

# Similarities Attract: Political Regimes and Foreign Direct Investments

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## Abstract

According to a well-established and substantively significant finding in the interna-tional political economy literature, democratic host countries are better able to attract foreign direct investment (FDI). However, I show that the supposed association be-tween democracy and FDI disappears once I control for a selection bias in which FDI tends to originate from democratic home countries. I then provide empirical evidence to support a novel claim that it is not democracy by itself but political similarity be-tween the home and host countries that attracts FDI. Additionally, I suggest a causal explanation for why FDI tends to flow between politically similar countries.

**Keywords:** Political regimes; Foreign Direct Investment; Political economy; UNCTAD

## Introduction

Foreign direct investment (FDI) is widely believed to bring capital, technologies, and man-agerial skills to recipient countries [1]. Furthermore, given its stability, FDI is the "private capital inflow of choice" for many developing countries [2]. Indeed, as Stone [3] recently writes, "when all other forms of development finance-foreign aid, multilateral financing, bank loans, portfolio investment, remittances, resource. I thank Randall Stone for carefully reviewing successive drafts of this paper. I also thank Avidit Acharya, Kevin Clarke, John Duggan, Mark Fey, David Primo, Curtis Signorino, and seminar participants at the University of Rochester for insightful comments. Rents have become suspect, FDI has emerged as the 'good flow' that is generally associated with positive outcomes." FDI is associated with not only good economics but also good politics, namely, democracy. Jensen [4] finds that the more democratic a country is, the better able it is to attract FDI. Several subsequent studies [5-6] also confirm this positive association between democracy and FDI. However, I argue in this paper that the supposed link between FDI and democracy does not actually exist; as a matter of fact, previous studies find that democracy attracts FDI only because they fail to control for selection biases in the sources of FDI. These studies focus exclusively on the demand side of FDI while ignoring the supply side of FDI. Such one-sided analyses likely stem from a simple lack of data needed for a two-sided analysis. Indeed, the two primary sources of data on FDI used to be the United Nations Conference on Trade and Development (UNCTAD) and the Organization for Economic Co-operation and Development (OECD); the former only provides monadic data on the recipients of FDI while the latter provides dyadic FDI data for only developed democracies. Unlike previous studies, I use a new data set from the International Monetary Fund (IMF), which contains dyadic FDI data for 245 countries and territories, democracies as well as non democracies. The most important among the selection biases is one that I term the democratic home bias: FDI tends to originate from democratic home countries. Once I control for this democratic home bias, I find that democracy no longer attracts FDI. Instead, I uncover an alternative mechanism in which FDI tends to flow between politically similar countries. It is this underlying mechanism that explains why the lack of control for the democratic home bias leads previous studies to stumble upon a spurious association between host countries' levels of democracy and their FDI inflows. If FDI tends to come from democratic home countries, and if FDI tends to flow between countries with similar regime types, then FDI tends to indubitably go to democratic host countries. To sum it up, I argue that democracy. Following existing convention, I refer to providers of FDI as home countries and recipients of FDI as host countries. by itself does not attract FDI, political similarity does. This paper proceeds as follows. In the theoretical section, I provide two causal explanations for why political similarity attracts FDI. I first present a macro-level explanation which says that FDI tends to flow between politically similar countries because these countries have similar legal environments. This explanation, however, relies on a partial equilibrium in which environmental factors drive the outcomes, yet the main actors-multinational corporations (MNCs) do not respond optimally to these environmental factors. To deal with this issue, I then provide a micro level model that explicitly takes into account MNCs' preferences and strategies. This model yields a surprising result in which MNCs from nondemocratic home countries are less likely to invest in democratic host countries although they face less uncertain investment gambles than MNCs from democratic home countries do. In the subsequent section, I provide evidence to support the empirical implication of the micro-level model presented in the theoretical section, which says that FDI tends to flow between countries with similar regime types. I use a Heckman two-stage model to show that previous studies find an association between democracy and FDI only because they fail to control for a selection bias in which FDI tends to originate from democratic home countries. Once I control for this democratic home bias, I find that it is not democracy but political similarity that attracts FDI. All of my empirical results also pass a number of robustness checks. Finally, the concluding section discusses the implications of the findings and potential venues for future research.

## Theory

In this section, I first provide a macro-level explanation which says that FDI tends to flow between politically similar countries because these countries have similar legal environments. This explanation, however, relies on a partial equilibrium in which environmental factors drive the outcomes, yet the main actors–MNCs–do not respond optimally to these environ-mental factors. To deal with this issue,

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I then provide a micro-level model that explicitly takes into account MNCs' preferences and strategies. This model yields a surprising result in which MNCs from nondemocratic home countries are less likely to invest in democratic host countries although they face less uncertain investment gambles than MNCs from democratic home countries do.

## Macro-level theory

A plausible explanation for why FDI tends to flow between politically similar countries is that these countries have similar legal environments, which means MNCs can enjoy some measures of operational familiarity when they invest in host countries that are politically similar to their home countries [7]. Such familiarity gives way to inexperience when the destinations of investment are politically dissimilar host countries instead.

On the one hand, MNCs from democratic home countries may find it difficult to function in nondemocratic host countries where extralegal practices are sometimes the norm. On the other hand, MNCs from nondemocratic home countries may be reluctant to undertake large-scale operations in democratic host countries due to their lack of experience functioning in more transparent legal environments. Even when MNCs from democratic home countries can learn how to effectively carry out underhand dealings host in nondemocratic countries, they still do not have the complete freedom to apply that expertise because of anti-bribery laws imposed by the MNCs' home governments. For instance, the U.S. government's Foreign Corrupt Practices Act (FCPA) explicitly prohibits American MNCs from bribing foreign officials. In the four years leading up to 2012, 58 companies have paid a total of \$3.74 billion in fines [8] which suggests that the FCPA is an anti-bribery measure with real teeth. Other OECD countries also have anti-bribery laws for their own MNCs, two examples of such laws are the United Kingdom's Bribery Act and Canada's Corruption of Foreign Public Officials Act. On a wider scale, all OECD countries have acceded to the OECD Anti-Bribery Convention which requires OECD members to enact and implement anti-bribery measures.

An OECD country's anti-bribery law applies not only to its own MNCs but sometimes foreign MNCs issuing financial securities in that country as well. For example, the U.S. government has used the FCPA against a number of non-American MNCs that are listed on the New York Stock Exchange. As of 2012, the targets of nine out of ten largest FCPA fines are MNCs headquartered in other countries, including France, Germany, Hungary, Italy, Japan, Netherlands, Switzerland, and the United Kingdom [9]. Before these European and Japanese MNCs attempt to bribe foreign officials in some developing countries again, they will have to worry about facing punishments not only from their own governments but from the U.S. government as well. MNCs from nondemocratic home countries also face significant hurdles when investing in democratic host countries with legal constraints that they cannot satisfy. For example, the U.S. Securities and Exchange Commission has investigated and delisted a number of Chinese corporations due to reverse takeover, an opaque practice that is prone to fraud. However, from a Chinese company's point of view, American legal requirements can be so stringent that a reverse takeover is the only way it could list in the U.S. [10]. Even if MNCs from nondemocratic home countries are able to satisfy all legal requirements, sometimes they still face significant political opposition when making investments in democratic host countries. The failed attempts by China National Offshore Oil Corporation to buy out Union Oil Company of California in 2005 and by DP World of the United Arab Emirates to acquire six port facilities in America both due to congressional delays are only the two most public cases among others. Despite the fact that no law

was broken, there was the perception that the acquisitions could pose security threats to the U.S. partly because these foreign companies came from nondemocratic home countries. The macro-level theory elaborated here specifies the environmental factors that induce FDI to flow between politically similar countries, but it underemphasizes MNCs' possible responses to these environmental factors. In principle, powerful MNCs from democratic home countries can lobby against anti-bribery laws that put them at a significant disadvantage visa`-vis MNCs from nondemocratic home countries. The lawmakers from democratic home countries should also be amenable to such lobbying efforts in order to promote their countries' commercial interests abroad [11]. MNCs from nondemocratic countries can learn how to function in more stringent legal environments if it is necessary and profitable for them to do so. Therefore, the macro-level theory appears to rely on a partial equilibrium in which environmental factors drive the outcomes, yet the main actors-MNCs-do not respond optimally to these environmental factors. A more powerful theory should be able to explain why political similarity attracts FDI with a general equilibrium. It is to this task that I turn next.

#### Micro-level theory

In this section, I present a micro-level model that explicitly takes into account MNCs' preferences and strategies. I use a static game of incomplete information because a sequential setup is not needed to explain the phenomenon of interest [12]. Incomplete information is both necessary and realistic, however. The solution concept is Bayesian Nash equilibrium, introduced by Harsanyi [2]. The two actors in the model are  $F_1$  and  $F_2$  which, respectively, stand for "Firm 1" and "Firm 2." Without loss of generality,  $F_1$  is an MNC from a democratic home country, and  $F_2$  is an MNC from a nondemocratic home country. For simplicity, there are only two destinations for foreign investments, a democratic host country and a nondemocratic one. Each firm chooses to invest in the democratic host country (action D) or the nondemocratic host country (action N) [6,12]. If democratic host countries are more desirable investment destinations (as previous studies argue, see text for further elaboration), and if MNCs from democratic home countries have a first-mover advantage over MNCs from nondemocratic home countries (as is the case in reality due to historical reasons), then it is trivial to show why MNCs from democratic/nondemocratic home countries tend to invest in democratic/nondemocratic host countries. To avoid confusion between the home and host countries, the reader may think of  $F_1$  as an MNC from the model makes two main assumptions regarding the desirability of each investment destination and the nature of each firm. First, other things being equal, both firms find it more desirable to invest in the democratic host country than to invest in the nondemocratic host country. Second, if the two firms invest and compete in the same host country, the resultant competition poses a more uncertain gamble for  $F_1$  than for  $F_2$ .

The first assumption is based on previous studies in the literature arguing that MNCs face more political and contractual risks in nondemocratic host countries than in democratic host countries. Vernon [13] is the first seminal work that introduces the concept of "the obsolescing bargain," in which host governments make "a series of self-denying commitments" in their negotiations with MNCs and thus have incentives to subsequently renege on these commitments as soon as "the signatures have dried on the document." Jensen [14] finds that MNCs face lower levels of political risk in democratic host countries because these countries place more stringent constraints on their executives. In addition to political risks, MNCs also have to deal with contractual risks, the possibilities that their local business partners in the host countries may take advantage of them. When both contractual

risks and political risks are present, the former are magnified as the latter increase [15]. All in all, MNCs find investing in nondemocratic host countries less desirable than investing in democratic host countries due to political as well as contractual risks. The second assumption is based on the observation that MNCs from democratic home countries tend to be private corporations, whereas MNCs from nondemocratic home countries are often state-owned enterprises (SOEs). On the one hand, when investments go sour, private corporations usually have to bear the consequences on their own while SOEs can rely on government backstops. This difference is particularly stark when it comes to foreign investments because nondemocratic home countries often treat SOEs as arms of the government and foreign investments as instruments of the state. Consequently, the ultimate goals of foreign investments may be political rather than economic [12] and the United States,  $F_2$  as an MNC from China, action D as investing in Denmark, and action N as investing in Nigeria. MNCs undertaking such investments face fewer downside risks. On the other hand, when investments go well, private corporations can enjoy the full fruits of their labor, whereas SOEs are obligated to contribute part of their profits to the state coffers. As a result of these two differences, MNCs from democratic home countries stand to lose more than MNCs from nondemocratic home countries when investments go sour but gain more when things go well. In other words, the former face more uncertain investment gambles than the latter do. Let the monopoly [9] profits from investing in the democratic host country and nondemocratic host country be positive  $\Pi_D$  and  $\Pi_N$ , respectively, with  $\Pi_D > \Pi_N$  in accordance with the first assumption. If the firms invest in different host countries, then there is no competition, and each firm takes the full monopoly profit from investing in its host country. That is, for  $i \in \{1, 2\}$ , if  $F_i$  plays D and  $F_{-i}$  plays N, then  $F_i$ 's pay off is  $\Pi_{D}$  and  $F_{-i}$ 's payoff is  $\Pi_{N}$ . However, if the firms invest in the same host country, each firm only gets an oligopolistic fraction of the monopoly profit. Therefore, if both firms choose the same action  $j \in \{D, d\}$ *N*}, then  $F_i$ 's payoff is  $f_i \Pi_i$  with  $f_i \in (0, 1)$  [5].

The fractions  $f_i$ 's are private information<sup>6</sup> with uniformly distributed priors:  $f_1 \sim U(0, 1), f_2 \sim U(1-)$ . The distribution of  $f_1$  is a mean-preserving spread of the distribution of  $f_2$ , and the latter secondorder stochastically dominates the former [16] in accordance with the second assumption. The positive constant  $\in (0, \frac{1}{2})$  indicates how preferable  $F_2$ 's investment gamble is relative to  $F_1$ 's investment gamble [9]. I use the term "monopoly" here and "oligopoly" subsequently because, in the context of this two-firm model, a market with only one firm makes a monopoly, and a market with two firms makes an oligopoly. However, the model does not rely on a monopolistic/ oligopolistic structure, and I do not make any assumption about it. The model only assumes that, other things being equal, a firm makes more profit when it faces less competition [5,17]. The proposition can be proved for any general (a, b) with  $0 \le a < b \le 1$ . However, I normalize to (0,1) to simplify the algebra and save space. The firm from the democratic home country does not know how much government support the firm from the nondemocratic home country will receive, and the latter does not know how competitive the former will be [16]. I make the standard assumption that the actors are expected utility maximizers with concave utility functions, so they prefer less uncertain gambles.

#### proposition

Let  $P^* \in (0, 1)$  and  $Q^* \in (0, 1)$  be the probabilities that  $F_1$  and  $F_2$ , respectively, choose *D* in equilibrium. For all parameter values,  $P^*$  is strictly greater than  $Q^*$ .

Proof: Appendix A.

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The proposition says that the firm from the democratic home country is always more likely than the firm from the nondemocratic home country to invest in the democratic host country. Equivalently, the latter is always more likely than the former to invest in the nondemocratic host country. Moreover, the more profitable it is to invest in the democratic host country (i.e., larger  $\Pi_{\rm p}$ ) and/or the less profitable it is to invest in the nondemocratic host country (i.e., smaller  $\Pi_{y}$ ), the larger the difference in probabilities of investing in the democratic host country,  $P^* - Q^*$ , is. The reason why the firm from the nondemocratic home country is less likely to invest in the democratic host country is counterintuitive: It faces a less uncertain investment gamble [18]. To see why, consider the firms' decisions whether to invest in the democratic host country or the nondemocratic host country. Each firm  $F_i$  invests in the democratic host country if its oligopolistic profit fraction  $f_i$  is high enough. Specifically,  $F_1$  chooses D if  $f_1 \ge [Q\Pi_N (1-Q)\Pi_{D}/[Q\Pi_{D}-(1-Q)\Pi_{N}]$ , and  $F_{2}$  chooses D if  $f_{2} \ge [P\Pi_{N}-(1-P)\Pi_{D}]/(1-P)\Pi_{D}$  $[P \prod_{D} - (1-P) \prod_{N}]$ . Let's suppose that the two firms are equally likely to invest in the democratic host country and show why this situation cannot hold in equilibrium. If P=Q, then  $f_1$  and  $f_2$  have to exceed the same threshold for  $F_1$  and  $F_2$  to choose D. However, since  $f_1 \sim U(0, 1)$  and  $f_2 \sim U(1-)$  with >0, the probability that  $f_1$  exceeds a certain threshold is strictly greater than the probability that  $f_2$  exceeds the same threshold, which means P must be strictly greater than Q. The crucial thing to note here is that a less uncertain gamble P and Q are the probabilities that firm 1 and firm 2 invest in the democratic country, respectively, as defined in the proof. An analogous process of reasoning shows that the situation in which  $F_1$  is more likely to play N and  $F_2$  is more likely to play D cannot hold in equilibrium either [7,15]. The weak-inequality form of this statement does not depend on the uniform distribution. It is true for any general distribution if the distribution of  $f_{1}$  secondorder stochastically dominates the distribution of  $f_1$  involves not only less downside risk but also less upside reward. Finally, P>Q implies [P  $\Pi_{N} - (1 - P)\Pi_{D}] / [P \Pi_{D} - (1 - P)\Pi_{N}] > [Q\Pi_{N} - (1 - Q)\Pi_{D}] / [Q\Pi_{D} - (1 - Q)$  $(1 - Q)\Pi_N$ ], which in turn implies that  $f_1$ 's threshold is lower than  $f_2$ 's threshold, reinforcing P>Q. This new situation is internally consistent and holds in equilibrium. To sum it up, the theoretical argument for why FDI tends to flow between politically similar countries can be loosely stated as follows. The firm from the nondemocratic home country  $(F_{2})$  reasons that although investing in the democratic host country may be more profitable, it will have to give up a chunk of the profit to the state coffer due to the fact that it is an SOE, whereas the other firm can keep all of its profit. Recognizing  $F_2$ 's reasoning process, the firm from the democratic home country  $(F_1)$  reasons that it stands to benefit from investing in the democratic host country not only because it can win big there but also because it can crowd the other firm out of the democratic market and thereby avoid unwanted competition. Finally,  $F_1$ 's reasoning process confirms the validity of  $F_2$ 's reasoning process and vice versa. Since neither firm has an incentive to deviate, the situation in which  $F_1$  invests in the democratic host country and  $F_2$ invests in the nondemocratic host country constitutes an equilibrium.

#### Empirics

In this section, I provide evidence to support the empirical implication of the model in the previous section, which says that FDI tends to flow between countries with similar regime types. I show that previous studies find an association between democracy and FDI only because they fail to control for a selection bias in which FDI tends to originate from democratic home countries. Once I control for this democratic home bias, I find that democracy by itself does not attract FDI, political similarity does. In sum, this section provides an empirical test of the following hypothesis in accordance with the second assumption.

## Hypothesis

FDI tends to originate from more democratic home countries and to flow between countries with more similar regime types. It is not democracy but political similarity that attracts FDI.

# Specification and Data

I use a Heckman two-stage model to correct for selection biases in the origin of FDI because the sample of home countries from which FDI originates is not randomly selected. First, larger economies are more likely to be the sources of FDI. Second, FDI is more likely to come from wealthier countries. Neither of these selection biases is surprising. More importantly, FDI tends to originate from democratic home countries, thus studies that do not correct for this democratic home bias may find a spurious association between democracy and FDI for the following reason. If FDI tends to come from democratic home countries, and if FDI tends to flow between countries with similar regime types, then FDI tends to indubitably go to democratic host countries. However, the underlying mechanism here is that it is not democracy but political similarity that attracts FDI. We cannot recover this true causal relationship without a Heckman selection model. The response variable is the log of the FDI position a home country holds in a host country. The data come from the IMF's Coordinated Direct Investment Survey (CDIS) which contains dyadic FDI positions of 245 countries and territories in 2009 and 2010. I perform a cross-sectional analysis of all countries in both years together. As a robustness check, I also conduct a separate analysis for each year (Table 1) [1,4]. Indeed, the use of a Heckman selection model is crucial because when I run an OLS regression as previous studies do, I find similar results despite working with a different data set. In other words, it is not the different data set that drives the different results. The new data set I use is only important to the extent that, without its dyadic FDI data, one cannot run a Heckman selection model as this paper does. To deal with the nonexistence of the natural log of zero, I follow the standard procedure of adding one to each FDI value before taking the log [13]. The CDIS contains an Inward Direct Investment series as well as an Outward Direct Investment series. By definition, country A's outward direct investment in country B equals country B's inward direct investment from country A, thus these two series complement each other in theory. In reality, some discrepancies exist due to differences in reporting methodologies across countries. Unless otherwise noted, I use the averages of data from the two series when encountering discrepancies. As a robustness check, I conduct a separate analysis for each series (Table 1). The main explanatory variable of interest is Political Similarity which measures how similar a home country's regime type is to a host country's regime type. I operationalize Political Similarity by the opposite of the absolute difference between two countries' Polity scores [14]. Larger values of Political Similarity indicate more politically

Model	Description	Host Democracy	<b>Political Similarity</b>
R1	Inward FDI	-0.057*	0.087**
R2	Outward FDI	-0.044***	0.118**
R3	2009	-0.033***	0.070***
R4	2010	-0.050***	0.105***
R5	Recategorization of regimes	-0.296**	0.568***
R6	Home Economic Growth	-0.037***	0.080***
R7	Home WTO Membership	-0.039***	0.080***
R8	Economic Growth Differential	-0.021***	0.073***

\* $p \le 0.1$ , \*\* $p \le 0.05$ , \*\*\* $p \le 0.01$ 

similar countries, thus a statistically significant and positive coefficient for Political Similarity would be evidence in support of my hypothesis. I include Home Democracy (i.e., a home country's level of democracy) and Host Democracy (i.e., a host country's level of democracy) in the selection equation and the outcome equation, respectively. Some previous studies [4,17] find a positive association between Host Democracy and FDI. However, these studies do not actually show that democratic host countries attract more FDI. Instead, the association between Host Democracy and FDI is merely a byproduct of the fact that democratic home countries tend to be major sources of FDI and that political similarity attracts FDI. A statistically significant and positive coefficient for Home Democracy in the selection equation would be evidence to support my hypothesis. For the variable Host Democracy in the outcome equation, a statistically insignificant coefficient would be weak evidence, but a statistically significant and negative coefficient would be strong evidence in support of my hypothesis. I use a standard set of control variables in the outcome equation including Host Economic Size, Host Economic Development, Host Economic Growth, Host WTO Membership, and BIT. Host Economic Size is the log of a host country's GDP, and Host Economic Development is the log of a host country's GDP per capita. Host Economic Growth is a host country's annual percentage growth rate of GDP. Host WTO Membership is a dummy variable that indicates whether a host country is a member of the World Trade Organization (WTO) [14,18]. As a robustness check, I use a three-part categorization of autocratic countries (-10 to -6), mixed countries (-5 to +5), and democratic countries (+6 to +10), using Polity scores from the Polity IV data set (Table 1). I operationalize both variables by the Polity IV scores. GDP and GDP per capita data come from the IMF's World Economic Outlook Databases. GDP growth data come from the World Bank's World Development Indicators. I take the list of WTO members from the WTO's website. Finally, BIT is a dummy variable that indicates whether there is a bilateral investment treaty (BIT) between a home country and a host country. Beside Home Democracy, I include Home Economic Size and Home Economic Development in the selection equation. As mentioned before, it should come as no surprise if FDI tends to originate from larger and wealthier economies. One can also make an argument for including Home Economic Growth and Home WTO Membership in the selection equation as well, but they are not as clearly warranted as Home Economic Size and Home Economic Development [19]. Nevertheless, I still provide robustness checks with Home Economic Growth and Home WTO Membership in the selection equation (Table 2). The descriptive statistics can be found in the appendix. All explanatory variables are lagged one year to alleviate concerns of endogeneity. The Heckman two-stage model I run is the following.

FDI Propensity<sub>i</sub> = 
$$\gamma \omega_i + u_i$$
  
FDI Selection<sub>i</sub> =  $\begin{cases} 1 \text{ if FDI Pr opensity_i} > 0 \\ 2 \text{ if FDI Pr opensity_i} > 0 \end{cases}$   
Log FDIi =  $\begin{cases} \beta x_i + \varepsilon_i & \text{if FDI Selection_i} = 1 \\ Unobserved & \text{if FDI Selection_i} = 1 \end{cases}$   
 $\begin{pmatrix} u_i \\ \varepsilon_i \end{pmatrix} = N \left( \begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{pmatrix} 1 & \rho \sigma \\ \rho \sigma & \sigma^2 \end{pmatrix} \right)$   
where  $\omega_i = \begin{bmatrix} Home Democracy \\ Home Economic Size \\ Home Economic Development \end{bmatrix}$  and  $\mathbf{x}_i$ 

	Model 1	Model 2	Model 3
Selection Equation			
Home Democracy	0.036***	0.027***	0.025***
	-0.002	-0.002	-0.002
Home Economic Size	0.349***	0.349***	0.349***
	-0.008	-0.008	-0.008
Home Economic Development	0.223	0.229***	0.230***
	-0.01	-0.01	-0.01
Constant	-4.601***	-4.622***	-4.620***
	-0.059	-0.06	-0.06
Outcome Equation			
Host Democracy	-0.001		-0.040***
	-0.004		-0.004
Political Similarity		0.068***	0.082***
		-0.003	-0.00
Host Economic Size	0.310***	0.314***	0.305***
	-0.011	-0.011	-0.011
Host Economic Development	0.172***	0.168***	0.214***
	-0.017	-0.017	-0.017
Host Economic Growth	-0.002	0.005	-0.003
	-0.004	-0.004	-0.004
Host WTO Membership	0.312***	0.117**	0.351***
	-0.062	-0.056	-0.061
BIT	1.165***	1.169***	1.153***
	-0.041	-0.041	-0.04
Constant	-3.317***	-2.755***	-2.947***
	-0.136	-0.133	-0.134
Parameters			
Inverse Mill's Ratio	-2.363***	-2.305***	-2.289***
	-0.023	-0.023	-0.023
ρ	-0.861	-0.854	-0.851
σ	2.745	2.7	2.69
Ν	22,789	22,789	22,789

\*p ≤ 0.1, \*\*p ≤ 0.05, \*\*\*p ≤ 0.01

Table 2: Estimated Coeffcients and Parameters.

Home Democracy
Political Similarity
Host Economic Development
Host Economic Growth
Host WTO Membership
BIT

All explanatory variables in the selection stage are "home" variables because this stage concerns whether a home country sends any FDI abroad at all. FDI Selection takes on the value of 1 as long as the amount of FDI is not zero. In other words, whether a home country sends billions of dollars to dozens of different host countries or only one million dollars to one host country is immaterial here. As such, the selection stage depends entirely on the characteristics of the home country, not of the host country. The reason why the "home variables" do not appear in the outcome equation is to satisfy the exclusion restriction in various models. Theoretically, it is hard to think of a variable that affects FDI selection but not FDI amount. If something leads a country to send any FDI abroad at all, it should also affect how much FDI that country is sending. Empirically, however, when the "home variables" are included in the outcome equation of each model in the subsequent sections, at least one is statistically insignificant in the outcome equation but significant in the selection equation. In other words, the exclusion restriction is empirically satisfied because there is always at least one variable that affects selection but not outcome. Moreover, the same substantive results hold regardless of whether the home variables are included in the outcome equation.

Although there is always at least one such variable, it is not always the same variable.

## **Results and Discussion**

Table 1 provides estimates from three models with Host Democracy included in the first, Political Similarity included in the second, and both variables included in the third. In short, the results support the main argument of this paper. Furthermore, the statistically significant inverse Mill's ratio suggests that selection biases do exist. Finally, all results are robust to clustering on the home countries in the selection equation, on the host countries in the outcome equation, and two-way clustering (Tabel 3). The coefficient for Home Democracy in the selection equation is statistically significant and positive, which confirms that FDI tends to originate from more democratic home countries. Additionally, as expected, larger and wealthier economies are also significantly more likely to be the sources of FDI. Studies that do not control for these selection biases are one-sided because they ignore the supply side of FDI. Such one-sided analyses may not bias the final estimates if selection biases either do not exist or are not significant. However, as I show here, selection biases do exist and are significant. In the outcome equation, the coefficient for Host Democracy is either statistically insignificant (Model 1) or statistically significant with the "wrong" sign (Model 3). Previous studies find a positive association between a host country's level of democracy and its FDI inflow because they do not control for selection biases. Simply controlling for selection biases as I do in Model 1 takes away the statistical significance of this association. Additionally, once the level of political similarity between the home and host countries is taken into account, the coefficient for Host Democracy becomes statistically significant and negative, which provides strong evidence against the claim that democracy attracts FDI. Political Similarity has a statistically significant and positive effect on FDI when it is included in Model 2 and Model 3, giving us the final piece of the puzzle. The fact that Host Democracy becomes insignificant once the democratic home bias is accounted for already implies that FDI is likely to flow from democratic home countries to democratic host countries. The significant and positive coefficient for Political Similarity simply confirms that FDI indeed flows between politically similar countries. Except for Host Economic Growth, all other variables in the outcome equation have statistically significant coefficients with the expected signs. Host Economic Size has positive effect on FDI because, unsurprisingly, larger economies attract more FDI. The coefficients for Host WTO Membership and BIT are statistically significant and positive, which is consistent with past findings. Regarding Host Economic Development, previous studies are not unanimous on the effect of this variable on FDI. For instance, Jensen [4] finds that, depending on the statistical specification, a host country's level of economic development may have positive as well as negative effects on its FDI inflows. B"uthe and Milner [6] find both statistically significant and insignificant coeffcients for Host Economic Development. However, a host country's level of economic development has a statistically significant and positive effect on its FDI inflow in all three of my models. Contrary to previous findings that faster growing host countries attract more FDI, I find the coeffcient on Host Economic Growth to be statistically insignificant. A key difference between this study and previous studies is that this study takes into account both the supply side and the demand side of FDI, whereas

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One standard deviation increase in the leads to the following percentage following explanatory variable change of a standard deviation of Log FDI				
Host Democracy***	(-11.4%, -7.5%)			
Political Similarity***	(16.0%,19.0%)			
Host Economic Size***	(25.1%,28.9%)			
Host Economic Development***	(10.4%,14.3%)			
Host Economic Growth	(-1.9%, 0.8%)			
Host WTO Membership***	(4.2%,8.5%)			
BIT···	(11.7%,13.4%)			

 $p \le 0.1, p \le 0.05, p \le 0.01$ 

Table 3: Estimated Effect Sizes (95% Confidence Intervals).

previous studies ignore the supply side. Accordingly, the monadic data used in previous studies are host countries' total FDI inflows while the dyadic data used in this study are FDI positions that individual home countries hold in individual host countries. Therefore, perhaps a monadic variable such as Host Economic Growth is not appropriate for a dyadic study such as this. Indeed, when I replace this variable by Economic Growth Differential defined as Host Economic Growth minus Home Economic Growth in one of the robustness checks, I find a statistically significant and positive coefficient. That is, how fast a host country is growing relative to a home country has a positive effect on how much FDI flows from the latter to the former. Table 3 provides the effect sizes estimated from Model 3 which is my benchmark model. The left column lists all explanatory variables in the outcome equation. Each corresponding pair of values in the right column gives the 95% confidence interval estimate of the effect that one standard deviation increase in the left column's variable has on Log FDI. I report the effect sizes in terms of percentages of a standard deviation of the response variable to facilitate comparison across explanatory variables. Judging by the end points of the confidence intervals, Political Similarity has a stronger effect on FDI than all other explanatory variables except for Host Economic Size. Loosely speaking, the best a host country can do to increase its FDI inflow is to grow its economy, which is little more than a tautological statement that is neither a novel academic finding nor an actionable policy prescription. Short of that, the country's best strategy is to become more politically similar to the home countries that are its most significant sources of FDI.

Table 3 provides the coefficient estimates for Host Democracy and Political Similarity in the eight robustness checks previously mentioned in Section 3. Models R1 and R2 are separate analyses of the Inward Direct Investment and Outward Direct Investment data series. Models R3 and R4 are separate analyses of the years 2009 and 2010. In Model R5, I use a three-part categorization of regime types. Models R6 and R7 include in the selection equation Home Economic Growth and Home WTO Membership, respectively. Finally, Model R8 replaces Host Economic Growth by Economic Growth Differential in the outcome equation. In short, the results of this paper survive all of the robustness checks. The coefficient for Host Democracy is statistically significant with the "wrong" sign in all eight models. Political Similarity has a statistically significant and positive effect on FDI in all eight models. Finally, Political Similarity remains the explanatory variable with the second largest effect size behind Host Economic Size in all eight models.

## Conclusion

The main argument of this paper is that it is not democracy but political similarity that attracts FDI. I show that previous studies find an association between democracy and FDI only because they fail to control for a selection bias in which FDI tends to originate from democratic home countries [19]. If FDI tends to come from democratic home countries, and if FDI tends to flow between countries with similar regime types, then FDI tends to indubitably go to democratic host countries. Controlling for the democratic home bias eliminates the association between democracy and FDI. In addition to empirical evidence, I also provide a theoretical explanation for why political similarity attracts FDI. What is lacking from this paper is a causal argument for why FDI tends to originate from democratic home countries. Although I provide empirical evidence to support this claim, I do not investigate the underlying mechanism behind it. Therefore, this question provides a potential venue for future research.

My findings suggest that whenever we investigate international flows-whether FDI, trade, or aid-we need to pay attention to the origins as well as the destinations of the flows, and we should consider important variables that relate the origins to the destinations. In the case of FDI, the key dyadic variable I find is the level of political similarity between the home and host countries. Other dyadic variables may matter in other cases. The estimated effect sizes, not shown here due to space constraint, are available upon request. In terms of policy, this paper's findings suggest that perhaps a curb on our enthusiasm for FDI is in order. If nondemocratic countries such as China and Russia continue to raise their profiles as international investors, nondemocratic governments in Africa, Asia, Eastern Europe, and the Middle East will feel increasingly secure in power since they can rely on steady investment flows from their nondemocratic friends and patrons. As a result, these nondemocratic governments will face fewer pressures to reform and democratize.

## **Appendix A: Proof of Proposition**

Fix an arbitrary strategy  $s_2$  for  $F_2$  and let the probability that  $F_2$ chooses D under  $s_2$  be  $Q = Prob[c_2 | s_2(c_2) = D]$  Given Q,  $F_1$ 's expected utility from choosing  $DisEU_1(D) = Qf_1\Pi_D + (1-Q)\Pi_D$ , and its expected utility from choosing  $NisQ\Pi_N + (1-Q)f_1\Pi_N$ . Given these expected utilities,  $F_1$  chooses D if  $EU_1(D) \ge EU_1(N) = EU_1(D) \ge EU_1(N)$ , or equivalently,  $f_1 \ge [Q_N - (1 - Q)_D] / [Q_D - (1 - Q)_N]$ . Analogously, fix an arbitrary strategy  $s_1$  for  $F_1$  and let the probability that  $F_1$  chooses D be  $P = Prob[c_1 | s_1(c_1) = D]$ . Similarly to  $F_1, F_2$  also calculates its expected utilities and chooses *D* if  $f_2 \ge \left\lceil P\Pi_N - (1-P)\Pi_D \right\rceil / \left\lceil P\Pi_D - (1-P)\Pi_N \right\rceil$ . Define equilibrium cut-points  $f_1^* = [Q^*\Pi_N - (1 - Q^*)\Pi_D]/[Q^*\Pi_D - (1 - Q^*)\Pi_N]$  and  $f_2^* = [P^* \Pi_N - (1 - P^*) \Pi_D] / [P^* \Pi_D - (1 - P^*) \Pi_N].$ Given the uniform distributions of  $f_1$  and  $f_2$ , the equilibrium probability that  $F_1$  chooses D is  $P^* = Prob(f_1 | f_1 \ge f_1^*) = 1 - f_1^* = [\Pi_D - \Pi_N] / [Q^*\Pi_D - (1 - Q^*)\Pi_N],$ and the equilibrium probability that  $F_2$  chooses D is

$$\begin{split} & Q^* = Prob(f_2 \mid f_2 \geq f_2^{*}) = [1 - -f_2^{*}]/[1 - 2] = \{P^* \Big[ (1 -) \Pi_D - \Pi_N \Big] + \\ & (1 - P^*)[\Pi_D - (1 -) \Pi_N ] \} / \{ (1 - 2) \Big[ P^* \Pi_D - (1 - P^*) \Pi_N ] \} . \\ & \text{We can use the last two equations to solve for the equilibrium probabilities and find that the difference } P^* - Q^* \text{ is:} \end{split}$$

 $\begin{array}{l} \sqrt{\left\{2 \, \Pi_{D}^{2} + (4-7) \Pi_{D} \Pi_{N} + (5-3) \Pi_{N}^{2} - 4 \Pi_{N} (1-2) \left(\Pi_{D} + \Pi_{N}\right) (\Pi_{D}^{2} + \Pi_{D} \Pi_{N} - \Pi_{N}^{2}) + \right. \\ \left[2 \, \Pi_{D}^{2} + \Pi_{D} \Pi_{N} - (1-) \Pi_{N}^{2}\right]^{2} \left(2(1-2) \Pi_{N} [\Pi_{D} + (1-) \Pi_{N}]\right] \\ \left. \operatorname{Given} \quad \in \left(0, \frac{1}{2}\right) \text{ and } \Pi_{D}, \Pi_{N} \right. \\ \left. > 0, \text{ the denominator of the above expression is positive. We need to show that the numerator is also positive for <math>P^{*}$  to be greater than  $Q^{*}$ .

Define  $A \equiv 4\Pi_{N}(1-2)(\Pi_{D} + \Pi_{N})(\Pi_{D}^{2} + \Pi_{D}\Pi_{N} - \Pi_{N}^{2})$  and  $B \equiv 2\Pi_{D}^{2} + \Pi_{D}\Pi_{N} - (1-)\Pi_{N}^{2}$ , we need to show  $2 \in \Pi_{D}^{2} + (4-7 \in )\Pi_{D}\Pi_{N} + (5 \in -3)\Pi_{N}^{2} > \sqrt{A+B^{2}}$ .

Rearranging the left-hand side of this inequality gives. Taking the square of both sides and canceling out  $B^2$  give

 $B + (2 - 4 \in)(2\Pi_{D} \Pi_{N} - \Pi_{N}^{2}) > \sqrt{A + B^{2}}.$  Substituting in A and canceling out 4(1-2) give  $B(2\Pi_{D} \Pi_{N} - \Pi_{N}^{2}) + (1 - 2)(2\Pi_{D} \Pi_{N} - \Pi_{N}^{2})^{2} > \Pi_{N}(\Pi_{D} + \Pi_{N})(\Pi_{D}^{2} + \Pi_{D} \Pi_{N} - \Pi_{N}^{2}).$ Substituting in B, expanding out all products, and simplifying the result give  $3\Pi_{N}(\Pi_{D} - \Pi_{N})^{2}[(\in \Pi_{D} - \Pi_{N}) + \Pi_{N}] > 0$ . Given  $\Pi_{N}, \in > 0$  and  $\Pi_{D} > \Pi_{N}$ , the last inequality holds, and the proof is complete.

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