy variable, bilateral fixed effects and source- and host-time dummy variables. According to theory, only when time-varying heterogeneity is controlled for, as well as bilateral fixed-effects, we can obtain an unbiased ATE of the BIT dummy. Our results indicate that controlling for potential endogeneity that may arise due to time-invariant and time-varying heterogeneity (including real GDPs), BIT dummy has a statistically significant ATE indicating that signing a BIT increases FDI outflows by 30 percent (e $^{0.26}$ -1= 1.30). This estimate is not much different than our baseline estimate in Table 3 column 1. In column 2, we introduce a lagged BIT dummy to control for anticipation effects: even though BITs do not have a 'phasing in' period like the free trade agreements, there is a lag between the time BITs are signed and the time they enter actually into force. The anticipation effect is statistically significant and negative (-0.45) indicating that the foreign investors have been disinvesting before the BIT comes into force. However, once the BIT is in force there is a strong positive effect (0.65) on FDI inflows. The total ATE of the BIT is the sum of statistically significant coefficients, i.e. 0.20 (0.65-0.45).

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[25] The US dummy is excluded from the regression model due to collinearity.

5.2 Domestic legal institutions, BIT and FDI

As discussed in detail in the theoretical part, in this part of our empirical analysis we rely on the literature on law and finance to determine the strength of private property rights in the host country. In order to examine the role played by domestic legal institutions, especially laws that protect and enforce private property rights, we estimate the baseline model controlling legal origin of the host country. As the law and finance literature suggests British common law was developed essentially as a law of property rights and offers relatively the strongest protection of shareholder rights. On the other hand, French civil law offers both the least institutional protection and enforcement of these rights. German and Scandinavian civil laws offer the best enforcement, however in terms of property rights they fall in between common and French civil law.

As a first step in Table 7 columns 1-3, we examine whether sharing a common legal origin has an impact on FDI (i.e. Common vs French and vs German civil law), have any impact[26]. Since legal origin of the host country is time-invariant we estimate an augmented version of our baseline model using the random-effects estimator[27]. Our results indicate that there is a positive effect of sharing a common legal origin among French civil law countries: sharing French civil law origin increases investment by ($e^{0.45}$-1) 57 percent in French civil law emerging economies by e.g. France, Italy, Netherlands, Belgium, Spain and Portugal. This effect is independent of the average treatment effect of a BIT, that remains robust to the inclusion of legal origin dummy.

In Table 8, we address the question whether BITs are substitute for weak property rights. Hallward-Dremeier (2003) argues that BITs are not substitutes but complements for good institutional quality and local property rights. If indeed BITs are complements for strong property rights, we would expect to see a positive impact of both BITs and domestic legal systems. On the other hand, if BITs substitute for weak property rights we would expect to see a statistically insignificant impact of BIT on FDI when property rights are controlled for. As Hallward-Dreimeier (2003) argues developing countries sign BITs to make up for poor quality of institutions. If this is indeed the rationale behind signing BITs, then we would expect that the correct marginal effect of BIT should be the sum of the coefficient for BIT dummy and the coefficient for an interaction term with legal origin (i.e. $\delta+\lambda$). Similarly, the marginal effect of domestic property rights is the sum of the coefficient of the legal origin dummy and the coefficient of the interaction term (i.e. $\lambda+\varphi$) as below.

$$\ln(FDI)_{ijt} = \alpha_{ij} + \delta BIT_{ijt} + \lambda BIT_{ijt}*legalorigin_j + \varphi legalorigin_j + \beta X_{jt} + t_t + \eta_{jt} + e_{ijt} \qquad (2)$$

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[26] We also examined whether the strength of protection of private property rights of the host country, as given by its legal origin have an impact on its FDI attractiveness. We did not find any statistically significant effect of common or civil law on FDI. Hence our results do not support that countries with weak property rights (i.e. countries with civil law origin) attract more (or less) FDI flows.

[27] We also estimated the same specifications using fixed-effects with vector decomposition estimator of Plumper and Troeger (2007) both on averaged and non-averaged FDI dataset. The BIT dummy is the only statistically significant variable in these specifications.

Our results indicate that domestic legal origin and hence local property rights do not have a statistically significant effect on FDI outflows from developed countries. There is also no support for the argument that BITs are signed by host countries with weak legal protection for property rights. On the other hand, controlling for domestic laws, only in civil law host countries (both French and German) BIT have a significant effect on FDI flows. This may be interpreted as BITs encouraging FDI outflows to mainly civil law countries. For host countries with common law, there is no evidence that BITs increase FDI. In these countries, FDI is mainly attracted to larger domestic and financial market size. Overall, there is no evidence in our sample that domestic legal institutions have a significant impact on FDI outflows from OECD countries. On the other hand sharing a common legal origin increases FDI outflows only for French civil law countries. Finally we re-ran all the regressions in this section using share of FDI in total capital flows as a dependent variable and all our results remain qualitatively the same.

5.3 FDI and legal governance: Robustness checks

In the previous section we examined the relationship between FDI and domestic legal institutions as identified by the legal origin of the host country. In this section, we revert to the effects of legal governance on FDI: in other words we isolate the effect of governance from institutions. We define legal governance as the quality with which laws are enforced in the host country. La Porta et al (1996) argue that legal rules are only one element of investor protection and the enforcement of these rules can be equally important, and may even substitute for weak rules. There is now extensive literature examining the impact of institutional quality on development and long-run growth (see for e.g. Acemoglu et al 2004), and a small but an increasing number of studies relating institutional quality to international capital flows (e.g. Alfaro et al 2008). There are several measures of institutional quality available for a large set of developing countries. In this section we aim to isolate the effect of legal governance using proxies for the quality of enforcement of legal rights.

In Table 9, we introduce several indices that measure the perceptions of investors on the quality of legal enforcement in the host country. As several of these indices are correlated with other variables, notably macroeconomic fundamentals, we introduce these variables in the specification used in Table 6 column 1. Column 1 in Table 9 reproduced the results from Table 6 and in subsequent columns we add our legal governance control variables. In column 2, we use an index of property rights that measure the degree to which a host country's laws protect property right and the degree to which they are enforced. The index ranges from 0-10, 0 meaning private property is outlawed and 10 stands for private property guaranteed by the government[28]. We find that property rights enforcement is not a significant determinant of FDI and controlling for this channel the average treatment effect of the BIT dummy becomes statistically and economically more significant (0.31).

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[28] This index is one of the subcomponents of the Economic Freedom index of the Heritage Foundation.

In order to refine our robustness test and to isolate the channels through which BITs works, we introduce an index of shareholder rights, as a more precise measure of expropriation risk by management. This index that ranges between 0-10 indicates that at lower values shareholder rights are poorly implemented and strongly implemented when the index increases[29]. Again, our results confirm that host country law, especially those that protect the rights of the shareholder and their enforcement do not seem to matter for the FDI investor. Holding shareholder risk constant, we find that BITs are still positively correlated with FDI: after signing a BIT, FDI increases by 0.65 percent (e $^{0.50}$- 1). Hence we rule out that BITs are a substitute for domestic property rights, nor are they complements.

Next we test whether BITs are a substitute for sovereign expropriation risk. In column 3 we introduce an index of sovereign risk using Standard & Poor's Sovereign Ratings measuring a central government's willingness and ability to service commercial financial obligations on a timely basis. This index is introduced to isolate the risk of a sovereign debt default from sovereign expropriation risk. Our results indicate, even when we control for sovereign default risk BIT dummy remains significant indicating that BITs continue to protect against expropriation risk. On the other hand, sovereign risk is a significant determinant of FDI outflows, indicating that countries with better risk ratings receive more FDI.

In columns 4-5 we control for rule of law and the risk of expropriation (of outright nationalization) in the host country. These two indices control for legal governance and enforcement of rules in the host country. We find that when we control for these variables BIT dummy is no longer statistically significant. The rule of law data is from Kaufmann et al (2010)- The Worldwide Governance Indicators project and measures perceptions of agents in particular the quality of contract enforcement in the host country, ranging from -2.5 (weak) to 2.5 (strong) governance performance. The risk of expropriation data are from PRS Group International Country Risk Guide and it measures the legal security of private ownership rights, i.e. risk of confiscation. The statistically robust and significant impact of BIT dummy on FDI outflows no longer holds true when we control for expropriation risk and rule of law. This result is striking as it indicates that indeed BITs are signed to protect against expropriation risk and that controlling for rule of law and the risk of confiscation BITs do not have any statistically significant effect on FDI flows. In other words the strong ATE of the BIT dummy on FDI outflows was due to the correlation between the two variables and rule of law, hence it is spurious.

Prior evidence indicating strong statistical and empirical treatment effect of BITs is in contradiction with the survey-based evidence as to the lack of knowledge about BITs among investors. It is also surprising that several other insurance instruments such as MIGA and private political risk insurance co-exist with BITs. According to Poulsen (2010) most capital-exporting countries provide political risk insurance in addition to BITs, with the exception of a few e.g. Germany and France where government guarantee is contingent on signature of a BIT. In addition, only a few private

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[29] This index is from IMD World Competitiveness Yearbook and is based on executive surveys.

providers factor BITs into their product. Hence we interpret our results as BITs providing less-than-perfect protection for sovereign expropriation risk.

6   Conclusions

In this paper we examine the role of law on foreign direct investment. Foreign direct investment has become a significant source of external finance for developing countries, especially for several emerging market economies. Understanding the role played by legal institutions and governance in attracting international capital flows can be significant for the future growth prospects of these countries through further financial integration.

This paper analyzes both the impact of international and domestic investment law on FDI. As a strong domestic law and its enforcement are indispensible to the financial development of a country, international investment law that protects the foreign investor against discretionary policies, e.g. expropriation, of a developing country host government is necessary for its financial integration. In addition to this, international investment law and domestic commercial laws are connected as the international investment law refers the foreign investor to the domestic laws of the host country in case of expropriation. In the absence of a multilateral investment agreement, several developed countries demand that developing countries sign bilateral investment agreements.

Our results indicate that FDI investor is indifferent to local property rights. This is because FDI investor can alleviate the post-establishment expropriation risk by the affiliate as FDI combines ownership with control, i.e. majority ownership of the foreign affiliate can effectively mitigate the risk of ex-post expropriation by management of the affiliate. On the other hand, FDI investor remains exposed to risk of expropriation by the host government and is strongly sensitive to the rule (enforcement) of law in the host country. We conclude that BITs are not a substitute for weak property rights but for sovereign expropriation risk. In addition, BITs have a strong and robust positive effect on FDI outflows to civil law countries but not to common law countries. This result supports our argument that BITs are signed to protect against expropriation risk as civil law historically developed to give more power to the state rather than protecting property rights of the individual.

Our results have significant implications for both literature and policy. As mentioned earlier while BITs liberalize FDI inflows and outflows in the post-establishment period, they restrict host states' sovereign right to impose capital controls and hence have an indirect effect on liberalization of capital flows related to FDI. On the other hand, few BITs provide market access, e.g. the recent US and Canada BITs, to foreign investors but there is no evidence in our analysis that this type of BIT encourage FDI outflows more so than others. Given that there are large regulatory barriers to FDI in developing countries and high risk of expropriation, the adverse effect of BITs on governance of international capital flows, i.e. FDI, is limited. This study contributes to the literature on institutions and international capital markets, as well as several others, and shows that it is not domestic legal institutions that explain lower than predicted levels of international capital flows to developing countries but it is their enforcement, hence it is governance that matters.

List of countries

Developed countries: Australia, Austria, Belgium-Luxembourg, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK and US.

Developing countries: Argentina, Brazil, Bulgaria, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Morocco, Philippines, Poland, Russia, Romania, Slovenia, Slovak Republic, South Africa, Thailand and Turkey.

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Tables and Figures

Figure 1 Global FDI Inflows and Bilateral Investment Treaties (1970-2008)
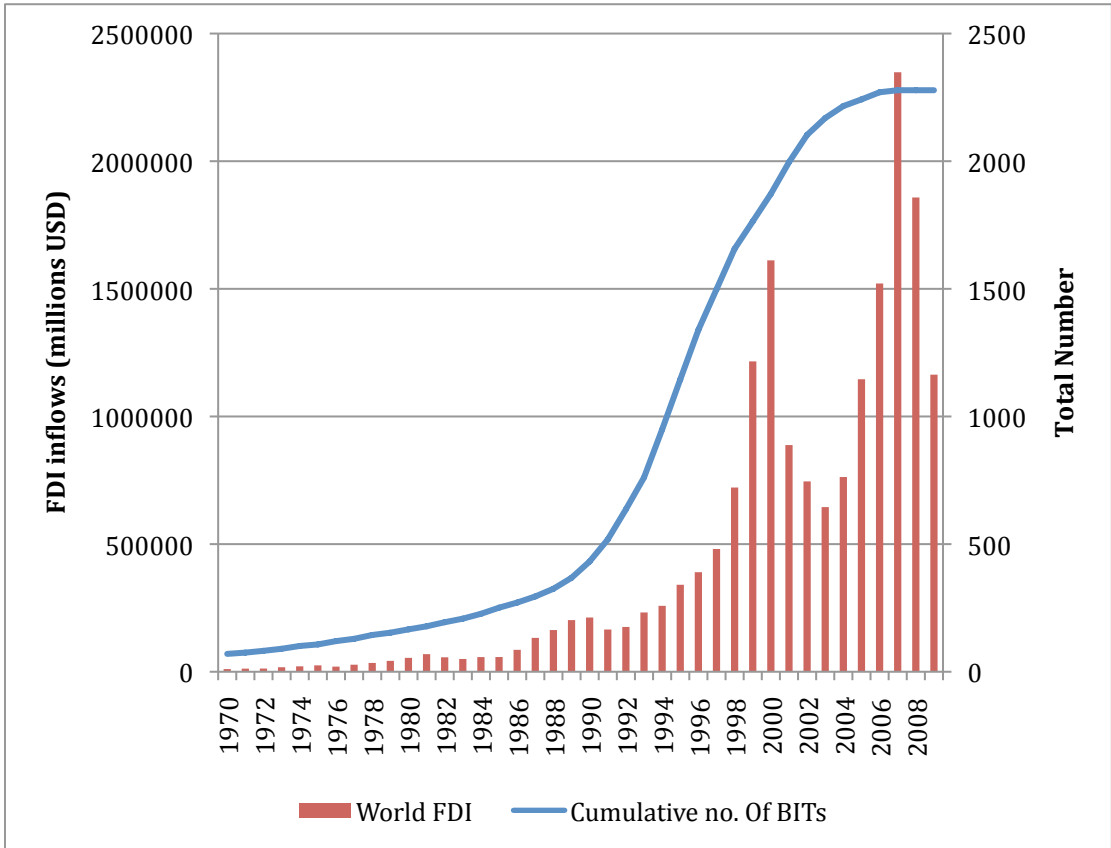
Table 1 US foreign affiliates in sample development countries (2008)

	All	Majority-owned
Czech Republic	163	159
Hungary	171	165
Poland	219	211
Russia	146	135
Turkey	115	99
Bulgaria	12	10
Romania	55	53
Slovakia	53	51
Slovenia	14	14
Argentina	263	244
Brazil	609	568
Chile	170	151
Colombia	122	110
Mexico	970	883
Egypt	58	50
South Africa	214	200
Morocco	26	23
China	947	868
India	310	267
Indonesia	165	154
Korea	303	270
Malaysia	220	206
Philippines	150	134
Thailand	222	200

Source: US BEA

Table 2 Cumulative number of BITs and FDI stocks (end 2007)

	BITs	FDI Inward	FDI Outward
Common Law			
Australia	20	508.1	402.2
India	61	197.9	92.4
Malaysia	67	101.3	96.7
New Zealand	4	70.1	17.6
South Africa	41	132.4	81.1
Thailand	42	127.3	25.4
UK	102	1086.1	1689.3
US	48	3451.4	4843.3
Total		5674.6	7248
French Law origin			
Argentina	56	86.7	29.8
Belgium	77	351.5	736.7
Brazil	15	472.6	180.9
Chile	53	139.5	49.8
Colombia	6	82.4	22.7
Egypt	91	73	5.4
France	103	1008.4	1523
Indonesia	44	121.5	1.7
Italy	83	337.4	475.6
Mexico	23	327.2	66.2
Netherlands	105	589.8	890.2
Philippines	29	24.9	6.6
Portugal	45	110.2	64.3
Spain	61	614.5	660.1
Turkey	73	181.9	23.8
Romania	84	70	1.5
Russia	50	423.1	433.7
Total		5014.6	5172
German Law origin			
Austria	65	155.9	169.7
Germany	147	674.2	1421
Japan	11	214.9	831
South Korea	68	127	139
Switzerland	127	539	909.4
China	90	578.8	297.6
Czech Republic	79	129.9	15.5
Hungary	58	91.9	20.7
Poland	62	193.1	36.8
Bulgaria	54	47.9	1.5
Slovak Rep	40	50.7	2.8
Slovenia	36	15	7.6
Total		2818.3	3852.6
Scandinavian			
Finland	62	82.7	130.6
Denmark	43	139.2	194.9
Norway	16	171.8	170.5
Sweden	66	348.7	336
World		19140.6	20408.3
Developing	2278	5951.2	3131.8

Source: ICSID, UNCTAD, FDI stocks (in billion USD)

Table 3 Average Treatment Effect of Bilateral Investment Treaties on Bilateral FDI outflows Panel Fixed Effects with source country- time dummies

	I	II	III	IV	V
ln GDP $_{jt}$	0.73 (0.19)***	-0.90 (1.36)	0.87 (0.22)***	0.85 (0.21)***	0.66 (1.50)
ln market capitalization	0.15 (0.05)***	0.10 (0.06)	0.14 (0.06)***	0.13 (0.05)**	0.12 (0.07)
BIT $_{ijt}$	0.27 (0.13)**	0.29 (0.13)**	0.37 (0.14)***	0.31 (0.14)**	0.41 (0.15)***
ln GDP per capita $_{jt}$		1.64 (1.35)			0.27 (1.47)
ln(growth) $_{jt}$			0.02 (0.07)		-0.01 (0.08)
ln(inflation) $_{jt}$				-0.02 (0.05)	-0.03 (0.05)
Within R^2	0.44	0.45	0.43	0.45	0.44
N	1161	1161	1079	1133	1051
F value	13.51 (0.00)	14.30 (0.00)	2995.53 (0.00)	13.60 (0.00)	84.03 (0.00)
Time dummies	Yes	Yes	Yes	Yes	Yes
Source country-time dummies	Yes	Yes	Yes	Yes	Yes

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient. Robust standard errors in parenthesis.

Table 4 BITs and Unilateral FDI reform process

	I	II	III	IV	V
ln GDP $_{jt}$	0.71	0.48	0.72	0.73	0.43
	(0.20)***	(0.24)**	(0.19)***	(0.19)***	(0.21)**
ln market capitalization	0.15	0.18	0.15	0.15	0.13
	(0.05)***	(0.05)***	(0.05)***	(0.05)***	(0.05)***
BIT $_{ijt}$	0.27	0.25	0.27	0.28	0.28
	(0.13)**	(0.14)*	(0.14)**	(0.13)**	(0.13)**
Financial openness	0.04				
	(0.05)				
ln(privatization) $_{jt}$		0.10			
		(0.04)***			
POLITY			-0.01		
			(0.02)		
RTA $_{ijt}$				-0.09	
				(0.14)	
Ln(trade) $_{ijt}$					0.50
					(0.16)***
Within R^2	0.42	0.46	0.45	0.45	0.45
N	1148	1072	1161	1161	1150
F value	78.66	12.55	13.66	13.29	13.06
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Time dummies	Yes	Yes	Yes	Yes	Yes

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient. Robust standard errors in parenthesis.

Table 5 Sensitivity to sub-samples

	I	II	III
Ln GDP $_{jt}$	0.78	0.74	0.73
	(0.20)***	(0.19)***	(0.20)***
ln market capitalization	0.11	0.14	0.15
	(0.06)*	(0.05)***	(0.05)***
BIT	0.28	0.28	0.27
	(0.13)**	(0.13)**	(0.13)**
EU membership	0.44		
	(0.33)		
EU*BIT	-0.12		
	(0.34)		
US*BIT			0.01
			(0.34)
OECD member		0.31	
		(0.26)	
OECD*BIT		0.01	
		(0.28)	
Within R^2	0.45	0.45	0.44
N	1161	1161	1161
F value	13.14	13.70	13.38
	(0.00)	(0.00)	(0.00)
Time dummies	Yes	Yes	Yes

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient.

Table 6 Robustness check-BITs and host-time and source-time controls

	I	II
BIT	0.26	0.65
	(0.14)*	(0.27)**
BIT$_{-1}$		-0.45
		(0.26)*
BIT$_{+1}$		
Source-country *time dummies	Yes	Yes
Host-country*time dummies	Yes	Yes
Bilateral fixed-effects	Yes	Yes
Within R^2	0.57	0.46
N	1241	941

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient.

Table 7 FDI, Host Domestic Legal Institutions and BITs Random effects GLS

	I	II	III	IV	V	VI
ln GDP $_{jt}$	0.71	0.70	0.73	0.71	0.71	0.71
	(0.08)***	(0.08)***	(0.08)***	(0.08)***	(0.08)***	(0.08)***
ln market capitalization	0.16	0.16	0.15	0.15	0.16	0.15
	(0.04)***	(0.04)***	(0.04)***	(0.04)***	(0.04)***	(0.04)***
BIT $_{ijt}$	0.22	0.22	0.22	0.21	0.23	0.21
	(0.11)**	(0.11)**	(0.11)**	(0.11)**	(0.11)**	(0.11)**
Ln(dist)	-0.94	-0.97	-0.98	-0.95	-0.96	-0.92
	(0.08)***	(0.08)***	(0.09)***	(0.08)***	(0.08)***	(0.11)***
Common language	1.17	1.20	1.13	1.21	1.08	1.15
	(0.47)**	(0.44)***	(0.44)***	(0.47)***	(0.42)***	(0.44)***
Common $_j$	-0.12					
	(0.19)					
French $_j$		0.19				
		(0.14)				
German $_j$			-0.12			
			(0.16)			
Common $_{ij}$				-0.17		
				(0.44)		
French $_{ij}$					0.45	
					(0.23)**	
German $_{ij}$						0.26
						(0.31)
Overall adj-R^2	0.60	0.60	0.60	0.60	0.61	0.60
Within	0.44	0.44	0.44	0.44	0.44	0.44
Between	0.65	0.65	0.65	0.65	0.65	0.65
N	1161	1161	1161	1161	1161	1161
F value	11667.2	11752.0	12176.9	10321.0	11781.6	12818.9

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient. Robust standard errors in parenthesis.

Table 8 BIT substitution effect for weak domestic property rights

	RE	RE	RE
ln GDP $_{jt}$	0.70	0.70	0.72
	(0.08)***	(0.08)***	(0.08)***
ln market capitalization	0.16	0.16	0.15
	(0.04)***	(0.04)***	(0.04)***
ln(dist)	-0.95	-0.97	-0.99
	(0.08)***	(0.08)***	(0.09)***
Common language	1.19	1.20	1.14
	(0.44)***	(0.44)***	(0.45)***
BIT $_{ijt}$	0.15	0.25	0.25
	(0.12)	(0.13)*	(0.15***
BIT*Common $_j$	0.28		
	(0.22)		
BIT*French $_j$		-0.05	
		(0.18)	
BIT*German $_j$			-0.12
			(0.21)
Common law $_j$	-0.25		
	(0.34)		
French law $_j$		0.21	
		(0.18)	
German law $_j$			-0.05
			(0.20)
Overall adj-R^2	0.60	0.60	0.60
Within	0.44	0.44	0.44
Between	0.65	0.65	0.65
N	1161	1161	1161
Time dummies	yes	yes	Yes
Source-country time dummies	yes	yes	Yes

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient. Robust standard errors in parenthesis.

Table 9 FDI and legal governance-Panel fixed-effects

	I	II	III	IV	V	VI
BIT $_{ijt}$	0.26 (0.14)*	0.26 (0.15)*	0.31 (0.18)*	0.50 (0.23)**	0.30 (0.19)	0.05 (0.18)
Sovereign risk		0.06 (0.04)*				
Property rights			0.00 (0.01)			
Shareholder rights				81.56 (83.39)		
Rule of law					2.21 (0.55)***	
Expropriation						0.33 (0.17)**
Within R^2	0.57	0.52	0.45	0.46	0.46	0.49
N	1241	1119	916	764	855	830
Source-country *time dummies	yes	yes	yes	yes	yes	yes
Host-country*time dummies	yes	yes	yes	yes	yes	yes
Bilateral FE	yes	yes	yes	yes	yes	yes

*** denotes significance at 1%; ** significant at 5%;* significant at 10%, - non significant coefficient. Robust standard errors in parenthesis.