The Conditional Nature of Publication Bias: A Meta-Regression Analysis

Supplemental appendix

Erica Owen

Quan Li

Contents

1 DATA COLLECTION, CODING AND SUMMARY STATS

We employ the following search procedures in identifying the relevant studies for our meta analysis. First, we queried the following databases: Google Scholar, EconLit, Scopus, Web of Science, and JSTOR for studies using the following key words: "democracy and fdi," "regime type and fdi," "market size and fdi," "economic growth and fdi," "growth and fdi," "determinants of fdi," "drivers of fdi," and "location of fdi." The search was repeated, replacing "foreign direct investment" for "fdi." Second, we determined a list of studies pertaining to democracy and FDI or to the determinants of FDI and selected the four with citation counts of 500 or greater (Blonigen 2005; Jensen 2003; Li and Resnick 2003; Noorbakhsh, Paloni, and Youssef 2001). We then collected those that cited the aforementioned studies. These

searches, which were terminated on October 3rd, 2015, produced a list of 2854 studies, with two recent FDI publications added to the list.

Our criteria for selecting studies from the 2856 into meta-analysis are as follows: (1) studies include country-level FDI flows or stocks as the dependent variable, (2) studies include some measure of democracy or regime type as an independent variable, (3) the study must be monadic (not dyadic) and cross-national (cross-sectional or panel), (4) studies report sufficient statistical information, including the coefficient and t-statistic or standard error for the democracy variable, (5) studies employ multivariate regression, and (6) studies are written in English.[1] We limit the analysis to published papers.[2]

We followed a conservative method for determining inclusion. We screened first by title with two teams of two coders each for cross validation. If we could absolutely determine from the title that the study was unrelated (e.g., used only a formal model), the study was removed. If the title was unclear or if at least one coder included the study, it was kept for the second round of screening. This left 758 articles eligible for full text screening. After our reading the full text, an article was excluded if it failed to meet at least one of the previously mentioned six criteria. Lastly, we removed any duplicates that resulted from using multiple search terms and databases. Finally, we exclude one study that included only democratic countries in the sample and a study that used volatility of FDI as the dependent variable.

In one study, only α levels are reported, but not t statistics nor standard errors. We employed the reported α levels to impute the t statistics and standard errors. We excluded one outlier estimate with a t-statistic of -173 from Mathur and Singh (2013), due to a likely an error in the published table because the reported standard error was orders of magnitude

[1]We eliminated any studies on outflows from a single investing country (such as studies that look at US FDI or Chinese outward FDI into recipient countries). We did not include analyses of sectoral FDI flows or stocks.

[2]We did not include working manuscripts or conference papers for those tend to vary dramatically in terms of quality. The caveat is that those papers might reflect an advancement in estimation techniques and new data, and that they might help correct for potential publication bias.

smaller than other standard errors reported in the same regression table.

Our final dataset includes 40 studies and 239 model estimates. In our estimation sample, we create one observation for each statistical model in each article. The full list of studies is provided in Table A1. The bibliographic information for all included studies is listed in the references.

2 DEFINITION OF VARIABLES AND SUMMARY STATISTICS

In this section, we define the variables included as design controls. We present summary statistics for all variables in Table A2 and the distribution of partial correlations and confidence intervals in Figure 1.

- *DV logged:* Coded one if dependent variable was logged, zero otherwise
- *Only developing:* Coded one if sample included only developing countries, zero otherwise
- *Non-polity measure:* Coded one if regime type is measured using indicator other than Polity, coded zero if Polity is used
- *Country fixed effects:* Coded one if country fixed effects are used, zero otherwise
- *Lagged dependent variable:* Coded one if lagged dependent variable is included, zero if not
- *Robust standard errors:* Coded one if robust standard errors are used, zero if not
- *GMM estimation:* Coded one if GMM estimation used, zero if not
- *# of years in sample:* Equal to the number of years in the data
- —emphPublication year: The year of publication

3 ALTERNATIVE MEASURE OF PUBLICATION BIAS

In Table A3, we present the results using the inverse of the square root of the number of observations as an alternative measure of precision.

Table A1: Summary of Included Studies

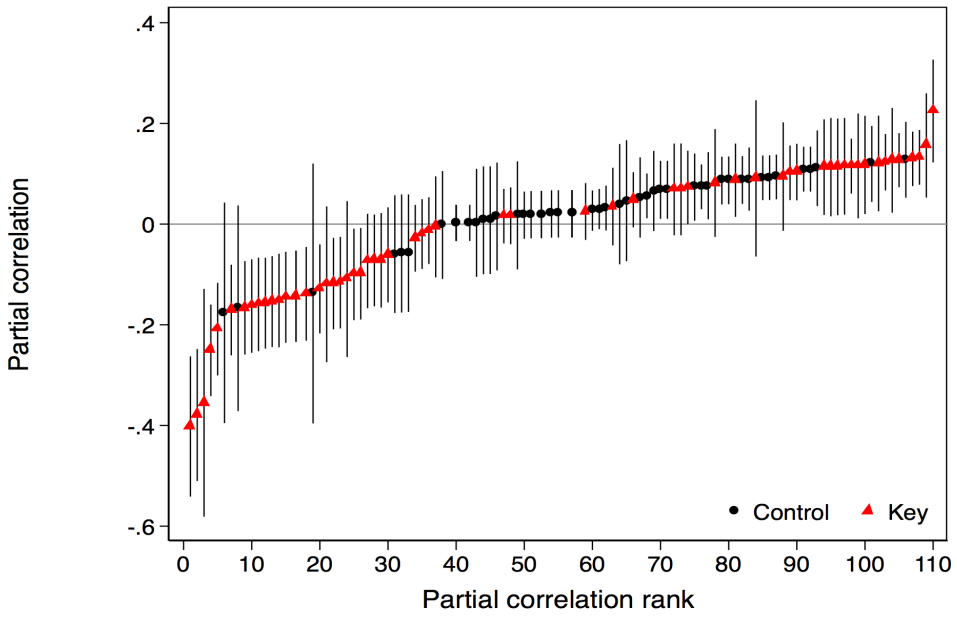
	# of models	Mean t	Min. t	Max t	Start	End
Ahlquist 2006	3	1.504	0.070	2.812	1985	2002
Ali, Fiess & MacDonald 2010	2	0.560	0.490	0.630	1981	2005
Allee & Peinhardt 2011	9	0.800	0.722	0.833	1984	2007
Appel & Loyle 2012	4	-1.101	-1.627	-0.106	1970	2001
Asiedu & Lien 2011	6	3.744	3.741	3.750	1982	2007
Barry, Clay & Flynn 2013	11	1.674	-1.013	3.367	1994	2004
Blanco 2012	6	0.149	-0.035	0.320	1986	2006
Blanton & Blanton 2007	2	1.000	1.000	1.000	1980	2003
Blanton & Blanton 2012	1	0.615	0.615	0.615	1985	2002
Braithwaite, Kucik & Maves 2014	9	0.062	-5.378	2.594	1975	2010
Bussmann 2010	3	2.389	1.929	2.692	1980	2000
Buthe & Milner 2008	3	0.313	-0.033	0.808	1970	2000
Choi & Samy 2008	11	1.462	-0.843	3.097	1985	2002
Choi 2009	11	0.569	-3.760	5.143	1982	1995
Cleeve, Debrah & Yiheyis 2015	14	-0.208	-2.604	2.723	1980	2012
Danzman 2016	4	1.634	1.295	2.424	1985	2011
Doces 2010	13	1.924	-4.500	4.361	1982	1999
Garriga & Phillips 2014	11	-0.512	-1.449	1.705	1973	2008
Hecock & Jepson 2013	18	1.274	-0.047	3.400	1972	2008
Holmes Miller, Hitt & Salmador 2013	1	-1.283	-1.283	-1.283	1995	2003
Jakobsen & de Soysa 2006	12	2.594	-2.890	4.840	1984	2001
Jensen & McGillivray 2005	1	1.855	1.855	1.855	1975	1995
Jensen 2003	18	1.286	-3.988	3.669	1990	1997
Jensen 2005	2	1.445	1.250	1.640	1975	1995
Lee & Johnston 2016	4	0.125	0.125	0.125	1971	2006
Lee 2015	10	3.585	0.640	4.708	1987	2006
Lee, Biglaiser & Staats 2014	3	0.200	-0.250	0.750	1970	2007
Lektzian & Biglaiser 2013	4	1.571	1.102	2.072	1969	2000
Li & Resnick 2003	10	-2.897	-5.470	-0.560	1982	1995
Li 2009	8	-2.181	-3.190	-0.110	1982	1995
Mathur & Singh 2013	2	-5.730	-5.737	-5.723	1980	2000
Mengistu & Adhikary 2011	3	-0.562	-1.460	1.106	1996	2007
Negishi 2007	3	1.841	0.855	3.542	1981	2002
Patti & Navarra 2009	1	0.013	0.013	0.013	1980	2003
Payton & Woo 2014	2	0.400	-0.200	1.000	1986	2002
Staats & Biglaiser 2012	4	1.781	1.151	2.558	1996	2007
Average	10.031	0.806	-1.603	2.551	1981.738	2003.162
# observations	229					

Table A2: Summary statistics

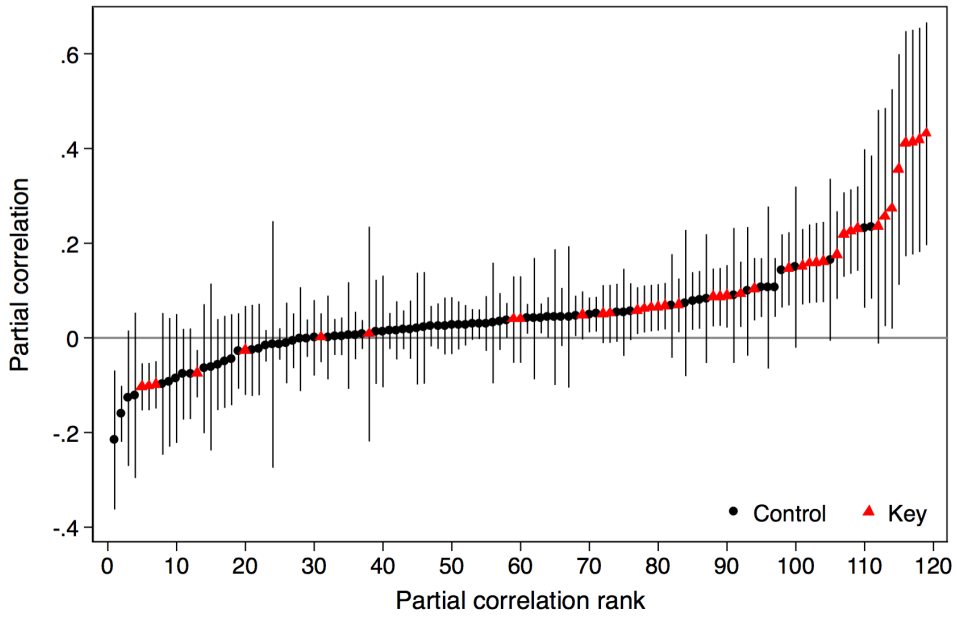
Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Level				
Partial correlation	-0.0007	0.12	-0.4	0.22
Std. error of r_{ij}	0.04	0.02	0.02	0.13
Democracy key variable	0.55	0.5	0	1
DV logged	0.59	0.49	0	1
Only developing	0.84	0.37	0	1
Non-polity measure of democracy	0.08	0.28	0	1
Model includes country fixed effects	0.32	0.47	0	1
Lagged dependent variable	0.34	0.47	0	1
Robust standard errors	0.6	0.49	0	1
GMM estimation	0.12	0.32	0	1
# of years in sample	17.65	6.41	9	36
Publication year	2010.22	3.62	2003	2016
N		110		
Share				
Partial correlation	0.05	0.11	-0.22	0.43
Std. error of r_{ij}	0.05	0.03	0.02	0.13
Democracy key variable	0.34	0.47	0	1
DV logged	0.04	0.2	0	1
Only developing	0.62	0.49	0	1
Non-polity measure of democracy	0.29	0.46	0	1
Model includes country fixed effects	0.52	0.5	0	1
Lagged dependent variable	0.58	0.5	0	1
Robust standard errors	0.65	0.48	0	1
GMM estimation	0.1	0.3	0	1
# of years in sample	23.47	10.32	6	38
Publication year	2010.55	4.14	2003	2015
N		119		

Figure 1: Distribution of partial correlations

(a) Level



(b) Share



Note: Vertical lines represent 95% confidence intervals.

Table A3: Alternative measure of publication bias

	Level				Share			
	1	2	3	4	5	6	7	8
$1/\sqrt{n}$	-2.551***	-0.464	-0.746*	0.235	0.994***	-0.196	-0.685	-0.219
	(0.631)	(0.563)	(0.429)	(0.668)	(0.364)	(0.343)	(0.436)	(0.353)
Key	0.000	0.164***	0.195***	0.256***	0.024	-0.109***	-0.110***	-0.094***
	(0.016)	(0.044)	(0.049)	(0.048)	(0.017)	(0.032)	(0.022)	(0.027)
Key × $1/\sqrt{n}$		-4.934***	-6.680***	-6.343***		4.397***	4.018***	4.313***
		(1.247)	(1.050)	(1.253)		(0.760)	(0.654)	(0.717)
DV logged			0.065***				0.011	
			(0.016)				(0.016)	
Only developing			0.021				0.003	
			(0.015)				(0.010)	
Non-polity measure of democracy			0.010				-0.044***	
			(0.018)				(0.015)	
Model includes country fixed effects			0.033*				-0.022**	
			(0.017)				(0.009)	
Lagged dependent variable			0.059***				-0.005	
			(0.021)				(0.013)	
Robust standard errors			-0.034***				0.005	
			(0.009)				(0.013)	
GMM estimation			0.123**				0.062***	
			(0.051)				(0.016)	
of years in sample			-0.009***				-0.000	
			(0.001)				(0.001)	
Publication year				0.007***				0.002
				(0.003)				(0.002)
Constant	0.108***	0.055***	0.167***	-14.463***	-0.004	0.026***	0.076*	-3.388
	(0.019)	(0.018)	(0.030)	(5.330)	(0.010)	(0.009)	(0.039)	(3.872)
Observations	110	110	110	110	119	119	119	119
Adjusted R^2	0.13	0.23	0.69	0.26	0.08	0.27	0.43	0.26

Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

4 FURTHER DISCUSSION OF CONTROL VARIABLES

However, a fourth more pernicious and less transparent reason to include control variables is recently raised by Lenz and Sahn (2017). They demonstrate that the inclusion of control variables can be utilized to improve the significance of a key variable of interest via a suppression effect. Hence, there is a hidden motive for including controls and indeed, one that is difficult to discern when reading a published study. Their findings are consistent with our argument that publication bias is more likely in the case of key variables.

One interpretation of the findings of Lenz and Sahn (2017) is that the cases when democracy is a control may be more informative because additional controls were not selected to make the coefficient on democracy statistically significant. Indeed, if the coefficient was statistically significant across many models, we could perhaps infer there is an overall effect of democracy on FDI. Yet there are several reasons that we caution against that view. Although our focus on how publication bias is worse for key variables and less severe for control variables, we do not think it is possible to estimate an overall effect of democracy on FDI. This is in part for the reasons noted in the introduction about meta-analysis of observational studies, but additionally because, as we show in other work, democracy affects FDI through different channels (e.g. property rights). Thus the coefficient on democracy itself represents only one part of its effect on FDI. As a result, even control variable estimates, which are less contaminated by publication bias, cannot help us estimate an overall effect. Another reason for this is raised by Keele, Elwert, and Stevenson (2015), who caution against interpreting all estimated coefficients in a traditional regression framework as causal parameters because researchers are more careful about isolating effect of key variable on DV either through model specification or causal identification. Thus, they advise researchers to carefully articulate the identification motivation for different variables even in the traditional framework. Both of these reasons suggest that even if control variable estimates are less contaminated by publication bias, we cannot necessarily view them as an informative estimate of the effect of interest.

Even if we cannot use control variables to estimate overall effects, our paper has important implications for researchers using meta-analysis, especially those interested in evaluating

publication bias. If a paper argues that X has a positive or negative effect on Y, the probability of publication is low if the coefficient on the key variable is not statistically different from zero across multiple models. The impact of publication bias on the incentive to submit and to reject is real. These incentives are amplified in the case of key variables. Previous meta regressions examining publication bias are likely misspecified according to our result. If unconditional meta-regression reveals publication bias, it could be much stronger for the key variable. If unconditional meta-regression did not find evidence of publication bias, it could be because of a failure to distinguish between the key and control variables.

5 EXCERPT FROM ARTICLES WITH DEMOCRACY AS A CONTROL VARIABLE

Table A4: Discussions of control variables in studies with democracy as a control variable

Author & year	**Motivation**	**Interpretation**
Ali, Fiess & MacDonald 2010	"To assess if property rights security is indeed the institutional aspect that matters most for FDI, we also investigate the impact of the following other institutional aspects: democracy (Demo); corruption (Corr); political instability (Polt); social tension (Soci). Results are reported in Table 4. We find that once property rights security is controlled for, other institutional aspects have no significant impact on FDI; property rights security remains significant at least at 10% level throughout all model specifications.4 Our findings identify property rights security is the most important institutional aspect for FDI, other institutional aspects are therefore likely to impact FDI only through their impact on property rights" 211	"compared with other institutional attributes such as democracy, corruption, political instability, and social tension, property rights security appears to be the most relevant institutional aspect for FDI; once property rights security is controlled for, other institutional attributes lose their significance" (p 215).
Allee and Peinhardt 2011	"In addition to these primary hypotheses and variables of interest, we include in our statistical tests additional explanatory variables that should affect FDI flows into a country One important set of controls identifies various political and economic "shocks"; that is, unforeseen negative political and economic developments that might also lead to reduced FDI. A skeptic might argue that ICSID disputes merely reflect or result from! these types of shocks and thus provide no unique information to firms. However, by controlling for these other types of information-revealing shocks in our empirical model, we generate a more difficult test for our hypotheses that ICSID disputes should have independent and statistically significant effects on future FDI" (417). "The first is the standard Polity net democracy score, which is scaled at -10 to 10, Although the positive effects of democracy on FDI remain debated, we include this democracy variable in our estimations to facilitate comparability with other FDI models" (418)	"Findings for various domestic political variables are mixed. The degree to which a country protects property rights consistently is positively associated with increased FDI flows. The coefficient on the property rights protection variable is positive and significant at the 95 percent level of confidence across all nine models presented in Tables 2 and 4. There is suggestive evidence that democratic regimes tend to receive greater FDI—the estimated coefficient for the democracy variable is always positive—yet it always falls just short of conventional levels of statistical significance. This weakly positive finding is not surprising, given debates and diver gent findings in the existing literature about whether or not democracy increases FDI" (p428)
Appel and Loyle 2012	"Based on the existing literature for both FDI and post-conflict states, we include several control variables. Our controls can be grouped into three categories: (1) economic variables, (2) political institutions, and (3) conflict variables. In addition, we include a Cold War variable in all of our equations to account for the increase in FDI in the post-Cold War world. . . We include two variables to measure domestic political institutions. For both measures, we believe FDI will be greater when the post-conflict state is more stable. First, we include a democracy variable since democratic states are viewed as more secure and stable compared to non-democratic states (e.g. Jensen, 2003: 200). In our empirical analysis, we include the full net-Polity scale (autocracy–democracy) which ranges from –10 to 10 (Marshall & Jaggers, 2002)." (692)	"We find mixed support for domestic political institutions. Political constraints are statistically significant in the expected direction, but regime type is negative and statistically significant. While the finding for regime type is contrary to our expectations, it is not entirely surprising. Resnick (2001), for instance, finds that in transition economies, democratic states receive less FDI" (p 693).

Author & year	Motivation	Interpretation
Barry, Clay and Flynn 2013	"The control variables used to fill out the rest of the model represent a fairly standard set of economic and sociopolitical factors that have been commonly identified in the existing literature as important determinants of FDI inflows (Jensen 2003, 2006; Li and Resnick 2003; Blanton and Blanton 2007; Bu the and Milner 2008)... Among the existing studies concerning the political determinants of FDI, political institutions have largely dominated the debate (Jensen 2003; Li and Resnick 2003; Li 2006). However, there has been considerable disagreement over the expected relationship between democracy and foreign investment inflows. On the one hand, autocrats enjoy the political flexibility to offer much larger concessions to prospective investors than can their democratic counterparts (O'Donnell 1978; Oneal 1994). On the other, democratic institutions can serve to greatly increase the long-term credibility of government commitments to maintain market-friendly policies, thus reducing uncertainty about the future (Olson 1993; Jensen 2006). Empirical findings have also been occasionally mixed, particularly when taken alongside direct indicators of respect for property rights (Li and Resnick 2003). As such, we do not adopt any strong directional expectations here. However, given its importance in the literature, we do include the Polity scale as a measure of democracy." (537-8)	"Larger urban populations, human capital (proxied by female life expectancy), and democracy also seem attractive to MNCs" (p 558).
Blanco 2012	"The specification of the model has several control variables found to be important determinants of FDI in previous analysis" 1341	"Democracy and internal stability are positive as expected, but not statistically significant." (1343)
Blanton and Blanton 2007	"We also incorporate control variables that are widely used in extant studies... Democracy may be related to FDI, though recent studies provide contrasting expectations for the direction of the relationship. Jensen (2003) argues that democratic countries can credibly provide a more stable environment for foreign investment and are thus better hosts for FDI. Li and Resnick (2003) likewise posit that democracies provide a better investment climate in terms of improved property rights protections. Yet they note ways in which democratic governance can discourage FDI. Specifically, democratic governments are less able to protect the sometimes monopolistic position of foreign corporations, more constrained in their ability to offer incentives to prospective investors, and more open to protectionist demands of domestic industries. Empirical results are similarly divergent—while Jensen finds a positive relationship between democracy and FDI, Li and Resnick find a negative relationship between the two" (147-8)	"Democracy was not a significant determinant of FDI to the developing world" (151).
Blanton and Blanton 2012	"Though our focus is on the relationship between labor rights and FDI, other factors influence investment decisions. We incorporate three sociopolitical factors that have been found to influence FDI: democracy, human rights, and human capital.9 Prior analysis has examined the prospective influence of democracy on FDI. To the extent that democratic polities constrain rentseeking behavior of elites (Jakobsen and de Soysa 2006; Jensen 2006; see also Choi and Samy 2008) and better respect the property rights of investors (Li and Resnick 2003), democratic governance may encourage FDI. As Schulz (2007) found, these effects should be particularly apparent in the manufacturing and services sectors. To account for democracy, we use the index of democratic institutions and governance from the Polity IV dataset (Marshall, Jaggers, and Gurr 2007)" 279	"Democracy is not signicant across any of these models, which indicates that the prospective inuence of democratic institutions does not have an independent impact upon FDI decisions beyond that of the other sociopolitical factors" (p285)

Author & year	Motivation	Interpretation
Braithwaite, Braithwaite and Kucik 2015	"We include several country-level predictors of FDI flows that may confound our estimates if omitted... we include a dichotomous indicator of regime type. Democracies are known to exhibit higher levels of economic openness and to receive larger inflows of investment than their autocratic counterparts. We measure democracy using the dichotomous coding (Democracy) provided by Cheibub, Gandhi, and Vreeland (2010)" (494)	"The controls behave largely as expected, which builds our confidence in the model specification...Lagged FDI is naturally a strong predictor of investment in year t. States with more open capital accounts and richer nations also enjoy comparatively larger inflows of FDI. And, importantly, democracies receive larger inflows of foreign capital, supporting the logic that investors respond favorably to democratic institutions" (495)
Busmann 2010	"The type of political regime is also potentially important in determining a country's attractiveness for foreign capital. For some, a democratic institution's credibility is a main advantage; the protection of civil liberties gives a sense of security, which motivates citizens to save and invest (Jensen, 2003). Others consider democracies to be less attractive because of pressure for immediate consumption (Sirowy & Inkeles, 1990). Empirically, the results are not conclusive (Oneal, 1994; Jensen, 2003; Resnick, 2001). To test this relationship, I add Polity IV's measure of regime type to the FDI models" 147	"The more democratic countries have higher FDI inflows and stock, and longer regime duration, that is, political stability, also enhances all aspects of FDI" 150
Buthe and Milner 2008	"While domestic political institutions are not the main focus of our analysis, we control for domestic institutional veto players from the start and examine measures of democracy in the first extension of our main analysis below" 743	"of the measures of electoral democracy per forms well. While the signs on the estimated coefficients suggest that more democracy is correlated with higher subsequent FDI (except for ACLP), none of the measures comes close to statistical significance."(p 753)
Cleeve, Debrah and Yiheyis 2015	"We also include an institutional variable, POLITY, as a measure of political participation and the absence or lack of democratic institutions" 5	" The coecient on POLITY is rather unstable, exhibiting a reversal in its sign depending on the HK indicator used and, more importantly, with changes in the size and composition of the sample" (p7)
Danzman 2016	"While domestic political institutions are not the main focus of our analysis, we control for domestic institutional veto players from the start and examine measures of democracy in the first extension of our main analysis below...In terms of political control variables, much research has focused on the effect of domestic institutions on FDI flows. I consider the role of regime type through inclusion of Polity 2 (Marshall and Jaggers 2002)." 743-4	"First, domestic political variables affect investment flows. Consistent with Henisz (2002), domestic political constraints are positively and statistically significantly associated with increased infrastructure investment. A one standard deviation increase in POLCON above its sample mean is associated with an average 15% to 18% increase in private infrastructure investment. Conversely, models of total FDI flows show mixed effects of POLCON on flows and that democracy is positively associated with investment. As a whole, these results corroborate existing research that argues that limited government attracts foreign investors and that measurement issues make uncovering the precise mechanism elusive" (p768)
Garriga and Phillips 2013	"A number of factors have been shown to be associated with FDI levels...Democracy is the 1–7 scale from Freedom House (2009), reversed so that 0 indicates the least-free category and 6 indicates the most-free category. Empirical results have been mixed for regime type (Jensen 2006; Li and Resnick 2003)" 288	"As expected, FDI is positively associated with Market size, Economic development, GDP growth, Trade openness, and Democracy." (p289)
Hecock and Jepson 2013	"because regime has been a focus of a majority of the studies of the determinants of FDI, we also include democracy here as a control (reflected in the Polity IV measurement, Marshall & Jaggers, 2010). Its inclusion accounts for the possibility that FDI is attracted to the stability of democracy and for the possibility that democracies spend more on social programs than their authoritarian counterparts" (159)	"in the early period, there is some evidence supporting the contention that democracy has a positive eect on investment, though the nding is not robust across all estimation techniques. In the later period, the results are unambiguous: we nd no support for the hypothesis that democratization has an eect on FDI, either positive or negative. The FDI literature is populated by incongruent results regarding the eect of democracy on investment; some ndings are negative and others positive. Our analysis suggests that the omission of social programs and human capital from models predicting FDI may be critical. Perhaps it is the good governance associated with increases in human capital rather than democracy per se that aects the ow of investment. If this is the case, our ndings might help to resolve some of the starkly contradictory ndings that exist in the literature." (p 161)

Author & year	Motivation	Interpretation
Jensen 2005b	"To test the robustness of the results, I include variables including the level of democracy and the number of veto points in the political system. Jensen (2003) argues that democratic regimes attract higher levels of FDI. If federal systems are more likely to occur within democratic regimes, then a spurious correlation could lead us to associate federal regimes with higher levels of FDI. To control for this I include a standard measure of democracy from the Polity IV dataset from Marshall and Jaggers (2000). This measure classifies political regimes on a scale from 0 (authoritarian) to 20 (democratic)" 86	"In the next two models, I include the Polity IV measure of democracy as a control variable. The level of democracy is positive in both models, but only weakly signicant in the random effects model. This result is weaker than the positive link between democracy and FDI reported by Jensen (2003). One explanation is that this very limited sample size, 61 countries, is skewed towards the wealthier more democratic countries in the sample. More importantly the impact of the key independent variable, scal federalism, remains insignicant." (p89)
Jensen and McGillivray 2005	"Clearly, other economic and political variables need to be controlled for in this analysis. These are discussed in the empirical section of the paper. However, we take a paragraph here to talk about the effect of democracy on FDI" 312-313,"To test the effects of political regimes on economic performance we used the Polity IV political regime data from Marshall and Jaggers (2000)" 315.	"Models 4 and 5 include the Polity IV measure of democracy. Democracy has a positive and statistically significant effect on FDI flows. What is interesting is how democratic institutions interact with federal political structures." (p317)
Lee 2015	"Moreover, political factors may play a significant role in affecting FDI, as well. Specifically, democratic countries are found to be more attractive to MNCs because audience costs and a large number of veto players lead the executive to credibly commit to respect contracts (Jensen 2003, 2008), and because the protection of property rights makes democracies a favorable environment with low risks of expropriation (Li and Resnick 2003). I thus included democracy in the model specification. The data are from the Polity IV project (Marshall and Jaggers 2007), and the indices range from -10 to 10 with 10 as the highest level of democracy" 9	"Democracies are better equipped to attract FDI, consistent with the ndings in Jensen (2003)" (p13)
Lektzian and Biglaiser 2014	"We also include controls that are commonly used in the FDI literature and which may be correlated with the independent and dependent variables in our models (King, Keohane, and Verba 1994; Ray 2003). We group these variables into security, macroeconomic conditions and economic reforms, and political factors for expositional purposes...Lastly, regime type and political institutional stability are expected to influence risk calculations of global investors. Some argue that authoritarian governments attract greater FDI (Huntington 1968; O'Donnell 1978; Oneal 1994), while others highlight the democratic advantage (Henisz 2000; Jensen 2003, 2006, 2008; Li 2006). Despite the differences on regime type and FDI inflows, nearly all agree on the benefits of stable political institutions for attracting FDI. To control for regime type, we use the Polity2 variable contained within the Polity IV data (Marshall and Jaggers 2006). The Polity2 democracy measure is on a)10 to 10 scale (with scores closest to 10 representing most democratic)" (69-70)	"Polity, Political Stability, and Trade Openness are the only controls to reach statistical significance in any of the models. We should also keep in mind that the dependent variable in Table 2 is change in global FDI rather than the level of global FDI. Re-estimating Table 2 with the level of global FDI as the dependent variable shows that Polity, Political Stability, and Development are all positively and significantly related to FDI, as one would expect."
Lee and Jonston 2016	"We include a battery of control variables that are standard in the FDI literature... In addition, democracy is included to measure the quality of domestic institutions that shape the investment climate. Democratic institutions are more attractive to foreign investors, and a high degree of property rights protection is the main reason (Jensen 2008; Li and Resnick 2003)" 440	"In addition to BITs, Table 1 provides some results that are noteworthy. FDI from OECD countries has a significant effect, meaning that OECD countries are important exporters of FDI. Even when this variable is con- trolled, however, BITs signed with powerful countries have a strong effect on FDI, suggesting that powerful BITs can help attract FDI from non-OECD countries. Moreover, FDI tends to flow to countries with a higher level of economic growth or countries that are more open to trade. Countries are less likely to attract FDI when their exchange rate is volatile" (444)

Author & year	**Motivation**	**Interpretation**
Lee et al. 2014	"Lastly, we include five factors to control for the effects that political institutions bring to the equation: Democracy, Political Stability, Executive Ideology, and Conflict. A large debate in the FDI literature identifies the role of regime type for lessening investor risk (Jensen 2003, 2006; Li and Resnick 2003; Tuman and Emmert 2004). We use Polity IV to measure Democracy, rescaled from a 10-point plus and minus scale to 0–20, after which we created dummy variable scores of 0 for countries scoring less than 16, representing nondemocracies, and 1 for scores of 16 or more, representing democracies (Marshall and Jaggers 2006)" (401-2)	"Although not the focus of our paper, but consistent with the prevailing literature, we find in Models 1 and 2 that Economic Growth, Financial Openness, and Post-Cold War are each associated with increased FDI" (406)
Payton and Woo 2014	"We incorporate a number economic and political variables that are generally included in standard gravity models predicting FDI inflows. . . .Extant literature has suggested that a country's regime type may have an effect on the level of FDI it can attract. Two arguments in particular run contrary to theories positing that authoritarian governments are in a better position to attract FDI because they can offer better deals to potential investors in terms of depressing wages and union activity. Jensen (2003) suggests that democratic governments provide less risky investment environments and are thus better able to attract FDI than their authoritarian counterparts. In a study on the level of tax incentives to foreign investors, Li (2006) offers that nondemocracies provide more incentives to investors, which are interpreted as state intervention in the market, which could scare off potential investors. To assess this relationship, we include the Polity IV measure for regime type (Marshall and Jaggers 2006)." 468-469	"In most cases, the control variables do not reach standard levels of statistical significance; however, there are a few results worth noting" (470)
Staats and Biglaiser 2012	"in addition, we include a measure for regime type, which has raised much discussion in the literature about whether democracy supports or hinders FDI inflows (see, for example, Jensen 2003, 2006; Li and Resnick 2003). We use Polity IV (Marshall and Jaggers 2006) to measure democracy, rescaled from a 10-point plus and minus scale to 0–20" 195	"though a number of the political and economic control variables show statistical significance, most noteworthy for our purposes is that with only one exception (judicial independence on US FDI), each of our independent variables of interest, including the composite measures, are highly correlated with dependent variable in each model. . . .Because of space issues we do not elaborate on the control variable results, but they may differ from previous work (see Montero 2008; Ruiz and Pozo 2008; Agostini and Raquel Jalile 2009; Tuman 2009) because of various differences, including lack of a proper judicial rule of law indicator and or difference in the years and countries used in the studies" (196).

6 REFERENCES FOR INCLUDED STUDIES

Ahlquist, John (2006). Economic Policy, Insitutions, and Capital Flows: Portfolio and Direct Investment in Developing Countries. *International Studies Quarterly* 50:681–704.

Ali, Fathi A., Norbert Fiess, and Ronald MacDonald (2010). Do Institutions Matter for Foreign Direct Investment? *Open Economies Review* 21(2):201–219.

Allee, Todd and Clint Peinhardt (2011). Contingent Credibility: The Impact of Investment Treaty Violations on Foreign Direct Investment. *International Organization* 65(3):401–432.

Appel, Benjamin J. and Cyanne E. Loyle (2012). The Economic Benefits of Justice: Post-conflict Justice and Foreign Direct Investment. *Journal of Peace Research* 49(5):685–699.

Asiedu, Elizabeth and Donald Lien (2011). Democracy, foreign direct investment and natural resources. *Journal of International Economics* 84(1):99 –111.

Azemar, Celine and Rodolphe Desbordes (2009). Public Governance, Heatlh and Foreign Direct Invesment in Sub-Saharan Africa. *Journal of African Economics* 18(4):667–709.

Barry, Colin M., K. Chad Clay, and Michael E. Flynn (2013). Avoiding the Spotlight: HUman RIghts Shaming and Foreign Direct Investment. *International Studies Quarterly* 57(3):542–544.

Bauerle Danzman, Sarah (2016). Contracting with Whom? The Differential Effects of Investment Treaties on FDI. *International Interactions* 42(3):452–478.

Blanco, Luisa R. (2012). The Spatial Interdependence of FDI in Latin America. *World Development* 40(7):1337–1351.

Blanton, Robert G. and Shannon L. Blanton (2012). Labor Rights and Foreign Direct Investment: Is There a Race to the Bottom? *International Interactions* 38(3):267–294.

Blanton, Shannon Lindsey and Robert G. Blanton (2007). What Attracts Foreign Investors? An Examination of Human Rights and Foreign Direct Investment. *Journal of Politics* 69(1):143–155.

Blonigen, Bruce (2005). A Review of the Empirical Literature on FDI Determinants. *Atlantic Economic Journal* 33:383–403.

Braithwaite, Alex, Jeffrey Kucik, and Jessica Maves (2014). The Costs of Domestic Political Unrest. *International Studies Quarterly* 58:489–500.

Busse, Matthias (2004). Transnational Corporations and Repression of Politial Rights and Civil Liberties: An Empirical Analysis. *Kyklos* 57(1):45–65.

Busse, Matthias and Carsten Hefeker (2007). Political Risk, Institutions, and Foreign Direct Investment. *European Journal of Political Economy* 23(2):397–415.

Bussmann, Margit (2010). Foreign Direct Investment and Militarized International Conflict. *Journal of Peace Research* 47(2):143–153.

Buthe, Tim and Helen V. Milner (2008). The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI Through International Trade Agreements? *American Journal of Political Science* 52(4):741–762.

Choi, Seung-Whan (2009). The effect of outliers on regression analysis: regime type and foreign direct investment. *Quarterly Journal of Political Science* 4(2):153–165.

Choi, Seung-Whan and Yiagadeesen Samy (2008). Reexamining the Effect of Democratic Institutions on Inflows of Foreign Direct Investment in Developing Countries. *Foreign Policy Analysis* 4(1):83–103.

Cleeve, Emmanuel A., Yaw Debrah, and Zelealem Yiheyis (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development* 74:1–14.

Doces, John A. (2010). The Dynamics of Democracy and Direct Investment: An Empirical Analysis. *Polity* 42:329–351.

Garland, Marshall W. and Glen Biglaiser (2009). Do Electoral Rules Matter? Political Institutions and Foreign Direct Investment in Latin America. *Comparative Political Studies* 42(2):224–251.

Garriga, Ana Carolina and Brian J. Phillips (2014). Foreign Aid as a Signal to Investors: Predicting FDI In Post-Conflict Countries. *Journal of Conflict Resolution* 58(2):280–306.

Hecock, R. Douglas and Eric M. Jepsen (2013). Should Countries Engage in a Race to the Bottom? The Effect of Social Spending on FDI. *World Development* 44:156–164.

Holmes Jr, R Michael et al. (2013). The interrelationships among informal institutions, formal institutions, and inward foreign direct investment. *Journal of Management* 39(2):531–566.

Jakobsen, Jo and Indra de Soysa (2006). Do Investors Punish Democracy? Theory and Empirics, 1984-2001. *Kyklos* 59(3):383–410.

Jensen, Nathan (2005). Fiscal Federalism and International Capital: The Effects of Fiscal Federalism on Foreign Direct Investment and Sovereign Dept Ratings. *Swiss Political Science Review* 11(4):77–95.

Jensen, Nathan and Fiona McGillivray (2005). Federal institutions and multinational investors: Federalism, government credibility, and foreign direct investment. *International Interactions* 31(4):303–325.

Jensen, Nathan M. (2003). Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment. *International Organization* 57(3):587–616.

Keele, Luke, Felix Elwert, and Randolph T Stevenson (2015). *The Perils of the All Cause Model*. `https://csap.yale.edu/sites/default/files/files/keele.pdf`.

Lee, Chia yi (forthcoming). Terrorism, Counterterrorism Aid, Foreign Direct Investment. *Foreign Policy Analysis*.

Lee, Chia-yi and Noel P Johnston (2016). Improving Reputation BIT by BIT: Bilateral Investment Treaties and Foreign Accountability. *International Interactions* 42(3):429–451.

Lee, Hoon, Glen Biglaiser, and Joseph L. Staats (2014). Legal System Pathways to Foreign DIrect Investment in the Developing World. *Foreign Policy Analysis* 10(4):393–411.

Lektzian, David and Glen Biglaiser (2013). Investment, Opportunity, and Risk: Do US Sanctions Deter or Encourage Global Investment? *International Studies Quarterly* 57(1):65–78.

Lenz, Gabriel and Alexander Sahn (2017). Achieving Statistical Significance with Covariates and without Transparency.

Li, Quan (2009). Outlier, Measurement, and the Democracy-FDI Controversy. *Quarterly Journal of Political Science* 4(2):167–181.

Li, Quan and Adam Resnick (2003). Reversal of Fortunes: Democratic Institutions and Foreign Direct Inflows to Developing Countries. *International Organization* 57(1):175 –211.

Mathur, Aparna and Kartikeya Singh (2013). Foreign Direct Investment, Corruption, and Democracy. *Applied Economics* 45(8):991–1002.

Mengistu, Alemu Aye and Bishnu Kumar Adhikary (2011). Does good governance matter for FDI inflows? Evidence from Asian economies. *Asia Pacific business review* 17(3):281–299.

Negishi, Shoko (2007). External Finance and Investment Climate in East Asia and Other Emerging Markets: What Really Matters? *Asian Economic Papers* 6(1):74–98.

Noorbakhsh, Farhad, Alberto Paloni, and Ali Youssef (2001). Human capital and FDI inflows to developing countries: New empirical evidence. *World development* 29(9):1593–1610.

Patti, Dario Maimone Ansaldo and Pietro Navarra (2009). Globalization, Democratization, and Economic Growth. *Applied Economics Letters* 16(7):731–734.

Payton, Autumn Lockwood and Byungwon Woo (2014). Attracting Investment: Governments' Strategi Role in Labor Rights Protection. *International Studies Quarterly* 58(3):462–474.

Ponce, AF (2010). Foreign Direct Investment and Civil Rights: Testing Decreasing Returns to Civil Rights. *Romanian Journal of Political Sciences*.

Powers, Matthew and Seung-Whan Choi (2012). Does Transnational Terrorism Reduce Foreign Direct Investment? Business-related vs. Non-business-related Terrorism. *Journal of Peace Research* 49(3):407–422.

Resnick, Adam (2001). Investors, Turbulence, and Transition: Democratic Transition and Foreign Direct Investment in Nineteen Developing Countries. *International Interactions* 27(4):381–398.

Staats, Joseph L. and Glen Biglaiser (2012). Foreign Direct Investment in Latin America: The Importance of Judicial Strength and Rule of Law. *International Studies Quarterly* 56(1):193–202.

Vadlamannati, Krishna Chaitanya, Artur Tamazian, and Lokanandha Reddy Irala (2009). Determinants of Foreign Direct Investment and Volatility in Southeast Asian Economies. *Journal of the Asia Pacific Economy* 14(3):246–261.

Woo, Byungwon (2013). Conditional on Conditionality: IMF Program Design and Foreign Direct Investment. *International Interactions* 39(3):292–315.

Zheng, Yu (2011). Credibility and Flexibility: Political Institutions, Governance, and Foreign Direct Investment. *International Interactions* 37(3):293–319.