

# The Impact of Migration on Foreign Direct Investments

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September 7, 2016

*Preliminary Version*<sup>‡</sup>

## Abstract

In this paper, I investigate whether the presence of migrants has an impact on foreign direct investment decisions. Using a novel data set on bilateral FDI stocks, I show that migration is a key factor in determining bilateral investment allocation. I also identify other important drivers mostly overlooked in the literature, namely bilateral linguistic, genetic and religious distance. Finally and contrarily to initial expectations, the effect of migrants does not seem to be stronger for more distant countries.

*JEL Classification: F21, F22*

*Keywords: Migration, FDI*

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# 1 Introduction

*“The world is not borderless, flat, small or even shrinking”*

Head & Mayer, Canadian Journal of Economics, 2013

For at least one hundred years, individuals have been having the perception that frontiers are gradually disappearing and that geographic distance would matter less and less (Orwell 1944). However, even after reductions in transportation costs and the abolition of many formal trade barriers, borders and distance still impede economic exchanges (Head & Mayer 2013). Anderson & van Wincoop (2004) find a 170% total barrier to trade as an ad-valorem tax equivalent for a rich country. In their calculation they include aspects like information costs, contract enforcement costs, costs associated with the usage of different currencies and languages, legal and regulatory costs. These variables affect international frictions and have been shown to affect bilateral economic exchanges (Coeurdacier & Rey 2012, Head & Mayer 2013). In light of these findings, economist should focus on the role migrants might play in alleviating the informal trade barriers between countries, rather than considering migration as a simple cross-border movement of the labour force. Indeed migrants carry with them knowledge and skills acquired in the home country, where often a different language and different cultural and social norms prevail. The social and human capital acquired before migrating and the degree of familiarity with the home country are likely to affect the host country as well as the bilateral relationships between the two. The presence of migrants could for instance promote trade because they derive higher utility for goods produced in their home country, or foster the economic interactions by helping to reduce informal barriers to trade (language, culture, institutions) or creating business relationships (Felbermayr & Toubal 2012). The international economics literature has extensively investigated the link between trade and migration, unfolding a

positive relationship between the two.

However, the literature concerning the relationship between migration and FDI flows is at a very early stage and consists of a handful of studies about a limited number of countries. This paper is complementary to the existing literature, but it innovates in a number of ways. First, using a novel dataset on bilateral FDI, this seems to be the first attempt at exploiting the bilateral dimension of the problem instead of focusing on a single anchor country. Second, the empirical analysis focuses on the possible heterogeneity of the link between FDI and immigration. If migrants do indeed help to reduce informational barriers between countries, we should see that the impact that they have on migration flows is stronger for those situations in which informational asymmetries are more pronounced. Third, the empirical methodology explicitly addresses the bias arising from the presence of zeros in bilateral matrices and possible endogeneity issues.

The rest of the paper is organized as follows: Section 2 presents a brief review of the literature; sections 3 and 4 illustrate the data and strategy, respectively; section 5 illustrates the main findings and section 6 concludes.

## **2 Related Literature**

The bulk of the literature on migration and economic exchanges focuses on international trade and finds that migrants do help fostering relations between host and origin country. Bastos & Silva (2012) match historically-determined emigration stocks with detailed firm-level data from Portugal to investigate the impact of emigrants on exports at the intensive and extensive margin. They estimate a gravity and a Probit model and find that larger stocks of emigrants in a given destination increase both export participation and intensity. Felbermayr & Jung

(2009) investigate North-South trade and find that southern countries export more to northern countries, the higher the stock of southern migrants in the northern country. This pro-trade effect is heterogeneous across migrants' skill-groups and heavily influenced by measures of cultural proximity, thus suggesting that migrants help in reducing informational asymmetries between countries. Approaching the issue from a different perspective, Rauch & Trindade (2002) analyse the role of ethnic Chinese networks in influencing patterns of trade. Their empirical analysis suggests that Chinese networks do play an important role by providing an implicit contract guarantee and deterring opportunistic behaviour.<sup>1</sup>

Kugler et al. (2013) were the first to investigate the role of migration in alleviating informational problems connected to financial investments and hence international financial flows. In a gravity model setting, they find that migration has a positive impact on international bank lending and trade-able securities, with the effect being more pronounced in case of skilled migrants.

Although the effect of migration on international trade and international portfolio investments is well documented (Kugler et al. 2013), the possible link with foreign direct investments (FDIs) has received relatively little attention. This is surprising given that FDIs have a long-term focus and require interactions with a larger group of economic agents than trade relations (Javorcik et al. 2011), thus they are likely to suffer more severely from information asymmetries than trade. Moreover, FDIs are also substantially more sensitive to informational frictions than other types of investments (Daude & Fratzscher 2008): Due to high sunk cost, FDIs are especially vulnerable to any form of uncertainty, whether stemming from poor government efficiency, rights protection or the legal system (Bénassy-Quéré et al. 2007). Moreover, immigrants could also affect the perceived degree of familiarity of different investment opportunities.

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<sup>1</sup>See also Gould (1994), Rauch & Casella (2003) and Felbermayr & Toubal (2010). Rauch (2001) provides an extensive literature review.

A handful of studies confirm the existence of a link between migration and FDIs, though it is unclear what the direction of the effect should be. Bhattacharya & Groznik (2008) investigate the relevance of familiarity measures for the determination of FDI investments and find that the country of origin is crucial for the choice between different FDI. The authors show that *ceteris paribus*, the higher the number of immigrants from a particular country in the US, the higher the level of FDI from the US to that country. These considerations make it noteworthy to investigate the relationship between foreign migrants and FDI. Buch et al. (2006) use German state-level data to analyze empirically the agglomeration between capital and labor. They focus on the inward flow of both factors of production to Germany and observe that the flow of immigrants and inward FDI in Germany feature complementarities. Javorcik et al. (2011) use an instrumental variable (IV) approach to identify the effect of immigrants in the US on outward FDI. They confirm a positive effect, which gets stronger for migrants with tertiary education. Kugler & Rapoport (2007) take US data to investigate the nature of the relationship between migration and FDI. In line with the aforementioned literature, they find that the two substitute each other from a static standpoint but complement each other instead from a dynamic perspective.

Though the findings on the topic are quite unanimous, it is not yet clear in which direction the effect should go. It is true that immigrants foster an increase in outward FDI but it is also true that they bring about an increase in inward FDI (Buch et al. 2006). A first scope of this paper is to disentangle whether both effects exist and which one of the two seems to prevail. Outward FDIs do indeed correlate with inward FDIs and immigrants could affect either of the two indirectly via the effect they have on the other one. My results suggest that although an effect exists in both directions, it persists when looking at net outward FDIs, suggesting that the presence of immigrants leads to higher net investments in their country of origin.

Whereas the international economics literature shares the understanding that the effect of immigration on investments might be due to a reduction in informational barriers, none of the studies directly addresses this issue by looking at whether the effect of migration is indeed stronger for cases in which the informational asymmetries are more pronounced. In this paper, I aim at closing this gap in the literature and exploring through which channels migrants might foster bilateral FDIs.

There are at least three main situations in which the presence of migrants might be of particular relevance for the flow of FDI:

1. Individuals tend to trust more partners with a common heritage and tend to have more economic interactions with partners whom they trust (Zingales et al. 2009). This means that for country pairs that differ greatly in terms of cultural proximity, the presence of an integrated migrants group might alleviate the feeling of distrust. I henceforth expect the effect of migration on FDI flows to be larger when country pairs are very different in terms of cultural proximity.<sup>2</sup>
2. North (1994) defines institutions as the “humanly devised constraints that structure human interactions.” Such constraints can be informal (norms of behaviour, conventions) like the ones described above, but constraints can also be formal. In this case they take the form of rules, laws, constitutions and their enforcement characteristics. I shall refer to this latter type of constraints as institutions and consider that institutional distance, similarly to cultural distance, can increase the scope for the effect of migrants on investment flows. Bénassy-Quéré et al. (2007) show that institutional distance has a negative impact on FDI flows and that the impact is stronger than the

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<sup>2</sup>Kugler et al. (2013) also consider cultural proximity as a source of heterogeneity in their analysis.

one of institutional quality. Given this background, the effect of migration should be higher in situations in which the institutional distance is greater.

3. Countries in the “South” of the world share some common institutional features that make it less attractive for foreigners to invest. One example thereof is the high level of corruption or the low ability to enforce the rule of law. (Javorcik & Wei 2009) show that corruption increases the value of using a local partner to “cut through the bureaucratic maze”. Migrants could foster North-South investment by reducing the uncertainty arising when investing in a country with lower institutional quality (Shell & Zheng 2015).

## 3 Data

Before proceeding to the empirical specification and analysis, I will briefly describe the main characteristics of the data.

### 3.1 Data Sources

I will explore the heterogeneity of the effect of migration on FDI by means of an empirical investigation. I will use Docquier et al. (2012)’s data on migration, which include migration by country of birth, skill category and gender for 195 countries in 1990 and 2000. This is the first dataset offering a broad range of bilateral data on migration on countries other than OECD. This aspect is relevant because *i)* it allows me to analyse the impact of migratory flows on FDI for a greater number of countries; and *ii)* although migration to non-OECD countries increased at a lower pace than migration to OECD countries in the last 20 years, immigrants in

non-OECD countries constitute some 40% of the world adult migration stock.

For what concerns FDIs, I will use a newly available dataset published by UNCTAD in April 2014. The dataset provides bilateral data on inflow, outflow, in-stock and out-stock of FDI for 206 countries for the period 2001-2012. For the purpose of my analysis, I will concentrate on FDI stocks rather than flows. There are three main reasons why I choose this approach. First, stocks are much less volatile than flows. In small countries, even takeovers can have a major influence on the FDI flows. Second, the decision of international investors is about which funds to allocate and where, hence it is a stock decision, not one of flow. Third, Bénassy-Quéré et al. (2007) suggest that stocks are a better measure of capital ownership because they account for FDI being financed through local capital markets.<sup>3</sup> I will take country-specific and bilateral gravity variables from the CHELEM, Gravity, Language and GeoDist datasets of CEPII, Paris. Additionally, I will consider bilateral genetic distance as measured by Spolaore & Wacziarg (2009) and indicators on governance and institutional quality taken from the World Bank (Kaufmann et al. 2010).

## 3.2 Descriptive Statistics

I show the descriptive statistics for the variables in my dataset in table 1. Overall, I have FDI information for 182 countries and migration information for 183.

GDP per capita ranges from 91.81 to 45'958.88 US dollars, with an average of 6'078.88. As the table shows, in most cases I have information at both the country- and the bilateral level<sup>4</sup>.

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<sup>3</sup>See also Devereux & Griffith (2002).

<sup>4</sup>I have listed the few exceptions in the appendix of the paper



## 4 The Empirics of Migration and Investment

In this section I illustrate the empirical strategy and the specification of the model implemented in section 5.

### 4.1 Empirical Specification

For the empirical estimation I will implement a gravity model. The use of gravity equations to study FDI is well-established in the international economics literature. Researchers have relied on this kind of models to investigate the determinants of FDI with bilateral country-level data, taking market size and geographical distance as explanatory variables. One possible weakness of gravity models is that they rely on a bilateral framework and do not allow to take into consideration drivers of FDI that relate to third countries. This aspect renders gravity models inadequate to investigate models of export-platforms FDI<sup>5</sup> or models of complex vertical FDI chains.<sup>6</sup> For these reasons, different authors have recently applied spatial-econometrics models to investigate determinants of FDI. Most of the studies indeed find that spatial interdependence is relevant for FDI decisions. Blonigen et al. (2007) present a concise summary of the literature and specifically address the issue of estimation bias due to the omission of spatial interactions in FDI regressions. They modify the standard gravity model by adding a dependent variable summarising the GDP of other countries (weighted by their distance to the host country) and a spatially lagged dependent variable:  $W \cdot FDI$ .  $W$  is the spatial lag weighting matrix in which every term describes the weights based on the distance between any two host countries,  $FDI$  is the stock of FDI from

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<sup>5</sup>Export-platform FDI occur when the parent country invests in a host country in order to serve third markets with exports of final goods produced in the host country. See Yeaple (2003), Ekholm et al. (2007) and Bergstrand & Egger (2007) for examples of such models.

<sup>6</sup>See Baltagi et al. (2007) for a definition.

the parent to the host country. This spatial interdependence term captures the proximity of the observed host to other hosts. In line with most recent findings, Blonigen et al. (2007) suggest that spatial interdependence is significant. However estimated relationships of traditional determinants of FDI are robust to the inclusion of spatial interdependence terms. For this reason, I proceed to the main estimation with a standard gravity approach.

The standard empirical specification of the gravity model (see Anderson & van Wincoop (2004)) takes the following form:

$$FDI_{ji} = \alpha_0 Migration_{ij}^{\alpha_1} e^{\alpha_2 X_{ij}} e^{c_i + c_j} \quad (1)$$

$FDI_{ij}$  denotes the stock of international FDI from country  $i$  to country  $j$ ,  $Migration_{ij}$  is the stock of individuals from country  $j$  living in country  $i$ ,<sup>7</sup>  $X_{ij}$  includes bilateral terms, which include measures of cultural and institutional distance as well as other bilateral control variables (like geographical distance and corruption differential),  $c_i$  and  $c_j$  are host and home country fixed effects, respectively.

## 4.2 Estimation method

In the international economic literature, the log-normal specification of gravity models is well established for the analysis of trade, investment and migration. However, this specification entails some methodological issues that have raised some concerns and received new attention in the past few years.

The perhaps most pressing problem of a log-normal gravity model is the presence of a large number of zeros in the bilateral matrices, since the logarithm of

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<sup>7</sup>Though this specification implies a focus on outward FDI and inward migration, I will discuss in the next section which type of FDI I will use in the main analysis.

zero is undefined. Economists have usually employed two main strategies to deal with zeros. The most common way of “circumventing” the issue has been to omit zero values all together. This greatly simplified the empirical estimation, but had the obvious major drawback of producing biased estimates. Moreover, this strategy would not be a viable one when dealing with FDI because of the high incidence of zeros in country-pairs. A second approach, which is still used today, is the addition of a positive constant inside the logarithm on the l.h.s. in order to make sure that the logarithm is well defined. The drawback of this approach is that by inserting an ad-hoc variable we cannot be sure of the consistency of the estimate (Linders & De Groot 2006). A third approach that has recently received particular attention is the implementation of Poisson estimators. Santos Silva & Tenreyro (2006) proposed a Poisson pseudo-maximum-likelihood (PPML) estimator in the context of gravity models of trade and Head & Ries (2008) implemented their framework in the context of FDI. They find that a Poisson estimator yields smaller estimates due to the consideration of zeros, in lines with previous findings in the trade literature. Furthermore, the PPML estimator is robust to different patterns of heteroskedasticity, which is both quantitatively and qualitatively important in the log-linear specification, even when controlling for fixed effects (Santos Silva & Tenreyro 2006).

For these reasons, I will estimate the gravity equation by means of PPML estimator, with the main equation taking the following form:

$$FDI_{ji} = exp\{\alpha_0 + \alpha_1 \ln(1 + Migration_{ij}) + \alpha_2 X_{ij} + c_i + c_j\} \quad (2)$$

### 4.3 Endogeneity issues

A major concern when investigating the relationship among macroeconomic variables like migration and FDI is endogeneity. Indeed, causality could go either way and the two variables are likely to have some common determinants. In order to address such issues, I will adopt an estimation strategy that takes endogeneity into account. First, I will always take a lag between the migration data and the FDI data. This way I can reduce short-term endogeneity. Second, I will take migration data for 1990 and FDI data for 2001 as benchmark. During the 1880s many country pairs had no financial connections, which began during the 1990s after a wave of liberalization. As a result, 2001 data are less influenced by the political process.<sup>8</sup> Still, it is possible that the factor that brought migrants to a specific country is the same one driving the flow of FDI some years in the future. For this reason I propose a third option: I will implement an instrumental variable (IV) approach to control for the endogeneity of the stock of immigrants. More specifically, I will use the immigrants stock from 1960 as an instrument for the immigrant stock in 1990 (as proposed by Javorcik et al. (2011)) and use the methodology proposed in Carrère (2006). Note that given the difficult implementation of IVs with PPML estimators, I will use a log-linearised form of the gravity equation when implementing this strategy.

## 5 Findings

In this section I empirically investigate the effect of immigration on FDIs. I first present some descriptive evidence about the main relationships among variables. Once the basis is laid out, I illustrate the main results.

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<sup>8</sup>As a robustness check, I will look at later years as well.

## 5.1 Descriptive Evidence

Before turning to econometric estimates, I briefly discuss the relationship between FDI and migration at the descriptive level. In Figure 1, I show the simple correlation between the out-stock of FDI and the in-stock of Migrants. I find a significant positive relationship. This suggests that countries tend to invest more in partners from which they have a high number of immigrants. However there exists a positive correlation between out-stock FDI and in-stock migrants as well (figure 3).

Additionally, 3 shows a positive correlation between FDI out- and in-stock, suggesting that estimating the impact of immigrants on outward (inward) FDI might suffer from omitted variable bias if inward (outward) investments are not controlled for. When considering net investments in the origin country of migrants, the relationship still persists (figure 4).

Another interesting question about the relationship between migration and FDI is then whether countries who have a higher number of emigrants also attract more direct investments. I explore this case in figure 5. Panel (a) shows that countries with a higher average number of emigrants stock also have higher net FDI in-stock. Panel (b) depicts the same relation using total stocks instead of averages.

These preliminary results point to the existence of a link between FDI and migration, which I explore in the following sections.

## 5.2 Migration and FDI

In this section I present the main results of the analysis: I investigate whether the presence of immigrants is relevant for FDI decisions and in what way exactly. In order to be consistent with past literature (i.e. having approximately a time-span of 10 years between the data on immigration and FDI stock) and to avoid short-term endogeneity, I use 2001 data for FDI stocks and 1990 data for migration stocks as reference years<sup>9</sup>.

I estimate equation 2 and present the results in table 2. Panel A shows the results for outward and inward FDI stocks in the first two and last two columns, respectively. Standard theory on gravity equation tells us that the estimates are biased whenever FE are excluded from the regression. This is confirmed in the table by a drop in the coefficients in columns (2) and (4) once both origin and destination FE are included. The effect of immigrants on FDI is positive and significant in all specifications. This confirms that estimating the impact of immigration on only either one of the definitions of FDI is likely to lead to omitted variable bias.<sup>10</sup>

To take care of this issue, I use net FDI stocks as dependent variable and show the results in columns (5) and (6) of Panel B. Though results are similar and point to a positive effect of immigrants on (net) outward FDI, I will use the net FDI outstock as preferred dependent variable for the analysis.

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<sup>9</sup>Results do not change qualitatively nor much quantitatively if I take some later measures of FDI.

<sup>10</sup>Given the very high correlation between inward and outward FDI stock at the country-pair level, it is likely that omitting one of the two could bias the results, with immigration becoming significant due to its relation to both.

### 5.3 Effect Heterogeneity

In the previous section I have shown that immigrants have a positive effect on net outward FDI. In this section, I explore whether the impact differs according to the degree of cultural, institutional and legal similarity between countries.

Kugler et al. (2013) point out that if investments decisions are indeed information-sensitive, migrants can only foster investments insofar as they *i*) have deep knowledge about the home country and can constantly improve it, *ii*) have high enough communication skills to exchange the crucial information with the relevant partners. This means that the effect of immigrants on FDI decisions should be stronger, the higher the number of highly-educated immigrants. As a first step, I investigate the aforementioned hypothesis by repeating the analysis considering only immigrants with at least 12 years of education. I present the results in columns (7) and (8) of table 2. Both with and without fixed effects, the impact of highly-educated immigrants is larger than the one for all immigrants (column (6)). This confirms that informational asymmetries are indeed relevant for FDI and that immigrants can (and do) help alleviating them.

In order to understand what types of asymmetries matter, I report an extended version of my workhorse model in the first column of table 3. Geographical and genetic distance have a negative impact on FDI whereas linguistic proximity does not have a significant impact. The legal environment seems to be less relevant for the investment decision: only common legal origin affects FDIs, whereas commonality of legal systems and similarity in corruption control do not play a role.

I then add an interaction term in each of the other columns in order to explore a possible heterogeneity of the migration effect. This means that I am estimating

the following equation:

$$FDI_{ji} = \exp\{\alpha_0 + \alpha_1 \ln Mig_{ij} + \alpha_2 X_{ij} + \alpha_k (Mig_{ij} - \mu_{mig})(X_k - \mu_X) + c_i + c_j\} \quad (3)$$

Where  $X_k$  is one of the  $k$  bilateral variables for which I generate the interaction. Note that I demean each variable before generating the interaction. This allows me to keep a similar interpretation of the coefficients of the main terms, with respect to the ones in column (1) of the table.

With the exception of genetic distance in column (3), all interaction terms are insignificant. Though puzzling, this result is still in line with the most recent literature on the role of ancestral distance in economics. Spolaore & Wacziarg (2016) investigate the role of ancestral distance, measured in terms of genetic distance, on economic outcomes. After controlling for geographic factors and gravity variables related to culture and institutions, the authors find a statistically and economically significant effect of ancestral distance from the technological frontier on income per capita. Fensore et al. (2016) also look at ancestral distance and show that it has a positive and significant impact on bilateral trade, even after controlling for linguistic, religious, institutional and geographical distance between countries.

My analysis also shows that countries invest less in partners with higher ancestral distance and that immigrants help reducing this gap: they play a larger role the higher the genetic distance between host and origin country. It appears that ancestral relatedness constitutes a form of barrier to the flow of information (Spolaore & Wacziarg (2016)), goods (Fensore et al. 2016) and investments. Such barrier seems to be of a different nature than the other cultural and institutional measures can capture.



## 5.4 Robustness

In this section I conduct some further empirical investigations in order to assess the robustness of the findings.

**Different estimation method** I have derived the results above by mean of PPML estimation. Notwithstanding the inclusion of fixed effects, the results could be biased due to the possible simultaneity of the investment and migration decision. For this reason, I carry out an instrumental variable(IV) estimation using the migrant stock of 1960 as an instrument for the migrant stock in 1990. Given that Poisson method does not lend itself easily to instrumental variable estimation (Bénassy-Quéré et al. 2007), I will carry the IV estimation using the log-linearised version of the gravity equation from the main analysis. The first two columns of table 4 show the results. Immigrants, geographic distance and linguistic proximity remain significant even after properly accounting for fixed effects (column (2)). On the institutional side, common legal origins positively affect FDIs whereas a higher differential in the implementation of the rule of law hinders them.

**FDI flows** I the main analysis I have used data on netto FDI outstocks for reasons described above. Nevertheless, stock data naturally include investments that were done in the distant past. If countries have invested a lot in the origin countries of migrants at the moment in which migration occurred, it could be true that both the investment and the migration decision were driven by a third factor which we do not necessarily observe. In order to control for this aspect, I use netto FDI outflows instead of outstocks. Specifically, in table 4 I show the results of regressing the average netto FDI outflow of years 2001/2012 on the stock of immigrants in 1990 and the control variables used in the main analysis. Columns (3) and (4) confirm the findings of the main analysis, with genetic distance playing

a larger role than estimated above whereas linguistic proximity and commonality of legal origins do not play any significant role.

## 6 Conclusion

The effect of migratory flows on other macroeconomic variables has recently raised the interest of international economists. Whereas the relation between migration and trade and trade and investment has been thoroughly explored, very little has been done to understand how migratory flows and investments are related.

This paper explores the relation between immigration and foreign direct investment patterns. Specifically, I investigate whether migration contributes to the reduction in informational asymmetries between countries, thus increasing the scope for FDI.

By means of a PPML estimation method I show that immigration positively affects outgoing FDI stocks, with host countries investing more in the origin countries of their immigrants. The results also hold when using FDI flows instead of stocks and when using an instrument to control for possible endogeneity with respect to the migration and investment decisions.

Furthermore, I provide evidence that immigrants do indeed foster investments by reducing informational asymmetries. I show that the effect on investments is larger for highly-educated immigrants and for country pairs who have a larger ancestral distance.

## 7 Bibliography

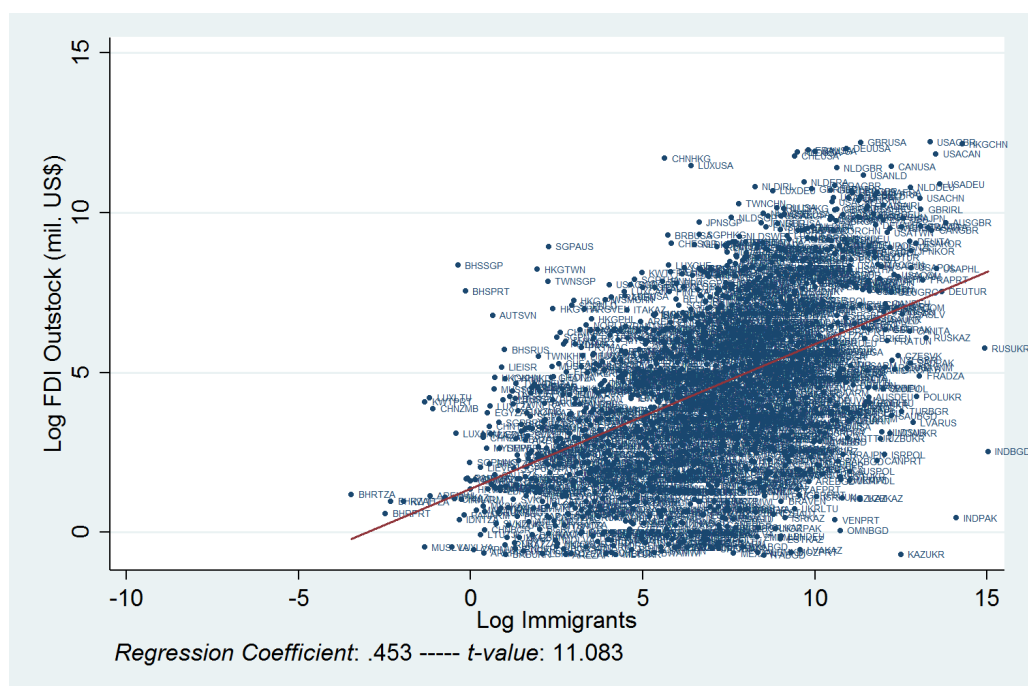
- Anderson, J. E. & van Wincoop, E. (2004), ‘Trade Costs’, *Journal of Economic Literature* **42**(3), 691–751.
- Baltagi, B. H., Egger, P. & Pfaffermayr, M. (2007), ‘Estimating models of complex FDI: Are there third-country effects?’, *Journal of Econometrics* **140**(1), 260–281.
- Bastos, P. & Silva, J. (2012), ‘Networks, firms, and trade’, *Journal of International Economics* **87**(2), 352–364.
- Bénassy-Quéré, A., Coupet, M. & Mayer, T. (2007), ‘Institutional Determinants of Foreign Direct Investment’, *The World Economy* **30**(5), 764–782.
- Bergstrand, J. H. & Egger, P. (2007), ‘A knowledge-and-physical-capital model of international trade flows, foreign direct investment, and multinational enterprises’, *Journal of International Economics* **73**, 278–308.
- Bhattacharya, U. & Groznik, P. (2008), ‘Melting pot or salad bowl: Some evidence from U.S. investments abroad’, *Journal of Financial Markets* **11**(3), 228–258.
- Blonigen, B. a., Davies, R. B., Waddell, G. R. & Naughton, H. T. (2007), ‘FDI in space: Spatial autoregressive relationships in foreign direct investment’, *European Economic Review* **51**(5), 1303–1325.
- Buch, C. M., Kleinert, J. & Toubal, F. (2006), ‘Where enterprises lead, people follow? Links between migration and FDI in Germany’, *European Economic Review* **50**(8), 2017–2036.
- Carrère, C. (2006), ‘Revisiting the effects of regional trade agreements on trade flows with proper specification of the gravity model’, *European Economic Review* **50**, 223–247.
- Coeurdacier, N. & Rey, H. (2012), ‘Home Bias in Open Economy Financial Macroeconomics’, *Journal of Economic Literature* **51**(210584), 63–115.
- Daude, C. & Fratzscher, M. (2008), ‘The pecking order of cross-border investment’, *Journal of International Economics* **74**(1), 94–119.
- Devereux, M. P. & Griffith, R. (2002), ‘The impact of corporate taxation on the location of capital: A review’, *Swedish Economic Policy Review* **9**, 79–102.
- Docquier, F., Özden, C., Parsons, C. & Artuc, E. (2012), ‘A Global Assessment of Human Capital Mobility : the Role of non-OECD Destinations’, *IRES Discussion Paper 2012-22* .
- Ekholm, K., Forslid, R. & Markusen, J. R. (2007), ‘Export-platform foreign direct investment’, *Journal of the European ...* **5**(June), 776–795.
- Felbermayr, G. J. & Jung, B. (2009), ‘The pro-trade effect of the brain drain: Sorting out confounding factors’, *Economics Letters* **104**(2), 72–75.
- Felbermayr, G. J. & Toubal, F. (2010), ‘Cultural proximity and trade’, *European Economic Review* **54**(2), 279–293.
- Felbermayr, G. J. & Toubal, F. (2012), ‘Revisiting the trade-migration nexus: Evidence from new OECD data’, *World Development* **40**(5), 928–937.

- Fensore, I., Legge, S. & Schmid, L. (2016), ‘Ancestral Distance as a barrier to International Trade’, *mimeo* .
- Gould, D. M. (1994), ‘Immigrant links to the home country: Empirical implications for U.S. bilateral trade flows’, *The Review of Economics and Statistics* **76**(2), 302–316.
- Head, K. & Mayer, T. (2013), ‘What separates us? Sources of resistance to globalization’, *Canadian Journal of Economics* **46**(4), 1196–1231.
- Head, K. & Ries, J. (2008), ‘FDI as an outcome of the market for corporate control: Theory and evidence’, *Journal of International Economics* **74**, 2–20.
- Javorcik, B. S., Özden, Ç., Spatareanu, M. & Neagu, C. (2011), ‘Migrant networks and foreign direct investment’, *Journal of Development Economics* **94**(2), 231–241.
- Javorcik, B. S. & Wei, S. J. (2009), ‘Corruption and cross-border investment in emerging markets: Firm-level evidence’, *Journal of International Money and Finance* **28**(4), 605–624.
- Kaufmann, D., Kraay, A. & Mastruzzi, M. (2010), ‘The Worldwide Governance Indicators : A Summary of Methodology, Data and Analytical Issues’, *World Bank Policy Research Working Paper No. 5430* .
- Kugler, M., Levintal, O. & Rapoport, H. (2013), ‘Migration and cross-border financial flows’, *IZA Discussion Paper No. 7548* .
- Kugler, M. & Rapoport, H. (2007), ‘International labor and capital flows: Complements or substitutes?’, *Economics Letters* **94**(2), 155–162.
- Linders, G.-J. M. & De Groot, H. L. (2006), ‘Estimation of the Gravity Equation in the Presence of Zero Flows’, *mimeo* .
- North, D. C. (1994), ‘Economic Performance Through Time’, *American Economic Review* **84**(3), 359–368.
- Orwell, G. (1944), ‘As I please’, *Tribune* **12 May**.
- Rauch, J. E. (2001), ‘Business and social networks in international trade’, *Journal of Economic Literature* **39**(4), 1177–1203.
- Rauch, J. E. & Casella, A. (2003), ‘Overcoming informational barriers to international resource allocation: Prices and ties’, *The Economic Journal* **113**(2001), 21–42.
- Rauch, J. E. & Trindade, V. (2002), ‘Ethnic chinese networks in international trade’, *Review of Economic and Statistics* **84**(February), 116–130.
- Santos Silva, J. & Tenreyro, S. (2006), ‘The log of gravity’, *The Review of Economics and Statistics* **88**(November), 641–658.
- Shell, H. G. & Zheng, L. (2015), ‘The Interaction Effects of Globalization and Institutions on International Capital Flows’, *International Journal of Economics and Finance* **7**(4), 12–22.  
**URL:** <http://www.ccsenet.org/journal/index.php/ijef/article/view/44695>
- Spolaore, E. & Wacziarg, R. (2009), ‘The diffusion of development’, *Quarterly Journal of Economics* (May), 469–529.
- Spolaore, E. & Wacziarg, R. (2016), ‘Ancestry and Development: New Evidence’.
- Yeaple, S. R. (2003), ‘The complex integration strategies of multinationals and cross country dependencies in the structure of foreign direct investment’, *Journal of International Economics* **60**, 293–314.

Zingales, L., Guiso, L. & Sapienza, P. (2009), 'Cultural biases in economic exchange?', *Quarterly Journal of Economics* **124**(3), 1095–1131.

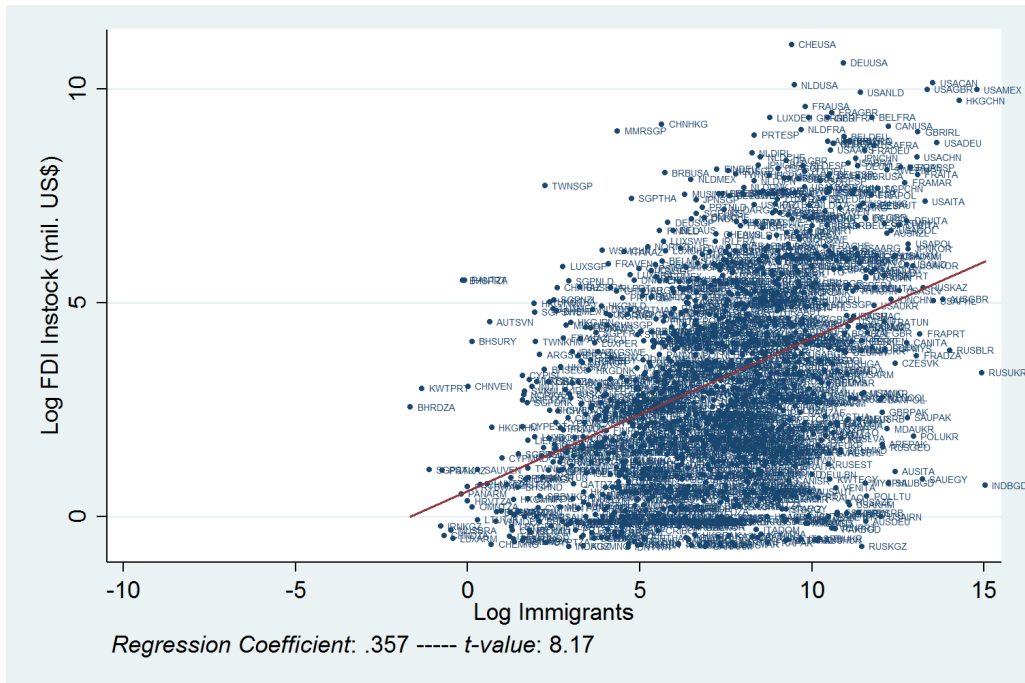
# Figures and Tables

Figure 1: Outward FDI and Immigrants Stocks



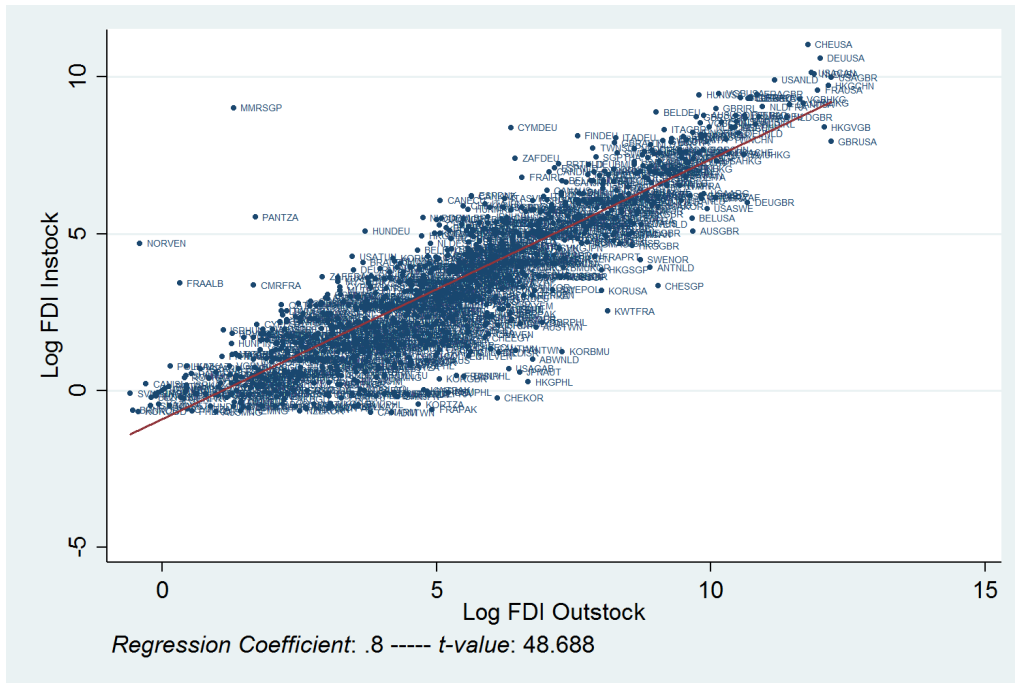
*Note:* For every country pair  $i, j$ , the figure shows country  $i$ 's immigrants from country  $j$  on the x-axis and the respective FDI stock from country  $j$  to country  $i$  in 2001 on the y-axis. Standard errors for t-value are clustered at the origin country.

Figure 2: Inward FDI and Immigrants Stocks



Note: For every country pair  $i, j$ , the figure shows country  $i$ 's immigrants from country  $j$  on the x-axis and the respective FDI stock from country  $i$  to country  $j$  in 2001 on the y-axis. Standard errors for t-value are clustered at the origin country of migrants.

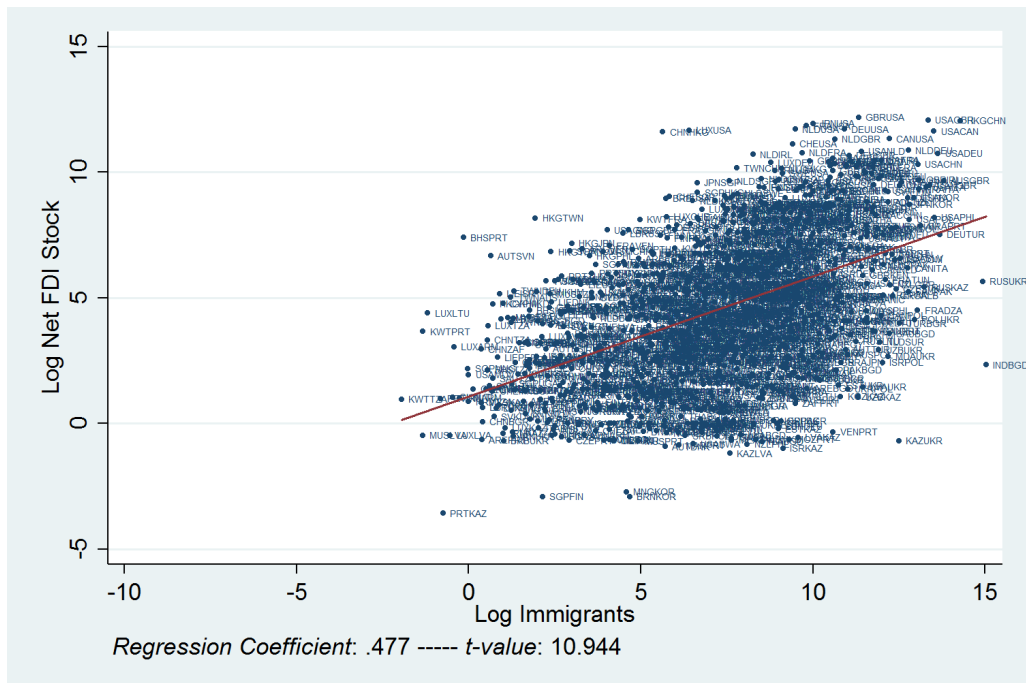
Figure 3: Inward and Outward FDI



Note: For every pair of countries  $i$  and  $j$ , the figure shows FDI in-stock (on the x-axis) and FDI out-stock (on the y-axis) from country  $i$  to country  $j$ . Standard errors for t-value are clustered at the origin country of migrants.



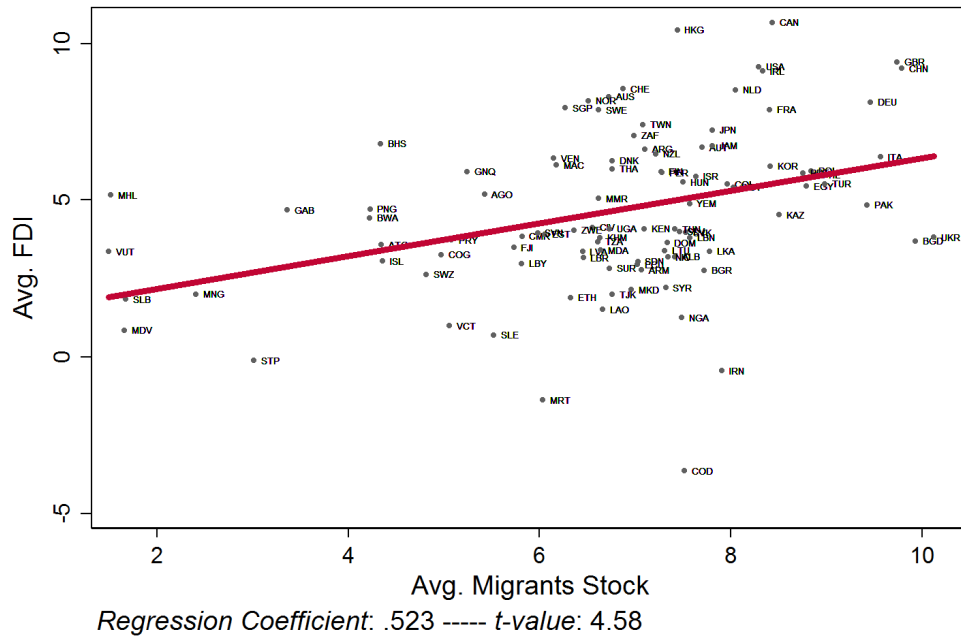
Figure 4: Net FDI outstock and immigrants



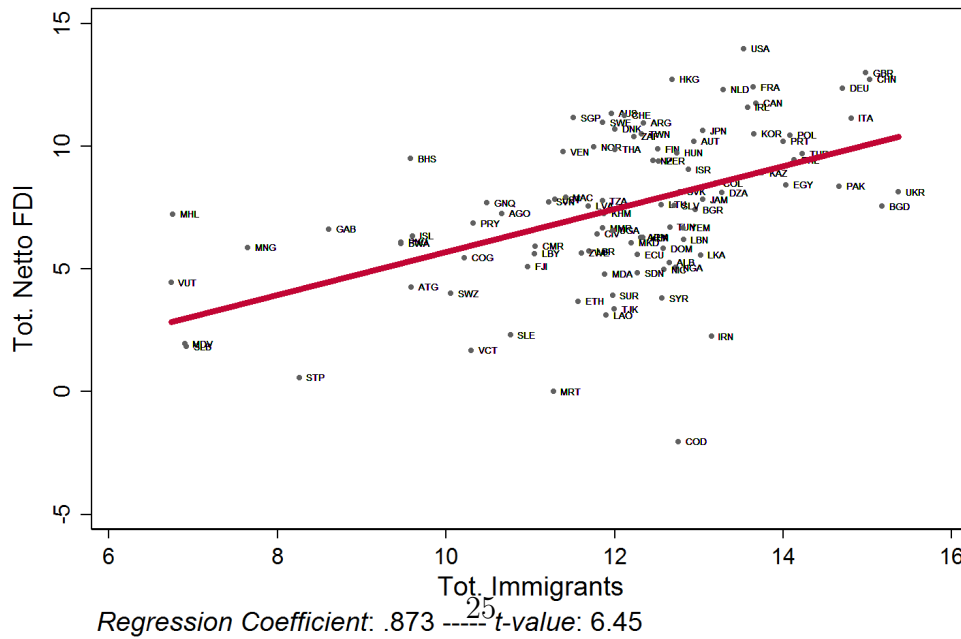
Note: For every pair of countries  $i$  and  $j$ , the figure shows country  $i$ 's immigrants stock from country  $j$  in 1990 on the x-axis and the FDI out-stock from  $i$  to  $j$  in 2001 on the y-axis. Standard errors for t-value are clustered at the origin country of migrants.

Figure 5: Relations by country

(a) Average FDI - Average Immigrants Stock



(b) Tot. FDI - Tot. Immigrants



Note: The figure shows each country's migrants in-stock on the x-axis and its respective FDI out-stock on the y-axis. I display the average and the total FDI in-stock and Migrants out-stock in Panels (a) and (b), respectively. Standard errors for t-value are clustered at the origin country of migrants.

**Table 1: Summary statistics**

Variable	Mean	Std. Dev.	Min.	Max.	N
<i>Part I: Country-Level Variables</i>					
GDP host (mil. 2001 USD)	168685.87	824812.45	48.52	10075900	187
Population host (mil.)	31.8	121.52	0.05	1271.85	193
GDP home (mil. 2001 USD)	168685.87	824812.45	48.52	10075900	187
Population home (mil.)	31.8	121.52	0.05	1271.85	193
Control of Corruption (origin)	-0.02	1.01	-1.91	2.59	194
Strength of Rule of Law (origin)	-0.03	1	-2.31	1.94	199
Control of Corruption (destination)	-0.01	1.01	-1.91	2.59	195
Strength of Rule of Law (destination)	-0.03	1	-2.31	1.94	200
<i>Part II: Bilateral Variables</i>					
Distance (weighted, km)	8392.73	4670.53	1	19781.39	47961
Common Border	0.01	0.11	0	1	50561
Ever in colonial relationship	0.01	0.1	0	1	50176
Common Colonizer	0.12	0.32	0	1	50561
Colonial relationship in 2001	0	0.04	0	1	50176
Colonial relationship in 1990	0	0.05	0	1	50176
Colonial relationship since 1945	0.01	0.08	0	1	50561
Same country (now or past)	0.01	0.09	0	1	50176
RTA in 2001	0.04	0.19	0	1	49952
RTA in 1990	0.01	0.1	0	1	49952
Common Currency in 2001	0.02	0.13	0	1	50176
Common Currency in 1990	0.01	0.11	0	1	50176
Hours of difference	5.02	3.5	0	12	50176
Common Legal System	0.2	0.4	0	1	28950
Common Legal Origin	0.28	0.45	0	1	49735
Genetic Distance	0.11	0.07	0	0.35	34036
Linguistic Proximity	0.67	0.77	0	7.46	28950
Religious Proximity	0.16	0.22	0	0.99	28950
Corruption Control Differential	1.11	0.89	0	4.5	37824
Strength of Rule of Law Differential	1.15	0.82	0	4.25	39786
<i>Part III: FDI and Migration Variables</i>					
FDI out-stock in 2001	1189.13	9272.15	-277.61	198656.93	3919
FDI in-stock in 2001	143.36	1558.77	-21498	61789	4733
Netto FDI out-stock in 2001	1362.45	9619.56	-8229.63	194832	2895
Stock of Immigrants in 1990	12397.95	97495.16	0	3365718.7	5589
Stock of Immigrants in 1960	13484.56	155225.26	0	8662538	5413
Stock of Educated Immigrants in 1990	2498.55	17234.14	0	496276	5589

**Table 2: PPML Results**

**Panel A: Different FDIs**

Estimator Dependent Variable	(1)	(2)	(3)	(4)
	Outstock FDI	Outstock FDI	Instock FDI	Instock FDI
Log Immigrants 1990	0.28*** (0.04)	0.23*** (0.06)	0.25*** (0.05)	0.12** (0.05)
Controls	Yes	-	Yes	-
Gravity Variables	Yes	Yes	Yes	Yes
FE	-	Yes	-	Yes
Observations	2,592	2,459	2,235	2,046
R-squared	0.72	0.94	0.54	0.82

**Panel B: Netto outward FDI**

Estimator Dependent Variable	(5)	(6)	(7)	(8)
	Netto FDI	Netto FDI	Netto FDI	Netto FDI
Log Immigrants 1990	0.29*** (0.04)	0.24*** (0.06)		
Highly Educated Immigrants 1990			0.30*** (0.05)	0.30*** (0.07)
Controls	Yes	-	Yes	-
Gravity Variables	Yes	Yes	Yes	Yes
FE	-	Yes	-	Yes
Observations	1,855	1,786	1,830	1,761
R-squared	0.74	0.95	0.74	0.96

*Note:* The table shows the result of eight PPML regressions using netto FDI outstock as dependent variable. The data is from the year 2001. Control variables include GDP per capita, area in square km, population size, corruption control and strength of rule of law. Gravity variables include geographical distance, same currency, cultural and institutional distance, corruption differential and rule of law differential. Standard errors are shown in parentheses. Significance at the 10% level is indicated by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.

**Table 3: Distance between Countries**

Dependent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Netto FDI	Netto FDI	Netto FDI	Netto FDI	Netto FDI	Netto FDI	Netto FDI
Log Migration 1990	0.25***	0.25***	0.30***	0.25***	0.25***	0.25***	0.25***
	(0.07)	(0.07)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
Log Geographic Distance	-0.19	-0.20	-0.26	-0.19	-0.19	-0.19	-0.19
	(0.16)	(0.18)	(0.16)	(0.17)	(0.16)	(0.16)	(0.16)
Linguistic proximity	-0.01	0.00	-0.01	-0.01	-0.00	-0.00	-0.00
	(0.06)	(0.11)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)
Genetic Distance	-4.89**	-4.85*	-10.08***	-4.94**	-4.92**	-5.02**	-4.89**
	(2.42)	(2.63)	(2.72)	(2.39)	(2.46)	(2.54)	(2.41)
Common Legal Origin	0.27**	0.27**	0.28**	0.31	0.27**	0.28**	0.27**
	(0.12)	(0.12)	(0.12)	(0.22)	(0.12)	(0.12)	(0.12)
Common Legal System	-0.14	-0.14	-0.12	-0.14	-0.22	-0.13	-0.14
	(0.13)	(0.12)	(0.12)	(0.12)	(0.20)	(0.13)	(0.13)
Corruption_differential	0.15	0.15	0.16	0.15	0.14	0.10	0.15
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.20)	(0.17)
RuleofLaw_differential	-0.59***	-0.59***	-0.65***	-0.59***	-0.59***	-0.58***	-0.59***
	(0.20)	(0.20)	(0.22)	(0.20)	(0.20)	(0.21)	(0.19)
Mig*CommonLang		-0.00					
		(0.02)					
Mig*GenDist			1.62**				
			(0.68)				
Mig*Legal Origin				-0.01			
				(0.04)			
Mig*Legal System					0.02		
					(0.05)		
Mig*CorruptionDifferential						0.01	
						(0.03)	
Mig*RuleofLaw_differential							0.00
							(0.02)
Observations	1,785	1,785	1,785	1,785	1,785	1,785	1,785
R-squared	0.95	0.95	0.96	0.95	0.95	0.95	0.95

*Note:* The table shows the result of seven PPML regressions using netto FDI outstock as dependent variable. The data is from the year 2001. Control variables include GDP per capita, area in square km, population size, corruption control and strength of rule of law. I have included origin and destination fixed effects in all specifications. Standard errors are shown in parentheses. Significance at the 10% level is indicated by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.

**Table 4: Robustness**

Estimator Dependent Variable	(1)	(2)	(3)	(4)
	IV		PPML	
	Netto FDI (Stocks)	Netto FDI (Stocks)	Netto FDI (Flows)	Netto FDI (Flows)
Log Immigrants 1990	0.41*** (0.10)	0.32*** (0.07)	0.16*** (0.03)	0.18*** (0.03)
Log GeoDistance	-0.09 (0.19)	-0.68*** (0.12)	0.06 (0.20)	-0.46*** (0.18)
Common Spoken Language	-0.09 (0.43)	0.90** (0.37)	-0.62 (0.47)	-0.16 (0.43)
Ancestral Distance	2.58 (2.06)	-2.95 (2.12)	-6.61** (2.73)	-4.78*** (1.81)
Common Legal Origin	0.33* (0.19)	0.38*** (0.14)	-0.03 (0.21)	0.03 (0.19)
Common Legal System	-0.26 (0.24)	-0.02 (0.22)	-0.55*** (0.15)	-0.50** (0.22)
Corruption Differential	0.34** (0.17)	0.02 (0.16)	-0.34* (0.20)	-0.54** (0.25)
Rule of Law Differential	-0.80*** (0.20)	-0.37* (0.20)	0.29 (0.26)	0.80** (0.34)
Gravity Variables	Yes	Yes	Yes	Yes
FE	-	Yes	-	Yes
Observations	1,220	1,220	997	997
R-squared	0.49	0.77	0.51	0.81

*Note:* The table shows the result of four IV regressions using the logarithm of 1 + netto FDI outstock as dependent variable. The data is from the year 2001. Control variables include GDP per capita, area in square km, population size, corruption control and strength of rule of law. I have included fixed effects on all specifications. Standard errors are shown in parentheses. Significance at the 10% level is indicated by \*, at the 5% level by \*\*, and at the 1% level by \*\*\*.