

## Effects of FDI Flows on Institutional Development:

### Does It Matter Where the Investors are from?<sup>1</sup>

Firat Demir  
University of Oklahoma  
Department of Economics  
308 Cate Center Drive, Room 436 CCD1  
Norman, Oklahoma, USA 73019  
E-mail: fdemir@ou.edu

Forthcoming in *World Development*

#### ABSTRACT

Global FDI flows to and from developing countries have increased significantly since the 1990s. While developing countries saw this as a positive development, many economists and policy makers in developed countries have raised concerns regarding the institutional effects of developing country investments in other developing countries. In this paper we explore the effects of bilateral FDI flows on institutional development gaps between countries and whether such effects are conditional on the direction of flows including South–South, South–North, North–South and North–North directions. The empirical results using bilateral flows between 134 countries and a variety of institutional development measures during 1990 – 2009 suggest that the institutional development effects of FDI flows in any direction including the North–South or South–South directions are not significant. In any case we do not find any significant convergence or divergence effect of FDI flows on the institutional distance between host and home countries. We also fail to find any significant effect of aggregate North–South FDI flows on host country institutions. In contrast, we find that aggregate South–South FDI flows have a significantly negative effect on host country institutions. Furthermore, we find some evidence that South–South FDI flows may be harmful to institutional development in natural resource rich countries while the opposite is true for North–South flows. Overall, the results suggest that there is no strong evidence of any benevolent or malevolent effects of bilateral FDI flows from developed or developing countries to developing countries.

Keywords: Institutional development; Conditionality; Bilateral FDI flows; South – South economic integration

JEL Codes: O10, F21, F23, P48, K00

---

<sup>1</sup> ACKNOWLEDGEMENTS: I thank Mustafa Caglayan, Tatiana Didier, Amitava K. Dutt, Kevin Gallagher, Ilene Grabel, Jeffrey B. Nugent, Arslan Razmi, Jaime Ros, the session participants at the ASSA 2014 meeting in Philadelphia, the seminar participants at Koç University, and the World Bank, and the Editor and the three referees of the journal for their comments and suggestions. I thank Xiaoman Duan, Chenghao Hu, Xiaokai Li and Ying Zhang for their research assistance. All remaining errors and omissions are mine.

## 1. INTRODUCTION

*“What we have here -- in states like China, Iran, Saudi Arabia, and Venezuela -- are regimes that have the cash and the will to reshape the world into a place very different from where the rest of us want to live. Although they are not acting in concert, they collectively represent a threat to healthy, sustainable development... If they continue to succeed in pushing their alternative development model, they will succeed in underwriting a world that is more corrupt, chaotic, and authoritarian” (Naim, 2007).*

*“As the beneficiaries of the blessings of a stable democracy and a robust economy, we, as Americans, have an obligation to ensure that our corporations – and their officers, directors, and employees – are not undermining the promise of democracy and economic development in other parts of the world by paying bribes” (Deputy Attorney General James M. Cole, 2013).*

Foreign Direct Investment (FDI) flows to and from developing countries (i.e. the South) have reached \$886 and \$553 billion in 2013, accounting for 61% and 39% of global flows, respectively. Equally impressive has been the fact that for the first time in 2010 Chinese outward FDI flows exceeded those of Japan, reaching \$69 billion in 2010 (and \$101 billion in 2013) (UNCTAD, 2015). Furthermore, within aggregate flows to and from the South, South–South FDI flows reached 63% of all outflows from developing countries in 2010 (UNCTAD, 2011). As FDI has become a significant source of investment and capital formation, there has been a global gold rush in many countries to improve and harmonize their institutional environments in order to strengthen their competitiveness. Between 2000 and 2012 alone, an average of 55 countries adopted a total of 1,082 institutional policy changes to promote and facilitate a more favorable environment for foreign investors. Likewise, by the end of 2013 a total of 9,175 bilateral investment treaties including

features for improving and re-aligning institutional settings of host and home countries have been signed among 201 countries (UNCTAD, 2014).

The growing importance of developing country multinationals in cross-border investments has also created a controversy regarding their impacts on host country institutions. Particularly, Southern investors are often accused of undermining developed country efforts to improve institutional development in the developing world. While how exactly this happens is not very clear, one channel frequently cited in the press is the lower levels of conditionality involved in South–South economic exchanges, which allegedly diminishes Northern countries’ (i.e. the North) bargaining position for institutional and political change in those countries. China, for example, is often criticized for “neglecting human rights offences ..., supporting corrupt authoritarian regimes, and undermining Western efforts in these countries to promote good governance” and better economic and political institutional infrastructure (Lyman, 2005; Economist, 2006; Warmerdam, 2012). In addition, Southern investments are argued to have weaker “demonstration” and “professionalization” spillover effects on host country firms and institutions than Northern investments (Kwok and Tadesse, 2006).<sup>1</sup>

Despite the controversy, however, there is no empirical study that tests the “China” vs. “Western” effect on developing country institutions. While most research on FDI flows focus on their direct economic effects through technology transfer and productivity spillovers, few have explored their effects on host country institutions. This is particularly surprising given that institutional development is argued to be a source of comparative advantage, affecting long run development and growth (Mauro, 1995; Knack and Keefer, 1995; Kaufmann et al., 1999; Acemoglu et al., 2001, 2005), productivity and incomes (Hall and Jones, 1999) and trade and capital flows (Alfaro et al., 2008; Wei, 2000; Dutt and Traca, 2010).

In this paper we contribute to this literature by addressing two questions. First, we explore whether bilateral FDI flows affect institutional development gaps (along multiple dimensions) between home and host countries. Second, we test if there is any difference between developed and developing country investors regarding their effects on institutional convergence dynamics in host countries. The empirical results based on bilateral FDI flows among 134 countries during 1990 – 2009 suggests that the institutional development effects of bilateral FDI flows from developed to developing countries as well as those from developing to developing countries are not significant and are not any different from each other. In either case we do not find any significant institutional convergence or divergence effect of FDI flows between host and home countries. We also do not detect any significant effect of aggregate North–South FDI flows on host country institutions. In contrast, we find that aggregate South–South flows have a significantly negative effect on host country institutions. Furthermore, we find some evidence that South–South FDI flows might be harmful to institutional development in natural resource rich host countries while the opposite is true for South–North and North–South flows.

The organization of the paper is as follows: The next section provides a brief literature review on the link between FDI flows and institutional development. The third section introduces the methodology and data. The fourth section presents the empirical results followed by extensions in section five. The final section concludes.

## **2. LITERATURE REVIEW**

There is a large and growing body of evidence suggesting that institutional development is important for long run development and growth, and that developed (i.e. Northern) countries are endowed with better institutions than developing countries (i.e. Southern) (Knack and Keefer, 1995; Mauro, 1995; La Porta et al., 1999; Hall and Jones, 1999; Kaufmann et al., 1999; Wei, 2000; Acemoglu and Robinson, 2001; Chong and Gradstein 2007; Alfaro et al., 2008; Dutt and Traca, 2010).

Nevertheless, there is no consensus in the literature either on the determinants of institutional heterogeneity across countries or on the causal relationship between institutions and long run development (Khan, 2006).<sup>2</sup> Existing research identifies following variables as factors affecting institutional development: a) natural resource base (Leite and Weidmann, 1999; Ades and Di Tella, 1999); b) economic openness (Ades and Di Tella, 1999; Rigobon and Rodrik, 2005); c) colonial past (Acemoglu et al., 2001, 2005), slave trade (Nunn and Wantchekon, 2011), and pre-colonial governance structures (Gennaioli and Rainer, 2007); d) initial wealth (Engerman and Sokoloff, 2002) and income inequality (Chong and Gradstein, 2007); e) ethnic structures (Michalopoulos and Papaioannou, 2013) and ethnic fragmentation (Easterly and Levine, 1997); f) past rulers (Caselli and Modelli, 2004); and g) regional and international agreements and multilateral institutions (Thrasher and Gallagher, 2008; Busse et al., 2010; UNCTAD, 2011, 2014).

In global economic relations, developed countries together with developed-country-controlled bilateral and multilateral institutions (such as IMF and World Bank) are known to push for strong conditionality requirements in their economic exchanges with foreign governments involving trade policy, business environment, transparency, and rule of law (Lyman, 2005; Rodrik, 2008; Thrasher and Gallagher, 2008; UNDP, 2013). The legal barriers in developed countries also put pressure on foreign governments to synchronize their regulatory and institutional environments with those of their own. For example, the US Foreign Corrupt Practices Act (FCPA) of 1977 bans US firms from bribing foreign governments or businesses while no such law exists in China or India.<sup>3</sup> Furthermore, the US also launched the Kleptocracy Asset Recovery Initiative in 2010, which allows the Department of Justice to identify and repatriate stolen assets by corrupt foreign leaders and officials (US Department of Justice, 2012a; US Department of State, 2012). In the similar vein, the U.K. passed the Bribery Act in 2010 to fight corruption at home and abroad. Likewise, 40 countries around the world have ratified the OECD Anti-Bribery Convention of 1997 and yet 34 of

those are OECD members.<sup>4</sup> These types of legislations can also have indirect effects by encouraging developing countries to adopt developed country standards and harmonize their institutional settings if they hope to engage in economic exchanges with the latter, including cross border investment flows (UNCTAD, 2012).

In contrast, developing countries are known to have lower conditionality requirements in their economic exchanges with other developing countries (Lyman, 2005). Furthermore, despite the fact that a majority of prosecuted corrupt practices in Western jurisdictions involve developing countries, few, if any, prosecution takes place in those Southern jurisdictions themselves (Oduor, et al., 2014). Increasing rivalry between key emerging markets such as China and Brazil, and the West in having access to developing country economies, either for natural resources or market access might be one cause of this difference. The reported comparative advantage of developing country investors in their ability to operate in poor institutional environments may also be influential in this choice.<sup>5</sup> Furthermore, countries such as China often justify their lack of conditionality requirements by their refusal to impose their own set of values on sovereign host country governments, and by their willingness to “separate business from politics” (Lyman, 2005). Because of this lack of conditionality, growing South–South economic exchanges, particularly those involving financial flows, are often singled out as undermining Western country efforts to promote good governance and better institutions in developing countries with detrimental long term development effects. (Strange et al., 2013; Economist, 2006; Graham-Harrison, 2009; Mbaye, 2011; Warmerdam, 2012).

Another possible source of heterogeneity between Northern and Southern investors is argued to be the demonstration channel. Accordingly, the introduction of new methods of business practices through Northern multinational subsidiaries can trigger institutional change in the South (Kwok and Tadesse, 2006). On the other hand, the level of institutional and cultural similarity as well as closeness in technological and preference structures between countries can also affect the

potential for institutional spillovers and convergence through economic exchanges (Amsden, 1987; UNIDO, 2005; Bergstrand and Egger, 2013; Regolo, 2013; Bahar et al., 2014; Cheong et al., 2015).<sup>6</sup>

Notwithstanding the transmission channels discussed above, increasing FDI flows from the North as well as the South may also worsen institutional quality in host countries. Increasing foreign investment, for example, may broaden the pool of money available for bribery. A second possibility results from the heightened inter-country competition to secure business for domestic market or natural resource access. The cutthroat competition among foreign investors may encourage them to bypass local laws and regulations or resort to other corrupt practices for securing competitive advantage.<sup>7</sup> A quick look at the US Department of Justice's FCPA web site suggests that a significant portion of corruption cases involve bribing developing country officials by high-income foreign country corporations and individuals. In a well-publicized case in 2012, for example, the US Justice Department settled with Pfizer for \$15 million on charges including bribery and taking "short cuts to boost its business" in several developing countries in Asia and Eastern Europe (US Department of Justice, 2012b).<sup>8</sup>

Foreign investors can also affect host country institutions through lobbying and exerting pressure on local policy makers (Long, 2015). The direction of change, however, is not that straightforward. While Dang (2013) and Long (2015), in two case studies on Vietnam and China, respectively, argue that this change is positive, it is also possible that FDI flows may undermine both the existing quality of local institutions and any attempts to improve them, especially if such changes are seen as lowering profit margins by foreign companies. For example, in 2010, a global freight company, and five oil and gas service companies and subsidiaries including the Royal Dutch Shell agreed to pay a total of \$156 million in criminal penalties in the US. The criminals all confessed that they used bribes to circumvent and bypass local rules and regulations with regard to their business activities in Africa, Asia and Latin America (US Department of Justice, 2010b). In another

case, Magyar Telecom (owned by Deutsche Telecom) agreed to pay \$64 million in criminal penalties in the US for paying bribes to change laws and regulations and to limit competition in the Macedonian telecommunications market (US Department of Justice, 2011).<sup>9</sup> A quick look at the US Justice Department's website reveals that a significant portion of corporations found guilty of corruption involves foreign, particularly, European, companies and their operations in Southern countries. Consequently, and perhaps not so surprisingly, there is little empirical evidence supporting the view that developed countries through their economic exchanges have any positive effect on institutional development in the South.<sup>10</sup>

Turning to the link between institutional development and FDI, a majority of previous research explores the effects of the latter on the former. Accordingly, the level of institutional development (including legal codes, transparency, political stability, financial system, corruption levels, etc.) is found to be a significant determinant of FDI flows (Wei, 2000; Alfaro et al., 2008; Cuervo-Cazurra, 2008; Javorcik and Wei, 2009; Kinda, 2010). There is, however, only limited work done on the effects of FDI flows on institutional development. Accordingly, while Kwok and Tadesse (2006) report that past *aggregate* FDI flows have a significantly negative effect on host-country corruption levels, Olney (2013), using bilateral FDI data from the US, find that competition among countries to attract FDI leads to competitive undercutting of regulatory labor market standards in host countries. There is also some evidence showing that aggregate FDI flows help improve property rights protection in host countries (Ali et al., 2011). Furthermore, in a case study on Vietnam, Dang (2013) shows that increasing FDI is likely to boost host country institutional development through better property rights, accountability, and business regulations. In a similar study, Long et al. (2015), based on firm surveys finds significant institutional spillovers from FDI to host regions in China including improvements in tax and fee policies, and better rule of law. The current study contributes to this literature along several dimensions. First, this is the first study that



explores institutional effects of bilateral as well as aggregate FDI flows using a comprehensive sample of countries. Secondly, we explore if there is any heterogeneity in the institutional effects of Northern vs. Southern investors. Third, instead of focusing on few dimensions of institutional change, we analyze a wide array of institutional change measures. Fourth, we test the determinants of both institutional change *and* institutional convergence (divergence). Fifth, we control for a wide range of country-specific factors including the natural resource curse.<sup>11</sup>

### 3. EMPIRICAL METHODOLOGY

We explore the effects of FDI flows on the institutional development gap between host and home countries using the following specification similar to La Porta et al. (1999), Chong and Gradstein (2007), Ali et al. (2011); ElBahnasawy and Review (2012), Olney (2013), and Long (2015).

$$Inst_{ijt} = \alpha_1 + \beta_1 FDI_{ijt-1} + \gamma_i' V_{ijt-1} + \varepsilon_{ijt} \quad (1)$$

Here  $Inst_{ijt}$  is the level of institutional development gap between host country  $i$  and home country  $j$  at time  $t$  and its measurement is discussed later in this section.  $FDI_{ijt}$  is the real FDI inflows from home country  $j$  to host country  $i$  at time  $t$ .  $\beta_1$  is the key parameter of interest to determine whether FDI flows have any effect on the institutional development gap between two countries. In the benchmark model (using a panel structured as country-pair and time) we estimate equation (1) using country-pair robust standard errors and year, host and home country fixed effects. All time variant economic variables on the right hand side of the equation are lagged one period to reduce the risk of reverse causality and to account for delayed effects.  $\varepsilon$  represents the normally distributed error term capturing other omitted effects.  $V$  is a vector of control variables and includes the following:

Real per capita GDPs (log) of country  $i$  and  $j$  ( $GDPPC_i$  and  $GDPPC_j$ ) controls for the effects of differences in income levels. It is expected that rising income levels leads to better institutions and that countries at similar levels of economic development have similar institutional development

levels (Hallak, 2010; Bahar et al., 2014). We also include real GDP growth rates of country  $i$  and  $j$  ( $GDPG_i$  and  $GDPG_j$ ) to account for the effects of economic growth on institutional change.<sup>12</sup>

Demographic pressures are captured by the (log) total population of country  $i$  and  $j$  ( $Population_i$  and  $Population_j$ ). It is possible that increasing population size and density make it more difficult and costly to improve institutional quality (Acemoglu et al., 2001). Countries with larger populations are also more likely to have higher ethnic fragmentation, which may negatively affect institutional development (Alesina, and Ferrara, 2005). On the other hand, larger population size may create more incentives for institutional development through scale effects as well as innovation and technological change resulting from intensified collective action (Kazianga et al., 2014).

The (log) (km) distance between  $i$  and  $j$  ( $Distance_{ij}$ ) captures knowledge diffusion costs. Increasing physical distance between two countries is expected to widen their institutional differences as countries will engage in fewer economic and cultural exchanges and therefore have less know-how of each other and (Bahar et al., 2014). It also captures the effect of regionalism, which may be a factor in creating incentives for the harmonization of countries' institutions (Bergstrand and Egger, 2013; Cheong et al., 2015).

Sharing a common language and a border can also facilitate institutional convergence through knowledge diffusion (Bergstrand and Egger, 2013; Bahar et al., 2014). Thus, we include two binary dummy variables,  $Language$  and  $Adj$ , equal to 1 if  $i$  and  $j$  share a common language, and share a common border, respectively, and 0 otherwise. In addition we include  $Land\ locked$ , which stands for the number of landlocked countries in the country pairs (0, 1, or 2). Being landlocked can increase natural barriers for knowledge diffusion and reduce spillovers from institutional changes in other parts of the world (Bahar et al., 2014). On the other hand, landlocked countries are dependent on building transportation and communication networks with other countries for their survival, which

requires establishing political linkages and therefore may reduce their institutional differences with partner countries.

The effect of colonial linkages on the institutional similarities is captured by the following variables: a binary variable equal to 1 if  $i$  and  $j$ : had a common colonizer after 1945 (*ComCol*); are in a current colonial relationship (*CurCol*); and have ever had a colonial link (*Colony*). Furthermore, we also include a binary variable if  $i$  and  $j$  were the same country (*ComNat*), capturing the familiarity and institutional path dependency effects.

Last but not least, we include a vector of time and country fixed effects. The year fixed effects ( $\varphi_t$ ) control for global changes that affect all countries symmetrically, and host and home country fixed effects ( $\varphi_i, \varphi_j$ ) account for all other unaccounted time-invariant country characteristics in host and home countries. For sensitivity analysis we also include a vector of country-pair fixed effects ( $\varphi_{ij}$ ) to control for any unobserved heterogeneity in institutional development gaps between countries.

We should note, however, that equation (1) assumes that bilateral investment flows have a homogenous effect on institutional development gaps independent of where they are from. As discussed earlier, the effect of FDI on host country institutions may depend on the direction of flows that is South–South vs. North–South, South–North, or North–North. If, for example, we find a significantly negative  $\beta_i$  coefficient, this suggests that FDI flows help close institutional development gaps between host and home countries. This, however, does not tell much about whether or not this convergence is towards a higher-end or a lower-end equilibrium, or whether it exists in every direction of FDI flows. If the critics of South–South FDI flows are right, we should then find institutional convergence particularly in North–South direction and expect the Northern flows to raise the institutional standards in the South. We should also be able to observe the same process in the South–South direction, but this time representing a lower-end equilibrium. If there is

indeed a *China effect* on host country institutions in the South, this then should be visible through a significant (downward) convergence process between Southern countries. To explore these questions, we introduce two interaction dummies in Eq. (2) and test any heterogeneity in the institutional effects of FDI flows between countries.

$$Inst_{ijt} = \alpha_1 + \beta_1 FDI_{ijt-1} + \beta_2 S_i * FDI_{ijt-1} + \beta_3 S_j * FDI_{ijt-1} + \beta_4 S_i * S_j * FDI_{ijt-1} + \gamma_i' V_{ijt-1} + \varepsilon_{ijt} \quad (2)$$

where  $S_i$  ( $S_j$ ) is equal to one if the host (home) country is a Southern country, and zero otherwise. The effects of *FDI* on North–North and South–South institutional development gaps are captured by  $\beta_1$  and  $\beta_1 + \beta_2 + \beta_3 + \beta_4$  while North–South and South–North flows are captured by  $\beta_1 + \beta_2$  and  $\beta_1 + \beta_3$ , respectively. In the empirical analysis, in order to have an alternative comparison of different groups of countries with regard to FDI flows and other control variables, we also divide the sample into four sub-groups based on the direction of FDI flows but this time without the interaction dummies.

### 3.1 Data

The bilateral FDI data are obtained from the OECD and UNCTAD FDI databases as well as from individual country statistical offices for the period of 1990 – 2009. The data availability was the main constraint in country and time period selection and we have dropped those country pairs that had no data for any of the years during the period analyzed. The final dataset is a panel of 38,898 country-year observations from 3,210 country pairs including 134 host and home countries. The bi-directionally disaggregated and large size of the sample limits the multicollinearity and aggregation bias in our empirical analysis (Wooldridge, 2002; Yu, 2010). The FDI data are expressed in current US dollars and are deflated by the US GDP deflator (with a base year of 2000) from the International Financial Statistics (IFS) of IMF.<sup>13</sup> The full list of sample countries is provided in the appendix (Tables A4-A5).

Control variables on *Distance*, *Language*, *Adj*, *Land locked* and colonial past, are from CEPII and CIA's World Factbook. The population and GDP data are from World Bank's World Development Indicators (WDI), and, when missing, from IFS, Penn World Table (PWT 6.3), and United Nations Statistics. The North and South refers to developed and developing countries based on UNCTAD and WTO classifications. The income and regional classifications are from the World Bank. The North includes Australia, Austria, Belgium, Canada, Switzerland, Cyprus, Germany, Denmark, Spain, Finland, France, Greece, Hong Kong, Ireland, Iceland, Israel, Italy, Japan, Luxemburg, Netherlands, Norway, New Zealand, Portugal, Sweden, UK, and USA. The South includes the rest of the world.<sup>14</sup>

During the period analyzed, 134 sample countries accounted for 77% of all global FDI inflows, with a low of 61% in 2009 and a high of 96% in 2002. During the period analyzed, Southern countries received 24% of total sample FDI inflows in the data. Table 1 provides summary statistics for the variables that entered the regression analysis. While the sample includes a large number of observations in all four directions, the average level of real FDI flows is the lowest in South–North (\$27 million) and South–South (\$34 million) directions and the highest in North–North direction (\$1 billion). Furthermore, while the largest flows (both in terms of frequency and dollar amount) are within the group of high-income OECD countries (i.e. North–North), the second highest level of flows occurs between high-income OECD and middle-income countries (lower and upper middle income combined).<sup>15</sup> Looking at the low-income host countries, the biggest investor group appears to be the high-income OECD countries. In contrast, middle-income countries do not have much investment in low-income countries and the number of recorded (i.e. frequency) bilateral FDI flows is quite low. Overall, the data suggests that most of the South–South flows are clustered between upper-middle income countries with little action taking place with respect to low-income or lower middle-income countries. While the average level of FDI flows in

the South is the highest between high-income non-OECD countries and lower-middle income countries, these flows are highly clustered between a few countries and are low in frequency. In fact, just the removal of China from the host countries list in this group reduces the average value from \$1.4 billion to \$77 million. Furthermore, we observe a high degree of clustering within and between some regions. In terms of both the average investment value and its frequency, Asia, Europe and North America, for example, mostly invest within and between each other. These three regions stand out as a major hub for both inflows and outflows of FDI. Further details on FDI based on income and regional characteristics are provided in the Appendix Tables A1 and A2.

**<Insert Table 1 Here>**

Turning to the measurement of institutional development, this obviously is no easy task. Acemoglu et al. (2001), among others, argue that institutional development encompasses overlapping economic and political institutions including the degree of development of government bureaucracy, law and order, civil institutions, democracy, level of corruption, etc. To proxy all these different aspects of institutional development, we use the International Country Risk Guide (ICRG) political risk rating constructed by Political Risk Services. The ICRG is measured using a composite index including political, legal, and bureaucratic institutions and consists of: government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religion in politics, law and order, ethnic tensions, democratic accountability, and bureaucracy quality. It ranges between 0 and 100, the latter reflecting the best institutional environment. Compared to other institutional quality measures, the ICRG rating has several advantages: First, it exhibits ample within-country variation. For example, the mean standard deviation in ICRG is 5.56 for the South and 4.13 for the North and these numbers account for 42% (48%) and 29% (33%) of cross section variance during the full period (or 2009). Second, it is reported since 1984 for a majority of countries, making it possible to utilize as many countries as

possible based on FDI data availability. To measure the institutional development gap between country pairs we use the following Kogut and Singh's (1988) method:

$$\text{Institutional Development Gap (Inst)} = \frac{1}{12} \sum_{d=1}^{12} (\text{Inst}_{dit} - \text{Inst}_{djt})^2 / V_d \quad (3)$$

where  $d$  indicates the dimensions of the index;  $V_d$  indicates the variance of the  $d^{\text{th}}$  dimension;  $\text{Inst}_{di}$  and  $\text{Inst}_{dj}$  refer to the institutional quality index of order  $d$  for country  $i$  and  $j$  at time  $t$ .

Figure 1 displays the evolution of average institutional distance in all four directions and Figure 2 shows their Kernel densities. Not surprisingly, the differences are the lowest between developed country pairs and the highest between developing and developed countries. The average institutional distance is 0.74 in North–North direction as opposed to 1.64 in South–South, 2.53 in North–South and 2.34 in South–North directions (Table 1) (the difference between North-South and South-North results from the unbalanced nature of the dataset). Likewise, the bilateral variation (measured by the standard deviation) is significantly higher in North–South direction (1.81) and the lowest in North–North direction (0.64). Still the variation is quite high among developing countries as well, reaching 1.21.<sup>16</sup> Supporting the convergence hypothesis, the simple correlation coefficient between FDI flows and institutional gap is negative in all directions (-0.076\*\*\*), yet is the highest and most significant in the North–South direction (-0.08\*\*\*) compared to South–South (-0.01), South–North (-0.04\*\*\*), or North–North (-0.02\*) directions (\* and \*\*\* refer to significance at 10% and 1% levels) (Table A3).

**<Insert Figures 1 - 2 Here>**

#### 4. EMPIRICAL RESULTS

Table 2 presents benchmark regression results with robust standard errors (clustered by country pairs). Column (1) presents the basic OLS results. Column (2) repeats (1) with the addition of year fixed effects. Column (3) introduces country-pair fixed effects (which cause all other country-pair time invariant variables to drop from the regression equation), and Column (4) addresses any

omitted time-invariant host country fixed effects. Column (5), which is our benchmark specification, controls for year fixed effects as well as host and home country fixed effects accounting for all other unobserved time-invariant country characteristics, including cultural, institutional or geographical factors such as initial and social capital, religious norms, trust, natural resource endowments, etc.

**<Insert Table 2 Here >**

While the regression results in columns (1) – (4) suggest that FDI flows have no significant effect on institutional differences across countries, the benchmark specification in column (5) suggests the opposite. Accordingly, once we control for host and home country fixed effects, which take care of all time-invariant country specific factors, FDI flows appear to have a significantly negative effect on institutional development gaps between countries, leading to institutional convergence. Regarding other variables of interest, coefficient estimates appear as expected and provide support to our specification and estimation methodology. First, we find that, independent of specification, an increase in per capita incomes and GDP growth rates in host and home countries significantly increase institutional convergence between two countries. Arguably, rising incomes and economic prosperity push both countries towards an optimal level of institutional development. Population size is also found to be a predictor of similarity in institutional development. On the other hand, countries that are landlocked or distant from each other are found to have institutional divergence.

Regarding colonial past variables, while countries that had a common colonizer after 1945 (*ComCol*) experience convergence, those that ever had a colonial relationship (*Colony*) or are currently in a colonial relationship (*CurCol*) face divergence. As suggested by numerous other studies it appears that colonizers had significant institutional footprints in their colonies. In contrast, the same cannot be said about those countries that had or have any kind of colonial relationship. We also find



that countries that were once the same country have significantly similar institutional development. While there is little surprise in these results, they provide support to our estimation methodology.

Table 3 reports regression results based on Eq. (2) after controlling for the direction of FDI flows. We include host and home country fixed effects as in the benchmark specification of column (5) in Table 2. Unlike in Table 2, the results in columns (1) – (5) do not suggest any strong evidence that being a Northern or Southern (host or home) country matters when it comes to the effects of FDI flows on institutional development gaps. Column (1) reports results using the interaction dummy approach. Accordingly, while  $\beta_1$  captures a significantly negative effect of FDI flows on institutional distance in North–North direction (resembling the well-known OECD convergence in the growth literature), we do not find any significant effect in any other direction that is South–South ( $\beta_1 + \beta_2 + \beta_3 + \beta_4 = 0.0001$ ), South–North ( $\beta_1 + \beta_3 = 0.00002$ ), or North–South ( $\beta_1 + \beta_2 = 0.00003$ ). In columns (2) – (5) we drop the interaction dummies and instead divide the sample into four based on South and North directions. Yet, we still find no evidence of any heterogeneous FDI effects on institutional differences between countries. That is the effects of South–South or North–South FDI flows (as well as those of North–North or South–North) on institutional distance are found to be insignificant. While the coefficient estimates for North–South and North–North flows in columns (4) and (5) are found to be negative, suggesting a convergence effect, none are statistically significant at conventional levels.

**<Insert Table 3 Here >**

The coefficient estimates from other control variables again appear as expected. We find that the GDP per capita of host or home countries is not a significant determinant of bilateral institutional differences in South–South or North–North directions, reflecting the relative homogeneity of institutional development levels within each group. In contrast, they are found to be a significant determinant of institutional distance in South–North and North–South directions.

Accordingly, in the South–North direction the higher the per capita income of the (Northern) host country the bigger is the institutional development gap with the (Southern) home country. In contrast, increasing income level in the (Southern) home country is found to narrow the existing institutional gap between the two countries. We find the opposite in the North–South direction that is the higher the per capital income of the (Southern) host country the smaller is the institutional difference it has with the (Northern) home country. Likewise, increasing income level in the (Northern) home country is found to widen the existing institutional gap between these countries. This finding probably results from the positive correlation between institutional development and income levels. That is, *ceteris paribus*, as the income level of the Southern country increases, regardless of whether it is a home or host country, it leads to a higher level of institutional development and therefore a narrower gap with the partnering Northern country. The opposite happens when the income level of the Northern country increases, which would further widen the existing gap it has with its Southern partner. In other words, increasing income levels in the South (North) leads to institutional convergence (divergence) in both South–North and North–South directions.

Likewise, GDP growth does not appear to have a robust and significant effect on institutional differences between host and home countries within South–South and North–North directions.<sup>17</sup> In contrast, we find that, similar to the case with per capita incomes, increasing GDP growth in Southern home or host countries is likely to narrow institutional development gaps in South–North and North–South directions. Yet, increasing growth rate in Northern home or host countries leads to further divergence in institutional development gaps they have with Southern countries. Countries that are landlocked, close in distance, and are neighbors appear to have more similar institutional development levels. We also find some evidence suggesting that colonial linkages, as well as having a shared past nationhood or a common language have moderating effects

on institutional development gaps between countries. Lastly, countries with similar population sizes appear to have more similar institutional development than others.

## 5. EXTENSIONS

### 5.1 Natural resource curse

The negative effects of natural resource dependence on institutional development (i.e. natural resource curse, NRC) have been discussed extensively in recent literature (deRosa and Iooty, 2012). Accordingly, the easy flow of rents from natural resource exports may facilitate the formation of a rentier state, leaving little incentive for the government to improve its institutional quality. Natural resource rents may also enable the militarization of state structures and cause formation of authoritarian police states that suppress public demands for improving institutions.<sup>18</sup> Thus, in the extended model we introduce a new control variable, *Rents*, measured by the percentage share of natural resource rents in GDP of host country  $i$  to capture the effect of natural resource dependence on institutional development gaps. We also include an interaction variable between FDI and *Rents* to test whether FDI flows affect countries with natural resource dependence differently. It is possible that in their bid to ensure resource access, developed and/or developing country investors treat natural resource rich countries differently than the rest and demand fewer conditions attached to their investment flows.<sup>19</sup>

Table 4 presents regression results after introducing these two new control variables. Column (1) reports results with host and home country fixed effects for the full sample. As before, we find a significantly negative effect of FDI flows on the institutional development gaps, implying convergence. Yet the net effect becomes insignificant as the level of natural resource dependence increases to the sample mean of 4.837%.<sup>20</sup> In fact, at the margins (captured by the interaction variable) FDI flows appear to cause further divergence in countries with higher levels of *Rents*. We also confirm the presence of a NRC whereby countries with a higher share of natural resource rents

in GDP experience more divergence in institutional development with home countries. In columns (2) – (5) we divide the sample into four directions and include home and host country fixed effects. This time, however, we fail to find any effect of FDI flows on institutional development gap in any of the four directions. The FDI effect stays insignificant even after taking into account the *Rents* interaction, as shown by the marginal effects in Table 4. However, as the share of natural resource rents increase, FDI flows appear to stimulate convergence in North–South and divergence in North–North directions as suggested by the coefficient on the interaction term between *FDI* and *Rents*.<sup>21</sup> We do not find any such effect in South–South or South–North directions, even though the signs are negative in the first and positive in the second case. The marginal effect of *Rents* itself stay positive but lose statistical significance in all but South–South direction, which suggests that natural resource dependence is a significant source of institutional distance between developing countries.

**<Insert Table 4 here>**

Notwithstanding these results, country fixed effects in columns (1) – (5) are likely to remove any time-invariant effect of *Rents* on institutions. Therefore, in columns (6) – (9) we repeat the same exercise but this time without including any host or home country fixed effects. The results suggest that countries with higher natural resource dependence have larger institutional development gaps with their partner countries, particularly in South–South and North–South directions. In contrast, *Rents* dependence is found to stimulate convergence among Northern countries. Furthermore, the net effect of FDI flows is found to be significant and conditional on the level of *Rents* dependence in host countries. Accordingly, looking at the net effect of FDI at the mean values of *Rents*, we find that FDI flows cause divergence in South–South direction but convergence in the South–North and North–South directions. The net effect appears to be negative but statistically insignificant in the North–North direction. These results provide some partial support to those arguments favoring Northern rather than Southern investments in countries with rich natural resources but poor

institutions. This is indeed a novel finding in the literature. Previous work on NRC hypothesis suggests limited economic spillovers from FDI to natural resource rich host countries. In fact, even the type of FDI is suggested to differ between resource-rich and resource poor countries with the former receiving more resource-oriented horizontal FDI and the latter receiving non-resource based vertical FDI (Poelhekke and Ploeg, 2013). However, previous work on NRC has not differentiated between developed vs. developing country investors. What is the transmission mechanism at play here? Without having a more in-depth micro analysis, we can only speculate about some possible channels through which this effect manifests itself. The US Department of Justice's FCPA web site provides all related information and involved parties including court documents on the FCPA cases. A quick look at it reveals that a significant part of FCPA cases involve natural resource rich countries such as Nigeria and Western, mostly European, multinationals. There also seems to be an increasing cooperation between the US and its developed country counterparts, such as France, Germany, and U.K. in prosecuting corruption involving third countries as well as in synchronizing their criminal laws.<sup>22</sup> There is little evidence, however, that there is a similar cooperation with the justice departments of developing countries. In fact, it is reported that in a vast majority of such cases involving foreign countries, no prosecution took place following the prosecutions in the US or other Western countries (Oduor et al., 2014). Therefore, it may very well be the case that there is a positive institutional spillover from the North to the South in the case of resource-rich Southern countries.

## **5.2 Bilateral versus aggregate FDI flows**

The bilateral data analysis in the previous sections might be masking the agglomeration effects driven by total FDI flows. It is possible that aggregate FDI flows from the North and the South as a block might be more important in influencing institutional change in host countries. For example, while FDI flows from  $j$  to  $i$  might be small relative to  $i$ 's GDP, *total* FDI flows from all  $j$ 's might be

quite significant. As a results, total volume of FDI flows from a particular group of countries (i.e. North vs. South) can play a more important role in stimulating institutional change than individual bilateral flows (i.e. the fallacy of composition). To test this hypothesis we pool bilateral FDI flows into an aggregate FDI variable from the South and the North. In this new set up, our left hand side variable becomes the *level* of aggregate institutional development in host country  $i$  at time  $t$ .

In column (1) of Table 5 we first present results with the aggregate FDI flows, which appear with a positive but statistically insignificant coefficient estimate. In column (2) we repeat the same exercise after separating aggregate FDI flows into those from the South and the North. This time we find a significantly positive effect of FDI flows from the North on institutional development in host countries while no significant effect is detected for those from the South. In column (3) we test whether there is any *China effect* by limiting host countries with those in the South and repeat the same exercise. The results support the presence of a *China effect* and suggest that aggregate South–South FDI flows have a statistically significant negative effect on institutional development in host countries. In the case of North–South FDI flows, however, we do not detect any significant effect. In column (4) we explore the South–North and North–North directions by limiting the left hand side variable with only Northern countries. We again do not detect any significant effect of South–North or North–North FDI flows on Northern institutional development. In column (5) we repeat the exercise by introducing interaction variables for Northern and Southern countries with the full sample. The results again suggest a significantly negative institutional development effect of South–South flows while no such effect is found in South–North or North–South directions. North–North flows, however, are found to have a significantly positive effect on institutional development, suggesting institutional convergence through FDI among developed countries.

**<Insert Table 5 here>**

In Table 6 we extend the analysis of Table 5 further. First we test the NRC hypothesis of section 5.1 to see if aggregate FDI flows have any differential effects on natural resource rich countries. Columns (1) and (2) show that aggregate FDI flows have no significant institutional development effect even after controlling for the NRC, both with and without its interaction with FDI. In column (3) we split FDI flows from the South and the North and limit the sample of host countries to those in the South. The results are similar to those in Table 5 showing a significantly negative effect of aggregate South–South FDI flows on institutional development in the South while no significant effect is detected in North–South flows. Column (4) introduces an interaction term with the *FDI* and *Rents* and repeats the analysis as in column (3). This time the net effect of FDI becomes insignificant for both South–South and North–South flows. In none of the regressions in columns (1) – (4) the *Rents* variable is significant at conventional levels.<sup>23</sup>

<Insert Table 6 here>

### 5.3 Are all institutions equal?

It is possible that FDI flows do not affect all aspects of institutional development equally and its certain components such as corruption might be more responsive to FDI flows than others. The structure of conditionality requirements attached to investment flows as well as investors' ranking of their own priorities may play a role in this. For example, the legal barriers in the US and UK prevent firms from bribing in host countries. Therefore we repeat our analysis after replacing the aggregate institutional development gap variable in Eq. (3) with a subset including only four, rather than all 12, components including corruption, government stability, investment profile and law and order. These four variables are found among the most significant determinants of FDI and therefore might be expected to react the most to FDI flows. Furthermore, a significant portion of empirical research on institutional change is focused on these variables, which are deemed as important for long-term growth and structural change. Corruption is probably the most explored institutional development

variable both as a dependent and an independent variable in empirical research (Mauro, 1995; Wei, 2000; Javorcik et al., 2009; Robertson, and Watson, 2009; Dutt and Traca, 2010; ElBahnasawy, 2012). Rule of law (as well its extensions to property rights) is another highly sought after variable, again on both sides of the equation (Mauro, 1995; Ali et al., 2011; Auer, 2013; Berden et al., 2014; Long et al., 2015). The third variable, Government stability, is also argued to affect capital flows as it measures “the government’s ability to carry out its declared program(s), and its ability to stay in office” (PRS, 2015). Therefore, it is expected to have a positive effect on FDI (Knack and Keefer, 1995; Mauro, 1995; La Porta et al., 1999; Berden et al., 2014). Last but not least, the investment profile variable controls for contract viability and risk of expropriation as well as limits on profits repatriations, which are key variables in research on FDI flows (Kinda, 2010; Aleksynska and Havrylchyk, 2013; Bergstrand and Egger, 2013; Dang, 2013; Long, 2015). We should note, however, that these variables are highly correlated and the simple correlation coefficient between the full and reduced form *Inst* variable is 0.82. Table 7 reports regression results using this new left hand side variable. The coefficient estimates are quite similar to those before and once taking into account country fixed effects suggest no significant evidence that South–South bilateral FDI flows have any different institutional effects than North–South flows at any significant level. We should note that despite using a modified left hand side variable other variables of interest are also found to be similar to those before.

**<Insert Table 7 here>**

Next, we repeat the same analysis by looking at the effect of *aggregate* bilateral FDI flows from the South and North on the *level* of corruption in host countries. The (unreported) regression results are very similar to those before showing no significant effect of FDI flows from any of the directions except for South–South flows, which appear with a negative yet marginally significant coefficient (at 10% level).<sup>24</sup> Last, we employ an alternative dependent variable that is the average of



Political Rights and Civil Liberties Ratings from the Freedom House's Freedom in the World Country Ratings (Clitz, 2011).<sup>25</sup> The unreported regression results (using both bilateral and aggregate FDI flows) were qualitatively similar to those reported in Table 7, and are available in an online Appendix.

## 6. ROBUSTNESS ANALYSIS

In this section, we explore the sensitivity of our findings to additional robustness tests. The unreported regression results for this section are again available in an online appendix. First, we test whether the results are conditional on the income group of host countries by limiting them to those at the low and middle-income levels based on the World Bank classification. We should note that 53% of global FDI flows to the South went to 10 middle income countries during the period analyzed (1990-2009), and that 79% of all South–South FDI flows in the sample went to middle income countries. In contrast, only 1% of South–South and North–South FDI flows were to low-income countries. It is also possible that because of differences in their economic and institutional structures FDI flows may have different effects among Southern countries at the low vs. middle-income levels. Thus we repeat the regression analysis by limiting host countries with those at the low and middle-income levels. In addition, we have also grouped low and middle-income countries into South and high-income countries into North. The results are similar to those reported in Table 2 and do not display any significant effect of FDI flows in any direction.

Next, we explore whether what matters for institutional change is investment flows from countries with better institutions to those with weaker institutions rather than the North–South dimension of flows. To this end, we created a dummy variable equaling one if the average institutional quality of country  $j$  is higher than that of country  $i$  at time  $t$ , and zero otherwise. The results are similar to those reported before. Third, we test whether there is a delayed effect of FDI flows by adding the second lag of FDI flows in the regressions. The results again support our

previous findings and do not suggest any significant lagged effect from FDI flows. Fourth, we analyze the sensitivity of our results to regional differences by dropping one host country region at a time from the sample. Fifth, we repeat the regressions after excluding observations below and above the 1<sup>st</sup> and 99<sup>th</sup> percentiles of institutional development gap. Last but not least, we replace the aggregate bilateral FDI flows variable of Table 6 with the net FDI inflows variable from the WDI database to test if our earlier findings are robust to any measurement error because of missing, incomplete or erroneous bilateral flows data.<sup>26</sup> The results in all these cases are again similar to those reported.

## **7. CONCLUSIONS**

Global FDI flows have increased significantly since 1990s and those to and from developing countries have experienced the largest increase during this period. While many developing countries saw the increasing investment flows from other developing countries as a positive development, many economists and policy makers in developed countries have raised concerns regarding the institutional effects of developing country investments in other developing countries. Particularly, Southern investors are often blamed for undermining developed country efforts to improve institutional development in Southern countries. In this paper we provide an empirical analysis of the institutional effects of long term investment flows in four directions: South–South, South–North, North–South, and North–North. The question we explore is to test whether bilateral FDI flows in any of these four directions have any effect on institutional development gaps between home and host economies. The empirical results using bilateral FDI flows between 134 countries for the period of 1990 – 2009 suggest 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 and are not any different from each other. In either case we do not find any significant convergence or divergence effect of FDI flows on the institutional distance between

host and home countries. We also fail to find any significant effect of aggregate North–South FDI flows on host country institutions. In contrast, we find that aggregate South–South FDI flows have a significantly negative effect on host country institutions. Furthermore, we find some evidence that South–South FDI flows might be harmful to institutional development in natural resource rich countries while the opposite is true for North–South flows. Overall, while the results suggest that there is no strong evidence of any benevolent or malevolent effects of bilateral FDI flows from developed or developing countries to developing countries, the same is not true for aggregate flows.

Our findings may have significant policy implications for both developed and developing country policy makers as well as for global financial institutions such as the World Bank. Despite the increased efforts by several developed countries and the well-publicized efforts of World Bank and OECD, as well as others to improve institutional playing field for domestic as well as multinational corporations in developing countries, there is little evidence that this is working at the bilateral level. Instead, what we see is a proliferation of bilateral investment treaties (BITs) that allow foreign investors to bypass domestic institutional challenges and lower the propensity of push and pull factors for institutional change in the South. If the goal is to improve the institutional landscape in developing countries, international organizations as well as country groups such as OECD and Group of 77 should focus their attention on coordinating their foreign investment policies including institutional changes they expect in host nations.

As a final note, we should note that further research is needed on the dynamic relationship between institutional change and foreign investment. For example, what if FDI flows affect institutional development only when the institutional development gap is above or below a certain threshold?<sup>27</sup> A similar question relates to the effects of BITs on institutional change. Is the proliferation of BITs a blessing or a curse for institutional development in the South? We hope that future research will shed more light on these questions.

## ENDNOTES

---

<sup>1</sup> An exception to this view is Amighini and Sanfilippo (2014) who show that South–South FDI flows have significantly higher skill spillovers than North–South flows in African countries.

<sup>2</sup> We here abstain from the discussion of whether or not there is indeed a universal set of “correct” institutions that produce the best outcomes for long run development and growth. For a critical discussion, see Khan (2006), Easterly (2008), and Rodrik (2008).

<sup>3</sup> The violation of FCPA is punishable with imprisonment for up to five years, and a monetary fine of up to \$250,000 for individuals, \$2 million for companies (Department of Justice, 2012a). In 2014 alone, the US charged 21 entities (both individuals and corporations) with billions of dollars in criminal penalties (US Department of Justice, 2015).

<sup>4</sup> “The OECD Anti-Bribery Convention establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions and provides for a host of related measures that make this effective. It is the first and only international anti-corruption instrument focused on the ‘supply side’ of the bribery transaction. The 34 OECD member countries and six non-member countries - Argentina, Brazil, Bulgaria, Colombia, Russia, and South Africa - have adopted this Convention” (OECD, 2013). While a similar attempt has been made through the 2003 United Nations Convention against Corruption, which has been ratified by 173 countries, it has more limited enforcement procedures.

<sup>5</sup> Aleksynska and Havrylchyk (2013), and Demir and Hu (2015) argue that Southern investors have a comparative advantage in dealing with challenging host country institutions thanks to their own home country experiences.

<sup>6</sup> It is possible that FDI flows in certain sectors such as manufactures, telecommunication, or financial services may carry more potential for institutional spillovers than extractive or primary

---

sectors such as mining or agriculture. If there are differences in the sectoral distribution of Northern and Southern investments, they may have different effects on institutional change in the South.

<sup>7</sup> For a discussion of this issue from the US perspective, see Wayne (2012) where it is suggested that the US uses FCPA to level the playing field against foreign multinationals, which uses bribery methods to gain advantage.

<sup>8</sup> In another case, Alcatel-Lucent was charged with bribing foreign officials “for the purpose of obtaining and retaining business” in several countries in Africa, Asia, and Latin America (US Department of Justice, 2010a).

<sup>9</sup> Siemens was also charged with similar crimes and was given a criminal fine of \$1.6 billion by the US and German authorities (US Department of Justice, 2008). For a list of other cases since 1977, see US Justice Department (2015).

<sup>10</sup> In the case of international aid disbursements, there is some evidence suggesting that developed countries often reward “bad behavior” in developing countries. For example, in the case of international aid disbursements many developed country multilateral institutions are found be favoring corrupt countries more than developing country institutions do (Easterly and Pfutze, 2008).

<sup>11</sup> We should note that the empirical strategies of these papers suffer from serious sample selection problems. Kwok and Tadesse (2006) uses aggregate FDI flows with a maximum sample size of 100 observations, while Olney (2013) uses only the US foreign affiliate sales as the FDI measure. Likewise, Ali et al. (2011) use samples ranging between 36 and 273 observations.

<sup>12</sup> To the extent that FDI also affects income and growth, our coefficient estimates on FDI will be biased downwards. However, note that the empirical research on the income and growth effects of FDI is inconclusive. Secondly, these effects, through productivity changes, are expected to be present only in the medium and long run but not in the same year.

---

<sup>13</sup> The FDI data are from the OECD and UNCTAD FDI databases as well as from individual country statistical offices. The data from these three different sources are merged using the following procedure. For FDI inflows and outflows to and from OECD members, we used the OECD dataset. For FDI flows from and to non-OECD member developing countries, we used the UNCTAD and/or individual country data. When there is discrepancy between inflows and outflows, if the home and host countries are both upper income OECD members we used the host country data, if the host (home) country is non-upper income OECD then the OECD member home (host) country data are used. When the data were in a non-US dollar currency, we used the annual average exchange rate from the IFS to convert them to current dollar values.

<sup>14</sup> The selection of countries into North and South is based on similarities in economic development (including institutional development), factor endowments, and export structures. For example, while Turkey and Brazil are both upper middle income countries with export structures similar to those of developed countries, they still have a large agrarian labor force, industry is still a small portion of the economy, and their institutions have more similarities with lower income countries than with developed countries. We should also note that institutional change is not a static but a dynamic process and as a result countries may move up or down the ladder. To prevent endogeneity in this variable with our key control variables, we kept these groups constant across time using their clustering in 1990. For robustness, we used other classification methods and found similar results (for a comparison, see, for example, Regolo, 2013; Amighini and Sanfilippo, 2014; Bahar et al., 2014; Cheong et al., 2015).

<sup>15</sup> The figure on high-income non-OECD FDI flows to lower-middle income should be taken with caution. First, the frequency of bilateral flows is very low (255). Secondly, it is driven mostly by bilateral FDI flows from four home countries (Bahamas, Hong Kong, Singapore and Taiwan) to

---

four host (China, Ecuador, Paraguay and Thailand) countries. Once we exclude FDI flows in these directions that are exceeding one billion dollars, the average drops to \$51 million.

<sup>16</sup> The averages are for country pairs for which we have the FDI data. Since the sample countries are those that passed the threshold level of institutional barriers, the estimated institutional effects might be biased downwards.

<sup>17</sup> We should note that economic growth in Southern or Northern home and host countries appear to have a negative effect on institutional distance in South–South and North–North directions, respectively. However, the effect is significant only for home country growth rates. Overall, it is possible that economic growth within the same country groups has a convergence effect on institutional development gaps. Further research is needed to explore this possibility and it is beyond the scope of the current paper.

<sup>18</sup> It is often claimed that increasing Chinese investment flows in Africa and elsewhere is mostly motivated by “resource grab.” For a discussion, see Graham-Harrison (2009), Mbaye (2011), Warmerdam (2012), and Strange et al. (2013).

<sup>19</sup> For example, China as well as UK may lower their conditionality requirements, such as fighting corruption, in natural-resource-rich countries such as Nigeria. Supporting this argument, the oil and gas industry is found to have the highest bribery and corruption rate in the UK (Mason and Blackden, 2012). Also see Chazan (2010) for the case of Royal Dutch Shell that was fined \$48 million in 2010 for bribing Nigerian officials.

<sup>20</sup> The marginal effects reported in the Tables are calculated using the *lincom* command in Stata 12.1 with the full decimal values of estimated betas at the mean values of interaction variables. Therefore, they are not fully comparable with the back of the envelope calculations based on reported betas in the tables. For example, the net effect of FDI ( $3.07E-06$ ) at the mean value of *Rents* (4.837502) in

---

column (1) is calculated as follows:  $(-0.00001655)+(4.837502*0.000002786)$ , which yield the reported marginal effect of FDI of  $-3.07E-06$  as opposed to  $-3.00E-06$  as would be calculated based on the rounded up values in Table 4. The significance levels are based on the standard t-test.

<sup>21</sup> The reason for the divergence effect in North – North direction is not very clear and may result from a not very precise coefficient estimate. One possible reason is the fact that the average level of *Rents* is the lowest in Northern countries and is mostly clustered within a few natural-resource rich Northern countries, causing very low levels of within-group variation.

<sup>22</sup> See, for example, the case of Siemens that was prosecuted both by the US and Germany (US Department of Justice, 2008). Also, the U.K. passed the Bribery Act in 2010 and introduced the Crime and Courts Act in August 2013, which, among others, are intended to fight corruption. Moreover, the UK published an anti-corruption plan in 2014 with 66 action plans to fight corruption at home and abroad (UK Anti-Corruption Plan, 2014).

<sup>23</sup> When repeating the regressions in columns (1) – (4) without country fixed effects, we find the following (unreported) results: (i) countries that are more natural resource dependent have significantly (at 1% level) lower institutional development, (ii) the net effect of South–South FDI flows on natural resource rich countries’ institutions is insignificant, (iii) the net effect of North–South FDI flows on developing country institutions is significantly positive.

<sup>24</sup> We should note that the inclusion of country and year fixed effects remove any time invariant country effects and country-invariant (global) year effects and therefore reduce the predictive power of other control variables. If we remove year fixed effects, despite the fact that the coefficients on year fixed effects are significant each and every year, except for 2008 and 2009, the total FDI as well as FDI from North variables become negative and significant. This finding raises questions on the



---

validity of previous panel studies that exclude year fixed effects in their specifications such as Ali et al. (2011).

<sup>25</sup> For bilateral flows, the dependent variable is the absolute value of the difference in average Freedom House ratings between host and home countries.

<sup>26</sup> We should note that it is not possible to separate WDI FDI flows data into North and South.

<sup>27</sup>For example, if the development gap is too much, international investors may not be able to exert much influence on host country institutions. Our very preliminary results from quintile regression analysis based on Eq. (1) for the 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> quintiles suggest that this may indeed be the case for the 25<sup>th</sup> quintile but not for any other.

## REFERENCES

- Acemoglu, D., Johnson, S. and Robinson, J.A. 2001. The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review* 91(5), 1369-1401.
- Acemoglu, D., Johnson, S., Robinson, J. 2005. Institutions as the Fundamental Cause of Long-run Growth. In P. Aghion and S. Durlauf (Eds.), *Handbook of Economic Growth*, vol. 1A, pp. 385–472, Elsevier.
- Alesina, A., and Ferrara, E.L. 2005. Ethnic Diversity and Economic Performance. *Journal of Economic Literature*, 43(3), 762-800.
- Amighini, A. and Sanfilippo, M. 2014. Impact of South–South FDI and Trade on the Export Upgrading of African Economies. *World Development* 64, 1-17.
- Ades, A. and Tella, R.D. 1999. Competition and Corruption. *American Economic Review* 89 (4), 982-993.
- Aleksynska, M. and Havrylchuk, O. 2013. FDI from the South: The Role of Institutional Distance and Natural Resources. *European Journal of Political Economy* 29, 38–53.
- Alfaro, L., Kalemli-Ozcan, S., Volosovych, V. 2008. Why doesn't Capital Flow from Rich to Poor Countries? An Empirical Investigation. *The Review of Economics and Statistics* 90, 347–368.
- Ali, F., Fiess, N., & Macdonald, R. (2011). Climbing to the top? Foreign direct investment and property rights. *Economic Inquiry*, 49, 289–302.
- Amsden, A. H. 1987. The Directionality of Trade: Historical Perspective and Overview. In *World Bank Symposium Exports of Developing Countries: How Direction Affects Performance*. O. Havrylyshyn (ed.), pp. 123–138, World Bank: Washington D.C.
- Auer, R.A. 2013. Geography, Institutions, and the Making of Comparative Development. *Journal of Economic Growth* 18, 179–215.

- Berden, K., and Bergstrand, J. H. and van Etten, E. 2014. Governance and Globalisation. *The World Economy* 37(3), 353-386.
- Bergstrand, J. H. and Egger, P. 2013. What Determines BITs? *Journal of International Economics*, 90(1), 107-122.
- Busse, M., Königer, J. and Nunnenkamp, P. 2010. FDI Promotion through Bilateral Investment Treaties: More Than a Bit? *Review of World Economics* 146(1), 147-177.
- Caselli, F. and Morelli, M. 2004. Bad Politicians. *Journal of Public Economics* 88(3– 4): 759 – 82.
- Chazan, G. 2012. Oil and Gas has Highest Bribery Rate. *Financial Times*, June 15.
- Cheong, Juyoung, Kwak, Do Won, and Tang, Kam Ki (2015). Heterogeneous Effects of Preferential Trade Agreements: How does Partner Similarity Matter? *World Development*, 66, 222-236
- Chong, A. and Gradstein, M. 2007. Inequality and Institutions. *The Review of Economics and Statistics* 89(3), 454–465.
- Cole, J.M. (2013) Deputy Attorney General James M. Cole Speaks at the Foreign Corrupt Practices Act Conference. November 19, Justice Department. <http://www.justice.gov/opa/speech/deputy-attorney-general-james-m-cole-speaks-foreign-corrupt-practices-act-conference>
- Cuervo-Cazurra, A. 2008. The Effectiveness of Laws against Bribery Abroad. *Journal of International Business Studies* 39(4), 634–651.
- Dang, D. A. (2013). How foreign direct investment promote institutional quality: Evidence from Vietnam. *Journal of Comparative Economics* 41, 1054–1072.
- Demir, F., and Hu, C. 2015. Institutional Differences and Direction of Bilateral FDI Flows: Are South-South Flows any Different than the Rest? Forthcoming in *The World Economy*.
- De Rosa, D., and Iooty, M. 2012. Are Natural Resources Cursed? An Investigation of the Dynamic Effects of Resource Dependence on Institutional Quality. WP 6151. World Bank.

- Dutt, P., and Traca, D. 2010. Corruption and Bilateral Trade Flows: Extortion or Evasion. *The Review of Economics and Statistics* 92(4), 843–860.
- Easterly, W. 2008. Design and Reform of Institutions in LDCs and Transition Economies. Institutions: Top Down or Bottom Up? *American Economic Review: Papers & Proceedings* 98(2), 95–99.
- Easterly, W., and Pfütze, T. 2008. Where Does the Money Go? Best and Worst Practices in Foreign Aid. *Journal of Economic Perspectives* 22(2), 29-52.
- Easterly, W., and Levine, R. 1997. Africa's Growth Tragedy: Policies and Ethnic Divisions. *Quarterly Journal of Economics* 62, 1203-1250.
- Economist, 2006. Africa and China: African Heads of State Gather for a Summit in China. Nov 3<sup>rd</sup>. [http://www.economist.com/node/8126261/print?story\\_id=8126261](http://www.economist.com/node/8126261/print?story_id=8126261)
- ElBahnasawy, N. G., and Review, C.F. 2012. The Determinants of Corruption: Cross-Country Panel Data Analysis. *The Developing Economies* 50(4), 311–33.
- Engerman, S. L., and Sokoloff, K. L. 2002. Factor Endowments, Inequality, and Paths of Development among New World Economies. NBER Working paper No. 9259. NBER.
- Gennaioli, N., and Rainer, I. 2007. The Modern Impact of Precolonial Centralization in Africa. *Journal of Economic Growth* 12(3), 185–234.
- Graham-Harrison, E. 2009. China Trade Outweighs Corruption Fears for Africa. Reuters. <http://www.reuters.com/article/2009/11/05/businesspro-us-china-africa-corruption-a-idUUSTRE5A44I220091105>
- Hall, R. and Jones, C. 1999. Why Do Some Countries Produce So Much More Output per Worker than Others? *Quarterly Journal of Economics* 114, 83–116.
- Javorcik, B.S. and Wei, S. 2009. Corruption and Cross-border Investment in Emerging Markets: Firm-level Evidence. *Journal of International Money and Finance* 28(4), 605-624.

Kaufmann, D., Kraay, A. and Zoido-Lobato'n, P. 1999. Governance Matters, World Bank Research Paper No. 2196. The World Bank: Washington, DC.

Kazianga, H., Masters, W.A., and McMillan, M.S. 2014. Disease control, demographic change and institutional development in Africa. *Journal of Development Economics* 110, 313-326.

Khan, M. 2006. Governance and anti-corruption reforms in developing countries: Policies, evidence and ways forward, G-24 Discussion Paper Series, Research Papers for the Intergovernmental Group of Twenty-Four on International Monetary Affairs and Development, No. 42, (Geneva: UNCTAD).

Kinda, T. 2010. Investment Climate and FDI in Developing Countries: Firm-level Evidence. *World Development* 38(4), 498-153.

Knack, S., and Keefer, P. 1995. Institutions and Economic Performance: Cross-country Tests Using Alternative Institutional Measures. *Economics and Politics* 7(3), 207–227.

Kogut, B., and Singh, H. 1988. The Effect of National Culture on the Choice of Entry Mode, *Journal of International Business Studies* 19, 411-432.

Kwok, C.C., and Tadesse, S. 2006. The MNC as an Agent of Change for Host-country Institutions: FDI and Corruption. *Journal of International Business Studies* 37, 767–785.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. 1999. The Quality of Government. *Journal of Law, Economics, & Organization* 15(1), 222-279.

Leite, C., and Weidmann, J. 1999. Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth. IMF Working Paper 99/85. Washington, DC, IMF.

Long, C., Yang, J., Zhang, J. 2015. Institutional Impact of Foreign Direct Investment in China, *World Development* 66, 31-48.

Lyman, P. 2005. China's Rising Role in Africa. Testimony on Council on Foreign Relations. July 21. <http://www.cfr.org/china/chinas-rising-role-africa/p8436>

- Mason, R. and Blackden, R. 2010. Shell to Pay \$48m Nigerian Bribe Fine. *The Telegraph*. November 4.
- Mauro, P. 1995. Corruption and Growth. *Quarterly Journal of Economics* 110(3), 681-712.
- Mbaye, S. 2011. Africa will not Put Up with a Colonialist China. *The Guardian*.
- Michalopoulos, S. and Papaioannou, E. 2013. Pre-colonial Ethnic Institutions and Contemporary African Development. *Econometrica* 81, 113–152.
- Naím, M. 2007. Rogue Aid. (Editor in chief) *Foreign Policy*. March 1. [http://www.foreignpolicy.com/articles/2007/02/14/rogue\\_aid](http://www.foreignpolicy.com/articles/2007/02/14/rogue_aid)
- Nunn, N. and Wantchekon, L. 2011. The Slave Trade and the Origins of Mistrust in Africa. *American Economic Review* 101, 3221- 3252.
- Olney, W.W. 2013. A Race to the Bottom? Employment Protection and Foreign Direct Investment. *Journal of International Economics* 91(2), 191–203.
- Oduor, J.A., Fernando, F.M.U., Flah, A., Gottwald, D., Hauch, J.M., Mathias, M., Park, J.W., and Stolpe, O. 2014. *Left Out of the Bargain: Settlements in Foreign Bribery Cases and Implications for Asset Recovery*, International Bank for Reconstruction and Development/World Bank, Washington D.C.
- OECD, 2013. <http://www.oecd.org/corruption/oecdantibriberyconvention.htm>
- Rigobon, R., and Rodrik, D. 2005. Rule of Law, Democracy, Openness, and Income: Estimating the Interrelationships. *Economics of Transition* 13(3), 533–564.
- Robertson, C.J., and Watson, A. 2004. Corruption and Change: The Impact of Foreign Direct Investment. *Strategic Management Journal* 25(4), 385–396.
- Rodrik, D. 2008. Second-Best Institutions. NBER Working paper 14050.
- Strange, A., Parks, B., Tierney, M.J., Fuchs, A., Dreher, A., and Ramachandran, V. 2013. China's Development Finance to Africa: A Media-Based Approach to Data Collection. Center for Global Development, Working paper 323.

Thrasher R. D. and Gallagher, K. 2008. 21<sup>st</sup> Century Trade Agreements: Implications for Long-Run Development Policy. *The Pardee Papers 2*. Boston University.

U.K. Anti-Corruption Plan. 2014. Available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/388894/UKantiCorruptionPlan.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/388894/UKantiCorruptionPlan.pdf)

UNCTAD. 2011. World Investment Report. UNCTAD: Geneva.

UNCTAD. 2012. World Investment Report. UNCTAD: Geneva.

UNCTAD. 2014. World Investment Report. UNCTAD: Geneva.

UNCTAD. 2015. Online FDI Database. Accessed on 4/1/2015. UNCTAD: Geneva.

UNIDO. 2005. *Industrial Development, Trade and Poverty Alleviation through South-South Cooperation*. U.N.: New York.

US Department of Justice (2008). Siemens AG and Three Subsidiaries Plead Guilty to Foreign Corrupt Practices Act Violations and Agree to Pay \$450 Million in Combined Criminal Fines. Office of Public Affairs, December 15.  
<http://www.justice.gov/archive/opa/pr/2008/December/08-crm-1105.html>

US Department of Justice (2010a) Alcatel-Lucent S.A. and Three Subsidiaries Agree to Pay \$92 Million to Resolve Foreign Corrupt Practices Act Investigation. Office of Public Affairs December 27. <http://www.justice.gov/opa/pr/alcatel-lucent-sa-and-three-subsidiaries-agree-pay-92-million-resolve-foreign-corrupt>

US Department of Justice (2010b). Oil Services Companies and a Freight Forwarding Company Agree to Resolve Foreign Bribery Investigations and to Pay More Than \$156 Million in Criminal Penalties. Office of Public Affairs, November 4. <http://www.justice.gov/opa/pr/oil-services-companies-and-freight-forwarding-company-agree-resolve-foreign-bribery>

US Department of Justice (2011). Magyar Telecom and Deutsche Telecom Resolve Foreign Corrupt Practices Act Investigation and Agree to Pay Nearly \$64 million in Combined Criminal Penalties. Office of Public Affairs, December 29. <http://www.justice.gov/criminal/fraud/fcpa/cases/magyar-telekom/2011-12-29-mt-dt-press-release.pdf>

US Department of Justice (2012a). A Resource Guide to the U.S. Foreign Corrupt Practices Act. The Criminal Division of the U.S. Department of Justice and the Enforcement Division of the U.S. Securities and Exchange Commission. Department of Justice.

US Department of Justice (2012b). Pfizer H.C.P. Corp. Agrees to Pay \$15 Million Penalty to Resolve Foreign Bribery Investigation. Office of Public Affairs, August 7. <http://www.justice.gov/opa/pr/pfizer-hcp-corp-agrees-pay-15-million-penalty-resolve-foreign-bribery-investigation>

US Department of Justice (2015). Foreign Corrupt Practices Act and Enforcement Sanctions. Accessed on 3/30/2015. Available at: <http://www.justice.gov/criminal/fraud/fcpa/cases/2014.html>

US Department of State (2012). U.S. Asset Recovery Tools & Procedures: A Practical Guide for International Cooperation. <http://www.state.gov/documents/organization/190690.pdf>

Warmerdam, W. 2012. Is China a Liberal Internationalist? *The Chinese Journal of International Politics* 5, 201–243.

Wayne, L. (2012). Foreign Firms Most Affected by a U.S. Law Barring Bribes. September 3. The New York Times.

Wei, S. J. 2000. How Taxing is Corruption on International Investors? *The Review of Economic and Statistics* 82(1), 1–11.



Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
$FDI_{ij}$	36,081	298	2,255	-47,911	110,915
<i>South-South</i>	6,738	34	233	-1,008	5,723
<i>South-North</i>	8,274	27	309	-8,108	9,836
<i>North-South</i>	13,132	171	943	-13,690	28,513
<i>North-North</i>	7,937	1,013	4,563	-47,911	110,915
$Inst_{ij}$	36,081	1.924	1.654	0.009	18.867
<i>South-South</i>	6,738	1.643	1.210	0.014	13.416
<i>South-North</i>	8,274	2.337	1.723	0.029	18.867
<i>North-South</i>	13,132	2.525	1.814	0.095	18.867
<i>North-North</i>	7,937	0.740	0.639	0.009	6.090
$\ln GDPPC_i$	36,081	8.868	1.364	4.131	10.944
$\ln GDPPC_j$	36,081	9.242	1.272	4.131	10.944
$\ln Population_i$	36,081	16.782	1.624	12.461	20.986
$\ln Population_j$	36,081	16.780	1.648	12.461	20.986
$GDP\ growth_i$	36,081	3.750	3.879	-51.031	106.280
$GDP\ growth_j$	36,081	3.443	3.746	-51.031	106.280
<i>Land locked</i>	36,081	0.233	0.452	0	2
$\ln Distance$	36,081	8.286	1.013	4.088	9.901
<i>Language</i>	36,081	0.112	0.315	0	1
<i>Adj</i>	36,081	0.052	0.222	0	1
<i>Colony</i>	36,081	0.062	0.241	0	1
<i>Comcol</i>	36,081	0.010	0.098	0	1
<i>Curcol</i>	36,081	0.000	0.018	0	1
<i>ComNat</i>	36,081	0.016	0.124	0	1
$Rents_i$	35,693	4.838	10.635	0	218.886

Notes: *FDI* is real FDI inflows in millions USD from country *j* to country *i*. *Inst* is the Institutional Development Gap between *i* and *j*. *GDPPC<sub>i</sub>* and *GDPPC<sub>j</sub>* are the (log) real GDP per capita in country *i* and *j*, *Population<sub>i</sub>* and *Population<sub>j</sub>* are (log) total populations of country *i* and *j*; *GDP Growth<sub>i</sub>* and *GDP Growth<sub>j</sub>* are the real GDP growth rates of country *i* and *j*; *Land locked* is the number of landlocked countries (0, 1, or 2); *Distance* is the (log) distance between the *i* and *j*; *Language* is a binary dummy variable equal to 1 if *i* and *j* share a common language, and 0 otherwise; *Adj* is a binary variable equal to 1 if *i* and *j* share a common border, and 0 otherwise. *Colony*, *ComCol*, *CurCol*, each is a binary variable equal to 1 if *i* and *j* have ever had a colonial link, had a common colonizer after 1945, and are in a colonial relationship, respectively. *ComNat* is a binary variable if *i* and *j* were the same country, *Rents* refer to the percentage share of natural resource rents in host country GDP.

Table 2: Benchmark regression results

	(1)	(2)	(3)	(4)	(5)
		Year FE	Pair FE	Year and Host Country FE	Year, Host and Home Country FE
<i>FDI<sub>ijt-1</sub></i>	4.85e-06 (4.67e-06)	1.44e-06 (4.43e-06)	1.07e-06 (1.63e-06)	-1.24e-06 (4.32e-06)	-1.27e-05*** (3.03e-06)
<i>GDPPC<sub>it-1</sub></i>	-0.513*** (0.023)	-0.521*** (0.023)	-0.302** (0.142)	-0.467*** (0.155)	-0.432*** (0.148)
<i>GDPPC<sub>jt-1</sub></i>	-0.374*** (0.028)	-0.383*** (0.028)	0.162 (0.149)	-0.435*** (0.026)	-0.015 (0.144)
<i>GDP<sub>growth</sub><sub>it-1</sub></i>	-0.028*** (0.006)	-0.034*** (0.006)	-0.023*** (0.005)	-0.022*** (0.006)	-0.023*** (0.006)
<i>GDP<sub>growth</sub><sub>jt-1</sub></i>	-0.022*** (0.007)	-0.028*** (0.008)	-0.015** (0.006)	-0.023*** (0.008)	-0.017** (0.007)
<i>lnPopulation<sub>it</sub></i>	0.006 (0.014)	0.014 (0.014)	-2.374*** (0.402)	-1.176*** (0.385)	-1.879*** (0.374)
<i>lnPopulation<sub>jt</sub></i>	-0.013 (0.015)	-0.009 (0.014)	-2.239*** (0.437)	-0.039*** (0.012)	-2.043*** (0.411)
<i>Land locked<sub>ij</sub></i>	0.170*** (0.048)	0.144*** (0.048)		0.126** (0.051)	13.06*** (2.057)
<i>lnDistance<sub>ij</sub></i>	0.263*** (0.023)	0.269*** (0.023)		0.253*** (0.023)	0.245*** (0.022)
<i>Language<sub>ij</sub></i>	-0.066 (0.077)	-0.030 (0.076)		-0.177*** (0.066)	-0.318*** (0.055)
<i>Adj<sub>ij</sub></i>	-0.474*** (0.088)	-0.441*** (0.088)		-0.350*** (0.087)	-0.238*** (0.079)
<i>Colony<sub>ij</sub></i>	0.275*** (0.102)	0.264*** (0.101)		0.165* (0.085)	0.114* (0.065)
<i>Comcol<sub>ij</sub></i>	-0.854*** (0.167)	-0.835*** (0.171)		-0.826*** (0.146)	-0.504*** (0.135)
<i>Curcol<sub>ijt</sub></i>	-0.132 (0.107)	-0.238** (0.107)		0.320** (0.131)	0.910*** (0.143)
<i>Smctry<sub>ij</sub></i>	-0.585*** (0.123)	-0.566*** (0.121)		-0.490*** (0.120)	-0.315** (0.140)
<i>Constant</i>	8.046*** (0.580)	8.173*** (0.597)	80.54*** (9.337)	28.66*** (6.210)	62.03*** (7.794)
<i>Year FE</i>	No	Yes	Yes	Yes	Yes
<i>Host FE</i>	No	No	No	Yes	Yes
<i>Home FE</i>	No	No	No	No	Yes
<i>Country-pair FE</i>	No	No	Yes	No	No
Observations	36,081	36,081	36,081	36,081	36,081
R-squared	0.257	0.282	3,211	0.517	0.665
Rmse	1.426	1.402	0.145	1.152	0.961

Notes: The dependent variable is the Institutional Development Gap between  $i$  and  $j$  in all following tables, unless stated otherwise.  $FDI$  is annual FDI flows from country  $j$  to  $i$ .  $GDPPC_i$  and  $GDPPC_j$  are the real GDP per capita in country  $i$  and  $j$ ;  $GDP\_growth_i$  and  $GDP\_growth_j$  are real GDP growth rates in country  $i$  and  $j$ ;  $lnPopulation_i$  and  $lnPopulation_j$  are total populations in country  $i$  and  $j$ ;  $Land\ locked$  is the number of landlocked countries (0, 1, or 2);  $ln\ Distance$  is the (natural log) distance between the  $i$  and  $j$ ,  $Language$  is a binary dummy variable equal to 1 if  $i$  and  $j$  share a common language, and 0 otherwise;  $Adj$  is a binary variable equal to 1 if  $i$  and  $j$  share a common border, and 0 otherwise;  $Colony$  is a binary variable equal to 1 if  $i$  and  $j$  have ever had a colonial link after 1945;  $ComCol$  is a binary variable equal to 1 if  $i$  and  $j$  had a common colonizer after 1945;  $CurCol$  is a binary variable equal to 1 if  $i$  and  $j$  are in a colonial relationship at time  $t$ ;  $Smctry$  is a binary variable if  $i$  and  $j$  were the same country. Coefficient estimates for fixed country and year effects are not reported for brevity. Time-invariant country pair variables in column (3) drop due to collinearity under country-pair fixed effects model. (\*\*\*) (\*\*), (\*) denote significance at 1, 5 and 10% levels, respectively.

Table 3: South-South flows versus the rest

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South – South	South – North	North – South	North – North
$FDI_{it-1}$	-1.53e-05*** (3.19e-06)	5.85e-05 (7.70e-05)	1.21e-05 (2.21e-05)	-1.44e-05 (1.31e-05)	-7.04e-09 (1.89e-06)
$FDI_{ijt-1} * S_i$	4.28e-05** (2.16e-05)				
$FDI_{ijt-1} * S_j$	3.20e-05 (3.02e-05)				
$FDI_{it-1} * S_i * S_j$	3.64e-05 (9.69e-05)				
$GDPPC_{it-1}$	-0.435*** (0.148)	-0.212 (0.254)	2.110*** (0.402)	-0.995*** (0.227)	-0.044 (0.162)
$GDPPC_{jt-1}$	-0.015 (0.144)	0.050 (0.208)	-0.855*** (0.274)	2.951*** (0.403)	0.278* (0.152)
$GDP\_growth_{it-1}$	-0.023*** (0.006)	-0.007 (0.004)	0.042*** (0.014)	-0.029*** (0.007)	-0.004 (0.004)
$GDP\_growth_{jt-1}$	-0.017** (0.007)	-0.020** (0.008)	-0.028*** (0.009)	0.040*** (0.011)	-0.012*** (0.004)
$\ln Population_{it}$	-1.879*** (0.374)	0.416 (0.625)	-1.232 (0.960)	-2.642*** (0.474)	-1.691*** (0.392)
$\ln Population_{jt}$	-2.045*** (0.411)	-1.168 (0.789)	-2.840*** (0.584)	-1.778** (0.779)	-1.851*** (0.408)
$Land\ locked_{ij}$	13.06*** (2.058)	3.676 (2.364)	13.50*** (3.735)	-4.810* (2.731)	-12.11*** (2.644)
$\ln Distance_{ij}$	0.246*** (0.022)	0.126*** (0.034)	0.045 (0.039)	0.036 (0.022)	0.021 (0.014)
$Language_{ij}$	-0.321*** (0.055)	-0.167 (0.136)	-0.015 (0.090)	-0.048 (0.062)	-0.033 (0.035)
$Adj_{ii}$	-0.239*** (0.079)	-0.166* (0.087)	0.105 (0.125)	0.082 (0.115)	-0.023 (0.038)
$Colony_{ij}$	0.114* (0.065)	-0.006 (0.176)	-0.064 (0.079)	-0.043 (0.059)	-0.135*** (0.038)
$Comcol_{ij}$	-0.501*** (0.135)	0.011 (0.127)		-1.927** (0.813)	
$Curcol_{iit}$	0.915*** (0.142)				-0.099 (0.113)
$Smctry_{ij}$	-0.348** (0.144)	-0.033 (0.103)	-0.368** (0.152)	-0.512*** (0.174)	0.117* (0.062)
$Constant$	62.06*** (7.790)	10.38 (15.80)	45.78*** (17.13)	58.59*** (17.07)	63.38*** (9.523)
$Year\ FE$	Yes	Yes	Yes	Yes	Yes
$Host\ FE$	Yes	Yes	Yes	Yes	Yes
$Home\ FE$	Yes	Yes	Yes	Yes	Yes
Observations	36,081	6,738	8,274	13,132	7,937
R-squared	0.666	0.641	0.742	0.758	0.612
Rmse	0.960	0.735	0.883	0.898	0.400

Notes: Full sample refers to the full sample estimation results using interaction dummies of  $S_i$  and  $S_j$ , referring to Southern country dummies for host and home countries, respectively. South–South, South–North, North–South and North–North refer to the direction of FDI flows from country  $j$  to country  $i$  in each group. For all other variables refer to Table 2.

Table 4: Natural resource curse

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Home and Host Country FE					No Country FE			
	Full Sample	S-S	S-N	N-S	N-N	S-S	S-N	N-S	N-N
$FDI_{ijt-1}$	-1.65e-05*** (2.83e-06)	0.0001 (0.0001)	7.78e-06 (2.45e-05)	-1.58e-07 (1.48e-05)	-1.77e-06 (2.00e-06)	9.37e-05 (0.0001)	-6.95e-05** (3.52e-05)	-3.44e-05 (2.63e-05)	-3.56e-06 (2.51e-06)
$Rents_{it-1}$	0.012*** (0.004)	0.014*** (0.005)	0.042 (0.032)	0.007 (0.005)	0.008 (0.007)	0.013*** (0.004)	0.051 (0.032)	0.031*** (0.002)	-0.028*** (0.005)
$FDI_{ijt-1} * Rents_{it-1}$	2.79e-06** (1.41e-06)	-1.53e-05 (1.84e-05)	1.56e-06 (8.14e-06)	-2.44e-06* (1.48e-06)	1.54e-06** (6.54e-07)	1.73e-05 (2.02e-05)	2.77e-07 (1.57e-05)	-2.78e-06 (2.38e-06)	2.31e-06** (1.01e-06)
$GDPPC_{it-1}$	-0.425*** (0.157)	-0.135 (0.255)	2.100*** (0.397)	-1.022*** (0.253)	-0.037 (0.163)	-0.102* (0.054)	0.932*** (0.112)	-0.846*** (0.038)	0.002 (0.056)
$GDPPC_{jt-1}$	-0.011 (0.144)	0.0231 (0.207)	-0.857*** (0.274)	2.937*** (0.411)	0.283* (0.152)	-0.369*** (0.073)	-0.835*** (0.052)	0.863*** (0.091)	-0.196*** (0.054)
$GDP\_growth_{it-1}$	-0.024*** (0.005)	-0.008** (0.004)	0.042*** (0.014)	-0.031*** (0.007)	-0.004 (0.004)	-0.0002 (0.005)	0.022 (0.017)	-0.044*** (0.006)	0.013** (0.006)
$GDP\_growth_{jt-1}$	-0.018*** (0.007)	-0.021** (0.008)	-0.028*** (0.009)	0.039*** (0.011)	-0.012*** (0.004)	-0.016* (0.009)	-0.040*** (0.010)	0.022* (0.013)	0.038*** (0.008)
$\ln Population_{it}$	-1.997*** (0.375)	0.160 (0.615)	-1.293 (0.964)	-2.735*** (0.465)	-1.718*** (0.393)	0.072*** (0.024)	-0.165*** (0.026)	0.023 (0.019)	0.013 (0.013)
$\ln Population_{jt}$	-2.032*** (0.411)	-1.122 (0.791)	-2.835*** (0.583)	-1.710** (0.792)	-1.845*** (0.407)	-0.004 (0.031)	-0.0420 (0.028)	-0.135*** (0.019)	-0.013 (0.011)
<i>Marginal effect</i>									
$\Delta Inst / \Delta FDI$	-3.07E-06	0.0001	8.85e-06	-0.00002	2.07e-07	0.0002**	-0.0001**	-0.0001**	-5.88e-07
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Home FE	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	35,693	6,667	8,274	12,815	7,937	6,667	8,274	12,815	7,937
R-squared	0.666	0.645	0.742	0.753	0.612	0.193	0.428	0.471	0.125
Rmse	0.956	0.724	0.883	0.900	0.400	1.079	1.305	1.312	0.599

Notes: *Rents* refers to total natural resource rents (% of GDP). S–S, S–N, N–S, N–N refer to South–South, South–North, North–South and North–North directions, respectively. *Controls* refer to the standard control variables as included in Table 2. *Marginal effect* refers to the net effect of *FDI* at the following mean values of *Rents*: 4.837% for the full sample, and 5.20%, 0.686%, 9.531%, and 1.283% in South–South, South–North, North–South and North–North directions, respectively.

Table 5: Aggregate FDI flows

	(1)	(2)	(3)	(4)	(5)
			Host: South	Host: North	
$FDI_{it-1}$	9.59e-06 (6.32e-06)				
$FDI\_South_{it-1}$		-8.51e-05 (5.17e-05)	-0.0003*** (0.0001)	-3.65e-05 (2.83e-05)	-3.64e-05 (3.18e-05)
$FDI\_North_{it-1}$		1.55e-05** (6.89e-06)	1.08e-05 (6.47e-05)	1.89e-06 (6.72e-06)	-8.39e-06 (6.09e-05)
$FDI\_South\_DSouth_{it-1}$					-0.0003** (0.0001)
$FDI\_North\_DNorth_{it-1}$					2.37e-05 (6.05e-05)
$GDPPC_{it-1}$	7.762*** (2.222)	7.853*** (2.204)	7.927*** (2.320)	12.12** (4.643)	8.170*** (2.245)
$GDP\_growth_{it-1}$	0.173*** (0.038)	0.172*** (0.038)	0.168*** (0.039)	0.386*** (0.063)	0.172*** (0.038)
$\ln Population_{it}$	10.34*** (3.769)	10.30*** (3.769)	11.54*** (4.288)	10.11 (11.63)	10.07*** (3.763)
<i>Constant</i>	-166.0*** (61.40)	-166.0*** (61.30)	-186.7*** (70.68)	-204.7 (180.7)	-164.7*** (60.74)
<i>Host Country FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Marginal effect (<math>\Delta Inst/\Delta FDI</math>)</i>					
<i>South-World</i>		-8.51e-05			
<i>North-World</i>		1.55e-05**			
<i>South-South</i>			-0.0003***		-0.0003***
<i>South-North</i>				-3.65e-05	-0.00004
<i>North-South</i>			1.08e-05		-8.39e-06
<i>North-North</i>				1.89e-06	0.00002**
Observations	2,451	2,451	1,976	475	2,451
R-squared	0.346	0.347	0.349	0.583	0.348
Number of host countries	136	136	111	25	136
Rmse	4.497	4.495	4.737	2.670	4.492



Notes: The dependent variable is the *level* of aggregate institutional development in host country  $i$  at time  $t$ .  $FDI\_South$  and  $FDI\_North$  refer to aggregate FDI flows from Southern and Northern home countries to country  $i$ , respectively. Column (5) includes interaction terms  $DSouth$  and  $DNorth$  that are dummy variables equal to 1 if host country  $i$  is a Southern or Northern country, respectively. Therefore, in column (5) the partial effects of FDI refer to the following:  $FDI\_South+FDI\_South\_DSouth$  for South–South,  $FDI\_South$  for South–North flows, and  $FDI\_North+FDI\_North\_DNorth$  for North–North, and  $FDI\_North$  for North–South flows.

Table 6: Aggregate FDI flows and the natural resource curse

	(1)	(2)	(3)	(4)
			Host: South	Host: South
$FDI_{it-1}$	8.52e-06 (6.44e-06)	3.48e-06 (7.98e-06)		
$FDI_{it-1} * Rents_{it-1}$		3.97e-06 (3.67e-06)		
$FDI\_South_{it-1}$			-0.0003*** (0.0001)	-0.0002 (0.0002)
$FDI\_North_{it-1}$			7.77e-06 (6.52e-05)	-8.95e-05 (5.57e-05)
$FDI\_South_{it-1} * Rents_{it-1}$				-8.61e-06 (3.15e-05)
$FDI\_North_{it-1} * Rents_{it-1}$				1.25e-05** (4.93e-06)
$Rents_{it-1}$	-0.022 (0.026)	-0.024 (0.026)	-0.019 (0.028)	-0.025 (0.026)
$GDPPC_{it-1}$	7.800*** (2.302)	7.738*** (2.315)	8.022*** (2.417)	7.947*** (2.436)
$GDP\_growth_{it-1}$	0.180*** (0.035)	0.179*** (0.035)	0.174*** (0.036)	0.171*** (0.036)
$lnPopulation_{it}$	10.23*** (3.709)	10.36*** (3.715)	11.34*** (4.231)	11.40*** (4.306)
<i>Constant</i>	-164.2*** (60.62)	-165.7*** (60.81)	-183.8** (70.13)	-184.2** (71.55)
<i>Time FE</i>	Yes	Yes	Yes	Yes
<i>Host Country FE</i>	Yes	Yes	Yes	Yes
<i>Marginal effect (<math>\Delta Inst / \Delta FDI</math>)</i>				
<i>World</i>	8.52e-06	0.00004		
<i>South-South</i>			-0.0003***	-0.0003
<i>North-South</i>			7.77e-06	0.0001
Observations	2,410	2,410	1,935	1,935
R-squared	0.347	0.347	0.350	0.352
Number of host countries	134	134	109	109
Rmse	4.501	4.501	4.751	4.745

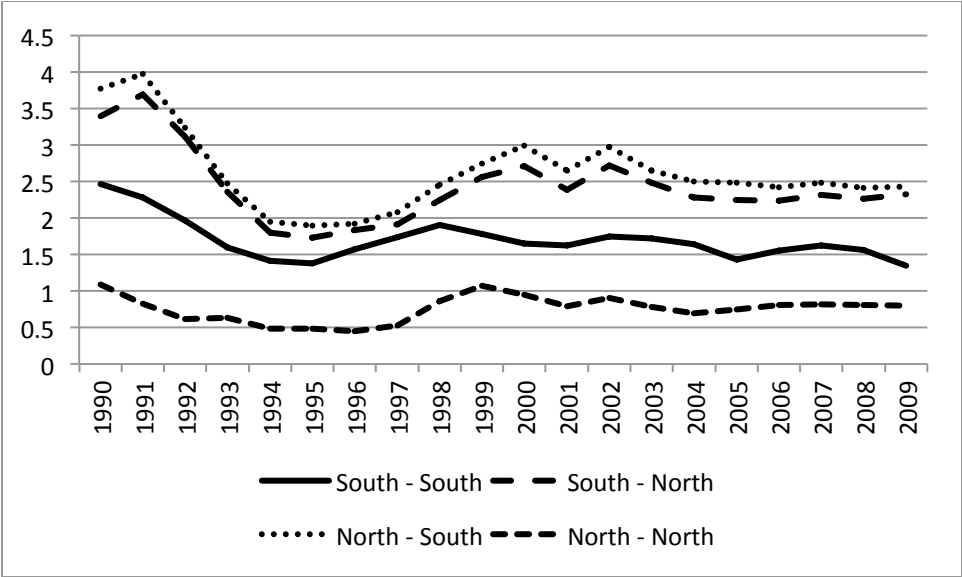
Notes: *Rents* refers to total natural resources rents (% of GDP). *South<sub>i</sub>* refer to the subsamples with the host country being a Southern country. *Marginal effect* refers to the net effect of *FDI* at the mean values of *Rents* that are 9.91% and 11.999%, in columns (2) and (4), respectively.

Table 7: Are all institutions equal?

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
$FDI_{ijt-1}$	-1.58e-05*** (3.37e-06)	0.0001 (8.44e-05)	-2.45e-05 (3.35e-05)	7.14e-06 (9.53e-06)	-1.42e-06 (1.04e-06)
$GDPPC_{it-1}$	-0.285** (0.133)	-0.471* (0.275)	1.711*** (0.411)	-0.630*** (0.222)	0.124 (0.154)
$GDPPC_{jt-1}$	-0.082 (0.136)	-0.120 (0.210)	-0.719** (0.293)	3.084*** (0.443)	0.655*** (0.168)
$GDP\_growth_{it-1}$	-0.015*** (0.003)	-0.007 (0.005)	0.028** (0.012)	-0.023*** (0.004)	0.0003 (0.005)
$GDP\_growth_{jt-1}$	-0.009* (0.005)	-0.014** (0.007)	-0.019*** (0.006)	0.022** (0.009)	0.004 (0.005)
$\ln Population_{it}$	-1.242*** (0.303)	-0.214 (0.692)	-1.055 (0.922)	-2.201*** (0.424)	-0.697* (0.360)
$\ln Population_{jt}$	-1.395*** (0.347)	-0.448 (0.801)	-2.341*** (0.502)	-1.451** (0.724)	-1.425*** (0.349)
$Land\ locked_{ij}$	5.350*** (1.646)	-0.371 (2.132)	8.788*** (2.746)	-3.404 (2.564)	-9.020*** (2.242)
$\ln Distance_{ij}$	0.278*** (0.025)	0.131*** (0.028)	0.042 (0.031)	0.031 (0.020)	0.061*** (0.019)
$Language_{ij}$	-0.366*** (0.0606)	-0.218* (0.130)	-0.187** (0.079)	-0.140** (0.056)	0.076** (0.034)
$Adj_{ij}$	-0.164** (0.083)	-0.096 (0.068)	0.057 (0.111)	0.018 (0.095)	-0.036 (0.046)
$Colony_{ij}$	0.211*** (0.068)	0.103 (0.113)	0.112 (0.074)	0.069 (0.051)	-0.124*** (0.038)
$Comcol_{ij}$	-0.275** (0.125)	0.094 (0.093)		-0.851 (0.698)	
$Curcol_{ijt}$	1.062*** (0.166)				-0.227* (0.129)
$Smctry_{ij}$	-0.308* (0.158)	-0.104 (0.089)	-0.467*** (0.170)	-0.274** (0.122)	0.119 (0.081)
Constant	43.05*** (7.555)	16.05 (17.80)	38.72** (17.85)	40.12** (17.12)	31.91*** (8.873)
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
Observations	36,081	6,738	8,274	13,132	7,937
R-squared	0.528	0.373	0.678	0.673	0.304
Rmse	0.985	0.705	0.891	0.879	0.461

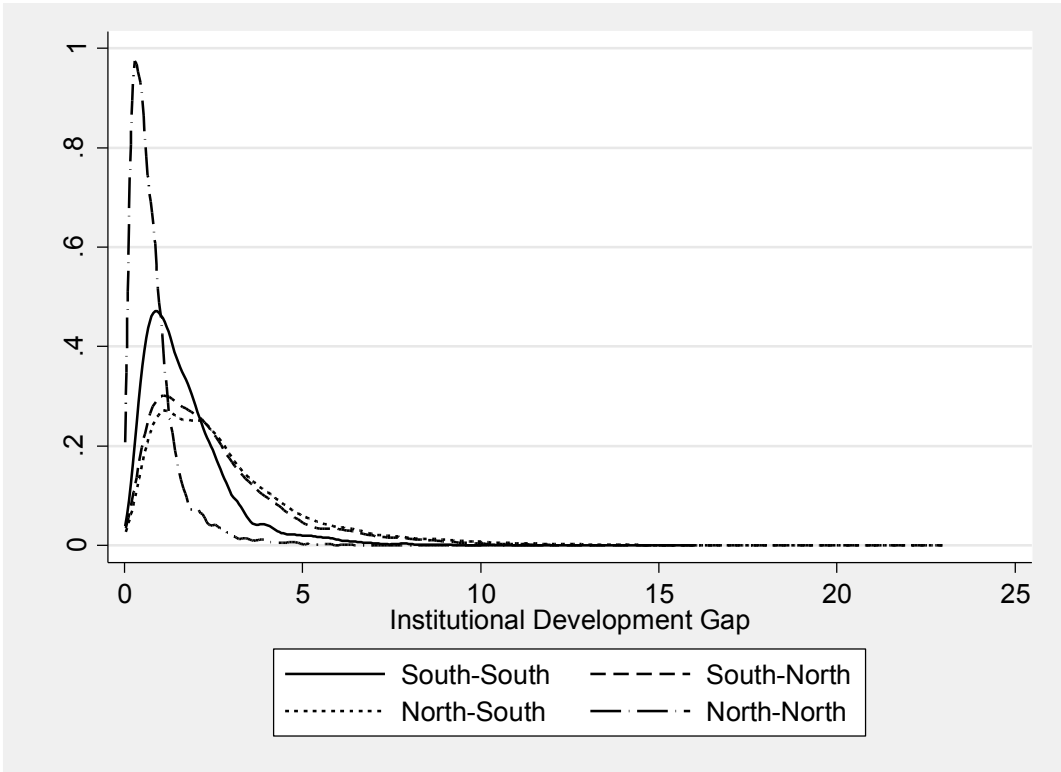
Notes: The dependent variable is the institutional distance based on four sub-categories that are corruption, government stability, investment profile and law and order.

Figure 1: Institutional distance



Notes: South–South and South–North, North–South, and North–North refer to average institutional development gap between each region based on the Kogut and Singh's (1988) method.

Figure 2: Institutional development gap Kernel densities



Notes: Kernel density diagrams of the Kogut and Singh's (1988) institutional development gap measure based on four directions.

## APPENDIX

Table A1: Distribution of FDI flows based on income levels

Host \ Home Country		Low Income	Lower Middle Income	Upper Middle Income	High Income Non-OECD	High Income-OECD
Low Income	Mean	17.708	8.314	12.538	36.620	20.601
	Obs.	9	25	25	21	1,151
Lower Middle Income	Mean	0.248	20.458	23.073	1,440.495	115.643
	Obs.	19	133	347	255	3,819
Lower Middle Income <sup>a</sup>	Mean	0.25	6.21	12.67	77.26	71.29
	Obs.	19	118	325	214	3,474
Upper Middle Income	Mean	0.017	4.109	28.184	40.072	198.053
	Obs.	66	505	1,136	465	5,137
High Income Non-OECD	Mean	-0.732	2.093	7.890	13.910	174.244
	Obs.	28	107	260	171	2,459
High Income-OECD	Mean	3.434	10.762	24.038	57.828	902.393
	Obs.	625	2,296	3,561	1,869	9,228

Notes: Income groups are based on 2010 World Bank WDI classification. <sup>a</sup> refers to the sample without China as a host country.

Table A2: Distribution of FDI flows based on geographical location

Host\Home Country		Europe	MENA	Latin America	Asia	North America	Africa	Oceania
Europe	Mean	453.116	3.083	16.470	40.002	660.575	11.853	61.835
	Obs.	10,160	209	1,077	3,800	1,466	1,139	538
MENA	Mean	51.572	5.276	0.000	5.840	13.860	1.588	0.000
	Obs.	263	5	0.000	43	26	12	0
Latin America	Mean	171.639	0.000	26.537	134.713	394.690	69.550	56.795
	Obs.	1,474	0	437	180	320	19	20
Asia	Mean	98.311	0.000	1.784	473.818	781.845	3.457	40.627
	Obs.	4,127	0	77	1,352	417	100	209
North America	Mean	1,169.661	-0.871	12.497	429.319	1,433.312	0.198	787.762
	Obs.	1,666	24	278	639	461	137	96
Africa	Mean	63.239	1.332	0.000	32.826	114.051	16.943	13.199
	Obs.	1,760	3	0	125	198	22	12
Oceania	Mean	176.799	0.000	0.311	162.398	519.647	20.682	464.632
	Obs.	401	0	11	236	101	12	65

Notes: Geographical regions are based on World Bank's WDI classification.

Table A3: Correlation between institutional distance and FDI flows

Host\Home country	South	North
South	-0.01	-0.08***
North	-0.04***	-0.02*

Notes: Pairwise correlations between institutional distance and bilateral FDI flows for the full sample. \* and \*\*\* refer to significance at 10% and 1% levels.



Table A4: Number of observations per host country

Albania	109	Ecuador	212	Kuwait	60	Portugal	843
Algeria	129	Egypt, Arab Rep.	271	Latvia	369	Qatar	90
Angola	77	El Salvador	90	Lebanon	90	Romania	322
Argentina	319	Estonia	671	Liberia	101	Russian Federation	363
Armenia	54	Ethiopia	62	Libya	62	Saudi Arabia	145
Australia	419	Finland	497	Lithuania	384	Senegal	77
Austria	518	France	1,676	Luxembourg	851	Sierra Leone	30
Azerbaijan	88	Gabon	73	Madagascar	40	Singapore	345
Bahamas, The	92	Gambia, The	31	Malawi	49	Slovak Republic	279
Bahrain	91	Germany	1,784	Malaysia	291	Slovenia	184
Bangladesh	97	Ghana	91	Mali	38	South Africa	320
Belarus	94	Greece	461	Malta	156	Spain	774
Belgium	377	Guatemala	70	Mexico	1,026	Sri Lanka	109
Bolivia	156	Guinea	25	Moldova	61	Sudan	65
Botswana	54	Guinea-Bissau	31	Mongolia	115	Suriname	25
Brazil	452	Guyana	26	Morocco	289	Sweden	819
Brunei Darussalam	115	Haiti	17	Mozambique	83	Switzerland	256
Bulgaria	975	Honduras	48	Myanmar	109	Syrian Arab Republic	57
Burkina Faso	20	Hong Kong	353	Namibia	54	Tanzania	69
Cameroon	74	Hungary	580	Netherlands	1,104	Thailand	795
Canada	426	Iceland	290	New Zealand	404	Togo	47
Chile	448	India	340	Nicaragua	59	Trinidad and Tobago	71
China	470	Indonesia	280	Niger	25	Tunisia	99
Colombia	403	Iran, Islamic Rep.	165	Nigeria	120	Turkey	538
Congo, Rep.	57	Iraq	25	Norway	213	Uganda	99
Costa Rica	189	Ireland	483	Oman	81	Ukraine	230
Cote d'Ivoire	98	Italy	988	Pakistan	101	United Kingdom	628
Croatia	265	Jamaica	72	Panama	167	United States	1,132
Cuba	43	Japan	526	Papua New Guinea	56	Uruguay	136
Cyprus	192	Jordan	77	Paraguay	181	Venezuela, RB	228
Czech Republic	571	Kazakhstan	140	Peru	236	Vietnam	114
Denmark	939	Kenya	92	Philippines	285	Yemen, Rep.	70
Dominican Republic	166	Korea, Rep.	1,010	Poland	739	Zambia	49
						Zimbabwe	66

Table A5: Number of observations per home country

Albania	78	Ecuador	101	Kuwait	110	Portugal	641
Algeria	76	Egypt, Arab Rep.	226	Latvia	244	Qatar	66
Angola	38	El Salvador	53	Lebanon	139	Romania	276
Argentina	371	Estonia	190	Liberia	125	Russian Federation	367
Armenia	54	Ethiopia	8	Libya	97	Saudi Arabia	196
Australia	554	Finland	733	Lithuania	176	Senegal	42
Austria	882	France	1,756	Luxembourg	960	Sierra Leone	8
Azerbaijan	49	Gabon	63	Madagascar	37	Singapore	447
Bahamas, The	217	Germany	2,076	Malawi	16	Slovak Republic	261
Bahrain	101	Ghana	67	Malaysia	430	Slovenia	262
Bangladesh	73	Greece	511	Mali	25	South Africa	314
Belarus	110	Guatemala	54	Malta	184	Spain	826
Belgium	539	Guinea	21	Mexico	269	Sri Lanka	41
Bolivia	69	Guinea-Bissau	14	Moldova	26	Sudan	19
Botswana	8	Guyana	7	Mongolia	25	Suriname	17
Brazil	394	Haiti	10	Morocco	175	Sweden	1,087
Brunei Darussalam	52	Honduras	27	Mozambique	14	Switzerland	1,079
Bulgaria	291	Hong Kong	463	Myanmar	39	Syrian Arab Republic	67
Burkina Faso	20	Hungary	514	Namibia	32	Tanzania	18
Cameroon	64	Iceland	386	Netherlands	1,512	Thailand	260
Canada	562	India	340	New Zealand	403	Togo	23
Chile	267	Indonesia	273	Nicaragua	30	Trinidad and Tobago	48
China	441	Iran, Islamic Rep.	234	Niger	24	Tunisia	96
Colombia	243	Iraq	27	Nigeria	111	Turkey	421
Congo, Rep.	30	Ireland	471	Norway	450	Uganda	26
Costa Rica	120	Israel	284	Oman	55	Ukraine	223
Cote d'Ivoire	42	Italy	1,119	Pakistan	114	United Kingdom	1,197
Croatia	141	Jamaica	61	Panama	309	United States	1,455
Cuba	44	Japan	981	Papua New Guinea	32	Uruguay	216
Cyprus	214	Jordan	97	Paraguay	53	Venezuela, RB	281
Czech Republic	449	Kazakhstan	129	Peru	135	Vietnam	122
Denmark	970	Kenya	81	Philippines	265	Yemen, Rep.	19
Dominican Republic	63	Korea, Rep.	852	Poland	570	Zambia	19
						Zimbabwe	37

## Online Appendix

Table A1: Aggregate FDI flows and corruption levels

	(1)	(2)	(3)	(4)	(5)
			World-South	World-North	
$FDI_{it-1}$	1.78e-07 (1.17e-06)				
$FDI\_South_{it-1}$		-1.49e-06 (4.53e-06)	-3.75e-05* (2.21e-05)	1.78e-06 (2.69e-06)	4.83e-06 (3.86e-06)
$FDI\_North_{it-1}$		2.83e-07 (1.30e-06)	6.90e-06 (9.74e-06)	-4.89e-07 (1.08e-06)	4.34e-06 (9.44e-06)
$FDI\_South\_DSouth_{it-1}$					-4.07e-05* (2.15e-05)
$FDI\_North\_DNorth_{it-1}$					-4.22e-06 (9.45e-06)
$GDPPC_{it-1}$	-0.095 (0.304)	-0.094 (0.305)	0.003 (0.325)	-0.906 (1.214)	-0.059 (0.311)
$GDP\_growth_{it-1}$	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.034 (0.023)	0.003 (0.004)
$lnPopulation_{it}$	1.336** (0.568)	1.336** (0.568)	1.548** (0.638)	2.191 (2.362)	1.329** (0.568)
Host country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Marginal effect ( $\Delta Inst/\Delta FDI$ )					
South-World		-1.49e-06			
North-World		2.83e-07			
South-South			-3.75e-05*		-0.00004*
South-North				1.78e-06	4.83e-06
North-South			6.90e-06		4.34e-06
North-North				-4.89e-07	1.13e-07
Observations	2,451	2,451	1,976	475	2,451
R-squared	0.339	0.339	0.336	0.439	0.340
Number of countries	136	136	111	25	136
Rmse	0.571	0.571	0.584	0.490	0.571

Notes: The dependent variable is the *level* of corruption (based on ICRG rating) in host country  $i$  (an increase refers to lower corruption). FDI is aggregated bilateral FDI flows to country  $i$ .  $FDI\_South$  and  $FDI\_North$  are aggregate FDI flows from the South and the North to country  $i$ .  $DSouth$  and  $DNorth$  are dummy variables equal to 1 if host country  $i$  is a Southern or Northern country, respectively.  $FDI\_South\_DSouth$  and  $FDI\_North\_DNorth$  are interaction terms between  $FDI\_South$  and  $FDI\_North$  with  $DSouth$  and  $DNorth$ , respectively.  $World-South$  and  $World-North$  refer to aggregate FDI flows from the North and South to Southern (Northern) host county  $i$ . Regressions include an unreported constant variable.

Table A2: Bilateral FDI flows and corruption gap

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
$FDI_{ijt-1}$	-1.61e-05*** (3.45e-06)	7.92e-05 (6.35e-05)	-1.58e-05 (2.36e-05)	-5.01e-06 (6.61e-06)	6.72e-07 (1.81e-06)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
Observations	36,081	6,738	8,274	13,132	7,937
R-squared	0.351	0.356	0.634	0.619	0.292

Notes: The dependent variable is the absolute value of the difference in corruption levels between host and home countries (based on the ICRG rating). Regressions include all other control variables (*Controls*) as in Table 2 in the paper as well as home and host country and year fixed effects.

Table A3: Bilateral FDI flows and Freedom House measure

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
$FDI_{ijt-1}$	-1.08e-05*** (2.66e-06)	4.16e-05 (0.0002)	1.08e-06 (3.82e-06)	1.32e-05 (8.88e-06)	1.14e-07 (5.24e-07)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
Observations	38,683	8,031	8,838	14,408	7,406
R-squared	0.777	0.636	0.909	0.903	0.478

Notes: The dependent variable is the absolute value of the difference in average Political Rights and Civil Liberties Ratings between host and home countries based on the Freedom House's *Freedom in the World Country Ratings*. Regressions include all other control variables (*Controls*) as in Table 2 in the paper as well as home and host country and year fixed effects.

Table A4: Aggregate FDI flows and Freedom House measure

	(1)	(2)	(3)	(4)	(5)
			World-South	World-North	
$FDI_{it-1}$	-6.39e-07 (6.65e-07)				
$FDI\_South_{it-1}$		-1.43e-06 (2.44e-06)	-1.39e-06 (1.92e-05)	-6.56e-07 (1.70e-06)	-2.56e-06* (1.46e-06)
$FDI\_North_{it-1}$		-5.89e-07 (6.36e-07)	2.05e-06 (1.44e-05)	5.79e-07 (4.11e-07)	3.54e-06 (1.43e-05)
$FDI\_South\_DSouth_{it-1}$					2.51e-06 (1.92e-05)
$FDI\_North\_DNorth_{it-1}$					-4.22e-06 (1.43e-05)
$GDPPC_{it-1}$	0.181 (0.142)	0.182 (0.142)	0.191 (0.150)	0.102 (0.255)	0.177 (0.144)
$GDP\_growth_{it-1}$	0.00593* (0.00306)	0.00593* (0.00306)	0.00539* (0.00311)	0.00526 (0.00400)	0.00594* (0.00306)
$lnPopulation_{it}$	0.285 (0.393)	0.284 (0.393)	0.195 (0.424)	-0.899 (0.682)	0.295 (0.390)
Host country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Marginal effect ( $\Delta Inst/\Delta FDI$ )					
South-World		-1.43e-06			
North-World		-5.89e-07			
South-South			-1.39e-06		-5.44e-08
South-North				-6.56e-07	-2.56e-06
North-South			2.05e-06		3.54e-06
North-North				5.79e-07	-6.78e-07
Observations	2,451	2,451	1,976	475	2,451
R-squared	0.081	0.081	0.084	0.267	0.082
Number of countries	174	174	148	26	174
Rmse	0.532	0.532	0.573	0.122	0.532

Notes: The dependent variable is the *level* of average Political Rights and Civil Liberties Ratings in host country  $i$  based on the Freedom House's *Freedom in the World Country Ratings* (higher number refers better rights and liberties). FDI is aggregated bilateral FDI flows to country  $i$ .  $FDI\_South$  and  $FDI\_North$  are aggregate FDI flows from the South and the North to country  $i$ .  $DSouth$  and  $DNorth$  are dummy variables equal to 1 if host country  $i$  is a Southern or Northern country, respectively.  $FDI\_South\_DSouth$  and  $FDI\_North\_DNorth$  are interaction terms between  $FDI\_South$  and  $FDI\_North$  with  $DSouth$  and  $DNorth$ , respectively.  $World-South$  and  $World-North$  refer to aggregate FDI flows from the North and South to Southern (Northern) host country  $i$ .

Table A5: South vs. North FDI using World Bank Classification

	(1)	(2)	(3)	(4)
	South-South	South-North	North-South	North-North
<i>FDI<sub>ijt-1</sub></i>	5.11e-05 (0.0002)	3.97e-07 (4.47e-05)	-1.58e-05 (1.43e-05)	-2.18e-06 (1.87e-06)
<i>GDPPC<sub>it-1</sub></i>	-0.847** (0.355)	1.671*** (0.368)	-1.303*** (0.232)	0.079 (0.089)
<i>GDPPC<sub>jt-1</sub></i>	0.530 (0.353)	-1.119*** (0.260)	1.870*** (0.286)	0.232** (0.099)
<i>GDP_growth<sub>it-1</sub></i>	-0.014** (0.006)	0.027*** (0.008)	-0.035*** (0.007)	-0.004** (0.002)
<i>GDP_growth<sub>jt-1</sub></i>	-0.023* (0.0119)	-0.034*** (0.00756)	0.035*** (0.008)	-0.007*** (0.002)
<i>lnPopulation<sub>it</sub></i>	0.648 (0.927)	0.574 (0.908)	-3.771*** (0.579)	-0.484*** (0.174)
<i>lnPopulation<sub>jt</sub></i>	-2.302** (0.962)	-4.375*** (0.688)	0.017 (0.706)	-0.828*** (0.186)
<i>Land locked<sub>ij</sub></i>	-3.915* (2.021)	14.68*** (1.998)	2.770 (2.333)	-1.570*** (0.185)
<i>lnDistance<sub>ij</sub></i>	0.110* (0.058)	-0.016 (0.044)	0.021 (0.026)	0.027* (0.014)
<i>Language<sub>ij</sub></i>	0.159 (0.249)	0.034 (0.094)	-0.052 (0.066)	-0.036 (0.034)
<i>Adj<sub>ij</sub></i>	-0.157 (0.111)	-0.060 (0.110)	-0.022 (0.103)	-0.068* (0.036)
<i>Colony<sub>ij</sub></i>	0.528*** (0.182)	0.017 (0.091)	-0.008 (0.070)	-0.049 (0.037)
<i>Comcol<sub>ij</sub></i>	0.144 (0.252)	0.176 (0.136)	-0.286 (0.283)	-1.033*** (0.138)
<i>Smctry<sub>ij</sub></i>	0.055 (0.129)	0.227 (0.142)	-0.143 (0.152)	-0.0498 (0.062)
<i>Constant</i>	32.61 (21.92)	41.17** (18.89)	57.18*** (17.09)	17.97*** (4.034)
<i>Year FE</i>	Yes	Yes	Yes	Yes
<i>Host FE</i>	Yes	Yes	Yes	Yes
<i>Home FE</i>	Yes	Yes	Yes	Yes
Observations	2,403	7,521	11,561	14,596
R-squared	0.630	0.718	0.734	0.621
Rmse	0.675	0.941	0.946	0.436

Notes: The dependent variable is the institutional development gap. South refers to low and middle income countries and North refers to high-income countries using the World Bank 2009 income classification.

Table A6: World Bank Based host country classifications

	(1)	(2)	(3)	(4)
	South-Low	North-Low	South-Middle	North-Middle
<i>FDI<sub>ijt-1</sub></i>	0.0003 (0.00266)	-0.0002 (0.000452)	-4.27e-05 (8.05e-05)	7.53e-06 (1.17e-05)
<i>GDPPC<sub>it-1</sub></i>	-2.345* (1.204)	0.224 (0.830)	-0.272 (0.257)	-1.620*** (0.256)
<i>GDPPC<sub>jt-1</sub></i>	2.353 (2.319)	8.241 (5.186)	0.381 (0.298)	3.303*** (0.523)
<i>GDP_growth<sub>it-1</sub></i>	-0.009 (0.008)	-0.059*** (0.007)	-0.012*** (0.004)	-0.009* (0.005)
<i>GDP_growth<sub>jt-1</sub></i>	-0.031 (0.038)	0.033 (0.063)	-0.019* (0.012)	0.037*** (0.013)
<i>lnPopulation<sub>it</sub></i>	-9.751 (6.707)	-11.76*** (2.196)	0.638 (0.537)	-1.823*** (0.480)
<i>lnPopulation<sub>jt</sub></i>	-1.746 (5.982)	-5.276 (4.304)	-0.979 (0.799)	-1.749* (0.943)
<i>Land locked<sub>ij</sub></i>		-34.97 (28.62)	1.247 (2.794)	-4.618 (3.305)
<i>lnDistance<sub>ij</sub></i>	5.934*** (1.188)	0.722*** (0.229)	0.087** (0.037)	-0.019 (0.030)
<i>Language<sub>ij</sub></i>		-0.120 (0.144)	-0.096 (0.148)	0.036 (0.072)
<i>Adj<sub>ij</sub></i>	-0.663 (19.83)		-0.124 (0.088)	0.112 (0.126)
<i>Colony<sub>ij</sub></i>		-0.039 (0.243)	0.270 (0.204)	-0.057 (0.071)
<i>Comcol<sub>ij</sub></i>	8.023 (18.93)	-19.14 (15.55)	0.277** (0.132)	
<i>Smctry<sub>ij</sub></i>	8.485 (39.85)		0.057 (0.120)	-1.593*** (0.257)
<i>Constant</i>	143.8 (149.9)	220.8*** (81.81)	3.451 (13.74)	46.41** (18.79)
<i>Year FE</i>	Yes	Yes	Yes	Yes
<i>Host FE</i>	Yes	Yes	Yes	Yes
<i>Home FE</i>	Yes	Yes	Yes	Yes
Observations	113	1,236	4,006	8,609
R-squared	0.899	0.738	0.600	0.708
Rmse	0.584	1.198	0.675	0.895

Notes: The dependent variable is the institutional development gap. *South-Low* and *North-Low* refer to regressions where the home country is South or North, based on the paper's definition, and host countries are those in the low income group based on World Bank 2009 income classification. *South-Middle* and *North-Middle* refer to regressions that limit the host countries with those in the middle income group.



Table A7: If Institutional development in  $j$  is greater than  $i$ ?

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
$FDI_{ijt-1}$	-1.40e-05*** (3.71e-06)	-8.66e-05 (0.000141)	-2.20e-05 (2.56e-05)	5.17e-07 (2.94e-05)	-1.57e-06 (1.56e-06)
$FDI_{ijt-1} * D_{j>i}$	2.59e-06 (4.81e-06)	0.0002 (0.0002)	0.0001** (4.61e-05)	-1.79e-05 (2.40e-05)	3.24e-06 (2.68e-06)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
Marginal effect	-0.00001***	0.0001	0.0001**	-0.00002	1.67e-06
Observations	36,056	6,726	8,273	13,130	7,927
R-squared	0.665	0.641	0.742	0.758	0.612

Notes: The dependent variable is the institutional development gap.  $D_{j>i}$  is a dummy variable equal to 1 if average ICRG index in  $j$  is greater than  $i$  at time  $t$ . Marginal effect refers to the marginal effect of FDI on institutions when  $D_{j>i} = 1$ . Regressions include all other control variables (*Controls*) and as in Table A2 as well as home and host country and year fixed effects.

Table A8: FDI effect in two years

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
<i>FDI<sub>ijt</sub></i>	-0.00002	0.0001	0.00004	-0.00002	4.85e-09
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
<i>Observations</i>	31,717	5,832	7,129	11,598	7,158
<i>R-squared</i>	0.680	0.657	0.759	0.772	0.610
<i>Rmse</i>	0.905	0.711	0.819	0.836	0.385

Notes: The dependent variable is the institutional development gap. FDI is the total effect of bilateral FDI in year  $(t-1)$  and  $(t-2)$ . Regressions include all other control variables (*Controls*) as in Table A2 as well as home and host country and year fixed effects.

Table A9: Regional Sensitivity

	(1)	(2)	(3)	(4)
	South-South	South-North	North-South	North-North
No Europe				
$FDI_{ijt-1}$	-5.75e-05 (7.70e-05)	1.28e-05 (3.93e-05)	2.54e-05* (1.40e-05)	-8.26e-07 (3.08e-06)
No Middle East				
$FDI_{ijt-1}$	6.37e-05 (7.82e-05)	1.21e-05 (2.21e-05)	-1.45e-05 (1.32e-05)	-7.04e-09 (1.89e-06)
No Asia				
$FDI_{ijt-1}$	-1.18e-05 (0.0001)	7.67e-06 (2.18e-05)	1.15e-05 (1.01e-05)	-1.89e-07 (1.84e-06)
No North America				
$FDI_{ijt-1}$	5.83e-05 (8.00e-05)	3.31e-06 (2.72e-05)	-1.68e-05 (1.29e-05)	6.37e-07 (1.95e-06)
No Africa				
$FDI_{ijt-1}$	7.97e-05 (7.54e-05)	1.21e-05 (2.21e-05)	-2.14e-05* (1.14e-05)	-7.04e-09 (1.89e-06)

Notes: The dependent variable is the institutional development gap. Regressions are run by excluding one host country geographical region (Europe, Middle East, Asia, North America, and Africa) at a time using World Bank's classifications. Regressions include all other control variables as in Table 2 in the paper as well as home and host country, and year fixed effects.

Table A10: Exclude outliers

	(1)	(2)	(3)	(4)	(5)
	Full Sample	South-South	South-North	North-South	North-North
$FDI_{ijt-1}$	-1.25e-05*** (3.11e-06)	6.45e-05 (7.55e-05)	-4.32e-06 (2.03e-05)	-1.95e-05 (1.23e-05)	9.12e-07 (1.64e-06)
Controls	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	Yes	Yes	Yes	Yes
Observations	35,359	6,713	8,155	12,907	7,584
R-squared	0.656	0.619	0.753	0.763	0.605

Notes: The dependent variable is the institutional development gap. Regressions are run by excluding the top and bottom one percentile of observations based on institutional distance. Regressions include all other control variables (*Controls*) as in Table 2 in the paper as well as home and host country, and year fixed effects.

Table A11: World Development Indicators measure for FDI

	(1)	(2)
	Full sample	Host: South
$FDI\_WDI_{it-1}$	1.99e-06 (7.31e-06)	-4.03e-05 (3.19e-05)
$GDPPC_{it-1}$	7.698*** (2.250)	7.824*** (2.353)
$GDP\_growth_{it-1}$	0.185*** (0.036)	0.180*** (0.037)
$\ln Population_{it}$	9.497** (3.833)	10.77** (4.353)
<i>Constant</i>	-152.0** (62.38)	-173.6** (71.82)
<i>Year FE</i>	Yes	Yes
<i>Host Country FE</i>	Yes	Yes
<i>World</i>	1.99e-06	
<i>World-South</i>		-4.03e-05
Observations	2,359	1,917
R-squared	0.340	0.342
Number of host countries	135	110
Rmse	4.459	4.699

Notes: The dependent variable is the *level* of average ICRG index in host country  $i$ .  $FDI\_WDI$  is the level of aggregate FDI inflows to host country  $i$  using World Bank's WDI dataset. *South* in column (2) restricts host countries to those in the South.

Table A12: Quintile Regression

FDI <sub>ijt-1</sub>	(1)	(2)	(3)	(4)
Quintiles	South – South	South – North	North – South	North – North
25 <sup>th</sup>	9.46e-05** (4.46e-05)	-2.68e-05 (3.23e-05)	-3.28e-05*** (9.87e-06)	-5.80e-07 (8.90e-07)
50 <sup>th</sup>	2.25e-05 (5.35e-05)	-1.25e-05 (3.18e-05)	-1.37e-05 (9.38e-06)	-1.38e-06 (1.19e-06)
75 <sup>th</sup>	3.11e-06 (6.02e-05)	1.26e-05 (4.57e-05)	-1.31e-05 (1.33e-05)	-1.58e-06 (1.57e-06)

Notes: 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> refer to the coefficient estimates for FDI flows based on quintile regressions at these quintiles. Regressions include all other control variables as in Table 2 as well as home and host country, and year fixed effects.