

The Impact of FDI on Institutions: What Role Do International Investment Agreements Play?

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Abstract

We build our analysis on the emerging literature examining the effect of foreign investment on institutional quality. While recent studies find ambiguous results for a relationship between FDI inflow and institutional development we argue that the institutional arrangement on the international level has to be taken into account when analyzing the effects of foreign investment on local institutions. International investment law in form of International Investment Agreements (IIAs) has the potential to shape the local institutional environment by influencing the behavior of investors and governments. We empirically examine the proposition that the impact of foreign investment on a country's institutions depends on the existence and extend of an IIA. In particular, we estimate the effect of bilateral FDI inflow on the institutional distance between home and host country given a certain degree of foreign investment protection under an IIA. For this purpose, we develop an index measuring the degree of investment protection of 645 IIAs. Our results suggest that bilateral FDI flows decrease the institutional distance between countries when the investment protection by an IIA is low while it increases the institutional distance when investment protection is high.

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1 Introduction

Does an International Investment Agreement (IIA) influence a country's local institutions? An IIA is designed to protect foreign investment in the host country's institutional setting. Thereby, an IIA is a possibility for the host country to provide a reliable commitment to protect foreign investors from expropriation and provide them with secure property rights. Bilateral Investment Treaties (BITs) are the predominant form of IIAs and the most common instrument of international investment protection since the late 1950s, when Germany and Pakistan signed the world's first investment agreement (Yackee, 2008). Since then the number of BITs has constantly increased and reached a total of 2,924 globally in 2016 (United Nations Committee on Trade and Development, 2016). Over the years, investment protection in a multilateral setting, for example investment protection clauses in Regional Trade Agreements (RTAs) and Preferential Trade Agreements (PTAs), has become increasingly popular. In 2016 the United Nations Committee on Trade and Development (UNCTAD) lists 359 IIAs apart from BIT.

By construction, an IIA differentiates between foreign and domestic investors. This paper argues that a discrimination of domestic investment vs. foreign investment interacts with the effect of investment on local institutions. An IIA disincentivizes governments to improve local legislation and foreign investors to urge for legislation that generates a favorable institutional environment. The literature on IIAs, FDI and institutions has so far mainly focused on two aspects: The effect institutions have on the ability of countries to attract and reap the benefits of FDI and the role IIAs play in substituting or complementing local institutions. Only recently studies have begun to acknowledge the bidirectional relationship between local institutions and FDI. These studies examine the effect of FDI on host country institutions and stress the impact multinational enterprises and investors have on political processes. For instance, Mijiyawa (2014) analyzes the effect of FDI inflow on the willingness of governments to conduct property rights reform. He argues that FDI inflows have a positive effect on such reforms and constitute an exogenous shock that changes the political status quo as foreign investment empowers local entrepreneurs and enhances their negotiating power when demanding economic reform. However, the results suggest that FDI has a initially negative effect on the propensity of governments to conduct property rights reform. Only when controlling for the level of constraints on the executive, i.e. the system of rules that is limiting the power of the government such that local entrepreneurs can benefit from the opportunities that FDI offers, the effects turn positive. Another recent study by Demir (2016) examines the impact of FDI on institutional development and

concludes that “the institutional development effects of bilateral FDI flows from developed to developing countries as well as those from developing to other developing countries are not significant” (Demir, 2016, p.353). However, neither the literature on the effects of IIAs on foreign investment nor the literature on FDI and institutions takes into account the effect that the existence of an IIA exerts on foreign investors willingness to push for legal reforms and on governments to provide a favorable institutional environment. An exception is a study by Mazumder (2015), which explains the relationship between BITs and the length of political tenures by the influence of BITs on local institutions. The direct link between IIAs and local institutions, however, remains unexplored. We try to shed light on the role IIAs play in shaping a host countries institutions by empirically examining the proposition that the impact of foreign investment on a country’s local institutions depends on the existence and extend of an IIA. More specifically, this paper estimates the effect of bilateral FDI inflow on the institutional distance between host and home country, i.e the gap between the home and host country’s institutional quality, given a certain level of foreign investment protection under an IIA.

While on first sight the content of IIAs may look very similar a closer look reveals considerable differences. Thus, treating all IIAs uniformly, regardless of the actual protective effect of their provisions, might neglect important features of international investment law. The literature argues that international dispute settlement clauses are a crucial component of IIAs as they provide a way to sanction deviating behavior, determine the credibility of legal promises and allow investors to enforce their rights independent of the local level of rule of law (Allee and Peinhardt, 2010, Berger et al., 2013, Yackee, 2008). Based on this argumentation the analysis takes the degree to which IIAs allow for international dispute settlement as an indicator for the intensity of investment protection under an IIA. International dispute settlement constitutes the most distinguish feature of IIAs discriminating between local and foreign investment. While foreign investors have access to international dispute settlement local investors have to rely on the local judiciary. We classify IIAs regarding the degree to which they allow for access to international arbitration where foreign investors can enforce their rights independent of the host country’s legal system.

The paper proceeds as follows. Section 2 presents theoretical arguments for a relationship between IIAs, FDI and local institutions. Section 3 gives an overview of the existing investment protection provisions in IIAs and develops a classification. Section 4 outlines the econometric estimation strategy while Section 5 describes the data. Section 6 presents the empirical results. Section 7 tests the robustness of the results while Section 8 concludes.

2 International Investment Agreements and Local Investment Protection

Local authorities and their legislative behavior is influenced by multinational enterprises and foreign investors. Early research goes back to Poynter (1985) who analyzes strategic behavior of multinational firms towards host country governments. Newer research has shown that foreign firms indeed influence the policies of host country governments. For example, Libman (2006) examines government-business relations in Russia, Kazakhstan and Ukraine and concludes that foreign firms had a considerable impact on institutional reforms during the transition process from a centrally planned to a market economy. In an analysis on the effect of FDI on institutions in China, Long et al. (2015) show that foreign investors behave strategically to affect local legislation. Ali et al. (2011) examine data for 70 developing countries between 1981 and 2005 and find a positive and significant relationship between FDI and property rights. These studies support the view that foreign investment has an effect on local institutions by influencing the political process. Three main theoretical arguments can be found in the literature on FDI that back-up the proposition that investment activities affect local institutions.

First, foreign investment has the potential to alter the political situation in a country by empowering local entrepreneurs vis-à-vis the ruling elite. For example, Mijiyawa (2014) argues that in many developing countries low legal protection enables a small elite to extract economic rents from the majority of entrepreneurs and investors. This can change to some extent when significant FDI inflows occur. FDI inflow can improve the political power of local entrepreneurs who wish to change the status quo and to reform legislation. For instance, FDI can improve the economic power of local firms through a positive effect on productivity. Such economic benefits give local firms a stronger bargaining power when demanding better legislation and investment protection. In addition, FDI inflows lead to spill-over effects which provide local firms with know-how on regulatory issues, knowledge on how to effectively lobby for economic reform and on how to represent their interests.

Second, given the investors' long-term interest involved in FDI, foreign investors have an incentive to push for economic reforms which secure their investment when faced with poor institutional quality. Compared to domestic firms, multinational enterprises have more resources, experience and know-how which they can use to influence local legislation. Following Ali et al. (2011), this mechanism can be described as the "demand linkage" for better local institutions. In this process IIAs can play an important role. This is the case because of the different treatment of foreign investors vs. local investors un-

der an IIA. For example, while foreign firms have access to independent courts through a international dispute settlement mechanism, host country firms have to rely on the quality of the local judiciary. This differentiation lowers the interest of foreign investors to push for legal reform as they already enjoy more favorable investment conditions, property right protection, and access to independent courts. In a situation in which foreign investment is protected under an IIA, investors do not see the need to advocate general reforms that would improve the institutional environment for foreign as well as domestic firms. If their investment is protected under international law the incentives for investors to lobby for local reform is limited. This effect weakens the positive influence of FDI on the institutional quality of the host country.

Third, next to the demand linkage for better institutions, FDI and institutions are linked by the incentives for governments to “supply” a better institutional environment. A comprehensive stream of literature has thoroughly investigated the effects of FDI on a host country’s economy. Most studies associate FDI inflow with positive effects, like knowledge spill-overs, transfer of technology, acquisition of management know-how, and job creation. In addition, FDI provides benefits to local authorities which go beyond the direct effects on the economy. Foreign investment generates tax revenues or might lead to favorable treatment of regional authorities by the central government when distributing common resources (Dang, 2013). The increased awareness of potential positive effects of FDI has created a shift of FDI policy towards measures intended to attract FDI. This has also increased the international competition for foreign investment (United Nations Committee on Trade and Development, 2004). Different effects on government policies can result from such competition. On the one hand, increased competition has raised the concern that governments will engage in a “race to the bottom”, lowering environmental and labor standards in order to attract foreign investment (Oman, 2000). On the other hand, such competition can also create incentives for countries to improve their institutional environment in order to attract FDI, for example by strengthening property right legislation and fighting corruption. In other words, countries might compete for foreign investment by providing a better institutional environment. This raises the question how IIAs interact with this effect. Given the legal protection of foreign investment provided by an IIA, host country governments face a situation in which competing for FDI through better domestic institutions does not work. For instance, if property rights are already secured on an international level better legislation on the national level cannot attract more FDI. Likewise, when the enforcement of contracts depends on independent dispute settlement instead on bribing a local judge, the government’s incentive to fight corruption in order to attract foreign investors is limited.

The three arguments outlined here imply an interesting interaction of FDI and IIAs on the changes in the institutional quality of the host country. While FDI *per se* can be expected to improve the quality of institutions, IIAs may limit this positive effect. In other words, an IIA may reduce the FDI effects on domestic institutions. However, there is hardly any evidence of the described interactions between IIAs and FDI. Our paper aims to provide a contribution that helps to close this gap.

3 Classification of Investment Agreements

In this section, we develop a measure for the protection intensity of an IIA that can later be used to test the hypothesis that international investment protection indeed dampens the effect of FDI on local institutions. Before describing this measure we consider the structure of IIAs and their role in foreign investment.

All IIAs have several elements in common. The preamble does not include explicit legal provisions but it contains information about the intentions and objectives behind the agreements. For instance, while in older BITs the contracting parties only express their mutual will to intensify economic cooperation and to create favorable investment conditions more recent agreements also contain references to environmental and labor standards (Perkams, 2011). In most agreements paragraphs follow which contain legal definitions of key terms. Investment is usually defined as “every kind of asset” and refers to a broader concept including portfolio and direct investment. Moreover, most agreements include National Treatment clauses (NT) which stipulate that foreign investors have to be treated “no less favorable” than domestic investors. Kuijper et al. (2014) note that in practice this does not necessarily imply an equal treatment of foreign and domestic investors. Foreign investment might be treated differently as long as the government creates no disadvantages for the foreign investor. While NT defines the treatment of foreign investors in comparison with national investors Most-Favoured-Nation treatment (MFN) defines the standard of treatment in comparison to other foreign investors. MFN treatment requires the host country to treat all foreign investors equally. Thereby, MFN provisions create a equal stand for all foreign investors and ensure that the rights one foreign investor enjoys are also granted to all other foreign investors. Furthermore, an important part of IIAs is given by their provision on expropriation of foreign investment. In most cases expropriation is considered to be legal if it is conducted under certain conditions outlined in the IIA. Those conditions require that a expropriation has to be non-discriminatory, legitimated by a public interest, and followed by a compensation (Sasse, 2011).¹ Important differences

¹According to the “Hull formula” compensation has to follow within a reasonable time,

in IIAs exist in the scope of their application with regard to the pre- and post-establishment phase. Investment protection in IIAs is usually only granted for the post-establishment phase, i.e. the time after an investment has been established. Some IIAs, however, extend the scope of its provisions to the time before the investment is realized (pre-establishment phase). The idea behind a greater scope of application is less based on consideration on investment protection, the extension to the pre-establishment phase is rather a tool for investment liberalization and facilitates the access of investment to the host country.

An essential part of IIAs are their provision on international dispute settlement. Investor-state dispute settlement provisions entitle an investor to take legal action against host country authorities in courts independent from the local judiciary (Büthe and Milner, 2008). Allee and Peinhardt (2010) claim that investor-state dispute settlement clauses provide the pivotal legal characteristic of IIAs as they constitute an enforcement mechanism on which the credibility of all legal instruments, included in IIAs, depend. An IIA which allows for international dispute settlement provides a mechanism that obliges governments not to pursue discriminatory or discretionary acts against foreign investors. The functions that IIAs serve, like providing protection against expropriation, crucially depend on the strength of provisions regarding international dispute settlement (Berger et al., 2013). In the development of a measure of investment protection in IIAs we thus focus on the provisions on international dispute settlement. Two arguments can be raised to justify this approach: First, international dispute settlement allows investors to enforce their rights independent of the local level of rule of law. Second, investment dispute arbitration on independent international courts provides a credible commitment for host country governments not to violate investor rights as the loss of reputation, when found guilty of violating a treaty, is visible for other international investors. Thus, it can be argued that IIAs that grant extensive access to independent international courts provide a higher degree of protection intensity compared to agreements with weak international dispute settlement provisions. Following this argument, the extent to which investors have an incentive to push for general reforms in the field of property rights and contract enforcement depends on the existence and extent of an IIA's dispute settlement provision.

In order to classify IIAs we take into account the differences between provisions which concern the settlement of disputes between states and provisions which concern the settlement of disputes between an investor and a state. State-state dispute settlement provisions provide only an indirect form for investors to defend their interests as they cannot directly sue host country authorities.

consist of an adequate amount (often related to the market value of the investment), and has to be paid in directly convertible currency.

However, in some cases states might act on behalf of investors and their interests might be represent through home state officials offering diplomatic protection (Sasse, 2011). By contrast, investor-state dispute settlement allow investors to take direct legal action against governments when contract violations occur. With respect to the investor-state dispute settlement we can further differentiate between arbitration conducted by formal international institutions and *ad hoc* arbitration (Leshner and Miroudot, 2006). Dispute settlement by formal international institutions describes a standing dispute settlement mechanism, such as the International Centre for the Settlement of Investment Disputes (ICSID) or the Court of Arbitration of the International Chamber of Commerce (ICC) that provide assistance in the arbitration process and a set of rules to proceed arbitration. In contrast, *ad hoc* arbitration is characterized by an process in which investors and states have to agree, on a case by case basis, on all modalities, including the judges and the procedure of the arbitration, themselves (Zhang and Uva, 2015). It can be argued that treaties with an *ad hoc* dispute settlement have a weaker protection intensity then treaties which allow for dispute settlement by an international institution.

Similar to the methodology by Leshner and Miroudot (2006), who develop an index of the protection intensity of RTAs, we create a variable for the depth and extent of dispute settlement provisions in IIAs. Our measure ranges from 0 to 4.5 with a higher value indicating a higher protection intensity. The score is obtained by the sum of the different number of provisions in an IIA. For example, agreements which include both state-state and investor-state dispute settlement get higher values than agreements only including state-state dispute settlement. Also, treaties which include binding state-state dispute settlement are weighted stronger as treaties with non-binding state-state dispute settlement. Agreements which stipulate investor-state dispute settlement by international institutions take higher values compared to agreements with *ad hoc* investor-state dispute settlement. We assign points to the investment provisions by coding them on a zero-to-one scale (where 1 indicates the presence of a provision and 0 its absence). As an exception, agreements with *ad hoc* investor-state dispute settlement have been weighted by 0.5 in order to indicate their relatively lower protection intensity compared to investor-state dispute settlement by international institutions. The score of the index is the sum of the points assigned as follows:

- 1 if the countries involved in bilateral FDI have signed a BIT or are member countries of another form of IIA, 0 if they are not,
- 1 if the countries involved in bilateral FDI have signed a BIT or are member of another form of IIA which allow for a state-state dispute settlement,

0 if not,

- 1 if the countries involved in bilateral FDI have signed a BIT or are member of another form of IIA which allow for a state-state dispute settlement which is binding, 0 if not,
- 1 if the countries involved in bilateral FDI have signed a BIT or are member of another form of IIA and the treaty allows for an investor-state dispute settlement by a standing body, 0 if not,
- 0.5 if the countries involved in bilateral FDI have signed a BIT or are member of another form of IIA and the treaty allows for an investor-state dispute settlement in form of *ad hoc* dispute settlement, 0 if not.

We consider 645 IIAs in force between 2001 and 2012. On average the FDI flows under coded IIAs account for three quarter of the world's total FDI flows, ranging from a minimum of about 50% in 2012 to a maximum of 88% in 2011. The treaty text of the agreements in English and German has been retrieved from the International Investment Agreement Navigator maintained by UNCTAD (United Nations Committee on Trade and Development, 2016).

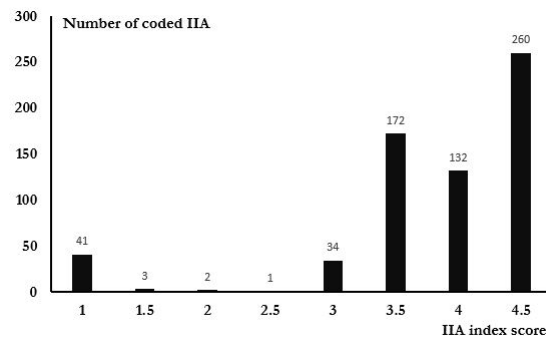


Figure 1: Number of coded IIAs for different IIA index scores

Figure 1 shows the number of IIAs for a particular IIA index score. More than half of the IIAs have a index score higher or equal to 4. While most of the IIAs have a index score of 4.5 only six IIAs have a score between 1.5 and 2.5. Table 1 gives an overview of the provisions include in the analyzed IIAs. All agreements analyzed include provisions regarding a state-state dispute settlement. State-state dispute settlement is in general conducted by *ad hoc* arbitration tribunals consisting of arbitrators from host and home countries which establish their own rules of procedure and decide by a majority of votes. In most cases those tribunals are headed by a chairman from a third nation on which the arbitrators have to agree mutually. Provisions on state-state dispute

Table 1: Dispute settlement provisions in coded IIAs

Total number of IIA coded	645
IIA includes state-state dispute settlement	645
IIA includes non-binding state-state dispute-settlement	12
IIA includes binding state-state dispute settlement	633
IIA includes investor-state dispute settlement	618
IIA includes <i>ad hoc</i> investor-state dispute settlement and investor-state dispute settlement by international institutions	298
IIA includes <i>ad hoc</i> investor-state dispute settlement	481
IIA includes investor-state dispute settlement by a standing body	437
IIA includes state-state dispute settlement and investor-state dispute settlement	615

settlement further specify the time in which arbitrators have to be appointed and disputes have to be submitted. 633 agreements explicitly mention that the decisions taken by the tribunal are binding. In 12 agreements such an explicit statement is missing. In addition to an state-state dispute settlement, 618 out of the 645 treaties include provisions on investor-state disputes which allow investors to peruse their claims directly. 481 IIAs only allow for an *ad hoc* dispute settlement in investor-state disputes, generally under the rules of the United Nations Commission on International Trade Law (UNCITRAL) or the Convention on the Settlement of Investment Disputes between States and Nationals of other States (“Washington Convention”). Dispute settlement by a standing body, i.e. an international institution, is possible under 437 agreements. In order to be coded as such an agreement a reference to a standing body has been required. Such permanent arbitration generally refers to the International Centre for the Settlement of Investment Disputes (ICSID), the Court of Arbitration of the International Chamber of Commerce (ICC) or the Arbitration Institute of the Stockholm Chamber of Commerce. 298 agreements allow for both, *ad hoc* arbitration and arbitration by an international institution, many of them at the option of the investor.

4 Estimation Strategy

To examine the effect of FDI inflows on institutions conditional on IIAs we estimate the following benchmark model using a Generalized Method of Moments (GMM) estimator:

$$INS_{ijt} = \beta_0 + \beta_1 FDI_{ijt} + \beta_2 IIA_{ijt} + \beta_3 FDI_{ijt} \cdot IIA_{ijt} + \mu' \mathbf{X} + \epsilon_{ijt}. \quad (1)$$

The relationship between FDI and institutions is likely to be bidirectional and suffers from endogeneity. Indeed, the relation between FDI and institutions has

long been thought of to be and studied in the opposite direction.² We try to limit the problem of endogeneity by using lagged right-hand side variables as instruments for the explanatory variables, which are all assumed to be endogenous. The validity of the instruments is tested by using the Hansen test for overidentifying restrictions.

We define the dependent variable as the institutional distance between country i and country j and calculate it as follows:

$$INS_{ijt} = |INS_{it} - INS_{j0}|. \quad (2)$$

INS_{it} is the institutional quality index of the host country i at time t while INS_{j0} describes the institutional development index of the home country j in a base year. We take as a base year the first year for which an observation of the institutional index for the respective country is available. A more common approach would be to take the absolute difference between country i and j for both countries at time t (see for example Demir (2016)). However, in case a closing institutional gap is observed this would not allow us to conclude that an improvement of institutions took place in the host country. Negative coefficients of the independent variables would simply indicate a closing effect on the institutional gap while positive estimated effects would indicate a widening institutional gap. To unambiguously identify improving institutions in the home country we consider the effect of FDI inflow on the institutional distance between country i at time t and country j in a base year. This approach holds the level of institutional quality of country j constant and thus allows to control for different initial levels of institutions in the home country while at the same time a closing institutional gap can be interpreted as an institutional improvement in the host country.

FDI_{ijt} denotes real FDI flow from country j to country i in year t and is expressed as the share of the real GDP of country i . The use of bilateral FDI over aggregated FDI flows is preferred because it can be argued that the incentives for investors to urge for better legislation only affect countries directly involved in the signature of an IIA and only interferes with the incentives of investors from country j and not with the incentives for investors from third countries. IIA_{ijt} is the measure for the degree of investment protection of an IIA developed in Section 3. $FDI_{ijt} \cdot IIA_{ijt}$ represents an interaction term of FDI and the IIA index. Hence, while the coefficient on FDI_{ijt} measures the direct effect of FDI on the institutional distance, the coefficient on the term $FDI_{ijt} \cdot IIA_{ijt}$ allows to examine the effect of FDI inflow on the endogenous variable depen-

²For instance, Li and Resnick (2003) and Jakobsen and De Soysa (2006) analyze how democratic institutions affect FDI inflow to developing countries.

dent on the level of IIA protection. \mathbf{X} is a vector of control variables. We use the logarithm of real per capita GDP of country i and j to control for income effects as the gap in local institutional quality might depend on the income level of the countries involved in FDI. Real GDP growth of the host country and the home country is included to control for the effect on institutions in fast growing compared to more stagnant economies. The (log) total population of country i and j is included following the reasoning of Alesina and La Ferrara (2005) and Acemoglu et al. (2012) who argue that more populous countries are more likely to have a higher ethnical and social fragmentation which makes institutional development more difficult. Kazianga et al. (2014) provide additional arguments to include population as a control variable. However, they claim that scale effects in more populous countries give incentives for the development of better institutions. The (log) distance between country i and j (*dist_geo*) is used to proxy for spill-over effects on institutions which might arise between host and home country involved in bilateral FDI. Bahar et al. (2014) also argue that geographical barriers hamper spill-overs on institutions and the diffusion of knowledge on institutional changes in other parts of the world. Following a similar reasoning we also use a dummy variable, that equals 1 if host and home country are neighboring countries (*conitg*) and 0 otherwise. Furthermore, we use standard control variables to account for special country characteristics. We employ a dummy that takes the value of 1 if the host country is landlocked and 0 otherwise (*landlocked*), again following the argument of Bahar et al. (2014) that landlocked countries are less prone to institutional spill-overs from other countries. The effects from shared cultural similarity between country i and j and a common colonial past is modeled by three dummy variables, capturing a common official language of the two countries (*commlang_off*), a common colonizer after 1945 (*comcol*) and a colonial relationship between the two countries (*colony*). An additional dummy controls for a colonial relationship after 1945 (*col45*). Finally, a dummy is used to reflect a situation in which the two countries formed one single country in recent history (*smctry*). ϵ_{ijt} represents the error term varying over the time and countries.

5 Data

The dataset is structured as country pairs over years with overall 29,601 country-pair-year observations from 4,224 country pairs. The analysis includes 126 host and 129 home countries for the years between 2001 and 2012. 17,508 observations have a developed country as a host and 12,093 a developing country.³ A

³Following the World Bank definition on income groups we define developed countries as “high-income countries” with gross national income per capita of \$12,476 or more in 2015 and

full list of host countries can be found in Table A1 in the Appendix. Data on bilateral FDI flow, expressed in US dollar and prices of 2010, have been taken from the UNCTAD bilateral FDI Database (UNCTAD, 2016).⁴ Data for GDP, GDP growth, and population are retrieved from the World Bank World Development Indicators Database (World Bank, 2016). The control variables on geography and colonial past (*dist-geo*, *landlocked*, *contig*, *comlang-off*, *colony*, *comcol*, *col45* and *smctry*) are all taken from the Centre d'Études Prospectives et d'Informations Internationales (Mayer and Zignago, 2011).

To test the hypothesis that IIAs influence foreign investors behavior in shaping local institutions a measure is needed that captures this part of local institutions for which IIA can substitute. In other words, investors willingness to shape local institutions will only be limited with regard to those institutional functions that are already provided by an IIA. Therefore, in this paper we apply a narrow definition of institutions and concentrate on measures that reflect the security of private property and the enforceability of contracts. We define institutions as the entirety of the structure and functioning of the legal system and the bureaucracy, the enforcement of contracts and laws as well as the absence of corruption. To operationalize this definition we apply a sub-index of the International Country Risk Guide. The International Country Risk Guide (PRS Group, 2016) is made up of 22 variables which contain subjective assessments by experts on political, financial and economic risk. We use a sub-index provided by the Quality of Governance Institute at the University of Gothenburg (Dahlberg et al., 2016) that averages the value of the variables on "Corruption", "Law and Order" and "Bureaucracy Quality" and scales them from 0 to 1, with higher values indicating a higher quality of government. The International Country Risk Guide is widely used in the literature, for example by Knack and Keefer (1995), Hall and Jones (1999), Chong and Calderon (2000) and recently by Demir (2016) and Shah et al. (2016), in comparable studies on the effect of FDI on institutions.

Table 2 summarizes the descriptive statistics of the variables and shows that the mean institutional gap is 0.25. The most distant countries are Luxembourg and Haiti (in 2011) with an institutional gap of 0.81. The minimum institutional gap is 0, i.e the countries are institutionally on par. This is the case for 418 observations, for example for Morocco and Malaysia in 2010 or Belgium and Germany in 2005. The average bilateral investment amounts to 0.18% of the host countries GDP. The biggest annual investments (about half of the host's GDP) came from the United States and where invested in Luxembourg

developing countries as the rest of the world.

⁴FDI data are deflated by using the US GDP deflator from the World Development Indicators (World Bank, 2016).

Table 2: Summary statistics

Variable	Obs.	Mean	Std. Dev	Min	Max
<i>INS_dis</i>	29,681	0.25	0.17	0	0.81
<i>FDI</i>	29,601	0.0018	0.0142	-0.3226	0.4941
<i>IIA_index</i>	14,719	1.854	1.590	0	4.5
<i>ln_host_GDP</i>	29,545	9.080	1.400	4.904	11.383
<i>host_growth_GDP</i>	29,498	3.4	4.1	-17.7	34.5
<i>ln_host_pop</i>	29,681	16.699	1.614	12.560	21.024
<i>ln_home_GDP</i>	29,539	9.666	1.245	4.904	11.383
<i>home_growth_GDP</i>	29,566	3.0	4.1	-62.1	34.5
<i>ln_home_pop</i>	29,681	16.788	1.786	12.560	21.024
<i>ln_dist_geo</i>	29,681	8.132	1.059	4.013	9.891
<i>natural resources</i>	29,601	7.2	12.5	0	72.7
<i>landlocked</i>	29,681	0.160	0.366	0	1
<i>contig</i>	29,681	0.076	0.266	0	1
<i>comlang_off</i>	29,681	0.156	0.363	0	1
<i>colony</i>	29,681	0.054	0.226	0	1
<i>comcol</i>	29,681	0.032	0.177	0	1
<i>col45</i>	29,681	0.026	0.160	0	1
<i>smctry</i>	29,681	0.030	0.170	0	1

Notes: *INS_dis* indicates the institutional distance described in Section 5 and measured by a sub-index of the International Country Risk Guide. *FDI* describes annual real FDI inflow in US dollar (constant prices of 2010) as a share of the host country's GDP. Negative signs indicate disinvestment or reverse investment. *IIA_index* stands for an index measuring the protection intensity of IIA as described in Section 3. *ln_host_GDP* (*ln_home_GDP*) is the real (log) GDP per capita of country *i* (country *j*) measured in constant 2005 US dollar, *host_growth_GDP* and *home_growth_GDP* are the real GDP growth rates (annual %) of country *i* and *j*, *ln_host_pop* (*ln_home_pop*) is the log of the total population of country *i* (country *j*), *ln_dist_geo* is the (log) distance between the most populated cities of country *i* and *j* in km, *natural resources* is the share of total natural resource rents of country *i* in GDP (%), *landlocked* is a dummy that takes 1 if country *i* is landlocked, 0 otherwise, *contig* is a variable that takes 1 if country *i* and *j* share a common border, *comlang_off* takes 1 if both countries have a common official primary language, *colony* is a dummy which is equal to 1 if the country pair ever had a common colonial relationship, *comcol* is 1 in the case that both countries had a common colonizer after 1945, *col45* is 1 for pairs in colonial relationship post 1945 and *smctry* equals 1 if countries where ever one single country.

in 2002. The average bilateral investment flow to developed countries (applying the World Bank definition) was around 0.19% of the home country's GDP. For developing countries, bilateral investment inflows had on average the size of 0.16% of GDP. Over the whole time period 18.5% of total FDI was directed towards developing countries while the remaining 81.5% were invested in developed countries. Table A2 in the Appendix reports bivariate correlations and does not reveal problematic high correlations.

6 Results

Table 3 presents the results of the two-step GMM estimation using as a dependent variable the institutional distance between the host and the home country. We use the first and the second lag of the independent variable as instruments. The Hansen J-test of overidentifying restrictions is performed to test for the validity of the instruments and reported at the bottom of Table 3. The null hypothesis that our instruments are valid, i.e. uncorrelated with the error term, cannot be rejected on a 10% significance level for all regressions. Furthermore, we report Newey-West corrected standard errors (Newey and West, 1987) to account for potential heteroscedasticity and autocorrelation of unknown form. Column (1) shows the model including the FDI variable. Column (2) adds the IIA index and the interaction term of the FDI variable and the IIA index to the model. The subsequent columns repeat the same models but include year fixed effects, host country fixed effects and both year and host country fixed effects. In all models the control variables are included but not reported.⁵ The regression results depicted in columns (1) and (3), which include only the FDI variable and the control variables as explanatory variables, show a positive and insignificant coefficients for FDI. When the regressions include the interaction term and the IIA index in columns (2) and (4) the coefficients on the FDI variable remain insignificant. When controlling for host country fixed effects in columns (5) and (7), the estimated coefficient of FDI becomes negative and significant. The IIA index and the interaction term are positive and significant in all regressions.

How can these results be interpreted? The negative and statistically significant coefficients of the FDI variable in column (5) and (7) provide some evidence that FDI inflows are associated with a closing institutional gap between host and home countries when host country fixed effects are taken into account. This effect occurs even when the IIA variable and the interaction term are not included in the regression. Second, the positive and significant estimate of the coefficient of the IIA index indicates that for a given level of FDI inflow

⁵Results on the control variables can be found in Table A3 in the Appendix.

Table 3: Regression results

VARIABLES	Year fixed effects			Host fixed effects			Year and host fixed effects		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<i>Const.</i>	0.404*** (0.0419)	0.234*** (0.0555)	0.450*** (0.0414)	0.281*** (0.0547)	1.881*** (0.554)	2.060** (0.868)	0.891 (0.725)	0.372 (1.052)	
<i>FDI</i>	0.233 (0.220)	-0.0700 (0.410)	0.292 (0.223)	-0.0321 (0.409)	-0.624** (0.248)	-0.729* (0.420)	-0.616** (0.247)	-0.723* (0.422)	
<i>IIA_index</i>		0.0178*** (0.00151)		0.0185*** (0.00150)		0.0249*** (0.00164)		0.0249*** (0.00164)	
<i>IIA_index*FDI</i>		0.567* (0.310)		0.603** (0.303)		0.652** (0.290)		0.667** (0.292)	
<i>margial effect at IIA_index=0</i>		-0.0700 (0.410)		-0.0321 (0.410)		-0.729* (0.420)		-0.723* (0.422)	
<i>margial effect at IIA_index=1</i>		0.497** (0.223)		0.571** (0.229)		-0.0768 (0.253)		-0.0558 (0.253)	
<i>margial effect at IIA_index=2</i>		1.063*** (0.352)		1.175*** (0.347)		0.576* (0.345)		0.611* (0.348)	
<i>margial effect at IIA_index=3</i>		1.630*** (0.626)		1.778*** (0.610)		1.228** (0.585)		1.278** (0.590)	
<i>margial effect at IIA_index=4</i>		2.197** (0.923)		2.382*** (0.898)		1.880** (0.856)		1.945** (0.863)	
<i>margial effect at IIA_index=4,5</i>		2.480** (1.074)		2.683** (1.045)		2.206** (0.995)		2.279** (1.004)	
control variables	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes	
Host fixed effects	No	No	No	No	Yes	Yes	Yes	Yes	
Observations	18,941	10,717	18,941	10,717	18,941	10,717	18,941	10,717	
R-squared	0.186	0.248	0.187	0.251	0.325	0.403	0.326	0.406	
J-statistic	1.195	0.653	0.679	0.304	0.016	0.394	0.001	0.211	
J-statistic p-value	0.274	0.721	0.410	0.859	0.900	0.821	0.978	0.900	

Note: Results based on the model depicted in Equation (1) and obtained by two-step GMM estimations with Newey-West heteroscedasticity and autocorrelation corrected (HAC) standard errors in parentheses. ***, **, and * indicate significance levels at the 1%, 5% and 10% level respectively. The J-statistic reports the Hansen J-test for overidentifying restrictions. All time-variant explanatory variables are considered as endogenous and instrumented by their first and second lags. Sample size varies due to data availability. *FDI* describes annual real FDI inflow in US dollar (constant prices of 2010) as a share of the host country's GDP. *IIA_index* stands for an index measuring the protection intensity of IIA as described in Section 3.

country pairs with an IIA in force have on average a wider institutional gap than countries without an IIA in force. Third, the finding on the interaction term points to an answer of the research question. The marginal effects of FDI, dependent on the IIA index, suggest that strong provisions in IIA limit the converging effect of FDI on the institutional distance. For example, taken the regression in column (8) and given the case that the IIA index is 0 (assuming there is no IIA in force) the marginal effect of FDI on the institutional gap is negative, i.e. $\partial INS_{ijt}/\partial FDI_{ijt} = -0.723 + 0.667 \cdot 0 = -0.723$. This result suggests that when there is no IIA in force between country pairs FDI inflow is associated with a decreasing institutional gap. In case of an IIA in force (the IIA index takes the value of 1) the marginal effect increases and becomes $\partial INS_{ijt}/\partial FDI_{ijt} = -0.723 + 0.667 \cdot 1 = -0.056$ (but not significantly different from zero). With a further rising IIA index (increasing investment protection under IIA) the marginal effect of FDI on the institutional gap increases and takes significantly positive values once the IIA index is ≥ 2 . This finding on a rising marginal effect of FDI holds for all regressions depicted in Table 3 including the interaction term. However, the negative marginal effect for $IIA.index = 0$ is only significant when controlling for host country fixed effects. Figure 2 illustrates this finding for the regression shown in column (8). The horizontal axis shows the value of the IIA index while the vertical axis depicts the marginal effect of FDI. The diagram shows that the marginal effect of FDI on the institutional gap depends on the existence and degree of IIA investment protection. From Figure 2 it can be seen that there is a negative and significant effect of FDI on the institutional gap in case there is no IIA. The marginal effect increases with an increasing index and turns significantly positive, when the IIA index takes the value of 2. If there is no investment protection on the international level investors seem to push for better investment protection on the local level and a convergence in the institutional distance occurs. With an IIA in place this incentive is weakened and with rising protection intensity of the IIA the converging effect of FDI on the institutional gap diminishes (i.e. the FDI coefficient rises) and even turns positive at a certain level of investment protection. However, a positive effect of FDI on the institutional distance is somehow surprising as it indicates that higher FDI inflows are associated with a widening institutional gap.

7 Extensions and Robustness

For the robustness analysis we first consider potential heterogeneous effects of FDI dependent on the destination of the investment. We distinguish between FDI flows to developed countries and to developing countries applying the World

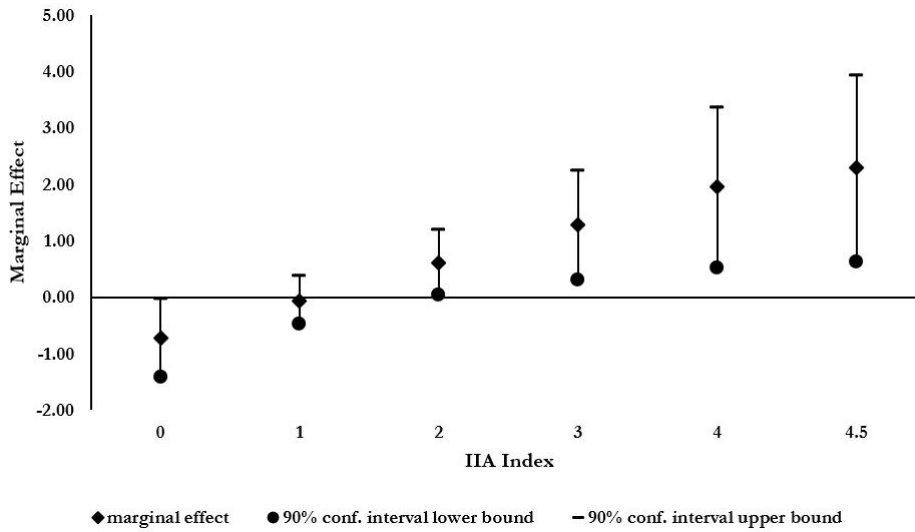


Figure 2: Marginal effects of FDI on institutional distance

Bank definition (see footnote 3). In a next step, we run the regression of the full model (including the IIA index, the interaction term and both year as well as host fixed effects) on two sub-samples: one where the sample of host countries is limited to developed countries and one where the group of host countries is limited to developing countries. Figure 3 and 4 show the marginal effects of FDI on the institutional gap for the two sub-samples. Looking at Figure 3, representing FDI inflow to developed countries, it can be seen that the marginal effect of FDI is significant and negative for an IIA index value of 0. With a rising IIA index the marginal effect of FDI turns positive and increases. In general, this result is in line with our main argumentation of a rising disincentive for investors to urge for better institutions when the investment protection by IIA increases. Figure 4 shows a slightly different picture. Looking only on investments flows to developing countries no converging effect of FDI on the institutional distance can be detected. Figure 4 shows positive and significant estimates for IIA index values ≥ 2 . Again, with a rising IIA index the marginal effect increases.

In the next step, we address the issue of resource dependence of the host country which has been suggested by the literature as a potential determinant of institutional quality. A often raised argumentation points in the following or in a similar direction: Investment in single sectors without linkages to local firms, as it is the case for example in mining, creates less incentives for investors and governments to improve the institutional environment. For example, Rosa and Iootty (2012) find evidence for a negative effect of high resource dependence on government effectiveness. We use data on the share of natural resource rents

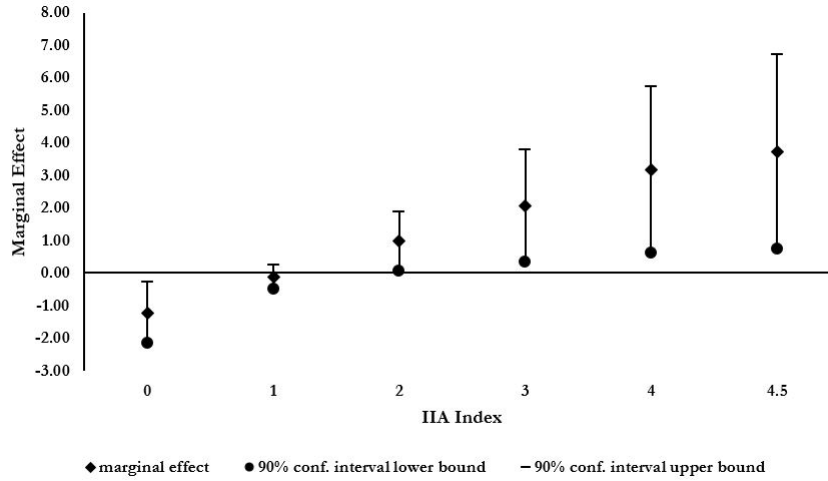


Figure 3: Marginal effects of investment inflow to developed countries

in GDP as a variable indicating the dependence on natural resources.⁶ Table 4 shows the regression results for the full sample including the above described indicator for natural resource dependence. Overall, the results are similar to those depicted in Table 3 and do not change when for resource dependence is controlled. The FDI variable is negative and significant in column (6) and (8), indicating that for country pairs without IIA the inflow of FDI is associated with a convergence in the institutional environment. Also, the significant and rising marginal effects of FDI, dependent on the IIA index, support the argumentation that strong investment protection of IIA is counteracting the narrowing effect of FDI on the institutional gap. The results on the natural resource variable are ambiguous. While there is a positive and significant estimate when controlling for year fixed effects there is a negative and significant estimate in the model controlling for host country fixed effects. However, in the final model including host and year fixed effects the coefficient is insignificant.

8 Conclusion

This paper has built its analysis on the emerging literature arguing that foreign investment is a crucial factor in shaping a host country’s institutional environment. From a theoretical standpoint several arguments suggest that foreign investors have influence on local institutions, for example through lobbying or institutional spill-overs. In this paper, we have argued that in order to assess such effects international investment law has to be taken into account. We pro-

⁶Data for the natural resource variable is taken from World Bank (2016).

Table 4: Regression results robustness analysis

VARIABLES	Year fixed effects			Host fixed effects			Year and host fixed effects		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<i>Const.</i>									
<i>FDI</i>	0.233 (0.220)	? -0.0551 (0.412)	? 0.297 (0.223)	? 0.0226 (0.412)	? -0.633** (0.249)	? -0.753* (0.422)	? -0.617** (0.247)	? -0.726* (0.422)	
<i>IIA_index</i>		0.0179*** (0.00152)		0.0188*** (0.00151)		0.0249*** (0.00164)		0.0249*** (0.00164)	
<i>IIA_index*FDI</i>		0.557* (0.312)		0.572* (0.304)		0.668** (0.287)		0.670** (0.291)	
<i>natural resources</i>	0.000101 (0.000141)	0.000111 (0.000198)	0.000373** (0.000145)	0.000386* (0.000202)	-0.00215** (0.000947)	-0.00412** (0.00195)	-0.000529 (0.00103)	-0.000433 (0.00206)	
<i>marginal effect at IIA_index=0</i>		-0.0551 (0.412)		0.0226 (0.412)		-0.753* (0.423)		-0.726* (0.422)	
<i>marginal effect at IIA_index=1</i>		0.502** (0.224)		0.595** (0.231)		-0.0850 (0.257)		-0.0569 (0.253)	
<i>marginal effect at IIA_index=2</i>		1.059*** (0.353)		1.166*** (0.348)		0.583* (0.344)		0.613* (0.347)	
<i>marginal effect at IIA_index=3</i>		1.617** (0.628)		1.738*** (0.612)		1.251** (0.579)		1.282** (0.589)	
<i>marginal effect at IIA_index=4</i>		2.174** (0.926)		2.310** (0.901)		1.920** (0.847)		1.952** (0.862)	
<i>marginal effect at IIA_index=4.5</i>		2.453** (1.079)		2.596** (1.049)		2.254** (0.985)		2.286* (1.002)	
additional control variables	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	included not reported	
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes	
Host fixed effects	No	No	No	No	Yes	Yes	Yes	Yes	
Observations	18,941	10,717	18,941	10,717	18,941	10,717	18,941	10,717	
R-squared	0.186	0.248	0.187	0.251	0.325	0.401	0.326	0.406	
J-statistic	1.209	0.654	0.686	0.292	0.003	0.440	0.002	0.209	
J-statistic p-value	0.272	0.721	0.407	0.864	0.955	0.802	0.965	0.901	

Note: Results based on the model depicted in Equation (1) and obtained by two-step GMM estimations with Newey-West heteroscedasticity and autocorrelation corrected (HAC) standard errors in parentheses. ***, **, and * indicate significance levels at the 1%, 5% and 10% level respectively. The J-statistic reports the Hansen J-test for overidentifying restrictions. All time-variant explanatory variables are considered as endogenous and instrumented by their first and second lags. Sample size varies due to data availability. *INS_dis* indicates the institutional distance described in Section 5 and measured by a sub-index of the International Country Risk Guide. *FDI* describes annual real FDI inflow in US dollar (constant prices of 2010) as a share of the host country's GDP. *IIA_index* stands for an index measuring the protection intensity of IIAs as described in Section 3.

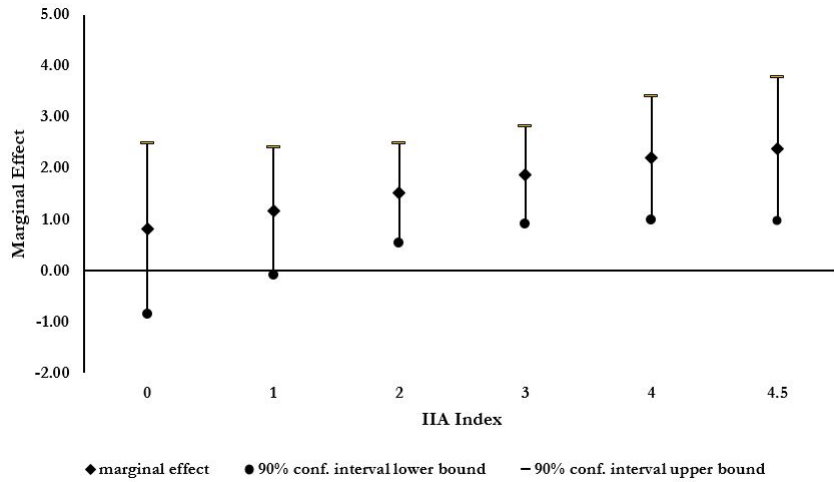


Figure 4: Marginal effects of investment inflow to developing countries

posed the hypothesis that foreign investors behavior is influenced by the degree under which investment is protected by IIAs. Given the case that investment is protected on the international level we argued that investors have less incentives to push for better investment protection on the local level. An empirical analysis of global bilateral FDI flows from 2001 to 2012 suggests that bilateral investment relations where no IIA is protecting foreign investment is indeed associated with a narrowing institutional gap defined by the absolute difference between the institutional index of a home and a host country. A measure for investment protection under different kind of IIAs was constructed and used to test the hypothesis that stronger investment protection on the international level lowers the incentives for foreign investors to urge for better investment protection. This argumentation finds support in our analysis as the converging effect of FDI on the institutional gap declines with rising investment protection by IIAs. Interestingly, once a certain level of investment protection is reached the estimated coefficient becomes positive and the inflow of FDI is associated with a divergence in institutions. This finding is especially pronounced when looking only on FDI flows to developing countries where we find no significant convergence. While considering only investments in developed countries reveals a narrowing institutional gap for FDI flows under low investment protection.

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Table A1: Number of observations per host country

Host country	Obs.	Obs. coded for IIA	Host country	Obs.	Obs. coded for IIA	Host country	Obs.	Obs. coded for IIA
Albania	65	27	Haiti	24	9	Pakistan	282	169
Algeria	296	107	Honduras	204	143	Panama	274	118
Angola	46	0	Hungary	548	346	Papua New Guinea	20	0
Argentina	447	187	Iceland	145	101	Paraguay	187	92
Armenia	189	76	India	254	100	Peru	212	76
Australia	246	166	Indonesia	190	130	Philippines	166	97
Austria	439	381	Iran	104	46	Poland	626	341
Azerbaijan	123	57	Iraq	1	0	Portugal	420	253
Bahrain	86	37	Ireland	135	119	Qatar	16	0
Bangladesh	270	163	Israel	108	22	Romania	440	237
Belarus	18	11	Italy	757	326	Russia	313	149
Belgium	473	113	Jamaica	40	10	Saudi Arabia	313	181
Bolivia	211	104	Japan	363	247	Senegal	55	16
Botswana	39	13	Jordan	72	16	Sierra Leone	20	6
Brazil	371	323	Kazakhstan	514	274	Singapore	268	217
Bulgaria	619	331	Kenya	83	44	Slovakia	286	79
Burkina Faso	9	5	Korea, South	455	305	Slovenia	308	52
Cameroon	65	32	Kuwait	75	23	South Africa	217	47
Canada	36	33	Latvia	390	203	Spain	369	199
Chile	204	84	Lebanon	80	26	Sri Lanka	80	0
China	250	197	Liberia	36	0	Suriname	18	10
Colombia	388	311	Libya	103	56	Sweden	487	142
Costa Rica	269	158	Lithuania	420	183	Switzerland	180	165
Croatia	339	241	Luxembourg	846	414	Syria	50	6
Cyprus	375	179	Madagascar	78	31	Tanzania	304	129
Czech Republic	517	329	Malawi	61	0	Thailand	373	160
Côte d'Ivoire	91	52	Malaysia	212	107	Togo	18	6
Denmark	500	349	Mali	38	13	Trinidad and Tobago	62	13
Dominican Republic	182	135	Malta	139	108	Tunisia	298	50
Ecuador	291	127	Mexico	503	226	Turkey	393	50
Egypt	330	146	Moldova	44	1	Uganda	117	75
El Salvador	197	84	Mongolia	194	63	Ukraine	536	80
Estonia	413	229	Morocco	341	60	United Arab Emirates	50	0
Ethiopia	45	21	Mozambique	140	32	United Kingdom	357	229
Finland	448	287	Myanmar	67	0	United States	859	445
France	999	373	Namibia	34	6	Uruguay	205	57
Gabon	55	27	Netherlands	403	233	Venezuela	220	73
Gambia	6	0	New Zealand	168	104	Yemen	55	17
Germany	911	611	Nicaragua	42	20	Zambia	133	0
Ghana	76	32	Niger	31	11	Zimbabwe	35	11
Greece	264	171	Nigeria	75	11			
Guatemala	122	70	Norway	60	54			
Guinea	28	14	Oman	134	56			

Table A2: Cross-correlation table

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) INS_dis	1.000																	
(2) FDI	-0.023	1.000																
(3) IIA_index	0.189	-0.020	1.000															
(4) natural resources	0.088	0.006	-0.022	1.000														
(5) ln_GDP_host	-0.204	0.033	-0.097	-0.326	1.000													
(6) GDP_growth_host	0.063	0.020	0.062	0.294	-0.366	1.000												
(7) ln_pop_host	0.027	-0.130	0.033	0.037	-0.217	0.027	1.000											
(8) ln_GDP_home	0.147	0.066	-0.040	0.037	-0.086	0.037	-0.049	1.000										
(9) GDP_growth_home	-0.079	-0.021	-0.001	0.026	0.013	0.276	0.026	-0.359	1.000									
(10) ln_pop_home	0.013	0.036	0.034	0.070	-0.085	0.038	-0.001	-0.309	0.105	1.000								
(11) ln_dist_geo	0.277	-0.082	-0.127	0.108	-0.154	0.078	0.215	0.014	0.050	0.240	1.000							
(12) landlocked	0.034	0.104	0.152	0.120	-0.009	0.082	-0.325	-0.015	-0.003	0.010	-0.073	1.000						
(13) contig	-0.202	0.063	-0.058	0.023	-0.016	0.011	-0.009	-0.127	0.036	0.010	-0.455	0.051	1.000					
(14) comlang_off	-0.098	0.053	-0.241	0.078	-0.130	0.052	0.016	-0.138	0.057	-0.018	-0.084	-0.022	0.204	1.000				
(15) colony	0.002	0.043	0.021	0.008	-0.010	-0.011	0.027	-0.010	-0.026	0.061	-0.030	-0.023	0.124	0.293	1.000			
(16) comcol	-0.088	-0.011	-0.064	0.050	-0.179	0.085	0.012	-0.168	0.101	-0.048	-0.110	0.009	0.105	0.104	-0.044	1.000		
(17) col45	0.040	0.024	0.001	0.035	-0.060	0.008	0.036	-0.053	-0.008	0.050	-0.002	-0.018	0.059	0.234	0.688	-0.030	1.000	
(18) smctry	-0.126	0.034	0.008	-0.024	-0.047	0.011	-0.062	-0.124	0.026	-0.067	-0.330	0.063	0.380	0.196	0.052	0.072	-0.029	1.000

Notes: *INS_dis* indicates the institutional distance described in Section 5 and measured by a sub-index of the International Country Risk Guide. *FDI* describes real FDI inflow in US dollar (constant prices of 2010) from country *j* to country *i* as share of country *i*'s GDP (annual). *IIA_index* stands for an index measuring the protection intensity of IIAs as described in Section 3. *ln_host_GDP* (*ln_home_GDP*) is the real (log) GDP per capita of country *i* (country *j*) measured in constant 2005 US dollar, *host_growth_GDP* and *home_growth_GDP* are the real GDP growth rates (annual %) of country *i* and *j*, *ln_host_pop* (*ln_home_pop*) is the total (log) population of country *i* (country *j*), *ln_dist_geo* is the (log) distance between the most populated cities of country *i* and *j* in km, *natural resources* is the share of total natural resource rents of country *i* in GDP (%), *landlocked* is a dummy that takes 1 if country *i* is landlocked, 0 otherwise, *contig* is a variable that takes 1 if country *i* and *j* share a common border, *comlang_off* takes 1 if both countries have a common official primary language, *colony* is a dummy which takes 1 if the country pair ever had a common colonial relationship, *comcol* is 1 in the case that both countries had a common colonizer after 1945, *col45* is 1 for pairs in colonial relationship post 1945 and *smctry* takes 1 if countries where ever one single country.

Table A3: Regression results reporting control variables

VARIABLES	Year fixed effects			Host fixed effects			Year and host fixed effects		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<i>constant</i>	0.404*** (0.0419)	0.234*** (0.0555)	0.450*** (0.0414)	0.281*** (0.0547)	1.881*** (0.554)	2.060** (0.868)	0.891 (0.725)	0.372 (1.052)	
<i>FDI</i>	0.233 (0.220)	-0.0700 (0.410)	0.292 (0.223)	-0.0321 (0.409)	-0.624** (0.248)	-0.729* (0.420)	-0.616** (0.247)	-0.723* (0.422)	
<i>IIA_index</i>	0.0178*** (0.00151)	0.0185*** (0.00150)	0.0178*** (0.00150)	0.0185*** (0.00150)	0.0185*** (0.00150)	0.0249*** (0.00164)	0.0249*** (0.00164)	0.0249*** (0.00164)	
<i>IIA_index*FDI</i>	0.567* (0.310)	0.567* (0.310)	0.603** (0.303)	0.603** (0.303)	0.652** (0.290)	0.652** (0.290)	0.667** (0.292)	0.667** (0.292)	
<i>ln_GDP_host</i>	-0.0362*** (0.00168)	-0.0405*** (0.00226)	-0.0385*** (0.00165)	-0.0428*** (0.00224)	-0.0444* (0.0264)	-0.0600 (0.0405)	-0.0404* (0.0245)	-0.0253 (0.0325)	
<i>GDP_growth_host</i>	-0.00115 (0.000925)	-0.00107 (0.00115)	-0.00331*** (0.000919)	-0.00326*** (0.00115)	0.00175 (0.00118)	0.00257* (0.00150)	-0.000657 (0.00136)	-0.000234 (0.00178)	
<i>ln_pop_host</i>	-0.00577*** (0.00107)	-0.00181 (0.00137)	-0.00602*** (0.00106)	-0.00192 (0.00136)	-0.107*** (0.0406)	-0.124** (0.0607)	-0.0414 (0.0484)	-0.0285 (0.0713)	
<i>ln_GDP_home</i>	0.00774*** (0.00216)	0.0111*** (0.00316)	0.00463** (0.00214)	0.00717** (0.00313)	0.0153*** (0.00219)	0.0167*** (0.00324)	0.0143*** (0.00215)	0.0156*** (0.00318)	
<i>GDP_growth_home</i>	-0.00372*** (0.000970)	-0.00407*** (0.00141)	-0.00580*** (0.000945)	-0.00655*** (0.00139)	-0.00425*** (0.000937)	-0.00554*** (0.00140)	-0.00502*** (0.000904)	-0.00625*** (0.00134)	
<i>ln_pop_home</i>	-0.00323*** (0.000989)	0.000857 (0.00123)	0.00348*** (0.000992)	0.000528 (0.00124)	-1.73e-06 (0.000935)	0.00383*** (0.00114)	-6.11e-05 (0.000935)	0.00375*** (0.00114)	
<i>ln_dist_geo</i>	0.0343*** (0.00183)	0.0343*** (0.00237)	0.0362*** (0.00184)	0.0365*** (0.00239)	0.0300*** (0.00214)	0.0295*** (0.00269)	0.0304*** (0.00214)	0.0299*** (0.00269)	
<i>landlocked</i>	0.0179*** (0.00454)	0.00568 (0.00570)	0.0188*** (0.00454)	0.00630 (0.00569)	0.396** (0.180)	0.653*** (0.249)	0.180 (0.188)	0.397 (0.264)	
<i>contig</i>	-0.0470*** (0.00564)	-0.0344*** (0.00716)	-0.0449*** (0.00565)	-0.0328*** (0.00714)	-0.0489*** (0.00572)	-0.0430*** (0.00698)	-0.0486*** (0.00572)	-0.0428*** (0.00696)	
<i>comlang_off</i>	-0.0493*** (0.00467)	-0.0300*** (0.00607)	-0.0480*** (0.00464)	-0.0282*** (0.00602)	-0.0466*** (0.00494)	-0.0273*** (0.00643)	-0.0463*** (0.00492)	-0.0269*** (0.00641)	
<i>colony</i>	0.00691 (0.00888)	-0.0507*** (0.00972)	0.00425 (0.00886)	-0.0532*** (0.00963)	0.0159* (0.00813)	-0.0251*** (0.00890)	0.0152* (0.00812)	-0.0254*** (0.00889)	
<i>comcol</i>	-0.0906*** (0.00908)	-0.0831*** (0.0162)	-0.0883*** (0.00918)	-0.0793*** (0.0163)	-0.0651*** (0.00968)	-0.0146 (0.0169)	-0.0647*** (0.00970)	-0.0137 (0.0169)	
<i>col45</i>	0.0460*** (0.0122)	0.104*** (0.0159)	0.0440*** (0.0120)	0.101*** (0.0156)	0.0357*** (0.0117)	0.0688*** (0.0166)	0.0353*** (0.0116)	0.0683*** (0.0166)	
<i>smctry</i>	-0.0101 (0.00769)	-0.00650 (0.00956)	-0.0104 (0.00770)	-0.00569 (0.00956)	-0.0138* (0.00817)	-0.0176* (0.00937)	-0.0137* (0.00815)	-0.0174* (0.00933)	
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes	
Host fixed effects	No	No	No	No	Yes	Yes	Yes	Yes	
Observations	18,941	10,717	18,941	10,717	18,941	10,717	18,941	10,717	
R-squared	0.186	0.248	0.187	0.251	0.403	0.403	0.326	0.406	
J-statistic	1.195	0.653	0.679	0.304	0.016	0.394	0.001	0.211	
J-statistic p-value	0.274	0.721	0.410	0.859	0.900	0.821	0.978	0.900	

Note: Results based on the model depicted in Equation (1) and obtained by two-step GMM estimations with Newey-West heteroskedasticity and autocorrelation corrected (HAC) standard errors in parentheses. ***, **, and * indicate significance levels at the 1%, 5% and 10% level respectively. The J-statistic reports the Hansen J-test for overidentifying restrictions. All time-variant explanatory variables are considered as endogenous and instrumented by their first and second lags. Sample size varies due to data availability. The dependent variable is the institutional distance described in Section 5 and measured by a sub-index of the International Country Risk Guide. *FDI* describes annual real FDI inflow in US dollar (constant prices of 2010) as a share of the host country's GDP. *IIA_index* stands for an index measuring the protection intensity of IIAs as described in Section 3. *ln_host_GDP* (*ln_home_GDP*) is the real (log) GDP per capita of country *i* (country *j*) measured in constant 2005 US dollar. *host_growth_GDP* and *home_growth_GDP* are the real GDP growth rates (annual %) of country *i* and *j*. *ln_host_pop* (*ln_home_pop*) is the log of the total population of country *i* (country *j*). *ln_dist_geo* is the (log) distance between the most populated cities of country *i* and *j* in km. *natural_resources* is the share of total natural resource rents of country *i* in GDP (%). *landlocked* is a dummy that takes 1 if country *i* is landlocked, 0 otherwise. *contig* is a variable that takes 1 if country *i* and *j* share a common border, *comlang_off* takes 1 if both countries have a common official primary language, *colony* is a dummy which is equal to 1 if the country pair ever had a common colonial relationship, *comcol* is 1 in the case that both countries had a common colonizer after 1945, *col45* is 1 for pairs in colonial relationship post 1945 and *smctry* equals 1 if countries where ever one single country.