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Democracy in the neighborhood and foreign direct investment

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Abstract

The determinants of foreign direct investment (FDI) have been extensively studied. Even though there is extensive research in the area, most of it is based on analyzing the effects of host country characteristics on FDI flows, and yet there is little research on how neighboring country characteristics play a role in facilitating FDI flows to host countries. This paper analyzes the association between the democracy level in neighboring countries and FDI flows to host countries. Using bilateral FDI flows from the OECD countries, with a large host country sample, we find that countries surrounded by democratic countries attract higher FDI flows. Furthermore, we find evidence that countries that are surrounded by neighboring countries with good institutions tend themselves to have better institutions, experience lower civil conflict, and have higher political stability and hence indirectly attract higher FDI flows. Our findings suggest that if neighboring countries act in such way as to become more democratic, FDI flows to these countries would be higher since not only does improving the quality of democracy attract more FDI inflows, but also being surrounded by neighboring advanced democratic countries will also lead to higher FDI flows to them.

KEY WORDS

democracy, democracy in the neighborhood, foreign direct investment, institutions, neighborhood characteristics

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1 | INTRODUCTION

The determinants of foreign direct investment (FDI) have been extensively studied in the literature (see, for example, Blonigen & Piger, 2014, for an extensive list of determinants). Even though there is extensive research on the determinants of FDI flows, most of this research is based on the source, and the effect of host countries' characteristics on FDI flows, and there is little research on how neighboring country characteristics play a role in FDI flows to host countries.

The linkages between neighboring country characteristics, however, have been examined in the literature. For instance, Easterly and Levine (2000) find that growth levels of countries are positively associated with the growth levels in their neighboring countries, and policies in neighboring countries are contagious (see also Kelejian, Murrell, & Shepotylo, 2013, where governance in neighboring countries is positively associated with countries' own governance levels). Similarly, Bosker and Garretsen (2009) find that the institutional quality of countries and of their neighbors has a direct effect on their long-term economic development. Recently, Qureshi (2013) finds that conflicts in neighboring countries reduce bilateral trade. To our knowledge, recent literature has only considered the relevance of host country characteristics in attracting FDI flows. For instance, in a seminal paper, Alfaro, Kalemli-Ozkan, and Volosovych (2008) find that the institutional quality of the host country explains the Lucas paradox (Lucas, 1990) suggesting that the reason why rich countries do not invest in poor countries is due to poor institutions in the latter (see also Pinar & Volkan, 2018). Similarly, Jensen (2003) finds that democratic countries attract relatively higher FDI flows compared to authoritarian regimes—see also Jakobsen and de Soysa (2006) and Asiedu and Lien (2011), where democratization in most countries leads to higher FDI flows. One potential reason for this is that the democratization process contributes to greater FDI openness, leading to higher FDI flows (see, for example, Pandya, 2014). In a recent paper, Bekaert, Harvey, Lundblad, and Siegel (2014) show that the reduction in political risk, which is captured by various institutional quality proxies of the host country, leads to a significant increase in FDI levels (see also Economou, Hassapis, Philippas, & Tsionas, 2017 where institutional factors are determinants of FDI both for the OECD and developing countries).¹ Even though the political, democratic, and institutional setting in the host country is extensively investigated, the effect of democratization of neighboring countries on FDI flows to the host country has not yet been examined in the literature, and this paper intends to fill this gap.

There are many channels that can affect FDI in a country through different characteristics of its neighboring countries (see Section 2 for a detailed discussion on some of these channels). An obvious one is for FDI to depend on the present and expected future performance of a given country, which in turn depends on the level of competition between the respective country and its neighboring countries. As discussed above, countries that have better institutional settings receive relatively higher capital flows, and neighboring countries would compete to improve their institutional quality setting to attract higher capital flows. In that respect, it is not surprising to expect that neighbors' institutional setting matters for FDI where the diffusion of information and institutional framework is stronger (see, for example, Easterly & Levine, 2000; Kelejian et al., 2013; Ward & Dorussen, 2015). In this paper we argue that neighboring countries that compete to attain a better institutional environment to attract FDI create positive spillover effects on each other, suggesting that institutional agglomerations tend to attract more investment.

We use gravity models and dynamic panel data estimation techniques and find that countries surrounded by good democracies attract higher FDI flows. For robustness, we control for different neighboring country characteristics such as the rule of law, political stability, civil conflict, and the market size, and our results remain robust. Furthermore, the results are also robust to the use of different samples and estimation techniques.

The paper is organized as follows. In Section 2 we discuss briefly how neighboring country characteristics play a role in countries' economic, social and political outcomes and discuss how these factors might also play a role in attracting FDI flows to host countries. Section 3 discusses the data and variables used in this paper, and also provides details on how neighboring country characteristics are obtained. Section 4 presents the estimation technique, and Section 5 offers the results. Section 6 concludes.

2 | NEIGHBORING COUNTRY CHARACTERISTICS AND THEIR EFFECT ON OTHER COUNTRIES

In this section we discuss the effects of neighboring country characteristics on other countries and discuss how these factors might play direct and/or indirect roles in attracting higher FDI flows to host countries.

It is a long-established finding that countries with higher market access (MA) and/or market potential (MP), which is measured by the closeness of a country to other high-income countries, tend to have a higher income (see, for example, Crafts & Venables, 2003; Redding & Venables, 2004; Liu & Meissner, 2015), with access to the export market found to be one of the main factors behind this relationship (see Bosker & Garretsen, 2012; de Sousa, Mayer, & Zignago, 2012). Even though the above papers examined the relationship between MA and economic development of a country, recent studies also examined the link between FDI and MA. For instance, Blanco (2012) finds that the surrounding market potential has a significant positive effect on net FDI flows to Latin American countries. At a regional level, multinational firms in the German border region show a significant preference to invest in the neighboring Czech regions (Schäffler, Hecht, & Moritz, 2017). Similar spillover effects on neighboring regions have been found in Polish counties, with those counties identified as special economic zones having a strong positive employment impact in the host county as well as in neighboring counties (Cizkowicz, Cizkowicz-Pekala, Pekala, & Rzonca, 2017).

Another effect across neighboring countries is the spillover of social, economic, and political policies and outcomes. In particular, policies are found to be contagious when countries surrounded by other countries with better institutions also have a better institutional setting. For example, Kelejjan et al. (2013) find that governance in neighboring countries is positively related to the countries' own governance levels. Similarly, Ward and Dorussen (2015) find that public knowledge of the importance of governance leads to higher diffusion of good governance to neighboring countries. One of the practical implications of this is the establishment and enlargement of the European Union. In order to join the EU, countries need to follow the Copenhagen criteria that require 'stable conditions guaranteeing democracy and the rule of law', something that led to the diffusion of democracy and institutional quality within Europe. Furthermore, institutional quality in neighboring countries is found to be important in affecting economic growth and development. For instance, Easterly and Levine (2000) show that the economic performance of a country is good if its neighbors have relatively higher economic growth. On the other hand, Bosker and Garretsen (2009) find that not only does countries' own institutional quality matter for long-term economic development but also the institutional quality of neighboring countries directly explains development levels. In other words, being surrounded by

countries with better institutional quality not only leads to better governance but also increases gross domestic product (GDP) per capita. In this paper we examine whether these indirect linkages between neighboring and host country affect FDI flows.

The other channel that is found to be important in affecting a country's income level is political unrest or instability in neighboring countries. For instance, Ades and Chua (1997) find that political instability in a neighboring country may lead to lower economic performance by decreasing the magnitude of trade and expenditure on education and increasing the expenditure on the military. Qureshi (2013) finds that conflict in neighboring countries reduces bilateral trade. Furthermore, conflict in neighboring countries may lead to inflows of refugees (Moore & Shellman, 2007), resulting in an increased probability of violence and civil war (Salehyan & Gleditsch, 2006; Blattman & Miguel, 2010), as well as an adverse effect on health and education of refugee-hosting economies (Baez, 2011). Bandyopadhyay, Sandler, and Younas (2014) find that both domestic and transnational terrorism in the host country have a negative effect on FDI (see also Gaibulloev & Younas, 2016, who show that higher conflict levels lead to lower levels of domestic bank lending). In a more recent paper, Filer and Stanišić (2016) show that terror incidents not only lower FDI flows to host countries but also lead to lower investment to neighboring countries. However, Hegre (2014) finds that the democracies have less conflict than semi-democracies, suggesting that the establishment of long-lasting democracies has some mitigating effect on conflict.

Based on the previous literature, we expect that democratic institutions in neighboring countries are key in affecting the allocation of FDI. If a country is surrounded by countries that have strong democratic institutions, these neighboring countries are less likely to experience conflict (see, for example, Hegre, 2014), which would then decrease the likelihood of the host country experiencing conflict (Salehyan & Gleditsch, 2006; Blattman & Miguel, 2010). Furthermore, if a host country is surrounded by countries that have good institutions, this would also improve the economic outcomes of the host country (Bosker & Garretsen, 2009), and would lead to improvements in its institutional quality (Kelejian et al., 2013; Ward & Dorussen, 2015). Overall, being surrounded by countries that have well-developed institutions would increase the likelihood of countries improving their economic and institutional outcomes and decrease the likelihood of them experiencing conflict. Therefore, if a host country is surrounded by countries that have better institutions, this would make the host country a relatively safer and socioeconomically more desirable place in which to invest compared to other host countries that are surrounded by countries that have worse institutions. As a result, we expect that host countries surrounded by countries that have good institutions are likely to attract more FDI flows. In Section 5 we will examine whether this theoretical expectation holds empirically. This proposition has been analyzed by the contagion effect concerning financial flows (see, for example, Kaminsky & Reinhart, 2000; Corsetti, Pericoli, & Sbracia, 2005; Forbes & Warnock, 2012; Dell'Erba & Reinhardt, 2015); however, whether neighboring characteristics directly affect FDI flows has not yet been examined, something that we intend to do in this paper.

Given the above discussion on potential direct and indirect links between neighboring country characteristics and FDI to a host country, we will examine whether these characteristics play a direct or indirect role in FDI flows to host countries. In particular, we will examine two channels by which the quality of institutions in the neighboring countries can affect FDI flows to a country. Firstly, we will examine whether investing countries consider regional institutional quality to play a direct role in attracting FDI. Secondly, we will analyze the indirect relationship of institutional quality in neighboring countries and other factors in the host country, such as the effects of neighboring institutional quality on other factors in the host country.

3 | DATA AND VARIABLES

Our paper uses panel data of FDI flows from 34 OECD countries to 143 host countries between 1993 and 2012 as the dependent variable (see the list of the countries used in Table A1 in Appendix A).

The OECD provides FDI flows from OECD countries to host countries between 1985 and 2013; however, most of the FDI flow data before the 1993 period and for 2013 had many missing values and therefore are excluded from the analysis.² The reason for the exclusion of the period before 1993 was our attempt to include as many OECD countries as possible in our analysis since some of the OECD countries became independent after 1991, and they did not have data for FDI flows.³ Still, our data set covers a period of analysis that is longer than those used by the recent studies—for example, Mishra and Jena (2019) used the period 2001–12, Belgibayeva and Plekhanov (2019) used bilateral FDI flows for the period 2008–12, Xu (2019) considered the period 2001–12, and Donaubauer, Neumayer, and Nunnenkamp (2020) cover the period 2001–12.

3.1 | Institutional quality

There are many measures of institutional quality, but one of the most commonly used in the literature is the democracy index from the Polity IV project (i.e. Polity 2). This index captures three elements that are directly related to the protection of property rights and other aspects that are important to attract FDI. These three essential elements are described as follows:

One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. The third is the guarantee of civil liberties to all citizens in their daily lives and acts of political participation. (Marshall, Gurr, & Jaggers, 2016, p. 14).

Knutsen (2011) finds that the relatively democratic countries have higher protection of property rights. Hence, we use a democracy proxy as our primary institutional quality measure, which consists of yearly data between 1993 and 2012 for 167 countries. We do not use small countries with little or no flows of FDI, and we ended up having data for 143 host countries.

We also use some other institutional quality proxies that are commonly used in the literature as controls in our robustness analysis, such as the rule of law measure from the World Governance Indicators constructed by the World Bank (Kaufmann, Kraay, & Mastruzzi, 2013). The effects of the rule of law on economic growth have been extensively examined through the mitigation of violence, the protection of property rights, institutional checks on government and control of private capture and corruption (see Haggard & Tiede, 2011, for theoretical and empirical analysis of the effect of the rule of law on aspects mentioned above).

3.2 | Neighboring country characteristics

For a host country i , we proceed to calculate the institutional quality of its neighboring countries by taking the average of the institutional quality values of the neighboring countries. For a given time t , we obtain the neighboring country institutional quality proxy as

$$N_INS_{it} = WINS_t$$

where N_INS_{it} is the average institutional quality of neighboring countries of country i at time t , and INS_t is an $n \times 1$ vector of observations on institutional quality levels for n countries. Finally, W is a $n \times n$ weighting matrix defined as

$$w_{ij} = \begin{cases} \frac{1}{m} & \text{if } i \text{ and } j \text{ are neighbors} \\ 0 & \text{otherwise,} \end{cases}$$

where m is the total number of neighbors of country i .⁴ Here, our main neighboring institutional quality measure is the democracy score; however, we have neighboring institutional quality proxies by using the rule of law, political stability, and absence-of-violence components from the World Governance Indicators as an additional set of control variables.

We also construct conflict and market size measures of neighboring countries similarly (see Section 2 for details of their importance). It is also possible that a given country might not be surrounded by larger markets, but located to be close to high-income countries. Therefore, we also construct a market potential (MP) measure at a given time t similarly to the Redding and Venables (2004) market potential measure as follows:

$$MP_{it} = ij \neq \sum \frac{GDP_{jt}}{Dist_{ij}}$$

where MP_{it} is the market potential of country i at time t and $Dist_{ij}$ is the great circle distance between capital cities of countries i and j .

3.3 | Other control variables

In line with the literature on the determinants of FDI and gravity models, we also control for source and host country characteristics such as the market size of the source and host countries (i.e. GDP of source and host countries, respectively), population and land areas of source and host countries. Another important factor that has been considered in gravity models while examining bilateral trade and FDI flows is regional trade agreements (e.g. Baier & Bergstrand, 2007, Balgati, Egger, & Pfaffermayr, 2008; Ullah & Inaba, 2012; Thangavelu & Narjoko, 2014; Chenaf-Nicet and Rougier, 2016; Martínez-San Román, Bengoa, & Sánchez-Robles, 2016; Cherif & Dreger, 2018), which we will also include in our estimations. Furthermore, we control for civil conflict and institutional quality of the host country. The definitions and sources of the variables used are presented in Table A2, and summary statistics are provided in Table A3.

4 | METHODOLOGY

In general, it is hard to account for all the factors that might affect FDI flows since capital flows are potentially affected by hard-to-measure country-specific factors such as culture, trust, and social

capital. This could potentially lead to an omitted variable bias. Furthermore, a positive relationship between (countries' own and neighboring countries') institutions and FDI flows might be due to reverse causality. To account for the first concern (omitted variables and unobserved country heterogeneity), we use the gravity model with fixed effects. Although the gravity model is known for its application in the trade flows—see, for example, Anderson and van Wincoop (2003) and see Head and Mayer (2014) for an overview of the use of gravity models in trade flows—gravity models have also been used to examine bilateral FDI flows (Head & Ries, 2008; Bergstrand & Egger, 2011; Petri, 2012; Bellos & Subasat, 2012; Thangavelu & Narjoko, 2014; Mishra & Jena, 2019; Xu, 2019; Belgibayeva & Plekhanov, 2019; Donaubaauer et al., 2020). Therefore, our first estimation method is to use the following gravity model estimation specification:

$$\ln(F_{i,j,t}) = \beta_0 + \ln(F_{i,j,t-1}) + X'_{j,t-1}\beta_j + X'_{i,t-1}\beta_i + \delta_1 \ln(\text{Distance})_{ij} + \delta_2(\text{Language})_{ij} + \delta_3(\text{Colony})_{ij} + \delta_4(\text{RTA})_{ijt} + \gamma(NX_{j,t-1}) + \alpha_j + \alpha_t + \mu_{i,j,t}, \quad (1)$$

where $F_{i,j,t}$ is the FDI flows from country i (source) to j (host) at time period t . X includes the control variables that account for the size of the source and host economies, such as income, population, land area, and other host country characteristics such as conflict and institutional quality. Furthermore, we include the distance between the source and host country (Distance_{ij}) to account for information asymmetries and transaction costs. Language_{ij} and Colony_{ij} are dummy variables taking the value 1 if countries share a common language and have had a colonial link, respectively, and 0 otherwise. RTA_{ijt} is a dummy variable taking the value 1 if countries i (source) and j (host) have a regional trade agreement at time period t 0 otherwise. Finally, we include $NX_{j,t}$ as the characteristics of the neighboring countries that might affect the FDI flows to host countries such as the quality of institutions, market potential of the host country, market size of the neighboring countries, and civil conflict.

Since the unobserved variables might be correlated with country-pair characteristics, we also control for country-pair fixed effects (Baier & Bergstrand, 2007). Finally, even though the gravity model accounts for time-invariant country effects and fixed time effects, the results obtained may be affected by endogeneity. The system generalized method of moments (GMM) has been one of the most popular methods to account for potential endogeneity while examining the determinants of FDI flows (see, for example, Asiedu & Lien, 2011; Bandyopadhyay et al., 2014; Aziz, 2018; Saini & Singhania, 2018; Neanidis, 2019, for the use of GMM). As such, we apply the system GMM estimator suggested by Blundell and Bond (1998) where the lagged levels and first differences are used as instruments for the endogenous variables. In sum, this paper uses two popular methods in examining the determinant of the FDI flows to ensure the robustness of our findings.

5 | EMPIRICAL ANALYSIS

5.1 | Gravity model estimates

We begin our analysis with the estimation of the gravity model. Table 1 presents the results when we control for year and source-country fixed effects (YSFE) and year and country-pair fixed effects (YCPFE) when we use democracy as a proxy for institutional quality. In columns 1–4 we control for the year and source-country fixed effects and use a different set of control variables. In column 1 we use the lagged FDI flows and democracy in the host and neighboring countries of the host country. We find that not only do democratic countries receive relatively higher FDI flows but also countries

TABLE 1 Gravity model estimations

Variables	(1)	(2)	(3)	(4)	(5)
	YSFE (1)	YSFE (2)	YSFE (3)	YSFE (4)	YCPFE
$\ln(FDI\ flows)_{i,t-1}$	0.834*** (0.00431)	0.820*** (0.00458)	0.759*** (0.00571)	0.735*** (0.00615)	0.747*** (0.00401)
$Democracy_{j,t-1}$	0.0444*** (0.00456)	0.0333*** (0.00457)	0.0204*** (0.00457)	0.0190*** (0.00462)	0.0254*** (0.00527)
$N_Democracy_{j,t-1}$	0.0186*** (0.00517)	0.00893* (0.00518)	0.0121** (0.00521)	0.00959* (0.00522)	0.0135** (0.00592)
$\ln(GDP)_{i,t-1}$					1.174*** (0.0477)
$\ln(GDP)_{j,t-1}$			0.556*** (0.0209)	0.527*** (0.0209)	0.637*** (0.0208)
$\ln(Population)_{i,t-1}$					-0.560*** (0.0472)
$\ln(Population)_{j,t-1}$			-0.0969*** (0.0249)	-0.0428* (0.0249)	-0.121*** (0.0295)
$\ln(Area)_{i,t-1}$					-0.241*** (0.0217)
$\ln(Area)_{j,t-1}$			-0.102*** (0.0159)	-0.0538*** (0.0163)	-0.110*** (0.0197)
$RTA_{i,j,t}$		0.852*** (0.0590)		0.246*** (0.0714)	
$Language_{i,j}$				0.475*** (0.0742)	
$Colony_{i,j}$				0.758*** (0.120)	
$Distance_{i,j}$				-0.376*** (0.0319)	
Observations	28,872	28,872	28,272	28,272	28,272
Number of pairs					3,905
R-squared	.836	.837	.843	.845	.838
R-squared (within)					.113
R-squared (between)					.943

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country i to host country j at time t . $Democracy$ and $N_Democracy$ are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. $Language_{i,j}$ and $Colony_{i,j}$ takes the value 1 if source (country i) and host (country j) share a common language and have had a colonial link, respectively. $Distance_{i,j}$ is the distance between the capital cities of the source and host countries. $RTA_{i,j,t}$ takes the value 1 if source (country i) and host (country j) have a regional trade agreement at time t , and 0 otherwise. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

that are surrounded by relatively democratic countries also receive higher FDI flows where the coefficients on host country democracy and democracy level of neighboring countries are positive and statistically significant at the 1% level. On the other hand, the coefficient of lagged FDI inflows is positive, suggesting that the current FDI flows are positively correlated with the FDI inflows in the previous year. Column 2 of Table 1 gives the estimation results when we include the *RTA* dummy variable as an additional control variable, and in line with the previous literature, we find that host countries receive relatively higher FDI flows if they have regional trade agreements with source countries. In column 3 we include additional controls for host country characteristics, such as the market size (i.e. GDP), population, and area. In line with the empirical literature, we find that countries with larger market sizes receive relatively higher FDI flows, whereas countries with larger populations and areas receive relatively lower FDI flows. In column 4 we also include language and colony dummies, which take the value 1 if source and host share a common language and have had a colonial link, respectively. We also control for the geographical distance between the capital cities of the source and host countries. All estimates of the other variables are in agreement with the existing literature, as we find that if investing and host countries share a common language and have had a colonial link, host countries tend to receive higher FDI flows. Finally, if the source and host countries are further away from each other, there are lower levels of FDI flows. Finally, column 5 introduces year and country-pair fixed effects (where we drop the dummy variables as these variables are captured by the country-pair fixed effect and do not vary over time). Similarly to the previous cases, we find that countries that have a relatively larger market size invest more and also receive more investment. The relationship between the level of democracy in the host country and FDI flows is positive and significant at the 1% level. Furthermore, the coefficient on the democracy level of neighboring countries is positive and significant at the 5% level.

Overall, results from columns 1–5 control for the year, source, and country-pair fixed effects, and suggest that the OECD countries invest relatively more in countries that are democratic and also if host countries are surrounded by other democratic countries. Regarding the other variables that we controlled for, coefficient estimates have the expected signs. The results for all specifications confirm that the democracy level of neighboring countries positively affects FDI flows. In particular, a one standard deviation increase in the democracy level of neighboring countries (i.e., 5.585) leads to a 7.54% increase in FDI flows to host countries (based on the coefficient of the democracy level of neighboring countries in column 5). For a country that receives average FDI flows of \$461 million, a one standard deviation increase in the democracy level of neighboring countries leads to a \$43.75 million increase in FDI flows.

5.2 | Estimation results: Controlling for other neighboring country characteristics

It is possible that the association between institutional quality in neighboring countries and FDI flows to host countries might be due to omitted variables relating to neighboring country characteristics. Table 2 presents the results when we control for other neighboring country characteristics such as civil conflict in the host and civil conflict in the neighboring country, market size of the neighboring countries (measured by the average GDP levels of neighboring countries), and the market potential of the host country when we include the year and country-pair fixed effects as in the specification used in column 5 of Table 1. In all these specifications, besides the additional neighboring country characteristics, we include the lagged FDI flows to examine the dynamic aspect of FDI flows, democracy in the host and neighboring countries, and the market size of the source and host countries. In column 1 of Table 2 we first control for civil conflict

TABLE 2 Controlling for other neighboring characteristics

Variables	(1)	(2)	(3)	(4)
$\ln(FDI\ flows)_{i,t-1}$	0.774*** (0.00730)	0.773*** (0.00736)	0.769*** (0.00739)	0.767*** (0.00749)
$Democracy_{j,t-1}$	0.0300*** (0.00548)	0.0333*** (0.00543)	0.0324*** (0.00555)	0.0341*** (0.00566)
$N_Democracy_{j,t-1}$	0.0115* (0.00633)	0.0118* (0.00639)	0.0179*** (0.00638)	0.0131* (0.00685)
$\ln(GDP)_{i,t-1}$	0.466*** (0.0227)	0.466*** (0.0228)	0.476*** (0.0228)	0.477*** (0.0229)
$\ln(GDP)_{j,t-1}$	0.491*** (0.0210)	0.467*** (0.0214)	0.511*** (0.0213)	0.498*** (0.0222)
$Conflict_{i,t-1}$	-0.0696*** (0.0180)	-0.0740*** (0.0182)	-0.0629*** (0.0181)	-0.0645*** (0.0183)
$N_Conflict_{j,t-1}$	-0.0122* (0.00661)	-0.0131* (0.00671)	-0.0120* (0.00691)	-0.0121* (0.00701)
$\ln(N_GDP)_{j,t-1}$		0.0502*** (0.0161)		0.0469*** (0.0161)
$\ln(Market\ potential)_{j,t-1}$			1.172*** (0.130)	1.154*** (0.132)
Observations	28,272	28,007	28,272	28,007
Number of pairs	3,905	3,874	3,905	3,874
R-squared	.8357	.8359	.8361	.8364

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country i to host country j at time t . $Democracy$ and $N_Democracy$ are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. $Conflict$ and $N_Conflict$ are the conflict levels in the host and neighboring countries of the host country, respectively. N_GDP represents the average GDP of the neighboring countries of the host country. All estimations are obtained after controlling for the year and country-pair fixed effects. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

in the host country and its neighboring countries. Both coefficients on civil conflict in the host country and its neighboring countries enter the regressions with the expected negative sign and both are statistically significant. In column 2 of Table 2 we control for the average market size of the neighboring countries, and we find that an increase in the average market size of neighbors leads to a rise in the FDI flows to the host country. In column 3 we also control for the market potential of the host country as neighboring countries might not directly be relatively rich themselves, but the host country may still be close enough to richer countries. We find that countries with higher market potential (i.e. countries that are close to high-income countries) also receive relatively higher FDI flows. Finally, in column 4 we control for all these neighboring characteristics. When we control for all factors, we find that all of the neighboring characteristics enter the regressions with the expected signs. Civil conflict in the host country and neighboring countries depresses FDI flows to host countries. If the host country is surrounded by relatively larger markets and also has higher market potential, it also tends to receive higher FDI flows. Finally, even after controlling for additional neighboring country characteristics, the coefficient on the democracy level of neighboring countries is still significant at the 10% level.

In Table 2 we controlled for the year and country-pair fixed effects. However, some studies analyze how FDI might affect the institutional quality of the host country (e.g. Demir, 2016) while others investigate the importance of the institutional setting in attracting FDI (e.g. Alfaro et al., 2008) resulting in endogeneity. To address this issue, we use the system GMM estimator proposed by Blundell and Bond (1998).

Table 3 controls for the neighboring country characteristics with the system GMM estimator, where both institutional quality proxies and conflict in the host and neighboring countries are considered as endogenous variables.⁵ In our regressions, we utilized 3–5 lags of endogenous variables as instrumental variables.⁶ In all cases, the Hansen test of overidentifying restrictions suggests that we cannot reject the null hypothesis of instrument validity. Even after accounting for the potential endogeneity, our main finding remains the same, with democratic countries and countries that are surrounded by relatively better democracies receiving relatively higher FDI flows. Compared to Table 2, once we control for potential endogeneity, we find that the coefficients on civil conflict in neighboring countries and the average market size of the neighboring countries still have the expected signs, but they now become insignificant.⁷ Countries with higher market potential still receive relatively higher FDI flows, but the coefficient drops from 1.154 to 0.466 (see column 4 of Tables 2 and 3, respectively). The coefficient of democracy of neighboring countries with the system GMM estimator is nearly three times as large as in the corresponding country-pair fixed effects estimation (0.0390 versus 0.0131 from column 4 of Tables 2 and 3, respectively). The coefficient on the democracy level of the host is also positive and significant at the 5% level when we control for all neighboring country characteristics. Furthermore, coefficients on the remaining control variables (i.e. lagged FDI flows, the market size of the source and host countries) are positive and significant at the 1% level.

Our findings suggest that a unit increase in democracy score in the host and neighboring countries would lead to a rise in FDI flows to host countries of roughly 3.5% and 4%, respectively. A one standard deviation increase in the democracy level of neighboring countries (i.e. 5.585) leads to a 24.33% increase in FDI flows to host countries (based on the coefficient of the democracy level of neighboring countries in column 4 of Table 3). For a country that receives average FDI flows of \$461 million, a one standard deviation increase in the democracy level of neighboring countries leads to a \$112.16 million increase in FDI flows. On the other hand, the estimated coefficient of lagged FDI flows is 0.819 in column 4 where we control for all neighboring country characteristics, which would suggest that the long-run effect of a unit increase in the democracy level of neighboring countries is roughly 24%.⁸

Overall, our main finding (i.e. the quality of institutions in neighboring countries is positively associated with FDI flows) is robust after accounting for various fixed effects (results obtained with

TABLE 3 Controlling for other neighboring characteristics with system GMM

Variables	(1)	(2)	(3)	(4)
$\ln(FDI\ flows)_{i,j,t-1}$	0.820*** (0.00671)	0.820*** (0.00671)	0.819*** (0.00680)	0.819*** (0.00678)
$Democracy_{j,t-1}$	0.0361** (0.0173)	0.0365** (0.0175)	0.0342** (0.0172)	0.0342** (0.0174)
$N_Democracy_{j,t-1}$	0.0325** (0.0166)	0.0343** (0.0165)	0.0370** (0.0182)	0.0390** (0.0193)
$\ln(GDP)_{i,t-1}$	0.392*** (0.0202)	0.391*** (0.0202)	0.401*** (0.0206)	0.400*** (0.0206)
$\ln(GDP)_{j,t-1}$	0.369*** (0.0212)	0.365*** (0.0218)	0.382*** (0.0206)	0.377*** (0.0213)
$Conflict_{j,t-1}$	-0.0240 (0.0430)	-0.0205 (0.0436)	-0.0191 (0.0433)	-0.0152 (0.0440)
$N_Conflict_{j,t-1}$	-0.0148 (0.0151)	-0.0148 (0.0152)	-0.0143 (0.0152)	-0.0141 (0.0153)
$\ln(N_GDP)_{j,t-1}$		0.0107 (0.0164)		0.00838 (0.0165)
$\ln(Market\ potential)_{j,t-1}$			0.452*** (0.112)	0.466*** (0.119)
Observations	28,272	28,007	28,272	28,007
Number of pairs	3,905	3,874	3,905	3,874
AR(3) (<i>p</i> -value) ^a	.984	.993	.984	.994
Overidentification test (<i>p</i> -value) ^b	.097	.110	.103	.119

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country *i* to host country *j* at time *t*. *Democracy* and *N_Democracy* are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. *Conflict* and *N_Conflict* are the conflict levels in the host and neighboring countries of the host country, respectively. *N_GDP* represents the average GDP of the neighboring countries of host country. All estimations utilize the system GMM estimation technique and use 3–5 lags for the endogenous variables. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

^aArellano–Bond test that the third-order autocorrelation in residuals is 0. First- second-order autocorrelations are not reported as they are rejected at the 10% significance level.

^bHansen *J*-test for overidentification of restrictions in GMM estimation.

the gravity model), other neighboring country characteristics such as the market size and potential and conflict in neighboring countries, and even after tackling potential endogeneity problem (results obtained with system GMM estimations).

5.3 | Results with the use of different samples

We carry out robustness checks of our findings when we use different samples to test whether our findings are driven by some particular set of countries, and the results are presented in Table 4. We use the same set of neighboring country characteristics in our analysis to compare our findings with the baseline finding, which is in column 4 of Table 3 using the full sample case.

In column 1 of Table 4 we exclude the islands from our analysis to examine whether the definition of closest neighbor for island countries affect our results or not. We find that the effect of the democracy level in neighboring countries increases when compared to the baseline sample. This is something that was expected as the effect of contagious countries on each other would be larger when compared to islands that are relatively secluded from each other.

In column 2 we exclude the European Union countries from the list to examine whether our results might be driven by the membership of the EU, since entry and membership of the EU require convergence in democratic institutions through EU legislation as well as economic convergence through the

TABLE 4 System GMM estimations with different samples

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	No islands	No EU	No euro zone	No OECD	No SSA	No high income
$\ln(FDI\ flows)_{i,t-1}$	0.813*** (0.00724)	0.808*** (0.00750)	0.816*** (0.00717)	0.817*** (0.00781)	0.822*** (0.00719)	0.805*** (0.00850)
$Democracy_{j,t-1}$	0.0372** (0.0175)	0.0379** (0.0169)	0.0391** (0.0178)	0.0337** (0.0165)	0.0368** (0.0179)	0.0366** (0.0176)
$N_Democracy_{j,t-1}$	0.0529** (0.0220)	0.0514** (0.0211)	0.0433** (0.0215)	0.0454** (0.0217)	0.0468** (0.0219)	0.0511** (0.0229)
$\ln(GDP)_{i,t-1}$	0.406*** (0.0215)	0.475*** (0.0244)	0.428*** (0.0222)	0.462*** (0.0261)	0.394*** (0.0234)	0.484*** (0.0271)
$\ln(GDP)_{j,t-1}$	0.390*** (0.0225)	0.414*** (0.0241)	0.392*** (0.0228)	0.422*** (0.0270)	0.348*** (0.0236)	0.428*** (0.0292)
$Conflict_{j,t-1}$	-0.0218 (0.0449)	-0.0128 (0.0440)	-0.0234 (0.0458)	-0.0122 (0.0459)	0.0322 (0.0481)	-0.0145 (0.0449)
$N_Conflict_{j,t-1}$	-0.00498 (0.0161)	-0.0110 (0.0153)	-0.00673 (0.0161)	-0.00895 (0.0156)	0.0106 (0.0154)	-0.00351 (0.0171)
$\ln(N_GDP)_{j,t-1}$	-0.00181 (0.0179)	-0.000729 (0.0167)	0.00415 (0.0162)	0.0149 (0.0181)	-0.0227 (0.0218)	0.00100 (0.0194)
$\ln(Market\ potential)_{i,t-1}$	0.346*** (0.125)	0.647*** (0.191)	0.560*** (0.153)	0.571*** (0.202)	0.662*** (0.125)	0.576*** (0.208)
Observations	26,133	22,808	25,503	19,754	21,865	18,204
Number of pairs	3,615	3,341	3,668	2,889	2,945	2,611
AR(3) (<i>p</i> -value) ^a	.936	.868	.790	.849	.652	.802
Over-identification test (<i>p</i> -value) ^b	.169	.180	.106	.175	.323	.262

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country *i* to host country *j* at time *t*. *Democracy* and *N_Democracy* are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. *Conflict* and *N_Conflict* are the conflict levels in the host and neighboring countries of the host country, respectively. *N_GDP* represents the average GDP of the neighboring countries of the host country. All estimations utilize the system GMM estimation technique and use 3–5 lags for the endogenous variables. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

^aArellano–Bond test that the third-order autocorrelation in residuals is 0. First- second-order autocorrelations are not reported as they are rejected at the 10% significance level.

^bHansen *J*-test for overidentification of restrictions in GMM estimation.

European Structural and Investment Funds.⁹ When the EU countries are excluded from our sample, the coefficients of the democracy level of the host countries and neighboring countries are still positive and statistically significant at the 5% level. In column 3 we exclude the subgroup of EU countries from our sample which are also part of the euro zone. In that case, the democracy levels in the host and neighboring countries remain positive and significant at the 5% level. In column 4 we exclude the OECD countries from the host country group, and the results of our main variable of interest (neighboring democratic institutions) remain significant.

In column 5 we exclude the countries in sub-Saharan Africa (SSA) from our analysis since the neighboring country characteristics have been found to be important for this region (Easterly & Levine, 2000). Furthermore, factors that attract FDI to this region are found to be different compared to other developing countries (Asiedu, 2002), and improvements in institutional quality in this region have fallen behind other developing regions (Asiedu, 2004), even though market access to this region has had a positive effect in recent years (Bosker & Garretsen, 2012). The positive effect of neighboring institutional quality on FDI flows to host countries remains significant after excluding the SSA countries from our analysis.

We exclude the high-income countries from our analysis in column 6.¹⁰ Similarly to the EU case, institutional quality in both host and neighboring countries remains a significant factor, with relatively higher coefficients estimates compared to the baseline ones.

Finally, irrespective of the sample used, coefficients on the lagged FDI, the market size of the source and host country, and host country market potential remain positive and significant at the 1% level.

5.4 | Controlling for additional host country characteristics

We also control for some other characteristics of the host country since they could be correlated with neighbor country characteristics, and their omission could lead to omitted variable bias. For instance, to be part of the EU, countries need to follow the Copenhagen criteria that require ‘stable conditions guaranteeing democracy [and] the rule of law’. This enables countries to trade freely, hence increasing trade, financial integration, and infrastructure integration through the European Structural and Investment Funds Regulations. In other words, the initial conditions to be part of the EU (i.e. institutional, political, and economic requirements) provided a way to promote trade, financial, and structural integration. To control whether the diffusion of institutional quality (i.e. institutional quality levels in the neighboring countries) does not have an effect on FDI flows through these factors, we control for capital account openness, trade openness, and infrastructure levels in the host country. Furthermore, Asiedu and Lien (2011) find that democracy promotes higher FDI flows if and only if a host country has a natural resource rent that is less than a given threshold, and as such, we also control for oil rents of the host country. Table 5 presents the results when we control for capital openness (measured as the updated capital account openness measure of Chinn & Ito, 2006, 2008), trade openness (measured as the total value of exports and imports as a percentage of GDP), infrastructure (measured as the number of telephone lines per 100 people) and oil rents (measured as the value of oil rents as a percentage of GDP) of the host country, which are obtained from World Development Indicators of the World Bank, respectively. Columns 1–4 report the results when we include capital account openness, trade openness, infrastructure level, and oil rents of the host country in the analysis one at a time, respectively. We find that countries that trade more and with better infrastructure also receive relatively higher FDI flows. Finally, column 5 of Table 5 controls for all these factors; now capital openness becomes negative and significant. More importantly, after accounting for additional

TABLE 5 System GMM results with additional host country characteristics

Variables	(1)	(2)	(3)	(4)	(5)
$\ln(FDI\ flows)_{i,t-1}$	0.820*** (0.00678)	0.814*** (0.00693)	0.816*** (0.00670)	0.818*** (0.00659)	0.816*** (0.00666)
$Democracy_{j,t-1}$	0.0390** (0.0190)	0.0427** (0.0202)	0.0367** (0.0176)	0.0487** (0.0202)	0.0395* (0.0202)
$N_Democracy_{j,t-1}$	0.0379* (0.0212)	0.0469** (0.0227)	0.0406* (0.0211)	0.0508** (0.0225)	0.0494** (0.0225)
$\ln(GDP)_{i,t-1}$	0.397*** (0.0206)	0.406*** (0.0208)	0.403*** (0.0206)	0.402*** (0.0209)	0.401*** (0.0207)
$\ln(GDP)_{j,t-1}$	0.380*** (0.0221)	0.404*** (0.0214)	0.335*** (0.0280)	0.359*** (0.0237)	0.361*** (0.0296)
$Conflict_{j,t-1}$	-0.0214 (0.0464)	0.0260 (0.0566)	0.00872 (0.0494)	0.00260 (0.0563)	0.0880 (0.0586)
$N_Conflict_{j,t-1}$	-0.00211 (0.0161)	0.00506 (0.0185)	0.00529 (0.0172)	-0.00214 (0.0177)	0.00399 (0.0185)
$\ln(N_GDP)_{j,t-1}$	0.00581 (0.0169)	-0.0168 (0.0172)	-0.0212 (0.0185)	0.00452 (0.0168)	-0.0322* (0.0190)
$\ln(Market\ potential)_{j,t-1}$	0.472*** (0.123)	0.407*** (0.117)	0.420*** (0.127)	0.516*** (0.109)	0.360*** (0.109)
$Capital\ openness_{j,t-1}$	-0.0825 (0.126)				-0.267*** (0.0952)
$Trade\ openness_{j,t-1}$		0.00483*** (0.000561)			0.00436*** (0.000625)
$\ln(Phones\ per\ 100)_{j,t-1}$			0.148*** (0.0570)		0.144*** (0.0550)
$Oil\ rents_{j,t-1}$				0.00412 (0.00427)	0.00161 (0.00403)
Observations	27,515	27,679	27,851	27,634	26,675
Number of pairs	3,826	3,848	3,873	3,837	3,759
AR(3) (p-value) ^a	.740	.934	.949	.961	.796
Overidentification test (p-value) ^b	.131	.148	.139	.135	.131

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country i to host country j at time t . *Democracy* and *N_Democracy* are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. *Conflict* and *N_Conflict* are the conflict levels in the host and neighboring countries of the host country, respectively. *N_GDP* represents the average GDP of the neighboring countries of host country. All estimations utilize the system GMM estimation technique and uses 3–5 lags for the endogenous variables. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

^aArellano–Bond test that the third-order autocorrelation in residuals is 0. First- and second-order autocorrelations are not reported as they are rejected at the 10% significance level.

^bHansen J -test for overidentification of restrictions in GMM estimation.

host country characteristics, the effects of host country and neighboring countries' institutional settings on FDI flows remain significant.

5.5 | Controlling for alternative institutional quality measures

We have chosen the democracy measure as our main institutional quality measure as it captures various aspects of the institutional setting (see Section 3 for discussion). To control whether our results are robust to additional measures of institutional quality, we further control for, on the one hand, the rule of law and, on the other hand, political stability and absence-of-violence measures from the World Governance Indicators. The former is one of the most common measures used to assess institutional quality, whereas the latter can be considered as an additional control for political stability. Similarly to the previous cases, we use the institutional quality measures (democracy and the rule of law) and civil conflict measures as endogenous variables in our estimations. Table 6 summarizes the results when we include the rule of law in the host country and the rule of law in the neighboring countries in our analysis. We find that the rule of law in the host country does matter for FDI flows as countries with better-functioning legal systems attract relatively higher FDI flows, yet the effect of the rule of law in the neighboring countries is negative and statistically insignificant. We repeat our analysis by including political stability and the absence-of-violence proxy. Our findings for the political stability proxy are similar to those for the rule of law, where higher levels of political stability in the host country attract higher capital flows, yet the political stability proxy in neighboring countries is not significant. The remaining factors are in line with the findings of the previous tables. Moreover, most importantly, the democracy level in both the host country and neighboring countries positively and significantly affects the levels of FDI flows.

5.6 | Results with the use of alternative democracy proxy

We used the democracy index from the Polity IV project as our proxy to measure the quality of democratic institutions of the host and the neighboring countries of the host country. To control whether our results are robust to an alternative proxy of democratic institutions, we use the Varieties of Democracy (V-DEM) indicator of political corruption index. The index is arrived at by taking the average of the public sector corruption index, the executive corruption index, the indicator for legislative corruption and the indicator for judicial corruption (for details, see Coppedge et al., 2020; Pemstein et al., 2020), which could be considered as a measure of political accountability (for examinations of the impact of democratic accountability on FDI flows, see Kolstad & Villanger, 2008; Doytch & Eren, 2012; Bailey, 2018). The political corruption index ranges between 0 and 1, and higher values represent a higher presence of corruption in executive, legislative, and judicial levels. To be consistent with the democracy index of Polity IV, we reverse the measure so that higher values represent lower political corruption.

Table 7 presents the results when we re-estimate the equations of Tables 2 and 3 with the use of the political corruption variable as a proxy for democratic accountability instead of the democracy index from Polity IV. The results reported in columns 1–4 and 5–8 of Table 7 are obtained with the gravity and system GMM models, respectively. With either estimation method, we find that political corruption in the host and the neighboring countries is a significant determinant of the FDI flows to the host country. Furthermore, in all cases, the Hansen test of overidentifying restrictions suggests that we cannot reject the null hypothesis of instrument validity. Overall, we find that the quality of the democratic institutions in the neighboring countries of the host country is a significant determinant of the FDI flows to the host country even after using an alternative proxy for democratic institutions.

TABLE 6 System GMM estimations with additional institutional quality measures

Lags used	Rule of law		Political stability	
	3-5 (1)	3+ (2)	3-5 (3)	3+ (4)
Variables				
$\ln(FDI\ flows)_{i,t-1}$	0.823*** (0.00697)	0.823*** (0.00679)	0.823*** (0.00675)	0.823*** (0.00670)
$Democracy_{j,t-1}$	0.0435*** (0.0157)	0.0328** (0.0135)	0.0273** (0.0136)	0.0254** (0.0124)
$N_Democracy_{j,t-1}$	0.0462** (0.0201)	0.0396** (0.0178)	0.0372** (0.0179)	0.0297* (0.0163)
$\ln(GDP)_{i,t-1}$	0.389*** (0.0205)	0.386*** (0.0202)	0.385*** (0.0202)	0.384*** (0.0201)
$\ln(GDP)_{j,t-1}$	0.337*** (0.0297)	0.318*** (0.0268)	0.347*** (0.0229)	0.342*** (0.0219)
$Conflict_{j,t-1}$	-0.0226 (0.0430)	0.00408 (0.0366)	0.0615 (0.0480)	0.0377 (0.0412)
$N_Conflict_{j,t-1}$	0.00119 (0.0149)	0.000182 (0.0132)	0.000538 (0.0144)	0.00744 (0.0133)
$\ln(N_GDP)_{j,t-1}$	0.0158 (0.0238)	0.00458 (0.0211)	-0.0125 (0.0170)	-0.0126 (0.0163)
$\ln(Market\ potential)_{j,t-1}$	0.798*** (0.136)	0.709*** (0.129)	0.695*** (0.122)	0.659*** (0.117)
$Rule\ of\ law_{j,t-1}$	0.220* (0.115)	0.291*** (0.102)		
$N_Rule\ of\ law_{j,t-1}$	-0.178 (0.178)	-0.122 (0.150)		
$Political\ stability_{j,t-1}$			0.344*** (0.0973)	0.312*** (0.0828)
$N_Political\ stability_{j,t-1}$			-0.0722 (0.126)	0.0263 (0.109)
Observations	26,120	26,120	26,120	26,120
Number of pairs	3,867	3,867	3,867	3,867
AR(3) (p-value) ^a	.999	.999	.997	.997
Over-identification test (p-value) ^b	.060	.120	.101	.189

Notes: The dependent variable is the natural logarithm of the foreign direct investment flows from source country i to host country j at time t . $Democracy$ and $N_Democracy$ are the institutional quality proxies for the host country and neighboring countries of the host country, respectively. $Conflict$ and $N_Conflict$ are the conflict levels in the host and neighboring countries of the host country, respectively. N_GDP represents the average GDP of the neighboring countries of host country. $Rule\ of\ law$ and $N_Rule\ of\ law$ represent the quality of rule of law in host country and neighboring countries of the host country, respectively. $Political\ stability$ and $N_Political\ stability$ represent the quality of political stability in host country and neighboring countries of the host country, respectively. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

^aArellano-Bond test that the third-order autocorrelation in residuals is 0. First- and second-order autocorrelations are not reported as they are rejected at the 10% significance level.

^bHansen J -test for overidentification of restrictions in GMM estimation.

TABLE 7 Gravity and system GMM estimations with the use of the political corruption variable as a democratic accountability proxy

Variables	Gravity model				System GMM			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\ln(FDI\ flows)_{i,t-1}$	0.772*** (0.00725)	0.769*** (0.00732)	0.768*** (0.00727)	0.767*** (0.00735)	0.824*** (0.00615)	0.824*** (0.00618)	0.824*** (0.00629)	0.823*** (0.00635)
$Political\ corruption_{j,t-1}$	0.753*** (0.126)	0.860*** (0.126)	0.824*** (0.124)	0.774*** (0.128)	0.615*** (0.122)	0.684*** (0.109)	0.666*** (0.112)	0.623*** (0.125)
$N_Political\ corruption_{j,t-1}$	0.353** (0.154)	0.308** (0.156)	0.335** (0.148)	0.274* (0.157)	0.299** (0.132)	0.472* (0.245)	0.331** (0.136)	0.278* (0.146)
$\ln(GDP)_{i,t-1}$	0.470*** (0.0225)	0.475*** (0.0227)	0.479*** (0.0225)	0.477*** (0.0227)	0.385*** (0.0194)	0.383*** (0.0194)	0.387*** (0.0244)	0.389*** (0.0249)
$\ln(GDP)_{j,t-1}$	0.450*** (0.0216)	0.446*** (0.0214)	0.465*** (0.0211)	0.476*** (0.0227)	0.352*** (0.0212)	0.362*** (0.0263)	0.347*** (0.0297)	0.370*** (0.0361)
$Conflict_{i,t-1}$	-0.0363** (0.0178)			-0.0373** (0.0180)	-0.0351 (0.0612)			-0.0334 (0.0640)
$N_Conflict_{j,t-1}$	-0.0140** (0.00652)			-0.0207*** (0.00678)	-0.00354 (0.00682)			-0.00440 (0.00684)
$\ln(N_GDP)_{j,t-1}$	0.0190 (0.0168)			0.0262 (0.0166)		-0.0674 (0.0797)		-0.0287 (0.0862)
$\ln(Market\ potential)_{j,t-1}$				0.895*** (0.128)			0.158 (0.794)	0.245 (0.824)
Observations	28,578	28,531	28,796	28,313	28,578	28,313	28,578	28,313
Number of pairs	3,935	3,904	3,935	3,904	3,935	3,904	3,935	3,904
R-squared	.8355	.8345	.8346	.8360				
AR(3) (<i>p</i> -value) ^a					.928	.847	.868	.907
Over-identification test (<i>p</i> -value) ^b					.233	.207	.180	.211

Note: The dependent variable is the natural logarithm of the foreign direct investment flows from source country *i* to host country *j* at time *t*. *Political corruption* and *N_Political corruption* are the political corruption proxies for the host country and neighboring countries of the host country, respectively. *Conflict* and *N_Conflict* are the conflict levels in the host and neighboring countries of the host country, respectively. *N_GDP* represents the average GDP of the neighboring countries of the host country. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

^aArellano–Bond test that the third-order autocorrelation in residuals is 0. First- and second-order autocorrelations are not reported as they are rejected at the 10% significance level.

^bHansen *J*-test for overidentification of restrictions in GMM estimation.

TABLE 8 Possible indirect links between neighboring institutional quality and host country characteristics

<i>Host country characteristics</i>	<i>Democracy (Polity IV) in neighboring countries</i>	<i>Democracy (Political corruption) in neighboring countries</i>	<i>Rule of law in neighboring countries</i>	<i>Political stability in neighboring countries</i>
<i>Democracy (Polity IV)</i>	0.719*** (0.00328)	11.22*** (0.0561)	3.319*** (0.0167)	3.672*** (0.0225)
<i>Democracy (Political corruption)</i>	0.0227*** (0.000194)	0.868*** (0.00233)	0.257*** (0.000779)	0.259*** (0.00106)
<i>Rule of law</i>	0.0706*** (0.000717)	2.956*** (0.00856)	0.902*** (0.00246)	0.894*** (0.00362)
<i>Political stability</i>	0.0707*** (0.000677)	2.330*** (0.00981)	0.676*** (0.00294)	0.784*** (0.00365)
<i>Conflict</i>	-0.0510*** (0.00082)	-1.030*** (0.0154)	-0.278*** (0.00467)	-0.328*** (0.00672)
<i>ln(GDP)</i>	0.101*** (0.00115)	4.052*** (0.0206)	1.279*** (0.00621)	1.210*** (0.00753)
<i>ln(GDP per capita)</i>	0.106*** (0.00109)	4.330*** (0.0126)	1.350*** (0.00396)	1.319*** (0.00553)

Notes: Different host country characteristics are used as dependent variables. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Robust standard errors are reported in parentheses.

5.7 | Possible indirect channels of neighboring institutional quality

We have examined how institutional quality in neighboring countries directly affects FDI flows to host countries. We now examine briefly how neighboring institutional quality might also affect other factors in the host country that are also found to be important in attracting FDI flows to these countries.

Table 8 suggests some possible ways in which institutional quality in neighboring countries (i.e. two proxies of democracy, the rule of law, and political stability in the neighboring countries) might influence some other characteristics of the host country. This table presents regression results that summarize the association between host country characteristics and the institutional quality of the neighboring countries after controlling for year effects.

The significant associations between neighboring institutions and the characteristics of the host country are in line with the existing literature. We find that countries that are surrounded by other countries with good institutions will also have a good institutional setting (see, for example, Kelejian et al., 2013, who show that the rule of law in neighboring countries has a direct effect on the rule of law of the home country after accounting for a variety of control variables). Even though the rule of law and political stability in neighboring countries are not significant in our results, improvements of these in neighboring countries can affect the rule of law and political stability in the host countries, something that, in turn, was found to be important in attracting higher FDI flows. In other words, better rule of law and higher political stability in neighboring countries leads to higher capital flows to host countries via their effect on the host country's institutional setting. Similarly, countries that are surrounded by better democracies tend to be more democratic themselves, suggesting that the democratic neighbors have not only a direct but also an indirect effect on FDI flows to host countries. Moreover, being surrounded by countries with good institutions leads not only to higher institutional quality for a given host country but also to higher levels of economic development—see, for example, seminal papers by Acemoglu, Johnson, and Robinson (2001) and Rodrik et al. (2004) which show that institutional quality is one of the main determinants of long-term economic development. Furthermore, these countries achieve higher development levels since there is a significant correlation between market size (i.e. GDP) and standard of living (i.e. GDP per capita) with neighboring institutions (see, for example, Bosker & Garretsen, 2009, who found that the neighboring institutions have a direct effect on economic development of countries). Furthermore, countries that are surrounded by good institutions experience lower civil conflict and have higher political stability.

Overall, Table 8 summarizes some channels by which the institutional quality of neighboring countries and as well the institutional quality of the host country might play a role in attracting higher levels of FDI. In our analysis, we provided the direct link that democratic institutions of the neighboring countries do indeed matter for the FDI flows to host countries, yet these channels need to be further explored to disentangle how and why institutions matter for attracting capital.

6 | CONCLUSIONS AND DISCUSSION

In this paper we examine whether democratic institutions in neighboring countries matter for FDI flows to host countries. We find that investing countries not only look at the democratic institutions of the host country but also evaluate the democratic institutions in neighboring countries when they decide to invest. In particular, we find that countries that are democratic and surrounded by other democratic countries receive relatively higher FDI flows. Our results were robust to the choice of different estimation techniques (gravity model and system GMM), different samples, and another set of neighboring country characteristics such as the conflict in neighboring countries, market size of

the neighboring countries, and market potential of the host country. We also controlled for alternative measures of institutional quality settings and used an alternative proxy for democratic institutions, and we find that democratic institutions in neighboring countries still matter for FDI flows to host countries. Furthermore, in some specifications, we find that civil conflict in neighboring countries also leads to lower levels of FDI flows to host countries, and countries that are close to relatively larger markets also receive more FDI flows. In all specifications, we also find that host countries that have higher market potential (i.e. if a host country is relatively closer to high-income countries) also receive relatively higher FDI flows. Furthermore, we briefly investigated potential indirect links of neighboring country institutional settings with other factors in the host country. For instance, we find that countries that are surrounded by neighbors that have better institutions tend to have a better institutional setting themselves. In other words, improvements in neighboring institutions also increase the FDI flows to host countries through their effect on a better institutional setting of the host country. Considering both the direct and indirect effects of the democracy level of neighboring countries, its impact on FDI flows is significant in both the short and long term.

Our study provides empirical support for the importance of neighboring country characteristics on the FDI location choice. Even though the institutional theory is one of the most utilized frameworks in this research, its use in empirical work is relatively small (see, for example, Blonigen & Piger, 2014; Nielsen et al., 2017). In this paper our empirical findings show that it is not only the institutional setting of the host countries that matters for the location choice of the FDI but also the institutional setting of the neighboring countries. Therefore, future studies should incorporate neighboring country characteristics into their analysis.

Our results suggest that if neighboring countries act together to improve their institutional quality, FDI flows to these countries will be much higher since not only does improving their institutional quality attracts more FDI inflows but also being surrounded by neighboring countries that have better institutional quality will also lead to higher FDI flows. In other words, regions that are clustered with relatively low institutional quality (or with lower democratic institutions) can attract higher levels of FDI flows by acting together and improving their institutional settings.

We should note that we analyzed FDI flows from the OECD countries to an extensive list of host countries. We found that the OECD countries give importance to the institutional quality setting of the host country and also whether countries are surrounded by other countries with good institutions when investing. However, investments made by emerging and developing countries have become important in recent years. For instance, it has been found that emerging economies have a better willingness to operate in countries that have relatively poor institutions (see, for example, Aleksynska & Havrylchuk, 2013). For example, Chinese outward investments go to countries that have relatively poor institutions (see, for example, Kolstad & Wiig, 2012). Hence, even though a better institutional setting in neighboring countries matters for the OECD countries, it might not do so in the case of emerging economies investing in other countries. As a result, countries that are surrounded by countries with relatively poor institutions might receive relatively lower FDI flows from the OECD countries, but might receive relatively higher investment from emerging markets. This can then lead to divergence in the evolution of institutional settings, depending on the origins of the FDI flows. This is potentially a new research area, which needs to be investigated in the future.

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DATA AVAILABILITY STATEMENT

The data used in this paper is derived from public domain resources. The detailed data sources are given in the Appendix.

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ENDNOTES

- ¹ Note that we discuss only some of the papers that analyze the importance of democracy, political risk, and institutional setting in the host countries, among many other factors that are found to be important, such as the financial openness of a country, institutional distance between source and host country, trade openness, tax levels, and differences in wage levels in two countries—see Blonigen and Piger (2014) and Nielsen, Asmussen, and Weatherall (2017) for a review of literature on determinants of FDI.
- ² The detailed bilateral FDI flows from OECD countries to partner countries can be obtained from https://stats.oecd.org/index.aspx?DataSetCode=FDI_FLOW_PARTNER.
- ³ For instance, Estonia and Slovenia gained their independence in 1991 and both the Czech Republic and Slovakia became independent nations in 1993 after the dissolution of Czechoslovakia.
- ⁴ When a country is an island, we consider the closest country in terms of distance between capital cities of countries. Note that we also repeated our analysis by excluding islands from the sample, and the results are presented in Section 5.
- ⁵ The choice of endogenous variables is in line the recent literature analyzing similar relationships. For instance, Asiedu and Lien (2011) use a similar estimation technique considering democracy as an endogenous variable, whereas, Qureshi (2013) considers conflict in the host and neighboring countries as endogenous variables.
- ⁶ The first two orders of autocorrelation are rejected at the 10% significance level. However, in all cases, the Arellano–Bond test that the third-order autocorrelation in residuals is 0 is not rejected and we used third or higher lags as instrumental variables.
- ⁷ We also included the average GDP per capita levels of neighboring countries in our regressions and found that the coefficient on average GDP per capita of neighboring countries is not significant after controlling for other neighboring country characteristics.
- ⁸ Note that the coefficient estimates are obtained with log-level regressions and the estimated percentage change is calculated as $100(e^{0.0390/(1-0.819)} - 1)$.
- ⁹ We exclude the EU countries from the year that they became a member. We also redo our analysis by only excluding those countries from the sample which were members during the whole period and the results are similar to those reported here; these results are available upon request from the authors.
- ¹⁰ We use the World Bank classification to exclude the high-income countries from the analysis.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the Supporting Information section.

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APPENDIX A

TABLE A1 Countries used in the analysis

Afghanistan	Estonia*	Lebanon	Saudi Arabia
Albania	Ethiopia	Liberia	Senegal
Algeria	Finland*	Libya	Sierra Leone
Angola	France*	Lithuania	Singapore
Argentina	Gabon	Luxembourg*	Slovakia*
Armenia	Gambia	Madagascar	Slovenia*
Australia*	Georgia	Malawi	Somalia
Austria*	Germany*	Malaysia	South Africa
Azerbaijan	Ghana	Mali	Spain*
Bangladesh	Greece*	Mexico*	Sri Lanka
Belarus	Guatemala	Moldova	Sudan
Belgium*	Guinea	Mongolia	Swaziland
Bolivia	Guinea-Bissau	Morocco	Sweden*
Botswana	Guyana	Mozambique	Switzerland*
Brazil	Haiti	Myanmar	Syria
Bulgaria	Honduras	Namibia	Tajikistan
Burkina Faso	Hungary*	Nepal	Tanzania
Cameroon	Iceland*	Netherlands*	Thailand
Canada*	India	New Zealand*	Togo
Central Afr. Rep.	Indonesia	Nicaragua	Trinidad & Tobago
Chad	Iran	Niger	Tunisia
Chile*	Iraq	Nigeria	Turkey*
China	Ireland*	Norway*	Turkmenistan
Colombia	Israel*	Oman	Uganda
Congo, Dem. Rep.	Italy*	Pakistan	Ukraine
Congo, Rep.	Jamaica	Panama	United Arab Emirates
Costa Rica	Japan*	Papua New Guinea	United Kingdom*
Côte d'Ivoire	Jordan	Paraguay	United States*
Croatia	Kazakhstan	Peru	Uruguay
Cyprus	Kenya	Philippines	Uzbekistan
Czech Rep.*	Korea, Dem. Rep.	Poland*	Venezuela
Denmark*	Korea, Rep.*	Portugal*	Vietnam
Dominican Rep.	Kuwait	Qatar	Yemen
Ecuador	Kyrgyzstan	Romania	Zambia
Egypt	Laos	Russia	Zimbabwe
El Salvador	Latvia	Rwanda	

Notes: Countries with * are the OECD countries.

TABLE A2 Variables, definitions and sources

Variable	Definition	Source
Aggregate FDI inflows	Aggregate FDI inflows (measured in U.S. dollars)	World Bank – World development Indicators (WDI)
FDI inflows	Bilateral FDI flows from OECD countries to host countries (measured in U.S. dollars)	OECD. Available via: https://data.oecd.org/
GDP	Gross Domestic Product (in constant 2010 U.S. dollars)	World Bank – WDI
GDP per capita	GDP divided by the population	World Bank – WDI
Population	Country's total population	World Bank – WDI
Land area	Country's total area (measured in km square)	World Bank – WDI
Language	Dummy variable indicating if a language is spoken by at least 9% of the population in source and host countries	Mayer and Zignago (2011)
Colony	Dummy variable indicating whether source and host countries have ever had a colonial link	Mayer and Zignago (2011)
Distance	Distance between most important cities/agglomerations between source and host countries	Mayer and Zignago (2011)
Regional trade agreements	Dummy variable indicating whether a source and host country has a regional trade agreement in a given period or not.	World Trade Organisation. Available via: https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx
Democracy	Polity 2 measure ranges between –10 and + 10, which suggests full autocracy and democracy, respectively.	Polity IV Project, Political Regime Characteristics and Transitions, 1800–2015, Available via: http://www.systemicpeace.org/inscrdata.html
Rule of law	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence, which ranges between –2.5 and + 2.5, where higher score represents better rule of law.	Rule of law component of the World Governance Indicators (Kaufmann et al. 2013) Available via: http://info.worldbank.org/governance/wgi/#home
Political stability and Absence of Violence	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. This measure ranges between –2.5 and + 2.5, where higher score represents higher political stability.	Political stability and absence of violence component of the World Governance Indicators (Kaufmann et al. 2013) Available via: http://info.worldbank.org/governance/wgi/#home

(Continues)

TABLE A2 (Continued)

Variable	Definition	Source
Conflict	Magnitude score of episode(s) of civil violence and warfare, ethnic violence and warfare involving that state in that year.	Center for Systemic Peace (CSP) Major Episodes of Political Violence, 1946–2015, URL: www.systemicpeace.org/warlist.htm
Conflict in neighboring countries	Sum of all societal (civil and ethnic) MEPV magnitude scores for all neighboring countries	Center for Systemic Peace (CSP) Major Episodes of Political Violence, 1946–2015, URL: www.systemicpeace.org/warlist.htm
Capital account openness	A measure of capital account liberalization where the index ranges between 0 and 1, where higher score represents more open capital account. This index is based on IMF's Annual Report on Exchange Arrangements and Exchange Restrictions.	Chinn and Ito (2006, 2008). Updated data available via: http://web.pdx.edu/~ito/Chinn-Ito_website.htm
Trade openness	Total imports and exports of goods divided by GDP, in %	World Bank – WDI
Phone	Fixed telephone subscriptions (per 100 people)	World Bank – WDI
Oil rents/GDP	Oil rents divided by GDP, in %	World Bank – WDI

TABLE A3 Summary statistics

Variable	Mean	Std. Dev.	Min	Max	Obs
ln (FDI flows)	9.46	8.91	0	25.87	38,891
Democracy in host country	4.38	6.27	-10	10	38,198
Democracy in neighbouring countries	3.83	5.44	-10	10	38,599
Rule of law in host country	-0.01	1.07	-2.67	2.00	36,366
Rule of law in neighbouring countries	-0.11	0.89	-1.91	1.98	36,366
Political stability of law in host country	-0.15	1.01	-3.32	1.66	36,366
Political stability in neighbouring countries	-0.22	0.77	-2.13	1.69	36,366
ln(Source country GDP)	26.80	1.57	22.76	30.37	38,891
ln(Host country GDP)	25.12	2.05	19.30	30.37	38,094
ln (Source country population)	16.48	1.55	12.48	19.57	38,891
ln (Host country population)	16.51	1.51	12.48	21.02	38,888
ln (Source land area)	12.05	1.58	7.86	16.03	38,891
ln (Host land area)	12.45	1.79	6.51	16.61	38,891
Common language dummy variable	0.09	0.29	0	1	38,891
Colony dummy variable	0.04	0.20	0	1	38,891
ln (Distance)	8.42	0.99	2.95	9.88	38,891
RTA dummy variable	0.29	0.46	0	1	38,891
Civil conflict in host country	0.51	1.41	0	10	38,599
Civil conflict in neighbouring countries	2.18	3.77	0	29	38,599
ln (Average GDP of neighbouring countries)	25.90	1.78	19.97	30.37	38,526
ln (Market Potential)	17.52	0.25	16.63	17.93	38,891