Effects of FDI Flows on Institutional Development in the South:

Does It Matter Where the Investors are from?

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FIRST DRAFT

ABSTRACT

FDI flows to and from developing countries have increased significantly accounting for more than 31% and 52% of global flows in 2012, respectively. Even more impressive has been the increase in South-South FDI flows, reaching around 63% of all outflows from developing countries in 2010. The increasing share of South-South flows and rising assertiveness of developing country multinationals in cross-border investments have created a controversy with regard to their effects on host country institutions. Given the weaker conditionality requirements in South-South FDI compared to North-South flows, developing countries such as China are accused of undermining developed country efforts to improve the institutional quality of developing countries. In this paper we provide an empirical analysis of the effects of bilateral FDI flows on institutional distance between home and host countries and whether such effects are dependent on the direction of the flows that is South-South vs. North-South, as well as South-North and North-North. The empirical result using bilateral FDI flows data among 134 countries during 1990-2009 suggests that the institutional development effects of bilateral FDI flows from North to South as well as those from South to South 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 pooled North-South FDI flows on host country institutions. In contrast, we find that pooled 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. Last but not least we discover that bilateral trade flows are much more influential in institutional convergence between countries.

Keywords: Institutional development, Bilateral FDI flows, South-South capital flows

JEL Codes: O10; F21; F23; P48; K33

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).

Foreign Direct Investment (FDI) outflows from developing countries have increased significantly reaching $482 billion and accounting for more than 35% of global flows in 2012, which is a significant increase compared to their 1990 level of less than 5%.[1] Equally impressive has been the fact that China exceeded Japan for the first time in terms of outward FDI flows in 2010. Furthermore, developing countries attracted 58% of global FDI inflows in 2012 and reached $790 billion, which again is a significant increase from their 1990 level of $35 billion that was only 17% of global flows (UNCTAD, 2013). As of 2012 four of top five host countries for FDI flows were developing countries, and seven developing countries were among the top 20 investors in the world (UNCTAD, 2013). Within aggregate flows to and from the South, South-South FDI flows increased significantly, reaching around 63% of all outflows from developing countries in 2010 (UNCTAD, 2011; WB, 2011). In the case of Latin America and the Caribbean region, for example, developing countries from Asia accounted for 68%, and intra-regional flows accounted for 17% of all Merger and Acquisitions in 2010 (UNCTAD, 2011: 59, 60). Overall, the share of developing country TNCs in this region increased from 8% in 2001 to 43% in 2010 (UNCTAD, 2011: 60).

The rising tide of global FDI flows has led a significant push in many countries for improving and harmonizing their institutional environment in order to increase their global competitiveness.[2] Between 2000 and 2012 an average of 55 countries adopted a total of 1,082 policy changes (and for an average of 83 changes a year) in their legal and institutional settings to promote and facilitate a more favorable environment for foreign investors. Furthermore, by the end of 2012 a total of 9,111 bilateral investment treaties including features for improving and re-aligning institutional settings of home (source) and host (destination) countries have been signed among 200 countries (UNCTAD, 2013). Nevertheless, the growing importance of South-South FDI flows has also led to plenty of controversy regarding their impacts on host country institutions. It is frequently argued that developing country investments in other developing countries undermine, or ta the least weaken, Western country efforts to improve the institutions and policy environment of host countries due to their lack of policy conditions. China, for example, in its economic relations with other developing countries, particularly with those in Africa, has often been accused of "neglecting human rights offences in recipient nations, supporting corrupt authoritarian regimes, and undermining Western efforts in these countries to promote good governance" and better institutional quality, including economic and political infrastructure and institutions (Economist, 2006; Warmerdam, 2012).[3] The lack of conditionality under the premise of respecting host country national sovereignty and "separating business from politics" (as put forward by China) is argued to diminish the Western countries' bargaining position with regard to institutional and political changes that they seek in those countries. It is also suggested that developed country investments are more beneficial for developing countries than those from the South as they spill over

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[1] We classify transition economies as developing countries.

[2] Governments around the world try to attract FDI to gain technology and productivity spillovers and transfers as foreign firms, compared to domestic firms, are found to have higher productivity, better risk management, know-how, and experience as well as better access to international goods and capital markets, and larger supply of internal finance through parent company (Navaretti et al. 2003; Almeida, 2007; Huttunen, 2007; Yasar and Paul, 2007, 2009; Desai et al., 2008; Arnold and Javorcik, 2009).

[3] For further discussion, see Mbaye, (2011), Graham-Harrison (2009), Strange et al. (2003). Moreover, the 2013 Human Development Report of UNDP (titled the Rise of the South) includes an entire chapter on the issue of re-aligning the institutional structures of the South with the North, including those involving trade policy, business environment, transparency and rule of law. Likewise, the 2012 World Investment report of UNCTAD is focused on the issues regarding realigning home and host country institutions as well as harmonizing international rules with regard to policy environment and institutional framework for cross-border investment flows.

"demonstration" and "professionalization" effects over local firms and institutions (Kwok and Tadesse, 2006).

Nevertheless, despite a significant amount of ink spilled over this debate, there is no empirical study that tests the "China effect" or any robust evidence of a positive "Western effect" in developing countries. While it has been repeatedly found that aggregate FDI flows have significant growth and development effects in recipient countries, none has yet explored their effects on institutional development in host countries as well as the institutional convergence between home and host economies. Instead, most research on FDI has focused on their direct economic effects through technology transfer and productivity spillovers (Haddad and Harrison, 1993; Aitken and Harrison, 1999; Hall and Jones, 1999; Haskel et al., 2007).

This is particularly surprising given that empirical work on institutional development has shown that institutions do matter for: long run development and growth (Mauro, 1995; Knack and Keefer, 1995; Kaufmann et al., 1999; Acemoglu and Robinson, 2001), productivity and incomes (Hall and Jones, 1999), trade and capital flows (Mauro, 1995; Wei, 1997; Alfaro et al., 2008; Shleifer & Vishny, 1993; Wei, 2000; Levchenko, 2007; Dutt and Traca, 2010), financial sector development (La Porta et al., 1998), and education, health and income distribution (Kaufmann et al., 1999b; Chong and Calderón 1999a and 1999b; Rodrik, 1999). Moreover, all these studies agree that the North is endowed with much better institutions than the South, and that it is a source of comparative advantage (Levchenko, 2007).

Despite the increasing number of studies looking into causes and effects of institutional change, none has yet explored the link between FDI flows and institutional development and convergence. What we set out to do in this paper is the following: First, we explore whether bilateral FDI flows cause any institutional convergence (or divergence) between home and host countries. Secondly, we explore whether there are any difference between developed and developing country investments regarding their effects on institutional convergence dynamics. Third, we test whether North-South as opposed to South-South aggregate FDI flows have any heterogeneous institution-improving effect on host countries. The empirical result using a unique dataset 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 convergence or divergence effect of FDI flows on the institutional distance between host and home countries. We also do not detect any significant effect of aggregated North-South FDI flows on host country institutions. In contrast, we find that aggregated 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 countries while the opposite is true for North – South flows. Last but not least, we discover that bilateral trade flows are much more influential in institutional convergence between countries.

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

2. LITERATURE REVIEW

A large and growing number of papers in economics agree that institutions matter for long run development and growth and that the Northern countries have better and institutions than the Southern ones (Shleifer & Vishny, 1993; Mauro, 1995; Knack and Keefer, 1995; Wei, 1997; La Porta et al., 1998; Kaufmann et al., 1999b; Chong and Calderón 1999a and 1999b; Rodrik, 1999; Hall and Jones, 1999; Kaufmann et al., 1999; Wei, 2000; Acemoglu and Robinson, 2001; Levchenko, 2007; Levchenko, 2007; Alfaro et al., 2008; Dutt and Traca, 2010). Nevertheless, there is no consensus on the determinants of institutional differences across countries. There are broadly two views on the causes of institutional change, the "top down" and "bottom up" view (Easterly, 2008). While the former sees institutions as creations of political actors, the latter explains it as the product of historical, cultural and environmental factors with a high level of path-dependency. Naturally, these two views have different implications regarding the speed at which institutions can be changed. According to the top down view, it is *fast and furious*, and can be done at any time, once there is the will. The bottom up view, however, sees transition as "evolutionary rather than revolutionary (Easterly, 2008).

The academic work on the bottom-up view of institutions focuses, among others, on the effects of: a) natural resource base (Leite and Weidmann, 1999; Ades and Di Tella, 1999); b) economic openness (Laffont and N'Guessan, 1999; Ades and Di Tella, 1999, Rigobon and Rodrik, 2005); c) colonial institutions (Acemoglu et al., 2001, 2005) and slave trade (Nunn and Wanchekon, 2011); d) initial wealth (Engerman and Sokoloff, 2002); e) ethnic structures (Michalopoulos and Papaioannou, 2013) and ethnic fragmentation (Easterly and Levine, 1997); f) pre-colonial governance structures (Gennaioli and Rainer, 2007, Hariri, 2012); g) past rulers and governments (Caselli and Modelli, 2004).

In contrast, the top-down view explores the effects of domestic as well international actors on institutions. Among the international actors, World Bank as well as IMF, for example, have long advocated and pushed for top-down changes (usually based on the Washington Consensus) in member country institutions through their conditionality requirements. Shock therapy, as applied in former Soviet Union, is another example of the top-down approach. Furthermore, international investment treaties (BITs) as well as preferential trade agreements have also been instrumental in initiating tow-down institutional changes (Dahi and Demir, 2013; Thrasher and Gallagher, 2008; UNCTAD, 2011, 2012, 2013). It is also argued that BITs can work either as a substitute or complement to improving institutional quality (Neumayer and Spess, 2005; Busse et al., 2010; Yackee, 2009). Regional Unions, such as the European Union, has also been instrumental for leveling institutional heterogeneity through a centralized decision making mechanism whereby each member state is required to harmonize its institutions to those of existing members.

The implication of tow down approach is that there is a universal set of "correct" institutions (such as legal codes, government bureaucracy, transparency, financial system, etc.) that produce the best outcomes for long run development and growth. It is also overwhelmingly agreed that the frontier for these correct institutions is established by Western European and North American countries.[4] The original as well as revised Washington Consensus was a byproduct of this belief. In contrast, bottom up economists are more prepared to accept that there might be a myriad of "correct" institutions and different societies may flourish using different institutions without ever converging to a standard norm (Rodrik, 1996, 2006, 2008). Furthermore, it is also possible that we may not even know what it is that we do not know and the only way to find it is through experimentation (Rodrik, 2004).

In global economic relations, developed countries as well as developed country bilateral and multilateral institutions[5] are known to adopt the top-down approach with strong conditionality requirements in their economic exchanges with foreign governments. The legal barriers in developed countries also put pressure on foreign governments to synchronize their regulatory and institutional environment with those of home economies. For example, while the US Foreign Corrupt Practices Act of 1977 bans US firms from bribing foreign governments or businesses no such law exists in China or India.[6] Likewise, 34 of the 40 countries that have adopted the OECD Anti-Bribery Convention of 1997 are OECD members.[7] In addition to their direct effects, such legal conditions may have indirect effects as well by encouraging developing countries to adopt developed country standards if they hope to engage in economic exchange with the latter, including attracting FDI flows. In contrast, developing countries are reported to have lower conditionality requirements attached to their economic exchanges with other developing countries. 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

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[4] For example, legal code, based on British, French, German or Scandinavian has long been pointed out as a major source of institutional and economic development and comparative advantage. The same is true for the effects of other Western style institutions.

[5] IMF and WB are usually considered Northern country institutions as developed countries control the majority of votes.

[6] The violation of this act is punishable with imprisonment for up to five years, and a monetary fine of up to $100,000 for individuals, $2 million for companies.

[7] "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).

environments may also be influential in this choice.[8] Similar to supporters of the bottom-up view, China has also often justified its lack of conditionality requirements as respecting national sovereignty by not imposing its institutions on their partner governments.

As a result of this lack of conditionality, South-South economic exchanges, particularly those involving FDI flows, are singled out as undermining Western country efforts to improve the institutional settings of developing countries. China, for example, has frequently been accused of "neglecting human rights offences in recipient nations, supporting corrupt authoritarian regimes", and undermining developed country efforts to improve developing country institutional quality and economic and political infrastructure (Strange et al., 2003; Economist, 2006; Graham-Harrison, 2009; Warmerdam, 2012; Mbaye, 2011).

In addition to the direct conditionality effect, another possible source of heterogeneous home country effect between the Northern and Southern investors is the demonstration channel. Accordingly, "the introduction of new modes of business practice in MNC subsidiaries can challenge the legitimacy of existing patterns and stimulate debates on better business practice in the host country" (Kwok and Tadesse, 2006). It is, however, also possible that increasing FDI may worsen the institutional quality of host countries. Robertson and Watson (2004) and Kwok and Tadesse (2006), for example, argue that FDI may result in more corruption in recipient countries by a) increasing the total supply of money (i.e. bribery potential), b) increasing the cut-throat competition by foreign investors for host country natural resources and market access. There may also be structural reasons why the effects of FDI flows may be different depending on the direction of flows. For example, higher level of institutional and cultural similarity, not to mention technological and preference structures (Amsden, 1987; Lall and Ghosh, 1989; Demir and Dahi, 2011; UNIDO, 2005), among Southern countries may affect the potential for institutional and governance spillovers, or convergence, from foreign firms.

Despite the wide-spread criticism of Southern governments, however, there is little empirical evidence supporting the view that Western countries through trade or financial flows, including aid, had any positive effect on host country institutions. On the contrary, there is some evidence showing that Western countries often rewarded "bad behavior" in developing countries. Easterly and Pfutze (2013), for example, convincingly show that the percentage of aid going to corrupt countries actually increased during the 1990s as they became more corrupt. Furthermore, developing country multilateral institutions such as the African Development Bank are found be favoring corrupt countries less in their financial aid programs than many developed countries, including the US, UK, and Japan (Easterly and Pfutze, 2008). Furthermore, there is also evidence showing that Western countries often intervened in developing countries for their own economic benefits. Berger et al. (2013), for example, provides strong evidence that the US used its political influence through CIA interventions in developing countries during the Cold War years to increase US export penetration in these economies. Regarding the example set by aid agencies themselves on issues such as transparency, many Western multilateral agencies are reported to perform worse than their developing country counterparts. For example, African Development Bank and Asian Development Bank are found to have a higher level of transparency in their operations than the Nordic Development Fund, European Bank for Reconstruction and Development, HellenicAid, IrishAid, Japan's Ministry of Foreign Affairs, New Zealand Aid, Spanish Agency for International Cooperation, German Development Bank, or the IMF (Easterly and Pfutze, 2008).

Turning to the link between institutional development and FDI, majority of research has focused on the effects of the latter on the former. Overall, most work on this topic find that improving institutional development significantly increases FDI flows to those countries. This finding is also used to explain the so called Lucas Paradox, the fact that capital does not flow from rich to poor countries. Alfaro et al. (2008), for example, suggest that improving Peru's institutional quality to that of Australia would quadruple foreign investment flows. Among institutional obstacles, corruption is pointed out as a major impediment to FDI inflows and works as an entry barrier (Shleifer & Vishny, 1993; Wei, 2000; Javorcik and Wei, 2009; Papaioannou, 2009; also see Kinda 2010).

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[8] Cuervo-Cazurra and Genc (2008), Darby et al. (2010); Aleksynska and Havrylchyk (2013) and Demir and Hu (2013) explore the idea that developing country investors might have a comparative advantage in dealing with challenging institutional and political environments thanks to their first-hand experience from their home countries.

Despite the controversy on the political arena there is only limited work done with regard to the effects of FDI flows on institutional development. In fact, Kwok and Tadesse (2006) is the only one we are aware of that considered the effect of FDI on institutional development, measured by corruption. They report that past aggregate FDI flows have a significantly negative effect on host-country corruption levels. We should note that their analysis is highly limited given the sample size of maximum 100 observations using aggregate FDI flows. Building on previous research what we set out in the current study is to explore the effect of FDI flows on institutional differences and whether they contribute to any institutional convergence (divergence) between home and host countries. If there is indeed an FDI effect on institutional development gaps and if this effect differs between developed vs. developing country investors, then South-South FDI flows may diminish incentives for developing countries to improve their institutional and political infrastructure. Moreover, developed country governments may no longer have the same leverage in persuading their counterparts in those countries for political reform. This, in turn, may delay the necessary reforms needed to improve sub-optimal institutional equilibrium in developing countries with detrimental long term negative effects on growth and development goals.

3. EMPIRICAL METHODOLOGY

In our analysis of the determinants of bilateral FDI flows, we estimate the following gravity model, adopted from Rose and van Wincoop (2001), Anderson and van Wincoop (2003), Rose (2004) and Baier and Bergstrand (2007)[9]. While it was developed for trade research, Gravity modeling of FDI and financial flows has also become common in empirical research (see, for example, Eaton and Tamura, 1994; Hausman and Fernandez-Arias, 2000; Portes et al., 2001; Wei, 2000). Our key hypothesis of interest is that FDI flows result in convergence (divergence) in institutions between home and host countries[10]

$$InstD_{ijt} = \beta_0 + \gamma_1 FDI_{ijt-1} + \lambda_i Gravity_{ijt-1} + \varepsilon_{ijt} \tag{1}$$

where

$$Gravity_{ijt} = (GDPPC_{it})^{\beta_1} (GDPPC_{jt})^{\beta_2} (GDPG_{it})^{\beta_3} (Dist_{ij})^{\beta_3} (Area_i * Area_j)^{\beta_4}$$

$$e^{\beta_5(Lang_{ij})} e^{\beta_6(Adj_{ij})} e^{\beta_7(LandL_{ij})} e^{\beta_8(ComCol_{ij})} e^{\beta_9(CurCol_{ij})} e^{\beta_{10}(Colony_{ij})} e^{\beta_{11}(ComNat_{ij})} e^{\beta_{12}(D_{ijt})} \varepsilon_{ijt}$$

Here $InstD_{ijt}$ is the level of institutional distance between host country i and home country j at time t, FDI_{ijt} is the real net FDI inflows from home country j to host country i at time t. (the higher it is the smaller the similarity). Time variant economic variables to reduce the risk of reverse causality and to account for lagged effects on institutional change. *Gravity* is the standard control variables employed in Gravity equations including the following:

Economic size and development level are proxied by (log) real per capita GDPs of country i and j ($GDPPC_i$ and $GDPPC_j$). It is expected that as income increases it leads to better institutions. We also include real GDP growth (*GDP Growth*) of country i and j, to proxy for the effect of economic growth on institutional change.[11]

Demographic pressures (as well as market and labor force size) are proxied by (log) total population of country i and j (*Population$_i$* and *Population$_j$*). It is possible that increasing population size makes it more difficult and costly to improve institutional quality.

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[9] Bergstrand and Egger (2007) and Kleinert and Toubal (2010) provide a theoretical extension of the standard Gravity model of trade to FDI flows.

[10] We should note that in panels with large cross section and short time period (as is the case in our dataset), fixed effects estimator may yield inconsistent results, known as the "incidental parameter problem" (Baltagi, 2001)

[11] We have also experimented with including the land sizes of i and j.

The (log) (km) distance between *i* and *j* (*Distance*) captures information costs. It is possible that as distance increases institutional similarity would diminish since countries will have less know-how of each other. Regionalism might be another factor creating incentives for increasing harmonization of countries' institutions as in the case of European Union.

Sharing a common language and a border may also work as a source institutional convergence. Hence we include a binary dummy variable equal to 1 if *i* and *j* share a common language, and 0 otherwise (*Language*), a binary variable equal to 1 if *i* and *j* share a common border, and 0 otherwise (*Adj*).

Being landlocked may increase country isolation and reduce spillovers from institutional changes in other countries or in other parts of the world. On the other hand, landlocked countries are dependent on building transportation, communication and therefore political networks with other countries for their survival and this may influence their institutional similarity to their economic partners. Thus we also include the number of landlocked countries in the country pair (0, 1, 2), *Land locked*.

The effect of colonial past on the institutional structures of developing countries is a highly contested and studied topic. To control for any such effects we include the following colony variables: a binary variable equal to 1 if *i* and *j*: had a common colonizer after 1945 (*ComCol*), are in a colonial relationship (*CurCol*), have ever had a colonial link (*Colony*).[12]

We also include a binary variable if *i* and *j* were the same country (*ComNat*) (as such they may capture part of the familiarity effect on the *InstD* variable).

We also include D_{ijt} that is a vector of time and country fixed effects. ε represents the normally distributed error term capturing omitted other influences on trade.

In equation (1) γ_1 is the key parameter of interest that we want to explore to determine whether FDI flows have any effect on institutional distance between two countries. In the benchmark model (using a panel structured as country-pair and time) we estimate the gravity equation using the OLS with country-pair robust standard errors and year fixed effects (to account for global changes in institutions).

Equation (1) however, assumes that bilateral investment flows have a homogenous effect on institutional (dis)similarities and generate convergence between home and host counties no matter what the development level of the countries in question and no matter what the direction of flows is. That is it fails to identify any non-linearities in the effect of FDI between two countries. The idea is that the effect of FDI on host country institutions and on the institutional distance between home and host countries may depend on the direction of flows that is South-South vs. North-South, as well as South-North or North-North.

If equation (1) is correct and we find a significantly negative γ_1 coefficient, this suggests that FDI flows lead to convergence between home and host countries. This, however, does not tell much about whether or not this convergence is towards a higher end or lower end equilibrium, or whether it exists in each direction of FDI flows, namely South-South, South-North, North-South and North-North. If the critics are right then we should observe institutional convergence in North-South direction where the differences are the greatest and the flow goes from a high to a low institutionally developed country thus raising the standards in the South. We should also observe a similar development in South-South direction, representing lower-end equilibrium. If there is indeed a China effect on host country institutions in the South, this should be visible through a significant convergence effect among Southern countries. Thus, as a next step we divide the sample into four to explore any heterogeneity in the effect of FDI on institutional gap between two countries.

3.1 Data

We carry out our empirical investigation using annual bilateral FDI flows data from the OECD and UNCTAD FDI databases as well as from individual country statistical offices for the period of 1990-2009. The sample selection is based on data availability. We merged the data from these three different sources 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, among the three we gave the priority

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[12] We have also experimented with whether *i* and *j* have and have had a colonial relationship after 1945 (*Col45*).

first to OECD, then individual country data sources. The availability of data was the main constraint in country and time period selection.[13] In the final dataset, we dropped those country pairs that had no data (zero and missing) for the full time period analyzed.

The final dataset is a panel of 38,898 country-year observations from 3,210 country pairs including 134 home and host countries. These 134 countries in the final sample account for 77% of all global FDI inflows, within the range of 61% in 2009 and 96% in 2002. Thus, this is one of the most comprehensive bilateral FDI datasets employed in the current literature. During this period the developing countries share in total sample FDI flows has been 24%. We also note that having a much more disaggregated and larger sample, limiting the possibility of multicollinearity and aggregation bias (Wooldridge, 2002; Yu, 2010). The full list of sample countries with observation numbers is in the appendix. The FDI data are expressed in current US dollars and we employ US GDP deflator from IFS to generate real FDI flows. Overall, we see in Figure 1 that the FDI flows to all directions are highly correlated.

<Insert Figure 1 Here>

The standard gravity variables are from CEPII, CIA's World Factbook, and Rose (2004). The population and GDP data are from WDI, and, when missing, from IFS, Penn World Table (PWT 6.3), and United Nations statistics. In our investigation the North and South refers to developed and developing countries based on UNCTAD and WTO classification. The income and regional classifications are from the World Bank. The trade data are from IMF's Direction of Trade database. 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: Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Bolivia, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Cameroon, Chile, China, Colombia, Congo (Rep.), Costa Rica, Cote d'Ivoire, Croatia, Cuba, Czech, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea, Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Korea Republic, Kuwait, Latvia, Lebanon, Liberia, Libya, Lithuania, Madagascar, Malawi, Malaysia, Mali, Malta, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, New Papua Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovak Republic, Slovenia, South Africa, Sri Lanka, Sudan, Suriname, Syrian Arab Republic, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, Uruguay, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

Table 1 provides summary statistics for the variables used in the empirical analysis. While the sample includes large number of observations in all four directions, average level of 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). Overall, the sample is quite representative with a high and similar number of FDI and Institutional Distance observations in all directions. Table 2 presents summary statistics on FDI based on home and host country income levels. As expected, the largest flows, both observation and flows level wise, are between high-income OECD countries. The second highest flows occur between high-income OECD and middle income countries (both lower and upper middle income). Looking at low-income 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. Overall, the data suggests that most of the South-South

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[13] When the data were in a non-us dollar currency, we used the annual average exchange rate from the IFS for converting to current dollar values. In addition FDI data present several challenges that may bias our results. 1) Reporting and measurement differences in data collection, and errors in reporting distort the data. This problem is more pronounced in South-South and North-South directions. 2) FDI flows in some cases are recorded only if they exceed a certain threshold level of equity ownership (i.e. 10%). 3) Exchange rate fluctuations cause different recordings of same flows (for a discussion, see UNCTAD, WIR2011:6). When there was an inconsistence 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 OECD member home (host) country data are used. If data are available from individual countries, we preferred these to UNCTAD or OECD data.

flows are clustered between upper-middle income countries with little action taking place with respect to low income and lower middle income countries.

Table 3 present presents summary statistics of FDI flows based on geographical location of home and host countries. We observe a high degree of regionalization across the world, with the exception of MENA region. Furthermore, there is a high level of clustering between and within North America and Europe regions. Asia also stands out as a major hub for both inflows and outflows FDI. Confirming regional trends published in other studies, Latin America receives most inflows from North America, Europe, and Asia. Likewise, Africa's biggest investors are located in North America, Europe, and Asia.

<div align="center"><Insert Tables 1 - 3 Here></div>

The measurement of institutional development is no easy task. Acemoglu et al. (2001), among others, argued that institutional development encompasses overlapping economic and political institutions including the degree of development of government bureaucracy, level of corruption, law and order, property rights, civil institutions and democracy, etc. All these aspects of institutional development are arguably highly correlated with each other. In addition, there are other factors that may affect foreign investors' decision to invest in a country including the security situation such as internal/external conflicts. The most comprehensive dataset that addresses all these aspects of institutional development for a majority of countries and for the longest time period is the one provided by the Political Risk Services named International Country Risk Guide (ICRG). Accordingly, the institutional quality using ICRG is measured using a composite index, which includes political, legal, and bureaucratic institutions, as well as ethnic tensions and corruption. More specifically, it 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 and least riskiness. Unlike other institutional quality measures, ICRG rating has several advantages; first, it exhibits ample within country variation, enabling us to explore our research question. Second, it is reported since 1984 for a majority of countries, making it possible to utilize as many countries as possible within the FDI dataset. To measure institutional distance (apartness) we use the Kogut and Singh's (1988) method:

$$\text{Institutional Distance} = \frac{1}{12} \sum_{i=1}^{12} (Inst_{dit} - Inst_{djt})^2 / V_d$$

where d indicates the dimensions of the index; V_d indicates the variance of the dth dimension; $Inst_{dit}$ and $Inst_{djt}$ refer to the institutional quality index of order d for country i and j at time t. Figure 2 displays the evolution of average institutional distance in all four directions. As expected and providing support to the measurement methodology, the differences are lowest among developed country pairs and 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). Likewise, the bilateral variation is significantly higher in North-South direction (1.81) and the lowest in North-North direction (0.64). Still the standard deviation is quite high among developing countries as well reaching 1.21 in South-South direction.[14]

<div align="center"><Insert Figure 2 Here></div>

The simple correlation coefficient between FDI flows and institutional distance is negative in all directions, suggesting a convergence effect yet is the highest and most significant in the North-South

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[14] The averages are for country pairs for which we have the FDI data for. Obviously, one may argue that the differences between developed and developing countries might be much higher if we take into account those country pairs where there are no observations for FDI flows, causing a censored dataset. Since the sample countries are the ones that managed to pass the threshold level of institutional barriers, the predicted effect of institutional differences might be biased downwards.

direction. Accordingly, it is -0.01 in South-South, -0.04*** in South-North, -0.08*** in North-South and -0.02* in North-North directions. Figure 3 below show the simple scatter diagrams of the relationship between these two variables. The diagram with whole sample suggests a negative yet weak relationship with a heavy clustering at the zero bound FDI flows. When we divide the sample into four directions, we again do not find a very significant relationship in North-North or, contrary to the criticisms discussed in previous section, in South-South directions. Yet, providing some support to the supporters of North-South integration, we find a comparatively stronger negative relationship in North-South and South-North directions. In the next section we explore whether there is indeed a causal relationship between FDI flows and institutional convergence between and within developed and developing county groups.

<Insert Figure 3 Here>

4.   EMPIRICAL RESULTS

Table 4 presents benchmark regression results with robust standard errors (clustered by country pair). Column (1) presents the basic OLS results. Column (2) repeats (1) with the addition of year fixed effects to control for global trends in institutional changes and convergence. Colum (3) introduces country-pair fixed effects (which cause all other country-pair variables to drop from the regression equation). Column (4) addresses any omitted time-invariant host country fixed effects, and column (5) controls for both host and home country fixed effects. Column (5) is our benchmark specification as it controls for all observed and unobserved country specific effects, including differences in the definition of FDI across sample countries as well as cultural, time-invariant institutional and geographical characteristics, and natural resource endowments.

<Insert Table 4 Here >

While the regression results in columns (1) – (4) from Table 4 suggest that FDI flows have no significant effect on institutional differences across countries, column (5) suggests a different picture. Accordingly, once we control for home and host country fixed effects, FDI flows appear to have a significantly negative effect on institutional differences between countries and leads to institutional convergence. However, we should note that none of the other regression estimations including column (3) with country-pair fixed effects support this conclusion.

Regarding other variables of interest, coefficient estimates appear as expected and provide support to the specification and estimation methodology. First, we find that, independent of specification, increasing per capita incomes 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 and convergence. Increasing population size is also found to generate convergence. We also find that countries that are landlocked or distant from each other experience divergence in their institutional development levels.

Regarding colonial past variables, coefficient estimates suggest that while those countries that have 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. It appears that colonizing countries had a significant institutional footprint in their colonies as suggested by numerous other studies. In contrast, the same cannot be said about those countries that had or have any kind of colonial relationship. As expected, we also find that countries that were at one point the same country have significantly smaller institutional differences.

<Insert Table 5 Here >

Table 5 reports regression results based on Eq (1) after controlling for the direction of FDI flows to explore whether institutional effects of FDI are conditional on the development levels of home and host countries. In other words, we test if there is indeed a China effect on host country institutions and whether

developed country investment flows help achieve convergence in the South. We report regression results in Table 5 based on the specifications in columns (4) and (5) of Table 4 after controlling for host and home country fixed effects.

Looking at results in columns (1) – (8) we do not observe any strong evidence suggesting that the development level of home and host countries matter regarding the effect of FDI flows on institutional development gap across countries. While we find some evidence in column (1) suggesting institutional divergence in response to South-South FDI flows, this is not robust to the inclusion of both home and host country fixed effects in column (5). Furthermore, the positive and significant coefficient estimate for FDI flows in column (1) suggests the opposite of what the critiques of South – South FDI flows argue, which would imply convergence or no significant change in the low-end institutional development levels of two Southern countries. Overall, we find no evidence of a China effect of FDI flows on institutional differences across countries in the South. Furthermore, we do not detect any significant convergence effect of FDI flows from developed to developing countries. While the coefficient estimates for North-South and North-North flows in columns (3) – (4), and (7) – (8) are found to be negative, suggesting a convergence effect, none are statistically significant at conventional levels.

As in Table 4, the coefficient estimates from other control variables provide support to the validity of estimation methodology. We find that the GDP per capita of host country is not a significant determinant of bilateral institutional differences in South-South or North – North directions, reflecting the relative homogeneity of institutional development levels in each group. In contrast, it is 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 host country in the North the bigger is the institutional development gap with the Southern home country. As expected we find the opposite for North-South flows, that is the higher the income level in the South the smaller is the institutional differences it has with the North. In other words, increasing income levels in the South (North) leads to institutional convergence (divergence) in South-North (North – South) direction.

Likewise, GDP growth does not appear to have a significant effect on institutional differences between host and home countries in South - South and North – North directions. In contrast, consistent with the effect income levels, we find that increasing GDP growth in host (home) country is likely to moderate (worsen) institutional differences in South – North and North – South directions.

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 current common language have a moderating effect on institutional structures across countries. Lastly, population size appears to be important determinant suggesting that countries that are similar in size are more likely to have similar institutions.

5. EXTENSIONS

5.1. Natural resource curse

The effects of natural resources on institutional development (i.e. natural resource curse) have been discussed extensively in recent literature. Overall it has been shown that increasing dependence on natural resources has a negative effect on institutional development. Some of the channels through which this relationship holds include rentier state formation, which leaves little incentive to improve institutional quality thanks to the easy flow of rents from natural resource exports such as oil and minerals. Another possible channel includes the militarization of state structure and formation of authoritarian police states, which uses revenues from natural resource sectors to suppress popular public demands for improving institutional quality. Furthermore, it is often argued that increasing Chinese investment flows in Africa and elsewhere is mostly motivated by "resource grab".[15]

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[15] For a discussion, see Warmerdam (2012) and Mbaye, (2011), Graham-Harrison (2009), Strange et al. (2003). Poelhekke and Ploeg (2013) also show that increasing natural resource dependence crowds out non-resource FDI flows.

Therefore we include a control variable *Rents* measured by the percentage share of natural resource rents in GDP to capture the effect of host country natural resource dependence on institutional differences across countries. We also include an interaction variable between FDI and *Rents* to test whether FDI flows affect countries with and without heavy dependence on natural resource rents differently. It is possible that either or both developed and developing country investors treat natural resource rich countries differently than the rest and demand less conditions attached to their investment flows. For example, China as well as UK may pressure a country such as Nigeria less than another developing country when it comes to their demands for institutional improvements, including the level of corruption.[16]

<Insert Table 6 here>

Table 6 reports regression results after including these two new variables. Column (1) presents results with home and host country fixed effects for the full sample. We find a significantly negative effect of FDI flows on institutional distance, i.e. implying convergence. Yet this effect disappears as the percentage of natural resource rents increase to the sample mean of 4.8%. Overall, it appears that there is indeed a natural resource curse causing host country institutions to diverge from home country institutions. Furthermore, FDI flows do appear to cause further divergence in countries with higher levels of natural resource dependence. In columns (2) – (5) we divide the sample to four directions and include home host country fixed effects. This time we fail to find any effect of FDI on institutional differences in any of the four directions. The effect of *Rents* also disappear in all but South – South direction. FDI flows also do not appear to have a significantly different effect on natural resource reach countries, either at the margins or in total as shown by the net effect in Table 6.[17]

However, country fixed effects are likely to remove any effect of *Rents* on institutions. Therefore, in columns (6) – (9) we repeat the same exercise without including any home or host country fixed effects. The results suggest that while South – North FDI flows may indeed have a positive convergence effect, we fail to find the same effect in any other direction. Yet, we confirm the presence of a NRC whereby countries with higher natural resource rent dependence are found to diverge from other country institutions, particularly in South – South and North – South direction. In contrast, *Rents* dependence is found to stimulate convergence among Northern countries. Furthermore, even though the marginal effect of *Rents* through FDI flows is found to be insignificant, except in North – North direction, 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 value of natural resource dependence across sample countries we find that FDI flows cause divergence in South-South direction but convergence in South-North and North-South directions. The net effect appears to be insignificant in North-North direction. This finding provides some support to the supporters of North – South FDI flows. Accordingly, FDI flows from developed countries to natural resource rich developing countries appear to cause convergence to a high level of equilibrium in institutional development.

5.2. Bilateral versus total FDI flows

The bilateral panel analysis in the previous section might be masking agglomeration effects caused by the total mass of FDI flows from the North and the South. It is possible that FDI flows from the North and the South as a whole might be more important in influencing institutional change in developing countries. For example, changes in OECD regulations including multilateral agreements on investments practices affect all of its members, most of which are Northern countries. Similarly, while there may not be a China effect per se, as our results so far suggests, the total sum of FDI flows from Southern countries as a whole may still affect institutional changes in the South. To test this hypothesis we pool bilateral FDI flows from the South and the

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[16] For example, it is reported that oil and gas industry has 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 customs officials.

[17] As in previous tables, we also repeated the exercise using only host country fixed effects. Unreported results are similar to those reported here.

North to create an aggregate FDI flows panel in both directions. We also replace the institutional distance variable with the *level* of aggregate institutional development in host country.

In column (1) of Table 7 we present regression results after aggregating bilateral FDI flows. While we find a positive coefficient estimate suggesting a positive institutional development effect from FDI, it is statistically insignificant. In column (2) we repeat the same exercise after splitting the aggregate FDI flows into two that are FDI flows from the South and the North. In this case we find a significantly positive effect of FDI flows from the North to the rest of the world while no significant effect is detected for those from the South (though the coefficient estimate is negative). In column (3) we test whether there is any China effect by limiting the data to developing countries only and repeat the regression analysis of column (2). The results support the presence of a China effect and suggest that South-South FDI flows have a statistically significant negative effect on institutional development in host countries. North-South FDI flows, on the other hand, is found to have a positive but statistically insignificant effect. To make sure that these are not random effects we replicate column (3) in South-North and North-North directions by limiting the left hand side variable this time to only Northern countries. As expected we did not detect any significant institutional effect of South-North or North-North FDI flows on Northern country institutional development. In column (5) we repeat the exercises in columns (3) and (4) with full sample by introducing interaction variables for Northern and Southern countries. The results suggest a significantly negative institutional development effect of South-South flows while no such effect is detected in South-North or North-South directions. North-North flows, however, are found to have a significantly positive effect on institutional development, possibly supporting the institutional convergence hypothesis among developed countries.

<center>**<Insert Table 7 here>**</center>

In Table 8 we further extend the analysis of Table 7. First we test the natural resource curse hypothesis of section 5.1 to see if FDI flows have any differential effects in those countries that are rich in natural resources. Column (1) shows that aggregate FDI flows have a positive yet statistically insignificant effect even after controlling for the NRC. NRC variable, on the other hand, is found with the expected negative yet statistically insignificant coefficient estimate. In column (2) we interact FDI flows with the NRC variable yet again fail to detect any marginal or net effect at conventional statistical significance levels. 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 7 showing a significantly negative effect of 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 NRC and repeats the analysis as in column (3). The results shows a marginally positive effect of North-South flows on natural resource rich Southern countries despite the fact that the net effect remains negative and insignificant for South-South flows and positive and insignificant for North-South flows. In none of the regressions in columns (1)-(4) the NRC variable is significant at conventional levels. However, we should note that the regression exercise here includes host country fixed effects, which might be removing any fixed effect of NRC. 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.

<center>**<Insert Table 8 here>**</center>

In column (5) we replace the aggregated bilateral FDI flows variable with the net FDI inflows variable from WDI to test if our earlier findings are robust to any measurement error because of missing or incomplete bilateral flows data. Arguably WDI data might be more complete as it reports net flows rather than bilateral flows which are subject to measurement, reporting and recording errors and include large number of missing or zero observations. Using this variable we still fail to find any significant effect of FDI flows though the sign turns out to be positive yet smaller in size than in Table 7. In column (6) we restrict the host countries to those in the South and this time find a negative though still statistically insignificant coefficient estimate. In column (7) we restrict the sample again to those in the South and use the aggregated bilateral FDI flows variable split into South and North as in column (3). Yet this time we limit the sample to

those observations where the aggregated FDI data are within the range of 100% deviation from the WDI data. The results support findings in column (3) as well as in Table 7 showing a significantly negative South-South effect and an insignificant but positive North-South effect.

5.3.   Are all institutions equal?

It is possible that FDI flows do not affect all aspects of institutional development equally. That is certain components of institutional quality such as corruption might respond more than others to FDI flows. One possible reason for this is the nature of conditions attached to investment flows, as well as investors' ranking of their priorities for investment decisions. For example, the US and OECD countries have strict restrictions and legal requirements against bribing in host countries. Therefore we repeat the analysis in previous sections after replacing the institutional distance variable with the one including only four rather than all 12 sub-components: corruption, government stability, investment profile and law and order. The simple correlation coefficient between the full and reduced form distance variables is quite high, 0.82. Table 9 reports regressions results using the four-component distance variable and replicates Tables 4 and 5. The results are quite close to those before and once taking into account country fixed effects suggest no significant evidence that South-South flows are any different then North-South flows at any significant level.

<Insert Table 9 here>

Next, we repeat the same analysis in Table 10 but this time using aggregated bilateral FDI flows from the South and North and only for the *level* of corruption in host countries. Column (1) looks at the effect of total FDI flows on the level of corruption in host countries (higher number signals lower corruption) and finds a positive yet insignificant effect. Column (2) divides the FDI inflows into South and North based on country of origin (i.e. home country) as before, yet we again do not detect any significant effect of FDI flows from either source. In column (3) we restrict host countries with those in the South (World – South) and this time find a negative yet only marginally significant effect from South-South FDI flows. North-South flows appear with a positive yet insignificant effect. In column (4) this time we restrict the host countries with those in the North (World – North) yet find no significant effect of either North-North or South-North flows. Column (5), rather than dividing the sample into sub-groups, introduces a dummy variable approach by identifying host countries as South or North. Thus, the interaction with FDI flows from the South and North of those with the host country dummies of South and North yields sub-group effects. The results are again very similar to those from columns (2) – (4) showing no significant effect of FDI flows from any of the directions except for South-South flows, which appear with a negative and marginally significant coefficient.

<Insert Table 10 here>

5.4.   Bilateral trade flows and institutional convergence

Bilateral trade flows can also work as a substitute for investment flows. According to option-pricing models, for example, increasing host country risk may deter foreign firms' investment and growth as they postpone their entry or expansion decisions (Campa, 1993). Conversely, increasing risks may increase foreign firms' entry and growth as risk-averse foreign firms substitute foreign production for exports (Cushman, 1985; Goldberg and Kolstad, 1995). Accordingly, multinationals can substitute foreign capital for decreasing exports in response to increasing risk. Furthermore, increasing trade integration might be more effective in harmonizing institutional structures between two countries than FDI flows. Increasing regionalization as well as preferential trade agreements may also be instrumental in this change. The Customs Union agreement between Turkey and European Union, for example, has led to a significant increase in trade flows while facilitating harmonization of institutional framework in Turkey. Thus, in table 11 we substitute bilateral trade volume for FDI to test whether bilateral trade integration has any effect on bilateral institutional differences and replicate the regression analysis of Table 5. According to coefficient estimates we find evidence showing that trade flows are much more instrumental for institutional change than FDI flows. Accordingly, we find that bilateral trade flows result in convergence in South – South, North – South, and North – North directions. Yet we fail to find any significant effect in South – North direction. If there is indeed a China

effect, it appears that the effect manifests itself more through trade flows than long term investment flows. Other control variables came out to be consistent with those from Tables 4 and 5.

<Insert Table 11 here>

6. CONCLUSIONS

Global FDI flows have increased significantly since 1990s. FDI flows 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 the global South. Particularly, the lack of conditionality and weaker institutional quality demands of Southern investors are blamed for undermining developed country efforts to improve institutional landscape of Southern countries. China, for example, is often accused of encouraging "bad behavior" through its increasing investment and trade orientation in developing 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 differential effect on institutional convergence (divergence) 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 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 pooled North-South FDI flows on host country institutions. In contrast, we find that pooled South-South FDI flows have a significantly negative effect on host country institutions. Furthermore, we find some evidence South – South FDI flows might be harmful to institutional development in natural resource rich countries while the opposite is true for North – South flows. Last but not least we discover that bilateral trade flows are much more influential in institutional convergence between countries.

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Figure 1: Real FDI Inflows to sample countries, 1990-2009
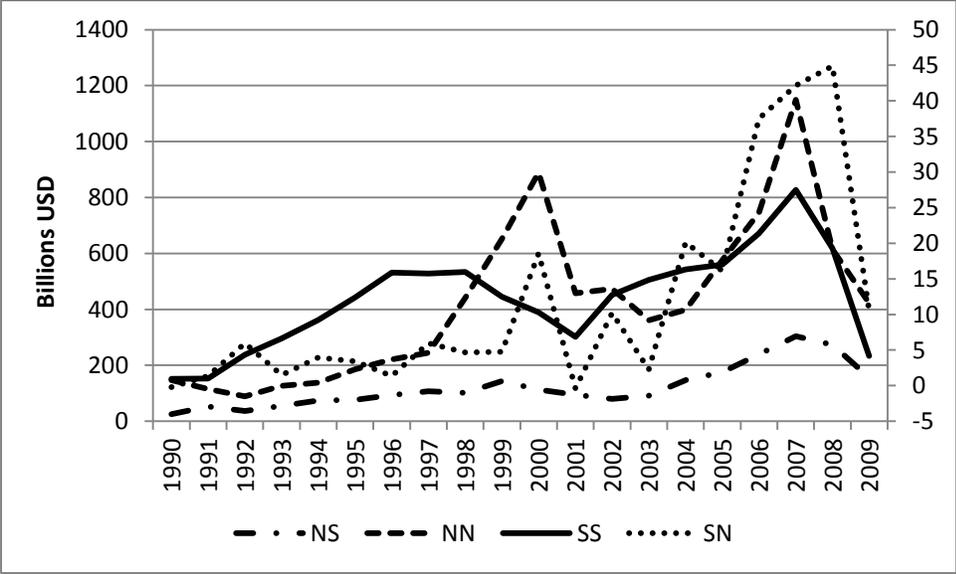
Notes: NS, NN, SS, and SN refer to North – South, North – North, South – South and South – North real FDI flows (in constant 2000 dollars), respectively.

Figure 2: Institutional distance
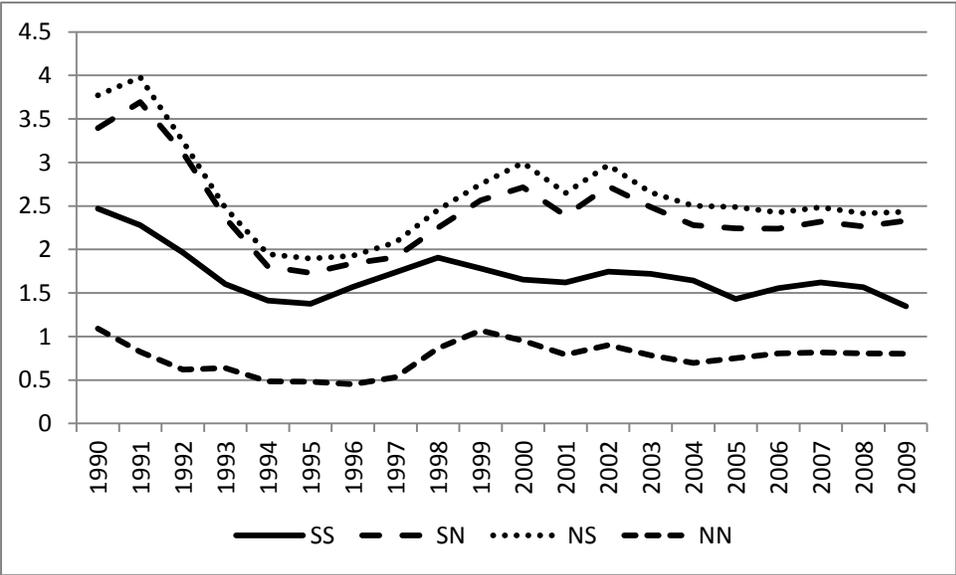
Notes: SS, SN NS, and NN, refer to South – South and South – North, North – South, and North – North, institutional distance using the Kogut and Singh's (1988) methodology, respectively.

Figure 3: FDI flows and Institutional change
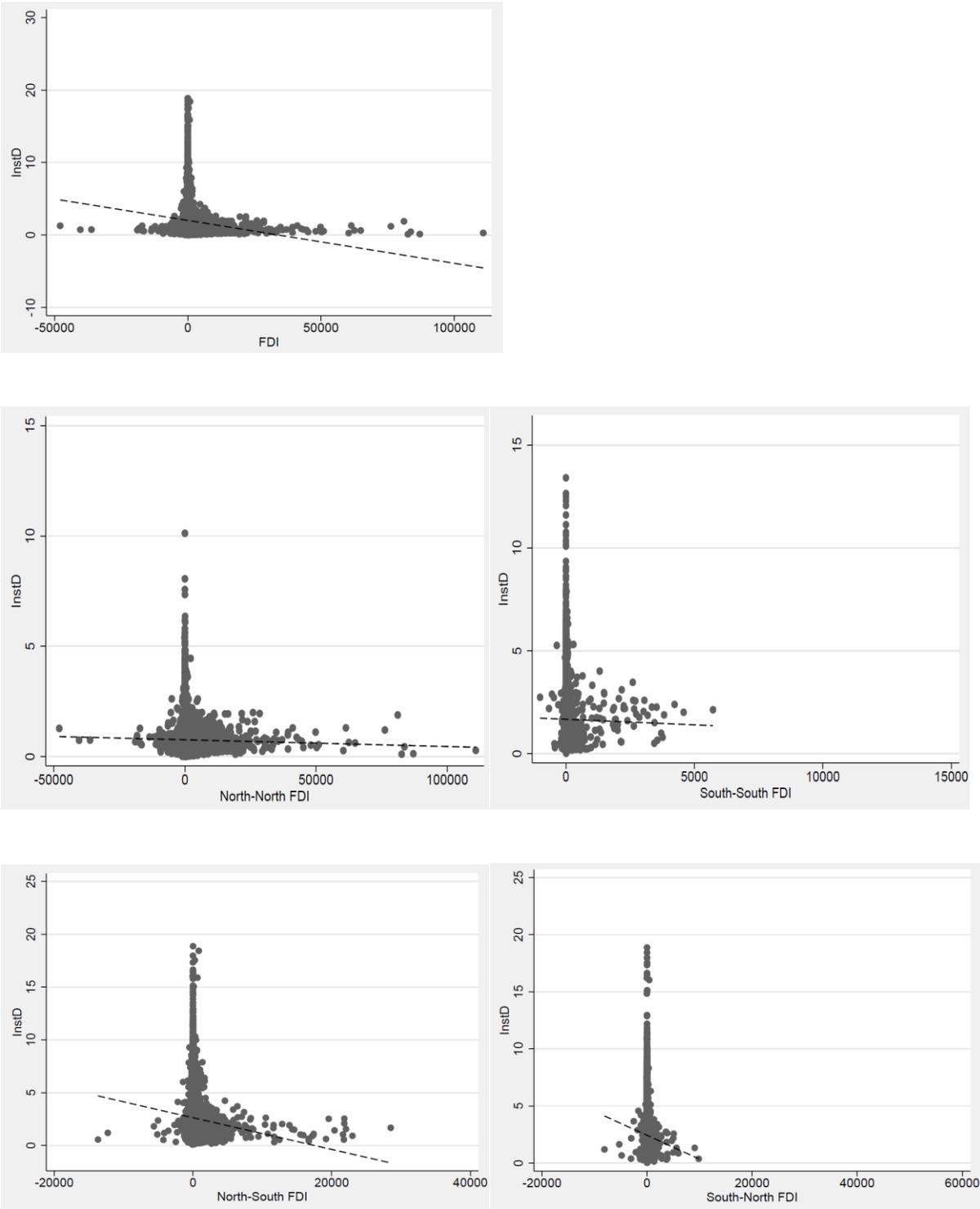
Notes: Scatter diagrams plot the Kogut and Singh's (1988) institutional distance variable with bilateral real FDI flows, in full sample as well as sub-samples based on four directions.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
FDI$_{ij}$	36,081	298	2,255	-47,911	110,915
South-South	6,738	34	233	-1,008	5,723
South-North	8,274	27	309	-8,108	9,836
North-South	13,132	171	943	-13,690	28,513
North-North	7,937	1,013	4,563	-47,911	110,915
InstD$_{ij}$	36,081	1.924	1.654	0.009	18.867
South-South	6,738	1.643	1.210	0.014	13.416
South-North	8,274	2.337	1.723	0.029	18.867
North-South	13,132	2.525	1.814	0.095	18.867
North-North	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
ln Bilateral trade$_{ij}$	51,237	5.961	2.350	0	13.089
Land locked	36,081	0.233	0.452	0	2
Ln Distance	36,081	8.286	1.013	4.088	9.901
Language	36,081	0.112	0.315	0	1
Adj	36,081	0.052	0.222	0	1
Colony	36,081	0.062	0.241	0	1
Comcol	36,081	0.010	0.098	0	1
Curcol	36,081	0.000	0.018	0	1
ComNat	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*. *GDPPC*$_i$ and *GDPPC*$_j$ are the (log) real GDP per capita in country *i* and *j*, *Population*$_i$ and *Population*$_j$ are (log) total populations of country *i* and *j*; *GDP Growth*$_i$ and *GDP Growth*$_j$ is real GDP growth of country *i* and *j*; *Land locked* is the number of landlocked countries (0, 1, or 2); *Bilateral Trade* is (log) total real bilateral trade in million USD between *i* and *j*; *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: 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
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.

Table 3: 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 4: Benchmark regression results

	(1)	(2)	(3)	(4)	(5)
				Year and Host Country FE	Year, Host and Home Country FE
		Year FE	Pair FE		
FDI_{ijt-1}	4.85e-06	1.44e-06	1.07e-06	-1.24e-06	-1.27e-05***
	(4.67e-06)	(4.43e-06)	(1.63e-06)	(4.32e-06)	(3.03e-06)
$GDPPC_{it-1}$	-0.513***	-0.521***	-0.302**	-0.467***	-0.432***
	(0.023)	(0.023)	(0.142)	(0.155)	(0.148)
$GDPPC_{jt-1}$	-0.374***	-0.383***	0.162	-0.435***	-0.015
	(0.028)	(0.028)	(0.149)	(0.026)	(0.144)
GDP_growth_{it-1}	-0.028***	-0.034***	-0.023***	-0.022***	-0.023***
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)
GDP_growth_{jt-1}	-0.022***	-0.028***	-0.015**	-0.023***	-0.017**
	(0.007)	(0.008)	(0.006)	(0.008)	(0.007)
$lnPopulation_{it}$	0.006	0.014	-2.374***	-1.176***	-1.879***
	(0.014)	(0.014)	(0.402)	(0.385)	(0.374)
$lnPopulation_{jt}$	-0.013	-0.009	-2.239***	-0.039***	-2.043***
	(0.015)	(0.014)	(0.437)	(0.012)	(0.411)
$Land\ locked_{ij}$	0.170***	0.144***		0.126**	13.06***
	(0.048)	(0.048)		(0.051)	(2.057)
$lnDistance_{ij}$	0.263***	0.269***		0.253***	0.245***
	(0.023)	(0.023)		(0.023)	(0.022)
$Language_{ij}$	-0.066	-0.030		-0.177***	-0.318***
	(0.077)	(0.076)		(0.066)	(0.055)
Adj_{ij}	-0.474***	-0.441***		-0.350***	-0.238***
	(0.088)	(0.088)		(0.087)	(0.079)
$Colony_{ij}$	0.275***	0.264***		0.165*	0.114*
	(0.102)	(0.101)		(0.085)	(0.065)
$Comcol_{ij}$	-0.854***	-0.835***		-0.826***	-0.504***
	(0.167)	(0.171)		(0.146)	(0.135)
$Curcol_{ijt}$	-0.132	-0.238**		0.320**	0.910***
	(0.107)	(0.107)		(0.131)	(0.143)
$Smctry_{ij}$	-0.585***	-0.566***		-0.490***	-0.315**
	(0.123)	(0.121)		(0.120)	(0.140)
Constant	8.046***	8.173***	80.54***	28.66***	62.03***
	(0.580)	(0.597)	(9.337)	(6.210)	(7.794)
Year FE	No	Yes	Yes	Yes	Yes
Host FE	No	No	No	Yes	Yes
Home FE	No	No	No	No	Yes
Country-pair FE	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 Distance between i and j for all regressions. *FDI* is annual FDI flows from country j to i at time *t-1*. $GDPPC_i$ 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; *ln Population*$_i$ and *ln Population*$_j$ are total population 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 Gravity variables dropped due to collinearity under country-pair fixed effects model. (***), (**), (*) denote significance at 1, 5 and 10% levels, respectively.

Table 5: South-South flows versus the rest

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Host country FE				Home and Host Country FE			
	SS	SN	NS	NN	SS	SN	NS	NN
FDI_{ijt-1}	0.0002**	-5.14e-05	-2.78e-05	-8.27e-07	5.85e-05	1.21e-05	-1.44e-05	-7.04e-09
	(0.0001)	(3.33e-05)	(1.95e-05)	(2.35e-06)	(7.70e-05)	(2.21e-05)	(1.31e-05)	(1.89e-06)
$GDPPC_{it-1}$	-0.295	2.605***	-0.983***	0.054	-0.212	2.110***	-0.995***	-0.044
	(0.262)	(0.644)	(0.231)	(0.197)	(0.254)	(0.402)	(0.227)	(0.162)
$GDPPC_{jt-1}$	-0.389***	-0.795***	0.706***	-0.172***	0.050	-0.855***	2.951***	0.278*
	(0.069)	(0.054)	(0.055)	(0.046)	(0.208)	(0.274)	(0.403)	(0.152)
GDP_growth_{it-1}	-0.005	0.043***	-0.029***	-0.007*	-0.007	0.042***	-0.029***	-0.004
	(0.005)	(0.017)	(0.007)	(0.004)	(0.004)	(0.014)	(0.007)	(0.004)
GDP_growth_{jt-1}	-0.015	-0.039***	0.046***	0.038***	-0.020**	-0.028***	0.040***	-0.012***
	(0.009)	(0.010)	(0.009)	(0.007)	(0.008)	(0.009)	(0.011)	(0.004)
$lnPopulation_{it}$	0.456	-1.867*	-2.636***	-1.735***	0.416	-1.232	-2.642***	-1.691***
	(0.624)	(1.078)	(0.470)	(0.413)	(0.625)	(0.960)	(0.474)	(0.392)
$lnPopulation_{jt}$	-0.026	-0.018	-0.158***	-0.018*	-1.168	-2.840***	-1.778**	-1.851***
	(0.029)	(0.030)	(0.012)	(0.009)	(0.789)	(0.584)	(0.779)	(0.408)
$Land\ locked_{ij}$	-0.298***	-0.489***	-0.215***	-0.115***	3.676	13.50***	-4.810*	-12.11***
	(0.073)	(0.097)	(0.052)	(0.034)	(2.364)	(3.735)	(2.731)	(2.644)
$lnDistance_{ij}$	0.184***	0.285***	0.015	0.053**	0.126***	0.045	0.036	0.021
	(0.049)	(0.049)	(0.025)	(0.022)	(0.034)	(0.039)	(0.022)	(0.014)
$Comlang_{ij}$	-0.074	0.193	-0.130*	0.048	-0.167	-0.015	-0.048	-0.033
	(0.122)	(0.192)	(0.075)	(0.069)	(0.136)	(0.090)	(0.062)	(0.035)
ADJ_{ij}	-0.204**	0.083	-0.083	-0.130**	-0.166*	0.105	0.082	-0.023
	(0.103)	(0.266)	(0.212)	(0.056)	(0.087)	(0.125)	(0.115)	(0.038)
$Colony_{ij}$	-0.031	-0.003	0.018	-0.091	-0.006	-0.064	-0.043	-0.135***
	(0.157)	(0.210)	(0.082)	(0.077)	(0.176)	(0.079)	(0.059)	(0.038)
$Comcol_{ij}$	-0.211		-2.632***		0.011		-1.927**	
	(0.161)		(0.773)		(0.127)		(0.813)	
$Curcol_{ijt}$				-0.056				-0.099
				(0.116)				(0.113)
$Smctry_{ij}$	-0.067	-0.083	-0.219	0.116	-0.033	-0.368**	-0.512***	0.117*
	(0.108)	(0.335)	(0.262)	(0.095)	(0.103)	(0.152)	(0.174)	(0.062)
Constant	-1.143	12.09	50.15***	30.70***	10.38	45.78***	58.59***	63.38***
	(11.85)	(17.34)	(7.901)	(6.568)	(15.80)	(17.13)	(17.07)	(9.523)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home FE	No	No	No	No	Yes	Yes	Yes	Yes
Observations	6,738	8,274	13,132	7,937	6,738	8,274	13,132	7,937
R-squared	0.350	0.463	0.724	0.215	0.641	0.742	0.758	0.612
rmse	0.984	1.266	0.957	0.568	0.735	0.883	0.898	0.400

Notes: *SS*, *SN*, *NS* and *NN* refer to the sample being restricted to South – South, South – North, North – South and North – North direction of FDI flows from country *j* to country *i*. For other variables refer to Table 4.

Table 6: Natural Resource Curse

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Home and Host Country FE					No Country FE			
	Full Sample	SS	SN	NS	NN	SS	SN	NS	NN
FDI_{ijt-1}	-1.65e-05***	0.0001	7.78e-06	-1.58e-07	-1.77e-06	9.37e-05	-6.95e-05**	-3.44e-05	-3.56e-06
	(2.83e-06)	(0.0001)	(2.45e-05)	(1.48e-05)	(2.00e-06)	(0.0001)	(3.52e-05)	(2.63e-05)	(2.51e-06)
$Rents_{it-1}$	0.012***	0.014***	0.042	0.007	0.008	0.013***	0.051	0.031***	-0.028***
	(0.004)	(0.005)	(0.032)	(0.005)	(0.007)	(0.004)	(0.032)	(0.002)	(0.005)
$FDI_{ijt-1}*Rents_{it-1}$	2.79e-06**	-1.53e-05	1.56e-06	-2.44e-06*	1.54e-06**	1.73e-05	2.77e-07	-2.78e-06	2.31e-06**
	(1.41e-06)	(1.84e-05)	(8.14e-06)	(1.48e-06)	(6.54e-07)	(2.02e-05)	(1.57e-05)	(2.38e-06)	(1.01e-06)
$GDPPC_{it-1}$	-0.425***	-0.135	2.100***	-1.022***	-0.037	-0.102*	0.932***	-0.846***	0.002
	(0.157)	(0.255)	(0.397)	(0.253)	(0.163)	(0.054)	(0.112)	(0.038)	(0.056)
$GDPPC_{jt-1}$	-0.011	0.0231	-0.857***	2.937***	0.283*	-0.369***	-0.835***	0.863***	-0.196***
	(0.144)	(0.207)	(0.274)	(0.411)	(0.152)	(0.073)	(0.052)	(0.091)	(0.054)
GDP_growth_{it-1}	-0.024***	-0.008**	0.042***	-0.031***	-0.004	-0.0002	0.022	-0.044***	0.013**
	(0.005)	(0.004)	(0.014)	(0.007)	(0.004)	(0.005)	(0.017)	(0.006)	(0.006)
GDP_growt_{jt-1}	-0.018***	-0.021**	-0.028***	0.039***	-0.012***	-0.016*	-0.040***	0.022*	0.038***
	(0.007)	(0.008)	(0.009)	(0.011)	(0.004)	(0.009)	(0.010)	(0.013)	(0.008)
$lnPopulation_{it}$	-1.997***	0.160	-1.293	-2.735***	-1.718***	0.072***	-0.165***	0.023	0.013
	(0.375)	(0.615)	(0.964)	(0.465)	(0.393)	(0.024)	(0.026)	(0.019)	(0.013)
$lnPopulation_{jt}$	-2.032***	-1.122	-2.835***	-1.710**	-1.845***	-0.004	-0.0420	-0.135***	-0.013
	(0.411)	(0.791)	(0.583)	(0.792)	(0.407)	(0.031)	(0.028)	(0.019)	(0.011)
Net effect	-3.07E-06	0.00005	8.87e-06	-0.00002	2.15e-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
Gravity	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 resources rents (% of GDP). *Gravity* refers to the standard Gravity controls as included in Tables 4 – 6.

Table 7: Cross section analysis

	(1)	(2)	(3)	(4)	(5)
			World-South	World-North	
FDI_{it-1}	9.59e-06				
	(6.32e-06)				
FDI_South_{it-1}		-8.51e-05	-0.0003***	-3.65e-05	-3.64e-05
		(5.17e-05)	(0.0001)	(2.83e-05)	(3.18e-05)
FDI_North_{it-1}		1.55e-05**	1.08e-05	1.89e-06	-8.39e-06
		(6.89e-06)	(6.47e-05)	(6.72e-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***	7.853***	7.927***	12.12**	8.170***
	(2.222)	(2.204)	(2.320)	(4.643)	(2.245)
GDP_growth_{it-1}	0.173***	0.172***	0.168***	0.386***	0.172***
	(0.038)	(0.038)	(0.039)	(0.063)	(0.038)
$lnPopulation_{it}$	10.34***	10.30***	11.54***	10.11	10.07***
	(3.769)	(3.769)	(4.288)	(11.63)	(3.763)
Constant	-166.0***	-166.0***	-186.7***	-204.7	-164.7***
	(61.40)	(61.30)	(70.68)	(180.7)	(60.74)
Host Country FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
South-World		-8.51e-05			
North-World		1.55e-05**			
South-South			-0.0003***		-0.0003***
South-North				-3.65e-05	-0.00004
North-South			1.08e-05		-8.39e-06
North-North				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 c.	136	136	111	25	136
rmse	4.497	4.495	4.737	2.670	4.492

Notes: *DSouth* and *DNorth* are dummy variables equal to 1 if host country *i* is a Southern or Northern country, respectively.

Table 8: Cross section analysis, natural resource curse and database error

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Natural Resource Curse		WDI				
			South	South		South	South
FDI_{it-1}	8.52e-06	3.48e-06					
	(6.44e-06)	(7.98e-06)					
$FDI_{it-1}*Rents_{it-1}$		3.97e-06					
		(3.67e-06)					
FDI_South_{it-1}			-0.0003***	-0.0002			-0.0003***
			(0.0001)	(0.0002)			(0.0001)
FDI_North_{it-1}			7.77e-06	-8.95e-05			2.52e-05
			(6.52e-05)	(5.57e-05)			(6.69e-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	-0.024	-0.019	-0.025			
	(0.026)	(0.026)	(0.028)	(0.026)			
FDI_WDI_{it-1}					1.99e-06	-4.03e-05	
					(7.31e-06)	(3.19e-05)	
$GDPPC_{it-1}$	7.800***	7.738***	8.022***	7.947***	7.698***	7.824***	8.777***
	(2.302)	(2.315)	(2.417)	(2.436)	(2.250)	(2.353)	(2.364)
GDP_growth_{it-1}	0.180***	0.179***	0.174***	0.171***	0.185***	0.180***	0.158***
	(0.035)	(0.035)	(0.036)	(0.036)	(0.036)	(0.037)	(0.042)
$lnPopulation_{it}$	10.23***	10.36***	11.34***	11.40***	9.497**	10.77**	11.09**
	(3.709)	(3.715)	(4.231)	(4.306)	(3.833)	(4.353)	(4.478)
Constant	-164.2***	-165.7***	-183.8**	-184.2**	-152.0**	-173.6**	-185.2**
	(60.62)	(60.81)	(70.13)	(71.55)	(62.38)	(71.82)	(77.85)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Net effects	8.52e-06	0.00004			1.99e-06		
World-South						-4.03e-05	
South-South			-0.0003***	-0.0003			-0.0003***
North-South			7.77e-06	0.0001			2.52e-05
Observations	2,410	2,410	1,935	1,935	2,359	1,917	1,774
R-squared	0.347	0.347	0.350	0.352	0.340	0.342	0.349
Number of host c.	134	134	109	109	135	110	109
Rmse	4.501	4.501	4.751	4.745	4.459	4.699	4.568
r2_o	0.149	0.142	0.0270	0.0249	0.178	0.0343	0.0424
r2_w	0.347	0.347	0.350	0.352	0.340	0.342	0.349

Notes: *Rents* refers to total natural resources rents (% of GDP). *FDI_WDI* refers to total FDI flows data from WDI (2013).

Table 9: Are all institutions equal

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Host Country FE				Home and Host Country FE			
	Full sample	SS	SN	NS	NN	SS	SN	NS	NN
FDI_{ijt-1}	-1.58e-05***	0.0002	-6.28e-05	-2.05e-05	-3.33e-06***	0.0001	-2.45e-05	7.14e-06	-1.42e-06
	(3.37e-06)	(0.0001)	(4.19e-05)	(1.88e-05)	(1.05e-06)	(8.44e-05)	(3.35e-05)	(9.53e-06)	(1.04e-06)
$GDPPC_{it-1}$	-0.285**	-0.414	2.267***	-0.597***	0.095	-0.471*	1.711***	-0.630***	0.124
	(0.133)	(0.279)	(0.510)	(0.231)	(0.158)	(0.275)	(0.411)	(0.222)	(0.154)
$GDPPC_{jt-1}$	-0.082	-0.166***	-0.525***	0.834***	-0.085*	-0.120	-0.719**	3.084***	0.655***
	(0.136)	(0.044)	(0.044)	(0.062)	(0.048)	(0.210)	(0.293)	(0.443)	(0.168)
GDP_growth_{it-1}	-0.015***	-0.007	0.034**	-0.023***	0.001	-0.007	0.028**	-0.023***	0.0003
	(0.003)	(0.005)	(0.013)	(0.004)	(0.005)	(0.005)	(0.012)	(0.004)	(0.005)
GDP_growth_{jt-1}	-0.009*	-0.012*	-0.049***	0.023**	0.009	-0.014**	-0.019***	0.022**	0.004
	(0.005)	(0.007)	(0.007)	(0.009)	(0.006)	(0.007)	(0.006)	(0.009)	(0.005)
$lnPopulation_{it}$	-1.242***	-0.230	-1.548	-2.252***	-0.566	-0.214	-1.055	-2.201***	-0.697*
	(0.303)	(0.698)	(0.956)	(0.425)	(0.369)	(0.692)	(0.922)	(0.424)	(0.360)
$lnPopulation_{jt}$	-1.395***	-0.029	-0.029	-0.216***	-0.001	-0.448	-2.341***	-1.451**	-1.425***
	(0.347)	(0.022)	(0.025)	(0.013)	(0.009)	(0.801)	(0.502)	(0.724)	(0.349)
$Land\ locked_{ij}$	5.350***	-0.037	-0.121	-0.433***	0.088**	-0.371	8.788***	-3.404	-9.020***
	(1.646)	(0.061)	(0.117)	(0.069)	(0.035)	(2.132)	(2.746)	(2.564)	(2.242)
$lnDistance_{ij}$	0.278***	0.181***	0.429***	-0.005	0.033**	0.131***	0.042	0.031	0.061***
	(0.025)	(0.034)	(0.042)	(0.035)	(0.015)	(0.028)	(0.031)	(0.020)	(0.019)
$Comlang_{ij}$	-0.366***	0.031	-0.115	-0.270***	-0.019	-0.218*	-0.187**	-0.140**	0.076**
	(0.0606)	(0.102)	(0.153)	(0.072)	(0.03)	(0.130)	(0.079)	(0.056)	(0.034)
ADJ_{ij}	-0.164**	-0.019	0.449**	-0.096	-0.040	-0.096	0.057	0.018	-0.036
	(0.083)	(0.074)	(0.217)	(0.223)	(0.053)	(0.068)	(0.111)	(0.095)	(0.046)
$Colony_{ij}$	0.211***	0.120	0.183	0.121	-0.135***	0.103	0.112	0.069	-0.124***
	(0.068)	(0.113)	(0.165)	(0.074)	(0.035)	(0.113)	(0.074)	(0.051)	(0.038)
$Comcol_{ij}$	-0.275**	0.016		-2.170***		0.094		-0.851	
	(0.125)	(0.101)		(0.646)		(0.093)		(0.698)	
$Curcol_{ijt}$	1.062***				0.026				-0.227*
	(0.166)				(0.318)				(0.129)
$Smctry_{ij}$	-0.308*	-0.169**	-0.312	0.179	0.153**	-0.104	-0.467***	-0.274**	0.119
	(0.158)	(0.085)	(0.355)	(0.254)	(0.077)	(0.089)	(0.170)	(0.122)	(0.081)
Constant	43.05***	9.042	6.767	40.30***	9.702*	16.05	38.72**	40.12**	31.91***
	(7.555)	(13.42)	(15.88)	(8.029)	(5.819)	(17.80)	(17.85)	(17.12)	(8.873)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Observations	36,081	6,738	8,274	13,132	7,937	6,738	8,274	13,132	7,937
R-squared	0.528	0.203	0.433	0.595	0.200	0.373	0.678	0.673	0.304
rmse	0.985	0.790	1.175	0.977	0.493	0.705	0.891	0.879	0.461

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

Table 10: Cross section analysis: Corruption

	(1)	(2)	(3)	(4)	(5)
			World-South	World-North	
FDI_{ijt-1}	1.78e-07				
	(1.17e-06)				
FDI_South_{ijt-1}		-1.49e-06	-3.75e-05*	1.78e-06	4.83e-06
		(4.53e-06)	(2.21e-05)	(2.69e-06)	(3.86e-06)
FDI_North_{ijt-1}		2.83e-07	6.90e-06	-4.89e-07	4.34e-06
		(1.30e-06)	(9.74e-06)	(1.08e-06)	(9.44e-06)
$FDI\_South_{ijt-1}*South_i$					-4.07e-05*
					(2.15e-05)
$FDI\_North_{ijt-1}*North_j$					-4.22e-06
					(9.45e-06)
$GDPPC_{it-1}$	-0.095	-0.094	0.003	-0.906	-0.059
	(0.304)	(0.305)	(0.325)	(1.214)	(0.311)
GDP_growth_{it-1}	0.003	0.003	0.003	0.034	0.003
	(0.004)	(0.004)	(0.004)	(0.023)	(0.004)
$ln\ Population_{it}$	1.336**	1.336**	1.548**	2.191	1.329**
	(0.568)	(0.568)	(0.638)	(2.362)	(0.568)
$Host\ country\ FE$	Yes	Yes	Yes	Yes	Yes
$Year\ FE$	Yes	Yes	Yes	Yes	Yes
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
r2_o	0.009	0.008	0.002	0.078	0.006
r2_w	0.339	0.339	0.336	0.439	0.340

Notes: The dependent variable is the level of corruption in host country *i*. *World - South* and *World - North* refer to FDI flows from North and Southern countries to Southern and Northern county *i*, respectively.

Table 11: Trade flows as a factor for institutional change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Home country FE				Home and Host country FE		
	Full Sample	SS	SN	NS	NN	SS	SN	NS	NN
$Trade_{ijt-1}$	-0.051***	-0.058	-0.007	0.021	-0.055	-0.07***	-0.032	-0.035**	-0.049**
	(0.015)	(0.044)	(0.049)	(0.018)	(0.044)	(0.023)	(0.022)	(0.016)	(0.020)
$GDPPC_{it-1}$	-0.536***	-0.144	2.544***	-1.312***	0.140	-0.131	2.407***	-1.258***	0.154
	(0.134)	(0.218)	(0.436)	(0.210)	(0.178)	(0.208)	(0.436)	(0.207)	(0.169)
$GDPPC_{jt-1}$	0.011	-0.313***	-0.823***	0.753***	-0.184***	0.249	-1.020***	2.591***	0.348**
	(0.128)	(0.084)	(0.077)	(0.050)	(0.052)	(0.200)	(0.234)	(0.398)	(0.159)
GDP_growth_{it-1}	-1.874***	0.107	-0.820	-2.870***	-1.726***	-0.038	-1.005	-2.812***	-1.907***
	(0.290)	(0.729)	(0.872)	(0.359)	(0.387)	(0.709)	(0.811)	(0.366)	(0.364)
GDP_growth_{jt-1}	-1.540***	0.037	-0.022	-0.182***	0.016	-1.152**	-2.698***	-0.695	-1.771***
	(0.350)	(0.055)	(0.057)	(0.019)	(0.036)	(0.572)	(0.475)	(0.772)	(0.324)
$lnPopulation_{it}$	-0.023***	-0.008	0.014	-0.028***	-0.001	-0.009	0.014	-0.028***	-0.003
	(0.004)	(0.009)	(0.012)	(0.004)	(0.004)	(0.009)	(0.012)	(0.005)	(0.003)
$lnPopulation_{jt}$	-0.017***	-0.013	-0.024***	0.031***	0.043***	-0.018**	-0.023***	0.024**	-0.014***
	(0.005)	(0.008)	(0.007)	(0.009)	(0.007)	(0.007)	(0.006)	(0.009)	(0.004)
$Land\ locked_{ij}$	-2.400***	-0.265***	-0.716***	-0.263***	-0.172***	3.048	9.717***	-4.776	-6.501***
	(0.330)	(0.068)	(0.095)	(0.050)	(0.046)	(2.210)	(3.281)	(5.028)	(1.144)
$lnDistance_{ij}$	0.218***	0.121*	0.254***	0.064**	0.022	0.056	0.019	0.004	-0.009
	(0.028)	(0.072)	(0.066)	(0.032)	(0.047)	(0.044)	(0.037)	(0.029)	(0.024)
$Language_{ij}$	-0.283***	-0.101	0.244	-0.122**	0.089	-0.116	0.047	-0.009	-0.015
	(0.053)	(0.113)	(0.203)	(0.060)	(0.085)	(0.122)	(0.068)	(0.05)	(0.035)
$Contig_{ij}$	-0.179**	-0.169*	-0.012	-0.079	-0.103*	-0.129	0.104	0.152	0.017
	(0.083)	(0.100)	(0.326)	(0.162)	(0.062)	(0.083)	(0.113)	(0.109)	(0.038)
$Colony_{ij}$	0.0830	-0.032	-0.063	-0.052	-0.096	0.053	-0.105	-0.082*	-0.137***
	(0.063)	(0.162)	(0.213)	(0.071)	(0.083)	(0.186)	(0.064)	(0.047)	(0.039)
$Comcol_{ij}$	-0.696***	-0.064		-2.574***		0.167		-2.080**	
	(0.151)	(0.178)		(0.827)		(0.113)		(0.810)	
$Curcol_{ijt}$	0.956***		4.324***		0.067				-0.003
	(0.138)		(0.243)		(0.140)				(0.092)
$Smctry_{ij}$	-0.201	-0.022	0.252	-0.109	0.121	-0.068	-0.171	-0.517**	0.139**
	(0.137)	(0.104)	(0.353)	(0.310)	(0.098)	(0.092)	(0.124)	(0.210)	(0.058)
Constant	70.66***	2.634	-4.625	55.71***	29.68***	17.62	40.86***	46.55***	62.79***
	(7.438)	(12.73)	(13.62)	(5.848)	(6.405)	(15.55)	(14.08)	(16.18)	(8.381)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Host FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home FE	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Observations	51,237	9,272	12,415	19,758	9,792	9,272	12,415	19,758	9,792
R-squared	0.667	0.367	0.441	0.718	0.231	0.600	0.726	0.746	0.628
rmse	1.067	1.025	1.371	1.097	0.624	0.819	0.963	1.043	0.435

Notes: Trade refers to the (log) gross real trade flows between country *i and j*.

APPENDIX

Table 1: 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 SAR, China	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

Appendix Table 2: Number of observations per home country

Country	N	Country	N	Country	N	Country	N
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 SAR, China	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