Democracy, Property Rights, and Foreign Direct Investment

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Abstract

States compete for Foreign Direct Investment (FDI) inflows, since they are an important source of employment and technology. However, the role played by a state’s regime type in attracting FDI remains mired in debate. Some scholars find a positive relationship with democracy, whereas others do not, while some suggest that property rights are responsible for attracting FDI. We attempt to sort out the roles that democracy and property rights play in attracting FDI from 1970 to 2008 through careful theorizing and the use of a non-nested hierarchical modeling strategy. Our theoretical and empirical analyses demonstrate that the effect of property rights on attracting FDI is contingent on democratic institutions. Democratic institutions influence property rights by providing: 1) a coherent logic to the property rights regime that is created in a state, and 2) a legitimate way to manage conflicts that arise in dynamic economies. We find that in the absence of democratic institutions, property rights protections actually exert a negative impact on FDI. However, as the level of democratic institutionalization improves, the effect of property rights on FDI becomes increasingly positive. The hierarchical model allows us to see that this conditional effect varies among countries and changes over time, but is generally positive for both developing and developed countries across all regions.
Introduction

While it has long been known that political decisions impact economics, the relationship between regime type and foreign direct investment (FDI) remains mired in controversy. Some studies show a positive relationship between democracy and FDI, whereas others do not (Busse 2004; Busse and Hefeker 2007; Choi and Samy 2008; Jakobsen and de Soysa 2006; Jensen 2003; Li 2009b; Li and Resnick 2003; Oneal 1994). This ambiguity in empirical findings is perplexing because, as Ahlquist notes, investors are thought “to be concerned with the stability of the political apparatus as well as more macro- and micro-level industrial and regulatory policies” and are expected to “respond to changes in institutional variables” (2006, 682).

Some of the ambiguity regarding the effect of democracy on FDI results from different operational measures of FDI. Li and Resnick (2003) operationalize FDI as net FDI inflows and find that democracy has both positive and negative effects on FDI, with democracy exerting no statistical influence when accounting for the rule of law. Choi (2009) replicates the work of Li and Resnick (2003) and finds that when FDI is measured as net FDI inflows as a percent of GDP (see also Jensen 2002, 2003, 2004), democracy has a positive impact on FDI. Some have suggested that it is property rights protections rather than democracy that attract FDI, though the two phenomena are notoriously intertwined (Li 2006, 2009b; Li and Resnick 2003).

We sort out the disparate empirical findings in the literature by considering the theoretical relationship between regime type and property rights protections. We expect that their interplay, rather than one or the other in isolation, is responsible for attracting higher levels of FDI. In particular, we argue that the effect of property right protections is conditioned by democracy. Democracy is thought to influence the impact of property rights through two intertwined mechanisms: 1) democratic institutions provide a coherent logic from which to frame
the property rights regime, and 2) democracies are better apt than autocratic regimes to
legitimately manage conflicts that emerge as different groups win and lose in a dynamic
economic setting (Chang 2003; Sunstein 1997). The effect of democratic institutions is important
because property rights protection is more than simply stating that individuals have the right to
private property; enforcement of property rights under changing technological conditions and in
dynamic economies, as well as how property rights are truncated in the face of other rights, must
also be addressed. We find empirically that the effect of property rights on FDI is contingent on
the strength of democratic institutions in a state through the use of a non-nested hierarchical
statistical model. In non-democracies, strong property right protections fail to secure FDI. Yet,
in democratic states, property right protections demonstrate a positive effect on attracting FDI.

**Regime Type and FDI**

FDI is defined as “a category of cross-border investment associated with a resident in one
economy having control or a significant degree of influence on the management of an enterprise
that is resident in another economy” (International Monetary Fund 2007, 100).\(^1\) Since this
definition requires that private capital flows have a lasting management interest in the company
that is acquired or created, it is more than simple portfolio diversification.\(^2\) FDI is an important
source of employment and technology to host countries that is thought to spur economic growth
and development. As a result, states frequently compete for FDI inflows by adopting domestic
policies that generate an attractive investment climate (Jensen 2008; Li 2006; Li 2009a). The
more FDI inflows a state receives, the more potential benefits it obtains. The fact that FDI
accounts for more than 50 percent of all resource flows to developing countries undoubtedly

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\(^1\) A firm is assumed to have “control of a significant degree of influence” when it holds 10 percent of more of voting
stock (World Bank 2011). This is the standard measure used throughout the literature.

\(^2\) Portfolio investment is “crossborder transactions and positions involving debt or equity securities, other than those
included in direct investment or reserve assets” (International Monetary Fund 2007, 110).
explains why it has been an appealing topic of study in International Political Economy (World Bank 2011).

Previous literature on the relationship between democratic regimes and FDI has produced conflicting outcomes. Li and Resnick (2003) claim that democracy has both positive and negative effects on FDI inflows. These contrasting claims can be found throughout the literature. Competing expectations also exist regarding whether the competitive political environment in democracies encourages FDI or not. In addition, the relationship between democracy and property rights is not clearly specified in the existing literature.

The argument that democracy reduces FDI inflows begins with the observation that multinational corporations (MNCs) and domestic companies compete to seek preferential policies from the government. Democracies must appease domestic interests to remain in power and are therefore less likely in general to offer advantages to MNCs. However, in order to attract FDI, democracies may attempt to solicit domestic support by offering welfare incentives to domestic political actors (Busch and Reinhardt 2000; Hays 2009; Hiscox 2002; Mukherjee, Smith, and Li 2009). Cushioning institutions, such as welfare and job retraining, could also be combined with the effects of increased wages and employment to increase domestic pressure for FDI. This leads Jakobsen and de Soysa (2006) to conclude that democracies may actually create a favorable environment for FDI. Their argument is that the largest electoral constituency in a democracy is labor, which benefits from FDI due to increased wages resulting in competition between domestic and foreign firms. Since labor benefits from foreign investment, policymakers should therefore pursue policies supporting FDI.

On the other hand, O’Donnell (1978, 1988) argues that authoritarian regimes are better equipped to make more favorable entry level arrangements with foreign investors. Autocrats
seek FDI inflows for their own private economic benefits and the interests of the elites that they serve. Authoritarian institutions are rarely constrained by either electoral consequences or structural veto players, which allows them to ignore the domestic public’s concerns about welfare, wages and employment (Bueno de Mesquita et al 2003). Authoritarian regimes are therefore more able to provide favorable entry and tax incentives to MNCs (Li 2006).

While democratic regimes may generally be constrained in their ability to offer attractive entry incentives to MNCs owing to their large number of veto players, this resistance to drastic policy change also provides a benefit. MNCs can use existing democratic institutions to enforce favorable arrangements negotiated with the democratic government and make it more difficult for the government to reverse policies. While authoritarian governments can grant better entry level agreements to MNCs, they provide MNCs with little room for domestic recourse should the leader or leaders renege on their initial commitments. Though the expropriation of firms has become less common over time, there is still a non-zero probability that an authoritarian government may confiscate MNC property or engage in other infringements on such property rights (Li 2009a). As Buthe and Milner note, "more subtle government interventions that reduce the profitability of investments have become the key political concern of investors" (2008, 741).

This reasoning leads Jensen (2003) to assert that democratic governments provide a more stable market for FDI and thus receive a greater proportion of it than authoritarian governments. Echoing Olson (1991), Jensen notes that authoritarian governments are predatory and cannot credibly ensure property rights while democratic institutions are able to protect the property rights of foreign investors. Thus, transparent legal systems are much more predictable than depending solely on the word of government officials (Jensen 2003; Li and Resnick 2003).
Li and Resnick (2003) go on to argue that democracy does not attract more FDI than authoritarian regimes, *ceteris paribus*. Instead, their argument focuses on property right protections. While democratic regimes tend to provide more secure property rights protections to MNCs, it is property right protections that investors seek. Therefore, any advantage that democracies enjoy in attracting FDI is primarily due to their strong rule of law. Once this is accounted for, Li and Resnick (2003) posit that any democratic advantage will dissipate. Li (2006, 64) continues this line of reasoning, arguing that "one reason that democracy and autocracy adopt different levels of tax incentives is because they differ systematically in terms of property rights protection and policy credibility." Jensen (2008) also notes that investors would prefer participating in transparent legal systems to relying solely on an authoritarian government to enforce contracts and intellectual property rights, as evident in the higher risk that private insurance companies associate with authoritarian regimes compared to democratic regimes.

In addition to these theoretically divergent expectations concerning regime type and property rights, Jakobsen and de Soysa (2006) note important methodological and data issues that contribute to the regime type-FDI controversy. Jakobsen and de Soysa argue that with a larger sample and time frame, Li and Resnick (2003) would find a positive relationship between democracy and FDI. To test this, Jakobsen and de Soysa expand upon Li and Resnick’s data and control for China in their statistical analysis. Jakobsen and de Soysa argue that while China is highly authoritarian, it has strong property right protections and thus attracts a large sum of FDI inflows. In fact, Chang (2003, 11) suggests that China accounts for 10% of the world’s total FDI. Thus, the inclusion of China biases the results and leads to incorrect inferences that are made about the general effects of regime type. Jakobsen and de Soysa find that when China is controlled for, democracy attracts FDI even in the presence of property right protections. Choi
(2009) criticizes the methods employed by Li and Resnick (2003) and argues that the negative result for democracy stems from Li and Resnick’s operationalization of FDI as net inflows and that the case of China is simply an outlier, albeit an important one.

Finally, the relationship between democracy and rule of law may not be as strong as is often assumed. In fact, Choi (2009, 158) notes in his replication of Li and Resnick that “interestingly, the entire replication data show a weak correlation of 0.20 between democracy and property rights. Perhaps, as Weimer (1997, p. 8) points out, the correlation between democracy and the security of property rights is imperfect.” Simmons (2000) finds similar results, noting that democracy and rule of law are actually not highly correlated. Furthermore, she warns that "popular participation along with weak guarantees for fair enforcement of property rights can endanger these rights" (2000: 828; see also Li 2009b).

As this review of the literature shows, both democratic and authoritarian regimes have theoretical advantages to offer foreign investors. Authoritarian regimes are not constrained by an electorate when negotiating with foreign investors. They can engage foreign firms and make generous entry level offers. Democracies must appease their electorate while at the same time negotiating with foreign investors. On the other hand, labor is the largest constituency in democracies. Labor may support FDI as it provides employment and drives up wages obtained from domestic firms that compete with foreign companies. Furthermore, the greater numbers of institutions and veto players in a democracy prevents the government from behaving in a predatory manner with MNCs. Despite the differing expectations found in the literature regarding the impact of regime type on attracting FDI, it is important to note that each position argues that regime type is important. Yet, the relationship between regime type and property right protections remains unclear.
Democratic Institutions and Property Right Regimes

The role of institutions is often neglected when discussing property rights; this is unfortunate because “the delineation of property rights is not independent of what rights members of a society accept as legitimate, and as a result most, if not all, property rights are ‘truncated’ in a most complex manner (Chang 2003, 181; see also Barzel 1989). We argue that previous studies have ignored the true manner in which democracy affects investment. Rather than acting as an independent factor, democracy enhances the effects of property right protections by creating institutions that: 1) provides a coherent logic for the creation and enforcement of legal protections in a property rights regime, and 2) managing conflicts that emerge as different groups win and lose in a dynamic economy. These two roles of democracy are intertwined, as a coordinated economic vision is necessary to address the concerns of those groups that lose as the economy changes and engage in subsequent mobilization against the new economic arrangements (Chang 2003, 52-63; Sunstein 1997, Ch 6 and Ch 8).

Dreher, Gaston, and Martens (2008, 124) argue that strong property rights and the right institutions promote economic growth. Chang (2003, 11) goes even farther, arguing that the property rights regime on its own is a minor determinate of FDI, lagging behind other factors such as large or growing markets, the quality of the existing infrastructure, and the quality of labor (human capital). Instead, he points to the need for strong institutions (e.g. contract laws) in order for property rights protections to actually impact the economy. As evidence, he points to “the fact that, during the last few decades, many countries have tried to copy the Anglo-American model with little success is a testimony to the difficulty of building the ‘special’ institutions that are required for an effective functioning of market-oriented trade and industrial policies” (Chang 2003, 14). Sunstein agrees, suggesting that well-drafted constitutions provide
the foundation for the state to create ownership rights from which all future private property
rights are grounded. This is necessary to prevent a system in which property rights definitions are
open to reinterpretation and readjustment (Sunstein 1997, 209-210).

**Logic of a Property Right Regime**

A state needs institutions when creating property rights because it “cannot grant property
(and other) rights to people in a coherent way, unless it has a certain vision of what it regards as
the desirable future” (Chang 2003, 55-56). Democracies have important financial and legal
institutions that autocracies either do not have or do not permit to act outside the range of the
executive. These independent institutions provide checks on executive power and introduce
additional veto players into the process of economic policy formations, including the formation
and enforcement of property rights. In addition, democratic institutions derive legitimacy from
the process in which they are formed, as constituents have at least some level of control over
them or those who oversee them. These institutions must meet and adhere to the principle of the
existing legal framework (e.g. constitution), ensuring philosophical and legal contiguity
(Sunstein 1997, Ch 8). In addition, democracies have more veto players, making changes to these
basic principles less likely and are thus more likely to delineate property rights in the same
manner over time (Tsebelis 1995, 2002). This creates a common vision of how property rights
are assigned and in what way they are enforced.

More concretely, since democratic institutions are more flexible than their autocratic
counterparts owing to their decentralized nature, they can more easily adapt and generate a
coherent set of property laws during times of technological and societal change. Thus, the state
acts as a visionary that provides the foundation and direction in goals that private firms then
fulfill. Chang (2003; 53) argues that “by providing such a vision at the early stage of change, the
state can drive private sector agents into a concerted action without making them spend resources on information gathering and processing, bargaining and so on.” By creating this clear vision, the state is able to lower transaction costs and reduce uncertainty regarding future policy in a dynamic economy. This promotes investment by strengthening the effectiveness of the state’s property right protections.

Managing Emergent Conflicts

Democracies are more effective than autocracies at managing conflict. This stems from their ability resolve disputes via non-violent, legitimate processes. Democracies provide legitimate methods for groups to raise their voice, air grievances, and seek compensation for losses that do not exist in autocratic regimes, such as politically relevant legislatures and independent courts. Democratic legislatures often feature compromises and tradeoffs among political parties representing various domestic interests. Independent judiciaries provide a non-violent outlet for conflicts to be settled between individuals regarding specific claims.

The ability to manage conflict enhances property right protections under democratic regimes. Conflict management is an important consideration for long-term economic growth and attracting foreign investment. Under static conditions, the market is often thought to be the most efficient mechanism to resolve conflict (e.g. Friedman 2002, Hayek 1976). Yet, in practice markets are not static and considerations of dynamic efficiency should also be addressed, even though this seldom happens (Joskow and Rose 1989). In particular, technological changes affect how existing property right protections are interpreted and applied. The manner in which new property right protections are allocated change the relationships between production factors, increasing the likelihood of conflictual outcomes (Chang 2003, 56-57; Kuznets 1973).
This means that states can realistically rely on the market solution to resolve conflicts only where technological change is gradual, when the costs paid by the losing parties are low, or they are prevented from organizing politically. Instead, some other institution must exist in order to manage conflicts. Chang (2003, 58) argues that the state itself is best suited to undertake this task since “it is the ultimate guarantor or property (and other) rights and (normally) the most important actor in setting and executing the public agenda for changes in rights and institutions.” It does this by creating institutions, such as courts, regulatory agencies, and legislative oversight that can quickly respond to technological change and address emergent conflicts in a consistent and coherent manner.

When property rights change either in the face of technological change or owing to other structural factors, “those who are to lose will try to mobilize against the new institutional arrangements and sometimes will succeed in doing so” (Chang 2003, 56; see also Garrett 1998; Fordham 2008, and Hays 2009). If losing parties are able to succeed in overturning the new institutional arrangements, the state’s economy will suffer since it will be less competitive globally. However, if losing parties mobilize and institutional structures do not exist for these groups to legitimately air their grievances, they may turn to illegitimate means, up to and including violence (Barber 1995; Nieman 2011; Rosenau 2003). The outcome of this is that “in societies where the state fails to manage conflict in an appropriate way, people will be reluctant to take risks or commit their resources in specific investments and therefore the dynamism of the economy may suffer” (Chang 2003, 61-62; see also Keynes 1997, 373). Thus, strong conflict management institutions encourage long-term investment, such as FDI, and improve economic dynamism (Chang 2003, 63).
Our theoretical argument that democratic institutions are better than their autocratic counterparts at creating a property rights regime and managing conflict produces the following hypothesis:

$H_1$: The effect of property rights on FDI inflows is conditioned by a state’s level of democracy.

**Methodology**

This paper examines the effects of democracy, property rights, and their interactive effect on attracting FDI in 124 countries between 1970 and 2008. While the theory posited above expects that property rights and democracy are determinants of investment, there are likely country and time specific effects as well. Figure 1 demonstrates that FDI has changed greatly over time. This means that while states continue to compete for FDI, the supply has increased substantially as firms are more willing to create lasting impacts in markets outside their home nation’s borders. Ignoring this temporal variation would lead to biased estimates of our theoretically relevant variables.

< Figure 1 about here >

A hierarchical model is used to account for the multilevel structure of cross-sectional time-series data. Further, we use a non-nested hierarchical model since neither state, nor year, are nested within the other (Gelman and Hill 2007, 2). As a result, there are three error components that must be accounted for in order to reduce inefficiency: individual, state, and year. While each of these types of error is constant within units, they differ between units. As Gill (2009, 395) notes, “ignoring the aggregate information excludes potentially important effects and treating the aggregate information as individual level effects confuses covariance in the model.” To account for this, our model takes the general form:
\[ y_{jt} = \alpha_j + \gamma_t + \beta x_{jt} + \varepsilon_{jt} \]
\[ \alpha_j = \alpha_0 + \eta_j \]
\[ \gamma_t = \alpha_t + \nu_t \]

where \( y \) is the dependent variable, \( \alpha \) and \( \gamma \) are random intercepts, \( \beta \) is a coefficient, \( x \) is a parameter, \( \varepsilon \) is a random component, and \( j \) and \( t \) are subscripts for country and time, respectively.

The random intercepts include both systematic and random components with \( \eta_j \sim N(0, \sigma^2_j) \) and \( \nu_t \sim N(0, \sigma^2_v) \). Inclusion of random intercepts avoids common problems associated with pooling data (Green, Kim and Yoon 2001).

The use of a hierarchical model produces several benefits over other commonly used approaches, such as panel corrected standard errors (PCSEs) with fixed effects (Beck and Katz, 1995). For instance, we are able to explicitly model time rather than simply treating it as a nuisance, as is the case with PCSEs (Shor et al. 2007, 171). In contrast to PCSEs, our hierarchical model allows the standard errors to vary over time (Gelman and Hill 2007, 289-292; Shor et al 2007, 172). The net effect of this is that the hierarchical model estimates standard errors more precisely, permitting more accurate testing of the hypothesis. We can also investigate the effect of property rights and democracy on each country by over-parameterizing the model rather than resort to the use of a reference category, as is true with models employing fixed effects (Gelman and Hill 2007, 68).\(^3\) Finally, this approach also allows us to avoid the dangers noted by Buthe and Milner (2008) of including developed and developing countries in the data set as coefficients for each country can easily be recovered and displayed to verify trends identified in the statistical analysis and note outliers (Gelman and Hill 2007). Thus, our

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\(^3\) Gelman and Hill (2007, 269) note this is possible “because of the partial pooling of the \( \alpha_j \)’s toward the group level linear model.” This means that the group level intercepts are estimated in part by the group level predictors.
coefficients for each country are the same as they would be using split samples between developed and developing countries, while we gain the increased efficiency of pooling the data.

**Dependent Variable**

The dependent variable of interest in this study is FDI. We operationalize FDI in terms of net FDI inflows per capita. This operationalization accounts for both the actual inflows of FDI and the effects of country size (Choi 2009, Li 2009b). The country size standardization reduces the influence of possible outliers that might otherwise bias the results owing to the aggregated nature of the data. This allows the data to adhere to the normal i.i.d. assumption (Choi 2009, 154) while at the same time accounting for country size (Busse and Hefeker 2007, 403; Hegre 2009). The data for net FDI inflows are obtained from the World Development Indicators (World Bank 2011). Population figures are taken from the Correlates of War’s National Material Capabilities (V3.02) data set (Singer, Bremer and Stuckey 1972).

**Independent Variables**

Two independent variables are tested in this study: Democracy and Property Rights. The Democracy variable is operationalized as the Xconst component of the polity2 score acquired from the Polity IV project (Marshall and Jaggers 2008). This means that our Democracy variable ranges from 1-7. We use this component to represent democracy for a number of reasons. First, and most importantly, the Xconst component most closely operationalizes our theoretical depiction of democracy. Democratic institutions are expected to provide a coherent logical basis for the creation, interpretation, and enforcement of property right laws. Any such institutions

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4 In order to check robustness, we also conducted analyses using FDI as a percent of GDP. Results did not substantively change.

5 Data are aggregated at the state level. While Pinto and Pinto (2008) and Blanton and Blanton (2009) demonstrate there is utility to disaggregating FDI among sectors, this type of data are largely limited to OECD countries, restricting the analysis to developed countries.
necessarily restrict the executive’s ability to unilaterally expropriate foreign property or to change to the domestic property rights regime structure on their own. Further, Gleditsch and Ward (1997, 371) find that in the post-1969 period, $X_{const}$ is the driving force behind the polity2 democracy score. Choi (forthcoming) and Starr (1992) suggest this is because executive constraints are the most easily identifiable signal of a liberal democracy. Additionally, by using a single component, we reduce statistical noise generated by including several related components.\(^6\)

In order to measure a state’s legal structure and respect for property rights, we use the *Legal Structure and Security of Property Rights* measure from the 2011 Economic Freedom of the World data set (Gwartney, Hall and Lawson 2011).\(^7\) This variable ranges from 0-10, with higher values reflecting an increasingly strong legal structure that enforces property rights. Property rights data are only available every five years during the period prior to 2000, meaning data exist for 1970, 1975, 1980, 1985, 1990, 1995, and 2000-2008.\(^8\)

As was noted earlier, democracy and property rights are conceptually distinct. However, these terms are often treated as closely related, with some even implying that private property rights are nested within democracies (c.f. Jensen 2003 or Jakobsen and de Soysa 2006). Within our data set, it is evident that the correlation between the two is moderately high ($\rho = .44$) and is statistically significant ($p < .001$). While this raises some collinearity concerns, it should make finding statistical significance more difficult.

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\(^6\) Analyses conducted using the 21-point polity2 democracy measure produce similar results.

\(^7\) The use of this data is relatively common within the economic and economic policy literature. See, for example, Burkhard (2002); Knack and Heckelman (2005); Ovaska and Takashima (2006); de Soysa and Vadlammanati (2011), and Vamvakidis (1998). In addition, employing a meta-analysis of economic freedom, Doucouliagos and Ulubasoglu (2006) find no statistical significant difference between studies employing these data compared to those produced by the Heritage Foundation, Freedom House, or Scully and Slottje (1991). For a more in-depth discussion of the how economic freedom is conceptualized and measured, see Gwartney and Hall (2003). Finally, this variable is conceptually the same as the International Country Risk Guide (ICRG), used by scholars such as Choi (2010) and Powell and Staton (2009), but is available for a wider time frame.

\(^8\) Rather than interpolating data, we rely only on this available data for our results.
Like Li and Resnick (2003), we expect that democracy may have both positive and negative effects on FDI. As Simmons (2000) suggests, firms may avoid democracies with weak property rights protections. However, we theorize that democracy impacts FDI conditionally through property rights; democracy increases the effectiveness of property right protections by promoting contiguity in a property rights regime. While firms prefer states with strong property right protections, they especially prefer democracies with strong property rights protections. Continuity within the property rights regime is especially important in times of technological dynamism. To account for this conditional effect, we include an interaction between Democracy and Property Rights.

*Control Variables*

Several variables are included to account for alternative determinants of FDI. These are government durability, economic size, economic growth, level of economic development, resource endowments, and physical security. While there are a number of other potentially confounding factors, most alternative theoretical explanations are accounted for by this set of control variables. Control variables are obtained from the World Development Indicators (World Bank 2011) unless otherwise noted.

*Durability* of a regime is obtained from the Polity IV data set (Marshall and Jaggers 2008). Durability is important for investors, as past stability is an indicator of current and future government stability. MNCs are more likely to invest in countries with consistent policies and

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9 Studies in international relations, and political science more generally, suffer from over-specification of variables in empirical models that do not correspond to the theoretical model on which they are based (Kadera and Mitchell 2005; Ray 2003). The inclusion of atheoretical control variables is often grounded in fears of omitted variable bias. However, Clark (2005) demonstrates that these fears are overstated. Worse, the inclusion of unnecessary control variables matter substantively because this can mask the relationship of theoretically relevant variables and the dependent variable (Achen 2005; Greene 2000, 337-338; Ray 2005).
governments. It is expected that Durability has a positive impact on FDI. This is logged to control for skewness.

The size of the economy also has an effect on FDI inflows. Larger markets are likely to produce higher FDI inflows, since they provide greater probability for future returns. Economic Size is operationalized as gross domestic product (GDP) in constant 2000 United States dollars. Economic Size is logged to control for skewness.

GDP Growth rates are used to demonstrate growing economies. High rates of GDP Growth demonstrate expanding markets. Growth attracts more FDI investment as foreign investors seek to maximize returns on future markets.

Rural Population represents the level of economic development. It is expected that populations that are rurally based are less economically developed than those with more urban development.

Resource endowments are thought to attract FDI. Resource are the sum of mineral, gas, and oil rents as a percent of GDP. These are logged to control for skewness. Because the Resource of a country can be equal to zero, a constant is added before logging the value to make all values positive and non-zero. Since this value is a constant, it has no effect on the estimated coefficient.

Security is represented by the number of battle deaths within a state’s territorial borders. This variable accounts for both international and intrastate sources of conflict. The number of battle deaths is logged to control for skewness. As was the case for the previous variable, a constant is added to all countries to prevent non-zero values.

Empirical Analysis
Table 1 demonstrates the importance of accounting for variation in space and time. The random intercepts are able to account for a large portion of the variance in the model. This can be seen by looking at the random effect parameters $\sigma_j$ and $\sigma_t$. These values of these parameters represent the amount of variation accounted for, or ‘soaked up,’ by including multiple levels in the statistical model that would otherwise inflate the standard errors of the coefficients. The individual effects of $\sigma_j$ and $\sigma_t$ will be demonstrated visually when looking at the individual coefficients associated with the marginal effect of property rights for different states over time.

The first model displays the independent effects of property rights and democracy. Property rights protections exert a positive impact on FDI while democracy has a negative influence. However, this ignores any conditional impact of democracy on property rights. This is investigated in the second model that includes an interactive term between property rights and democracy. It is important not to simply look at the results and interpret them as we would additive regression models. This is because interactive terms are multiplicative and non-linear in nature (Kam and Franzese 2007; Braumoeller 2004). Thus, the interactive and constitutive terms have no inherent meaning on their own. Instead, the marginal effects should be calculated to provide substantively meaningful results (Brambor, Clark and Golder 2006).

Figure 2 displays the marginal effect of property right protections on FDI over different levels of democracy. This means that the effect of property rights is conditional on a state’s level of democracy. At the lowest value of Democracy, the effect of Property Rights protections towards attracting FDI is negative and statistically significant. However, this effect becomes statistically insignificant between Democracy values of approximately 2 and 5 before becoming positive and statistically significant at values of 6 and 7. This means that marginal effect of
property rights is negative in autocracies and positive in democracies; that is, the effect of property rights changes depending on the level of Democracy. The kernel density estimate on the right hand side of the plot displays the proportion of observations at each level of democracy.

< Figure 2 about here >

Comparing model 1 to model 2 illustrates the importance of correctly modeling the structural form of our theoretical relationship in order to properly evaluate the theory outlined above (Keele 2008). Ignoring the conditional nature of democracy on attracting FDI at different levels of property right protections leads to very different inferences than assuming a linear structure. These results shed light on why previous studies have found mixed results regarding the effect of democracy and FDI. Rather than having an independent and linear effect on FDI, democracy interacts with property right protections and conditions its influence.

One aspect of the utility of the hierarchical model is evident when considering the marginal effect of Property Rights on FDI for each country over time. Figure 3 displays the marginal effect coefficient for each country in every year where data exists; thus, each line represents a specific country and each dot is an observation point. For ease of interpretation, these results are displayed at the regional level. It is clear from the figure that the marginal effect changes over time and by country. While in the Central and North Asia the marginal effect is predominately negative at all points in time, in the others it tends to start as negative and becomes positive. In addition, we find that while Europe introduces substantial variation in the marginal effect of Property Rights, the mean coefficients for each region are roughly the same in each year, expressing surprising sameness between developed and developing countries.

< Figure 3 about here >
It is clear that temporal elements introduce substantial variation that is accounted for by using a hierarchical modeling approach. Ignoring these sources of variation would inflate the standard errors associated with variable coefficients and may result in incorrect inferences regarding the relationship between democracy, property rights and FDI. By acknowledging this variation, we are able to isolate the impact of our variables of interest.

For instance, by looking closely at Figure 3, it appears that prior to the late 1990s, the marginal effect of Property Rights with FDI inflows was negative, while afterwards this effect becomes increasingly positive for most countries. In addition, the change between years is not constant, but instead experiences significant variation in both strength and direction over time. This helps to demonstrate the value of treating each year individually rather than assuming a common structure between all years.

Finally, the average substantive relationship between property rights and democracy and their effect on FDI is displayed in Figure 4. The simulations used to calculate the predicted values of FDI when varying property rights and democracy are based on the values obtained from the second model of Table 1. As is clear in Figure 4, democracy has a negative effect on attracting FDI at low levels of property rights protection. As property right protection increase to the mean, democracy has a positive impact on attracting FDI. At high levels of property right protection, democracy has an even stronger positive relationship with FDI.

< Figure 4 about here >

Conclusion
The disparate empirical findings in the literature are largely reconciled through our analytical and empirical approach. Analytically, both those arguing for democracy and autocracy as having a privileged position for enticing FDI are in some measure correct. However, the effect of
property rights protection on FDI is conditioned by the institutional structure and legitimacy provided by a country’s regime type. Despite claims in the literature that democracy attracts FDI because of its high levels of property rights protections, we know empirically that democracy and property rights protections are separate concepts. Yet, the intuition that high levels of democracy and property rights protections produce high inflows of FDI is accurate. But it is equally important to recall that democracies with low levels of property rights protections are less able to attract FDI than their autocratic counterparts. Thus, democracies and autocracies have advantages depending upon the level of property rights protections provided.

Our empirical approach also represents an advance in the literature on regime type and FDI. The non-nested hierarchical model allows us to more appropriately account for country-specific and temporal effects. We can examine the effect of property rights and regime type on FDI inflows in each country by over-parameterizing the model rather than resorting to a reference category as is the case with fixed effects models. We can explicitly model time rather than simply treating it as a nuisance as occurs in PCSE models. Both help us to estimate standard errors more precisely, resulting in a much more accurate testing of our central hypothesis. This approach also allows us to avoid well-known problems resulting from pooling developed and developing countries in the data set, since coefficients for each country can easily be recovered and displayed to verify trends identified in the statistical analysis and note outliers. Finally, our use of net inflows of FDI per capita helps to resolve some of the measurement issues found in the literature, since it reflects actual inflows of FDI and accounts for country size.

In terms of policy, the results of our analysis indicate that neither democracy, nor property rights protections alone are sufficient to attract FDI. In fact, democracy alone has a negative effect on FDI inflows. In order for democratic countries to attract FDI, they must be
encourages to develop strong property rights protections. Such property rights regimes provide institutionalized, legitimate means of establishing and modifying property rights as technology and the economy change over time. Only democracies are capable of ensuring such protections, and when they do, they are rewarded handsomely through increased FDI inflows.
References


Li, Quan. 2009a. Democracy, Autocracy, and Expropriation of Foreign Direct Investment. Comparative Political Studies. 42(8): 1098-1127.


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


Table 1. Effect of Democracy and Property Rights on FDI

<table>
<thead>
<tr>
<th>Property Rights * Democracy</th>
<th>24.17**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Rights</td>
<td>87.73***</td>
</tr>
<tr>
<td></td>
<td>(28.62)</td>
</tr>
<tr>
<td>Democracy</td>
<td>-44.27**</td>
</tr>
<tr>
<td></td>
<td>(21.68)</td>
</tr>
<tr>
<td>Durability</td>
<td>84.54**</td>
</tr>
<tr>
<td></td>
<td>(36.36)</td>
</tr>
<tr>
<td>GDP</td>
<td>22.74</td>
</tr>
<tr>
<td></td>
<td>(30.94)</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>3.06</td>
</tr>
<tr>
<td></td>
<td>(7.26)</td>
</tr>
<tr>
<td>Rural Population</td>
<td>-8.69***</td>
</tr>
<tr>
<td></td>
<td>(2.66)</td>
</tr>
<tr>
<td>Resources</td>
<td>-110.88***</td>
</tr>
<tr>
<td></td>
<td>(36.55)</td>
</tr>
<tr>
<td>Physical Security</td>
<td>-2.93</td>
</tr>
<tr>
<td></td>
<td>(15.75)</td>
</tr>
<tr>
<td>Constant</td>
<td>92.97</td>
</tr>
<tr>
<td></td>
<td>(393.52)</td>
</tr>
</tbody>
</table>

Random Effects Parameters

| $\sigma_j$ | 441.35 |
| $\sigma_t$ | 244.87 |
| $\sigma_\epsilon$ | 954.53 |

Observations | 1375 | 1375
Log-Likelihood | -11472.8 | -11470.2

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Coefficients are displayed above the standard errors, which are in parentheses. The random effects parameters display the estimated standard error associated with each non-nested hierarchical group variable, where $j$ is country, $t$ is year and $\epsilon$ is residual error.
Figure 1. Aggregated World Foreign Direct Investment Over Time

Note: Foreign Direct Investment figures are in billions of US dollars.
Figure 2. Marginal Effects of Property Rights on Foreign Direct Investment

Note: Dashed lines give 95% confidence interval. Light dashed-dotted line displays the Kernel density estimate.
Figure 3. Marginal Effect of Property Rights Over Space and Time

Note: Displayed value is the marginal effect of Property Rights when interacted with Democracy from model 2 of Table 1. Displayed coefficients are in thousands.
Figure 4. Predicted Foreign Direct Investment at Varying Levels of Democracy and Property Right Protection

Note: Dashed lines give 95% confidence interval. Durability, GDP, GDP Growth, Rural Population, Resources, and Physical Security held at mean.