

The influence of foreign direct investment on contracting confidence in developing countries

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Abstract

This paper examines whether foreign direct investment (FDI) influences confidence in commercial contracts in developing countries. While the research on how host countries' policy environments encourage FDI inflows has flourished, scholars have paid less attention to how the policy environment and local actors' beliefs might, in turn, be affected by FDI. This is surprising because multinational enterprises are well-recognized political and economic actors across the world. We expect that their increasing economic salience will influence the policy environments in which they function. By employing an innovative measure of property rights protection – contract-intensive money – we examine how foreign direct investment influences host countries' contract-intensive money ratio in a large panel time series of both developed and developing countries from 1980 to 2002. Our analysis suggests that higher levels of FDI inflows are associated with greater confidence in commercial contracts and, by extension, the protection of property rights in developing countries.

Keywords: contract enforcement, development, FDI, property rights.

Introduction

This paper examines whether foreign direct investment (FDI) influence domestic actors' confidence in contracting institutions. While the research on how host countries' institutional arrangements might encourage FDI inflows has flourished (Henisz 2000; Jensen 2006), scholars have paid less attention to how these policy environments might be affected by FDI. This is surprising because multinational enterprises (MNEs) are well-recognized economic actors across the world. In 2005, FDI inflows accounted for 12.8% of developing countries' gross fixed capital formation (4.5% in 1970) and FDI stocks amounted to 27% of their gross domestic product, up from 12.4% in 1970 (UNCTAD 2002). It is reasonable to expect that MNEs will leverage their economic importance to influence the policy environments in which they function. Specifically, we expect FDI to be positively associated with local confidence in contract enforcement and property rights.

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Since the heyday of dependency theory (Hymer 1976; Moran 1978), scholars have examined how MNEs impact host economies and how MNEs and host governments negotiate rents (Vernon 1971; Kobrin 1976). While there has been some debate as to the developmental benefits of FDI (Javorcik 2004),¹ most scholars focus on how FDI influences aggregate outcomes (such as economic growth and income inequality) in host economies.² Little attention has been paid to the effect of FDI on host countries' policy environments and the economic behaviors of local actors (Boddewyn & Brewer 1994). This is an important omission because the policy environment is the crucial link between FDI inflows and aggregate outcomes. By not identifying how FDI might influence the policy environment, scholars might not be correctly interpreting the effect of FDI on aggregate outcomes.

We expect MNEs to seek changes in the policy environment to enhance (or protect) rents. The extent to which MNEs succeed – or the extent to which host governments anticipate MNEs' preferences and unilaterally supply such policy environments – is likely to vary across countries, across sectors within a country, and even across firms within a sector (Makhija 1993). This paper makes a contribution by examining whether or not FDI influences an important dimension of host economies' macro policy environment – the security of property rights and the enforcement of contracts.

Why focus on this particular policy dimension? We begin with the assumption that as profit seeking actors, MNEs are likely to employ market based as well as political strategies to protect their rents (Baron 2000). MNEs typically function in the formal economy and undertake non-simultaneous, arm's-length transactions executed via commercial contracts. To effectively account for their activities, MNEs must rely on heavily intermediated financial transactions, forcing their local customers and suppliers to do the same.

There already exists evidence that MNEs condition their choice of investment location and mode on institutional considerations, at least at the margins.³ The security of the property rights attracts FDI inflows (Jensen 2006) and affects MNEs' modes of entry (Agarwal & Ramaswami 1992; Meyer 2001). The consequences of FDI for local actors' perceptions of the security of contracts and the enforcement of property rights are underexplored. We argue that FDI is part of a dynamic process in which we should expect to see MNEs' presence affecting host policy environment. While we present a theoretical story as to how this might take place, our primary goal is an empirical one: to document a correlation between FDI and subsequent confidence in commercial contract enforcement.

Just because MNEs prefer a certain type of a policy environment does not bring it into existence. We explore conditions under which MNEs' presence translates into observable effects on the economic behaviors of citizens and firms in the host economies. At a fundamental level, the larger MNEs loom in the host economy, the more likely it is that host governments will be sensitive to their preferences. After all, there is evidence that governments compete to attract and retain FDI. Given host governments' sensitivity toward MNEs' preferences, we hypothesize that higher levels of FDI will either lead to improved enforcement of existing contracting rules or induce governments to supply new rules to achieve the same goals. The net effect, which our data capture, should be reflected in the increased usage of contract-intensive money, the proportion of the money supply held in the banking system (Clague *et al.* 1996, 1999). The core idea behind this measure is that “where citizens believe that there is sufficient third-party enforcement, they are more likely to allow other parties to hold their money in exchange for some compensation, and CIM is correspondingly higher” (Clague *et al.* 1999, p. 188).

Contract-intensive money (CIM), we assert, reflect how actors in host economies perceive the security of property rights and the costs associated with enforcement of contracts. Other measures of governance quality, property rights security, and contract enforcement rely on elite surveys and expert assessments and are concerned only with the threats to property rights via government expropriation. In contrast, CIM is an objective proxy of actors' assessments of the contracting environment and the economic choices they make in response to it. We expect to find a positive correlation between FDI stock and the contract-intensive money ratio, all else being equal.

An example might be useful here. Since 1990, China has been one of the favored destinations for FDI. However, poor property rights protection, especially in intellectual property (IPR) is an important concern. Several MNEs have decided to exercise "voice" to persuade the Chinese government to improve the enforcement of property rights; as an important foreign investor, Microsoft is at the forefront in persuading the Chinese government to do more to enforce IPR. During Chinese President Hu's 2006 visit to the US, he visited Microsoft's Seattle area campus. *China Daily* reported "Hu visits Microsoft, Vows Better IPR Protection." Indeed, President Hu publicly declared that the Chinese government was sensitive to Microsoft's concerns about inadequate IPR protection, and would work to improve it.⁴ While it is too early to evaluate the progress made on this front, the *People's Daily*, the official organ of the Chinese Communist Party, reports that since the 2006 visit China has established IPR service centers in 50 major cities with the objective of curbing pirated software.⁵ The Chinese government claims that the software piracy rate in the Chinese market has declined markedly since. As the world's largest software maker, Microsoft undoubtedly benefited from the decreasing piracy rate. As of the end of September, the revenue of Microsoft Windows amounted to \$US822m, of which \$US164m came from the fight against piracy.⁶ While this example highlights the visible lobbying by MNEs, they will seek to employ less visible political strategies as well. Furthermore, governments might anticipate MNEs' preferences and supply a contracting environment accordingly.

We focus on developing countries for several reasons. First, they vary in their abilities to attract FDI. Because the accumulated stock of FDI varies across countries, we expect the FDI influence on the contracting environment to vary accordingly. Second, there is an emerging literature documenting how capital managers' behavior vis-à-vis governments in poorer countries differs from what we observe in relation to governments of the OECD (Mosley 2003; Wibbels & Arce 2003; Ahlquist 2006; Wibbels 2006). More concretely, empirical findings regarding the determinants of FDI show quite different patterns when examined in rich and poor countries (Blonigen & Wang 2005), making pooled samples problematic. In this paper, we study this important subject by examining a panel time series of both rich and developing countries covering the period 1980–2002. We show that this difference between rich and poor countries extends to the influence of MNEs over the host countries' policy environments. In developing countries, domestic actors' confidence in contracting rules and institutions is systematically and positively associated with higher levels of FDI.

An increased confidence in domestic contracting is likely to be the result of three avenues of influence. First, MNEs can have a direct and "mechanical" effect on contract usage through their economic activities. Second, this increased confidence in the contracting environment might be the result of policy changes that facilitate an increased reliance on formal contracting as reflected in the contract-intensive money ratio. Third,

the presence and increased salience of large foreign companies can act as a signal of contracting quality to the broader population which might be uncertain as to the effectiveness and costliness of local contract enforcement mechanisms. Specifying the relative importance of these three channels and identifying whether policy changes are the result of more effective enforcement of existing property rights rules or the establishment of new rules is beyond the scope of our argument and our data. We hope to provoke a new wave of scholarship that will ultimately be able to account for both firms' investment decisions and host governments' policies in a unified dynamic model.

Theoretical framework

Commercial contracts form the backbone of market based economies that rely on arm's-length and non-simultaneous transactions. By specifying rights and obligations of the transacting parties, contracts enable impersonal exchange over space and time, thereby facilitating specialization along the lines of comparative advantage with the attendant welfare gains. If contracts can be written, monitored, and enforced at low cost, resources can be efficiently allocated and economic prosperity follows (North 1990).⁷ The IMF and the World Bank routinely advise developing countries to improve legal protection for contracts (World Bank 2002).

While low cost transacting might be desirable, contracting disputes are inevitable. Varying interpretations of the contractual obligations and incentives for opportunism may induce contracting parties to overstate their rights or renege on their obligations. Where there is uncertainty about the effectiveness of contract enforcement or there are non-trivial enforcement costs that players must bear, contracts become less valuable. Without low cost enforcement, property rights specified in the contract attenuate and rents dissipate (Barzel 1989).

How do actors then seek to resolve contracting disputes? Prior research suggests that factors such as trust, face-to-face communication, and a long shadow of the future reduce the likelihood of disputes and facilitate their resolution (Axelrod 1984; Taylor 1987; Ostrom 1990; Ellickson 1994; McMillan & Woodruff 2000). In some cases, actors employ the services of private arbitrators, ranging from legal (Mattli 2001) to the not so legal (Gambetta 1993). When these enabling rules are absent, insufficient, or fail, transacting agents are likely to petition the state for contract enforcement and dispute resolution (Greif *et al.* 1994; Greif 1998).

MNEs may have incentives to influence the host environment given that FDI is less mobile than other forms of transnational economic flows such as portfolio capital. With their "exit" more expensive, MNEs have stronger incentives to engage in political "voice" than traders or bond market participants. Although MNE–host government interactions are increasingly governed by bilateral and multilateral investment treaties (UNCTAD 1998, 1999) as well as trade agreements, such treaties may not always bear upon the contracting environment faced by MNEs in dealing directly with private actors in host economies.⁸ They, therefore, possess incentives to lobby for changes in the contracting environment with the objective of securing their property rights.

The contracting environment also bears on the organization of foreign investment and productive activity. Direct investments (and the mode of entry) are specific organizational choices made by firms to take advantage of opportunities for securing rents in the host country. FDI is focused in the formal economy and relies on arm's-length and

non-simultaneous transactions for its value creating activities. Once invested, FDI tends to be illiquid and costly to divest (though this plausibly varies across sector, industries, firms, and even specific ventures). MNEs are less likely to be able to draw on informal social networks to resolve contractual disputes given their “foreignness”⁹ and the numerous arm’s-length agreements into which they must enter. Instead, they must turn to the state for enforcement of contracts. They would like the state to supply a policy environment that enables enforcement of contracts and protection of property rights at low cost. As their access to alternative enforcement mechanisms tends to be restricted, their preferences are likely to be stronger relative to domestic actors in this regard.

While there is a substantial literature explaining how host countries’ policy environments influence the location, amount, entry mode, and timing of FDI, the literature on how FDI might affect the host country’s policy environment remains relatively underdeveloped (Boddeyn & Brewer 1994). There is some discussion of the impact of FDI on host country practices such as human rights (Meyer 1996), environmental practices (Prakash & Potoski 2007), corruption (Larrain & Tavares 2004), child labor (Neumayer & de Soysa 2005), and local government budgets (Figlio & Blonigen 2000). Nevertheless, the most common approach in recent scholarship is to put FDI on the left and host policy environment variables on the right side of regression equations (e.g. Li & Resnick 2003; Jensen 2006). Our ignorance about local actors’ reactions to FDI, the resulting policy dynamics, and the consequent changes in the economic behaviors of these actors is an important omission.

MNEs seek changes in the contracting environment in at least two ways. First, MNEs can openly lobby host governments to supply a well-functioning property rights system¹⁰ enabling the enforcement of commercial contracts at low cost. Whether this involves establishing entirely new rules or simply effectively and consistently enforcing existing ones is beyond the scope of this paper but is clearly an avenue for future research. Host governments that depend on FDI for critical resources or that are unwilling to send negative signals to world financial markets are likely to be more responsive to MNEs’ wishes, although domestic political opposition to MNEs is likely to dampen governments’ responsiveness.¹¹

Second, the presence and activities of MNEs in the host economy are likely to create both economic and “political externalities” (Gartzke & Li 2003) that have concrete consequences for the host countries’ policy environments. The former are the result of the fact that MNEs will engage in formal contractual and financial relations directly with local suppliers, which then induces these local actors to participate more deeply in the formal sector than they might have otherwise. Political externalities refer to the unintended or unforeseen political changes induced by MNEs in host countries. Since these changes are unforeseen, the costs and benefits that emanate from them are not fully captured by the investor and are not included in the investor’s *ex ante* decisions regarding the location and mode of FDI. As a result, we expect there to be a relationship between FDI and CIM even if MNEs condition their initial entry decision on institutional considerations. An obvious political externality is the emergence of new political and economic actors, the “rent chain” as Baron (2000) puts it, whose economic interests align with those of MNEs. To the extent that the MNEs’ local customers, suppliers, and other service providers are drawn into formal contractual relations with a large enterprise, these local actors will have economic interests that are closely tied with the MNEs and therefore favor low cost contract enforcement.¹² Thus, the presence of MNEs may

alter the political incentives for governments to supply more effective enforcement of property rights.

Counter-pressures may also emerge from other domestic actors that favor the status quo or are ideologically opposed to MNEs (Doh & Teegan 2003). For example, there is anecdotal evidence of newly unified groups forming to contest the activities of MNEs in places like Bolivia, India, and Ecuador. More systematically, Silver (2003) documents how the shifting locations of production in the automobile and textile industries has stimulated the development of workers' movements and industrial unions. She argues explicitly that the geographic mobility of capital is instrumental in the emergence of powerful labor movements in places as diverse as Detroit, Brazil, and Korea. At the micro level, there exists evidence that FDI plays a role in conditioning workers' perceptions of economic insecurity. Scheve and Slaughter (2004) show that British workers in more FDI penetrated industries feel more economically insecure.¹³ While it is not immediately apparent that labor groups (for example) would oppose MNEs on the issue of contract enforcement, it is clear that political externalities do not necessarily work in favor of the MNE.

There are two pathways through which FDI might generate the externalities described above, which we dub "mechanical" and "informational." The mechanical pathway is simply a reflection of how MNEs' activities directly contribute to a greater use of contracts and, to look forward to the empirics, CIM. In order to manage a large multinational firm and communicate with investors, transactions must be accounted for and visible. Profit repatriation and making local payroll and sales require the use of the local banking system. All these mechanisms imply greater use of CIM. What's more, these activities will extend to their employees, suppliers, and customers which will reinforce the greater use of CIM. Furthermore, these actors whose economic interests are aligned with MNEs' will face incentives to demand better enforcement of property rights. The mechanical increase in contract usage reflects no direct attempt to change the policy environment; rather it is purely a function of the day-to-day activities of the firms. It is worth noting that if the mechanical pathway is the primary source of the positive FDI-CIM relationship we describe below, the time lag between FDI and CIM should then be relatively short. CIM should move as soon as the direct investors' operations are up and running in the host country.

The second pathway is informational. If we assume that the local actors are uncertain about a particular government's promise to improve the courts, root out corruption etc., the increasing visibility of large foreign entities relying on these institutions can constitute a broad signal of quality. Note that the mechanical activities of MNEs can serve to reinforce the strength of the informational signal. Both the mechanical and informational pathways imply that other large transnational actors, such as foreign donors and the IMF, could have similar effects on the confidence in local contracting.

Though we posit both mechanical and informational mechanisms through which FDI is likely to alter the contracting environment, we do not attempt to sort out the relative importance of FDI's intended (i.e. strategic) and unintended consequences on host countries' politics and policies. Rather, we focus on establishing the existence of an empirical relationship between FDI and local agents' evaluation of the protection of property rights and the enforcement of commercial contracts.

It is worth briefly summarizing our argument before turning to empirics. While the interests and activities of managers surely vary across countries, sectors, and firms, the

ability to enforce commercial contracts at low cost is central to the exercise of commerce that relies on arm's-length, non-simultaneous transactions. We make a simplifying assumption that all MNEs have the same preferences in this regard. Our central causal argument is as follows: Regardless of the reasons for their initial investment and the mode chosen to do so, MNEs, on average, prefer more credible and efficient contract enforcement to less. MNEs will pursue strategies to affect the policy environment. Additionally, their presence in developing countries will generate economic and political externalities that affect local actors' perceptions of the quality of contract enforcement which we measure using CIM. We hypothesize that FDI flows will be positively associated with contract-intensive money and we test this hypothesis using a panel time series dataset. These data include up to 117 countries with data from 1980–2002.

Empirical analysis

Systematic cross-national studies of the policy impact of MNEs are somewhat sparse, primarily due to a lack of reliable data. Data availability and concept measurement become more problematic when one begins to study developing countries because much of business's political activity in such institutional environments is invisible and often inadequately captured in official statistics or even surveys. While some have looked at firms' political activities in non-American contexts (Hillman & Keim 1995; Alt *et al.* 1999; Levy & Egan 1998; Fisman 2001; Hillman & Wan 2005), the central works examining corporate political activity focus on the US (Quinn & Shapiro 1991; Grier *et al.* 1994; Hansen & Mitchell 2000; Hart 2001).

Quantitative cross-national analyses tend to examine the responses of macroeconomic (e.g. openness, growth) and macropolitical variables (e.g. "democracy") to global capital flows (Busse 2003; Wibbels & Arce 2003; Jensen 2006) while attributing micro-level agency to firms and state actors. We attempt to split the difference between close examination of a particular country and highly aggregated outcomes. To do so, we employ a response variable that gives a more detailed picture of variation in property rights enforcement. While not enabling direct measurement of MNEs' political activities in host countries, this variable allows us to examine more granular configurations of the policy environment about which we have stronger theoretical expectations. In particular, these data permit more direct examination of private actors' behavior as assessments of the costs of contract enforcement change across countries and over time.

Contract-intensive money

The response variable we employ is so-called contract-intensive money (CIM). It is defined as the proportion of the money supply held in the banking system. More formally, it is $(M2-M1)/M2$, where M2 is "money and quasimoney" and M1 is money outside the banking system. Calculating CIM requires summing four different line items from the IMF reported national accounts (International Monetary Fund various years-b): lines 14a (currency outside banks), 15 (time, savings, and foreign currency deposit), 24 (demand deposits), and 25 (time and saving deposits). As usual, there is variation in how much data individual countries report. We, therefore, construct two CIM variables: one which includes only observations for which all data components are reported and another which includes observations for which 14a and at least one of 15, 24, and 25 is

reported. Obviously the latter has better coverage¹⁴ at the cost of more measurement error. Though previous studies are silent on this data availability point, we report all regression results using the more expansive measure of CIM. Where substantive results differ if the more restricted variable were used instead we make note.

Clague *et al.* (1996, 1999) were the first to suggest CIM as a tool to measure domestic confidence in contract enforceability. Their argument is that as general confidence in the enforceability of contracts increases, individuals and firms will be more likely to hold their money in the form of more complicated financial assets rather than just cash. As Clague *et al.* note:

[E]nforcement problems underlying the use of different forms of money and credit mirror enforcement problems underlying trade in goods and services...[T]he types of money that are most widely used vary greatly from country to country. In some countries, currency is the only money that is widely used... Characteristics of third-party contract enforcement in countries are likely to explain much of the differences in firms and individual preferences governing the choice of money to use... [t]he same governmental deficiencies that require self-enforcement of transactions also lead economic actors to prefer currency. If contracts are generally unreliable, there can be no assurance that the money lent to financial institutions is safe. Moreover, when financial institutions cannot rely on third-party enforcement of loan contracts – and when property rights are not clear, so that lenders do not have secure property rights to mortgaged assets in the event of borrowers' default – then they cannot earn as much with the depositor's money. This means in turn that there will be less financial intermediation and higher charges for banking services. (1999, pp. 187–188)

Clague *et al.* (1999) also provide an extensive discussion of CIM's relationship to numerous other variables (such as Gastil's indices of political freedoms and civil liberties, ICRG, BERI, and BI ratings) purporting to measure contract enforceability and governance quality. The essence of their findings is that contract-intensive money is preferable because it is not based on expert evaluations of contract enforcement costs. More subjective measures (such as indices from the Heritage Foundation and Fraser Institute) are known to be influenced by macroeconomic outcomes: when a country's economic performance is good, the survey respondent may believe that the country's quality of governance is good. In this paper we are not directly concerned with the threat of government expropriation, which composite indices from the Heritage Foundation and the Fraser Institute attempt to characterize. Rather we focus on the overall costs of engaging in arm's-length, non-simultaneous transactions over time and are therefore concerned with the efficiency of multilateral contracting, making the contract-intensive money variable more theoretically compelling as well as empirically useful than these subjective measures. In any event, CIM correlates in the right direction with these other measures. Clague *et al.* conclude that "it is a good sign for CIM, and for the subjective measures, that CIM's correlations with these complementary measures of institutional quality are fairly high and remarkably consistent (at .62 or .63). Each type of measure adds credibility to the other" (1999, pp.197). In the economic development literature CIM has been employed as a measure of confidence in property rights (Messick 1999; Mahoney 2001; Dollar & Kraay 2004) giving us added confidence that this variable is theoretically appropriate.

In Figures 1–3, we present cross-sectional plots of CIM on other commonly used measures of governance. Figure 1 plots 2004 CIM against three composite governance indicators from the World Bank (Kaufmann *et al.* 2005) – rule of law, control of corruption, and government effectiveness – for both wealthy and developing countries. It also plots CIM against the commonly used ICRG composite rating. Both these plots and those in Figure 2 (developing countries only) clearly depict how CIM correlates in the right direction. Figure 2 also plots CIM against a variable available only for developing countries: the cost to enforce a commercial debt contract (Djankov *et al.* 2003; World Bank 2005). While this variable is available only for a cross-section, it lends further support to the notion that CIM is related to the underlying concept we are interested in. These figures also point to the fact the CIM does not fully conform to expert assessments. While this implies that CIM is noisy, capturing something that these other indicators are not, its greater longitudinal availability and variation make it particularly useful for our purposes.

Since it could be argued that CIM is simply a reflection of the overall development of the financial system or driven by access to retail banking outlets, Figure 3 plots CIM against four different measures of retail banking access: (log) bank branches per square kilometer, log bank branches per 1,000 people, log ATMs per square kilometer and log ATMs per 1,000 people (Beck *et al.* 2005). While CIM does correlate with these measures, as one would expect, it correlates more strongly with the governance and institutional quality measures displayed in Figures 1 and 2. This leads us to conclude that CIM is relevant for our purposes but that we must take some care in modeling it statistically.¹⁵

Panel regressions¹⁶

We proceed in four steps. First we establish that, even in a fairly sparse model, FDI shows a significant and positive influence on CIM, but that this relationship differs in developed versus developing countries. We use this insight to justify the subsequent analysis which considers only developing countries. Second, we examine the stability of the FDI–CIM relationship in the developing world in the presence of a slate of control variables representing plausible alternative hypotheses. Third, we examine the robustness of these models to the possible endogeneity of FDI and CIM. Fourth, we model the temporal process more explicitly by fitting error correction models (ECMs). All these models show a consistent and positive association between FDI and CIM.¹⁷

The basic structure of the dataset is an (unbalanced) panel time series. To start, we fit a pooled OLS model with an AR(1) correction to account for serial error correlation. There was consistent evidence of panel-dependent error heteroskedasticity so, following Beck and Katz (1995), we report “panel-corrected standard errors” (PCSE). The basic regression equation can be written as

$$CIM_{it} = \alpha + \beta_0 FDI_{it} + \beta_1 FDI_{it-1} + \sum (\beta_k CONROLS_{kit-1}) + \varepsilon_{it}. \quad (1)$$

We use FDI stocks as % GDP (UNCTAD 2002) as opposed to the more commonly used net FDI inflows as FDI stocks represent the accumulated salience of foreign MNEs in the local economy. To account for initial FDI endowments, we include the inward FDI stock in 1980. Note that the initial FDI stock variable is unique for each country and time

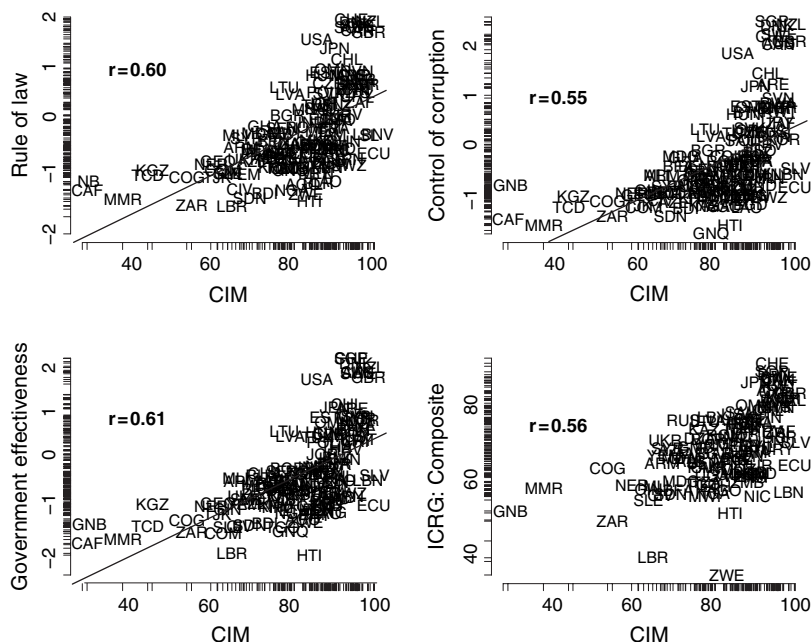


Figure 1 CIM correlates positively with other commonly used measures of governance across both rich and poor countries.

Note: See Appendix for data sources. CIM uses the more expansive version of the variable.

invariant, implying that we cannot also include a country fixed effect in the model as it would be perfectly collinear with this variable. For this reason, we must use caution in interpreting the coefficient on 1980 FDI stocks as it is also picking up other unmodeled, country specific factors related to CIM.

In the sparsest models we include population (logged), GDP (logged), per capita GDP (logged), and growth, as CIM is known to be pro-cyclical and increasing in wealth (Clague *et al.* 1999). We also include inflation rates as these plausibly influence the willingness to hold cash. In high inflation environments holding cash is increasingly expensive. Inflation is measured as a percentage change in the GDP deflator. We use this measure rather than consumer price inflation for two reasons: the price deflator measure has marginally better cross-country and time series coverage and CIM deals with the actions of all economic actors in the host economy, not just consumers. Thus overall price stability is relevant, not just prices for final consumption goods. Data are taken from the World Development Indicators (WDI).

To account for the effects of broad macropolitical institutions on CIM, we include the Polity IV scores (Marshall *et al.* 2004) scaled from 0 to 20. While there are several (highly correlated) measures of democracy, political openness and the like, Polity is uniquely well suited for studying political institutions (Casper & Tufis 2003). Polity is most directly concerned with the constraints on the executive and the freedom to compete in elections. Other measures emphasize civil rights and personal freedoms rather than institutions (e.g. Freedom House) or are too blunt (e.g. dichotomous democracy–autocracy scores).

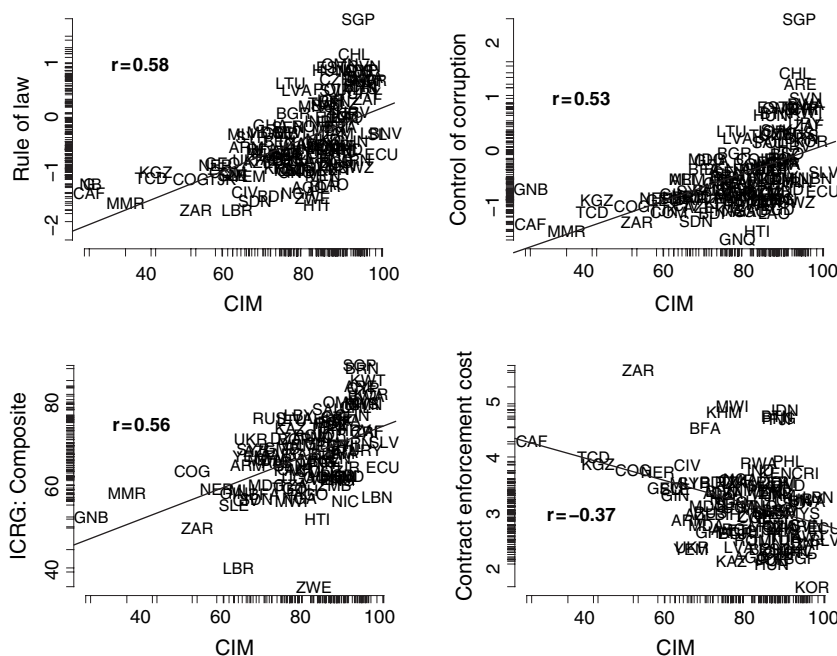


Figure 2 In developing countries, CIM correlates positively with other commonly used measures of governance. It correlates negatively with the costs of contract enforcement. Note: See Appendix for data sources. CIM uses the more expansive version of the variable.

In the initial regressions, we seek to characterize the difference between developing and rich countries. Rich countries have maintained stable institutional and policy environments for some time. None has defaulted on international debt obligations since World War II. CIM is already at quite high levels in all rich countries in the sample and shows less variability than in poorer ones. Firms operating in these countries are already governed by modern accounting and transaction rules, mitigating most of the externalities identified above. We therefore expect that FDI will not have a significant influence on CIM in rich countries. More generally, pooling wealthy and developing nations in FDI studies is problematic, as noted by Blonigen and Wang (2005). To demonstrate that this is in fact the case here, we construct an indicator variable that takes on the value of 0 if a country is one of the following: Australia, Canada, the EU15, Iceland, Japan, New Zealand, the USA, Norway, or Switzerland. All other countries are considered late developing countries (LDC) and are coded with 1 on the LDC variable.

Table 1 displays the results of two panel time series regressions. The key finding here is that there is evidence that FDI is positively associated with CIM, but only in developing countries. Model 1 presents a baseline model. Population, per capita wealth, and size of the economy are the significant covariates here. The 1980 FDI endowment is also strongly significant, but this is isomorphic with introducing country fixed effects.

In Model 2 we include the LDC interaction and findings differ dramatically. All the coefficients for all non-interacted terms, representing the relationships when $LDC = 0$, are indistinguishable from zero. Where $LDC = 1$, however, countries with high initial

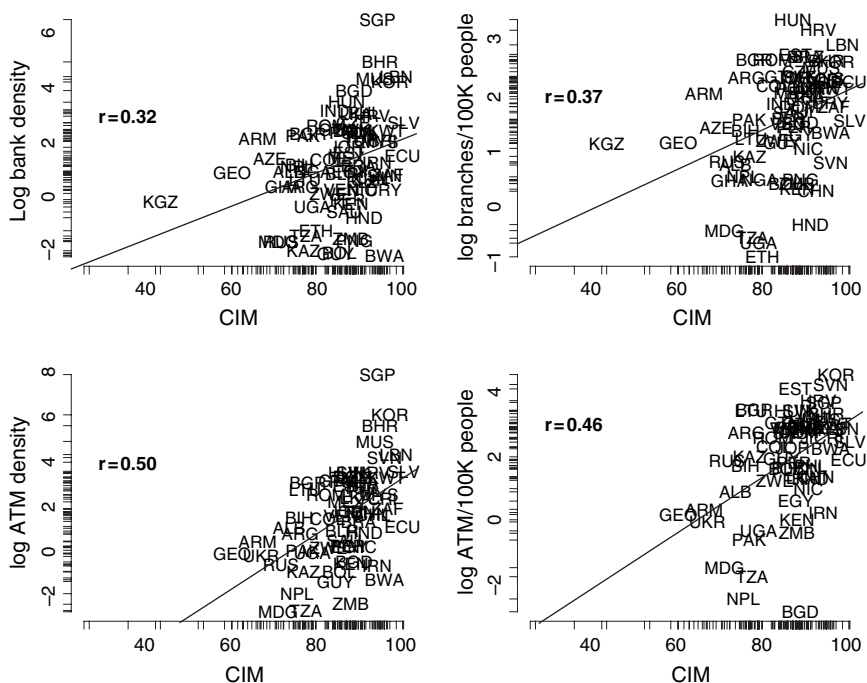


Figure 3 CIM is more highly correlated with governance indicators (Figs 1,2) than with measures of access to retail banking services.

Note: See Appendix for data sources. CIM uses the more expansive version of the variable.

FDI stocks in 1980 have systematically higher use of CIM. We note that the coefficient for this variable is near zero when $LDC = 0$. Even when initial FDI endowments are held constant, greater lagged FDI stocks are associated with greater use of CIM but, once again, only in developing countries. The negative relationship between CIM and Polity is curious but disappears if we use the more restricted version of CIM as the response variable.

We now examine this relationship between FDI and CIM further in the context of developing countries only (i.e. $LDC = 1$). We complicate the models by introducing additional covariates and attempting to address the possible endogeneity of FDI and CIM. First, many countries in the developing world underwent drastic reform programs in the 1980s and 1990s in which they liberalized their exchange rate regimes and capital accounts and deregulated their banking systems. These exogenous trends could affect both CIM and FDI, leading to a spurious finding. We therefore employ two possible indicators of the liberalization of the banking and financial system. First, following Clague *et al.* (1999) we include $M2/GDP$ and an indicator of financial development. Second, we employ the Fraser Institute's index of competition in domestic banking, that is the degree to which foreign banks can compete locally.¹⁸ This variable is available only at five year intervals, so we linearly interpolate the intervening years.

There is evidence that direct investors pay attention to institutional stability in addition to overall institutional configurations (Ahlquist 2006). In addition, Clague *et al.* (1999) show that where institutions are more variable, people are less willing to

Table 1 Pooled OLS estimates for both wealthy and developing countries. More initial and subsequent FDI is associated with increased confidence in the contracting environment in developing countries only.

Variable	Model 1		Model 2	
	Estimate	PCSE	Estimate	PCSE
FDI base (1980)	0.0978*	0.0247	0.009	0.024
FDI stocks ($t - 1$)	0.0238	0.0252	-0.038	0.032
Population ($t - 1$)	1.1413*	0.4615	-2.037	1.652
GDP ($t - 1$)	-0.3360*	0.1603	0.490	0.657
GDPpc ($t - 1$)	9.1437*	0.9837	4.029	2.664
Growth	0.0693*	0.0218	-0.021	0.078
Inflation ($t - 1$)	0.0002	0.0004	0.004	0.003
Polity ($t - 1$)	0.0126	0.0468	2.256	1.074
LDC interactions				
LDC * FDI base (1980)	—	—	0.163*	0.047
LDC * FDI stocks ($t - 1$)	—	—	0.112*	0.045
LDC * Population ($t - 1$)	—	—	0.251	1.879
LDC * GDP ($t - 1$)	—	—	2.996*	1.120
LDC * GDPpc ($t - 1$)	—	—	1.715	2.410
LDC * Growth	—	—	0.094	0.079
LDC * Inflation	—	—	-0.004	0.003
LDC * Polity ($t - 1$)	—	—	-2.241*	1.073
N (no. of countries)=	2,183 (109)		2,183 (109)	
$\rho =$	0.85		0.85	
Adjusted R^2	0.63		0.65	
χ^2 (d.f.)	694* (8)		1028* (16)	

*Significant at the 0.05 level or better (two-tailed test). Constant estimated but not reported. See Appendix for details on the variables.

hold contract-intensive money. The time series nature of the data permits us to take a more dynamic approach to institutional stability. Following Ward and Gleditsch (1998) we include the variance in Polity score for moving five year windows to account for the instability in the policy environment in the expectation that more variance will lead to lower reliance on CIM.¹⁹

There may also be other avenues through which international economic forces affect domestic actors' willingness to hold CIM. Citizens of countries in default to international lenders may worry about the stability of their financial systems and therefore want to hold more cash (and other light, fungible assets). We therefore include a variable indicating if a country was in default on its international debt obligations in the current period. Default data are taken from Beim and Calmoris (2001) and supplemented with data from Standard and Poor's (Beers & Chambers 2004).

In contrast, large amounts of foreign aid may reinforce the financial system. Donor governments may pressure recipients to make contract enforcement more reliable. Aid projects may also have effects similar to those of FDI, that is large projects will require formal multilateral transactions with local individuals and firms as well as foreign suppliers, increasing the use of CIM. International aid per capita (logged) is included for this reason. The presence of international organizations other than MNEs may also have an effect. The IMF routinely requires debtor countries to reform their economic policy and

has increasingly made demands for institutional reform. Ensuring security of property rights and creating low cost contracting environments are typical features of IMF conditionality. Following Vreeland (2003), we code our IMF variable as a 1 if a country appears in the International Monetary Fund (various years-a) *Annual Report* as subject to an agreement of any sort (standby arrangement, extended funds facility, or structural adjustment/poverty reduction program). These results are presented in Table 2.

The major message of our analyses is that FDI is positively associated with increased confidence in contracting environment. The FDI–CIM relationship is robust to whether we use the looser or more restricted version of CIM, the inclusion of several control variables representing plausible alternative hypotheses, and estimating an instrumental variables model to account for the possible endogeneity of FDI and CIM.

Model 3 displays strong evidence of the positive FDI–CIM relationship after including the covariates described above. This relationship is actually stronger²⁰ if we use the more restricted version of CIM, notwithstanding the fact that using this version reduces the number of countries in the sample by more than 50% and the number of observations by more than one-third. In terms of the magnitude of this relationship, an increase of one standard deviation in FDI is associated with about one-tenth of a standard deviation increase in CIM. Note that M2/GDP, representing the development of the financial system, is strongly positively associated with CIM, leading us to believe that there are other forces at work that may affect both CIM and FDI. Also note that the coefficient for the IMF indicator is significant and positive, consistent with the notion that other international actors may have an impact on confidence in contracting. The foreign aid coefficient is positive, but the uncertainty surrounding that estimate overlaps with a value of 0. In all models we find results from other studies confirmed: CIM is procyclical and positively associated with bigger, wealthier economies. In Model 5 we substitute the Fraser Institute's index of foreign bank competition for M2/GDP. This switch has no major impact on the substance of our results; the FDI relationship flows through, as does the positive and significant association between this measure of financial development/liberalization and CIM. What's more, the foreign aid variable is now stronger and attains significance at the 0.1 level.

It could be argued that we have the relationship backwards, that is, all we are picking up is the (known) relationship that FDI tends toward locations where MNEs' investments are more secure. Put in more technical terms, lagged FDI stocks may be correlated with the error process described in Equation 1, yielding misleading coefficient estimates. To address this possibility, we fit a fixed effects instrumental variables (2SLS) model using the second and third lags of FDI stocks as instruments for the one-period lag of that variable. Models 4 and 6 display these results, the former using M2/GDP and the latter using the Fraser index of foreign bank competition. The *J*-statistic for both models does not allow us to reject the null that our instruments are jointly exogenous. The positive FDI–CIM relationship remains, though its magnitude is somewhat attenuated. In Model 6, we see that lagged FDI stocks retain their positive sign but fail to achieve standard levels of significance. Once again, however, if we use the more restricted version of CIM (not reported here), the coefficients on FDI stocks roughly double in size and become strongly significant. The magnitude and significance of the foreign aid variable increase in both IV models. Curiously, Polity shows a negative and significant relationship in the IV specifications.

Overall, the results in Table 2 are encouraging. The findings for FDI are robust even in the presence of these additional variables, several of which show up as distinguishable

Table 2 Pooled IV and OLS Regressions using only developing countries. More initial and subsequent FDI is associated with increased confidence in the contracting environment in developing countries. This finding is robust to the inclusion of other covariates and using different estimators.

Variable	Model 3	Model 4	Model 5	Model 6
	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
FDI base (1980)	0.199** (0.028)	—	0.222** (0.026)	—
FDI stocks ($t - 1$)	0.044** (0.022)	0.0288** (0.0143)	0.050** (0.023)	0.019 (0.013)
Population ($t - 1$)	-0.635 (0.687)	4.6462** (1.4195)	-0.785 (1.100)	3.836** (1.51)
M2/GDP	0.101** (0.019)	0.0949** (0.0212)	—	—
Foreign bank	—	—	0.591** (0.111)	0.470** (0.081)
GDP ($t - 1$)	2.491** (0.711)	1.0330 (0.790)	2.823** (1.135)	2.786** (0.082)
GDPpc ($t - 1$)	6.192** (0.928)	5.5958** (1.135)	5.195** (1.408)	3.398** (1.16)
Growth	0.081** (0.021)	0.1023** (0.0276)	0.072** (0.021)	0.096** (0.027)
Inflation ($t - 1$)	0.000 (0.000)	-0.0008** (0.0001)	0.001 (0.000)	0.000 (0.000)
Polity ($t - 1$)	0.029 (0.048)	-0.1159** (0.0428)	0.061 (0.052)	-0.156** (0.043)
Polity variance	-0.021 (0.014)	-0.0039 (0.0160)	-0.029 (0.015)	-0.020 (0.020)
IMF	0.929** (0.371)	0.9893** (0.4269)	0.839** (0.362)	1.276** (0.380)
Default	-0.263 (0.518)	0.2229 (0.4470)	0.038 (0.450)	1.176 (0.430)
AIDpc ($t - 1$)	0.192 (0.144)	0.6587** (0.2276)	0.28* (0.158)	0.682** (0.226)
N (no. of countries) =	1,579 (88)	1,662 (117)	1,338 (73)	1,322 (87)
Estimator	OLS/PCSE	IV-FE	OLS/PCSE	IV-FE
$\rho =$	0.86	—	0.84	—
Hansen's J	—	3.9	—	0.8
Adjusted R^2	0.78	0.19	0.81	0.23
Model χ^2 (d.f.)/F (d.f.)	568** (14)	34** (12,1533)	772** (14)	30** (12,1223)

*Significant at the 0.1 level or better; **significant at the 0.05 level or better (two-tailed test). In IV models, lagged FDI stock is instrumented with its second and third lags. IV models report heteroskedastic consistent standard errors. Constant estimated but not reported for OLS/PCSE models; not estimated for IV models. See Appendix for details on the variables.

from zero. Of note are the consistent findings that development and liberalization of the financial system are also positively correlated with CIM and that other international actors (the IMF and foreign donors) also seem to have some positive influence on local confidence in the contracting environment. We also emphasize that the results for FDI are once again robust to the use of the restricted version of the response variable in spite of the reduction in sample size this implies.

For our final set of models, we seek to better characterize the temporal dynamics of the CIM–FDI relationship. To do so, we fit a within-country error correction model (ECM). ECMs, known for their use in cointegration and non-stationary time series work, also provide a convenient and intuitive way to explore temporal dynamics (Beck & Katz 1996; De Boef & Keele 2005). If we let Δ be the first difference operator, and de-mean all non-indicator variables, then we can write the within-country ECM as

$$\Delta CIM_{it} = \beta_0 CIM_{it-1} + \beta_1 FDI STOCK_{i,t-1} + \beta_2 \Delta FDI STOCK_{it} + \sum_{k=3}^K \beta_k CONROLS_{kit-1} + \sum_{m=K+1}^{2K-4} \beta_m \Delta CONROLS_{mit} + \varepsilon_{it}. \quad (2)$$

In an ECM, coefficients on the differenced terms represent the short-term, one-off effects of changes in those variables. Coefficients on the lagged variables represent the size of long-term changes once the system reaches its putative equilibrium. The size of this

effect for, for example, FDI stocks is given by the long-term multiplier $\beta_1/1-\beta_0$. Note that β_0 will fall in $(-1,0)$ if the process is stationary.

Table 3 displays the results of two different ECMs using different variables to account for the liberalization of the financial system. As required, the coefficient on lagged CIM is significant and in the $(-1,0)$ interval. If one looks at both models, a onetime change in FDI has no immediate affect on CIM, but examining the lagged values tells a different story. The long-term impact of a change in FDI stocks (i.e. a positive inflow) is of the order of 0.15. This relationship is significant in Model 7 but fails to achieve significance in Model 8. Note, however, that if we replace the expansive version of CIM with the more restricted version, the FDI relationship is approximately the same size and significant in both models. FDI's lack of discernable short-term impact on CIM combined with a significant long-run influence is consistent with our hypotheses about MNEs attempting to influence their policy environments. Influencing the political system will take time, certainly longer than a single year. If all the action were in the mechanical and informational channels, we would expect a fairly immediate effect on CIM. Foreign aid appears to behave in a similar fashion to FDI, at least vis-à-vis CIM: there is no short-run influence but there is a persistent positive relationship. We also note that the financial liberalization variables are strongly significant in both the short and long term in both models. The Polity variable once again shows up as significant and negative. We defer further exploration of this curious finding for future research.

Conclusion

Much of the literature in business, law, economics, and political science has viewed the host countries' policy environment as a predictor of FDI inflows. This paper reverses this question to examine how actors' perceptions of the host country's contracting environment are influenced by FDI. We hypothesize that the activities of MNEs will affect local actors' use of formal contracts via both mechanical and informational channels. More provocatively, we also argue that MNEs should be expected to attempt to mold the policy environments in which they operate. Given that MNEs tend to operate in the formal sectors of the host economies, undertake non-simultaneous transactions with their local value chain, and are disadvantaged in their abilities to draw on informal social networks to enforce commercial contracts, we argued that MNEs prefer, even demand, that host governments supply policy environments in which they can enforce contracts at low cost. Drawing on a large panel time series of both rich and poor countries over 1980–2002, we find that higher levels of FDI are associated with actors' increased use of contract-intensive money in developing countries.

Our paper raises several interesting issues for further research. Most generally, we hope to initiate a research program that will yield a more dynamic understanding of how host country politics and institutions interact with MNEs. We also highlight understudied puzzles as we begin to think of the host country policy environments as the dependent variable and FDI as the driver of change. While we have suggested possible avenues through which FDI might affect the local policy environment, the obvious next steps involve documenting the functioning (or lack thereof) of these mechanisms and evaluating their relative importance. Any research in this vein requires a careful study of MNEs' political strategies. While MNEs' political muscle grows with the salience of FDI in the host economy, conscious political agency is required to translate salience into

Table 3 ECM models using only developing countries. Changes in FDI stock are associated with significant long-term increases in the confidence in the contracting environment.

Variable	Model 7		Model 8	
	Estimate	PCSE	Estimate	PCSE
CIM ($t - 1$)	-0.28**	0.05	-0.24**	0.05
Δ FDI stocks	-0.02	0.02	0.02	0.02
Δ Population	-0.80	4.53	-0.79	4.10
Δ M2/GDP	0.15**	0.03	—	—
Δ FGN bank	—	—	0.37**	0.13
Δ GDP	1.04	0.79	1.65*	0.89
Δ GDPpc	5.98**	1.46	2.59	2.45
Δ Inflation	0.00	0.00	0.00	0.00
Δ Polity	-0.05	0.05	-0.07	0.05
Δ AIDpc	-0.03	0.14	0.09	0.13
FDI stocks ($t - 1$)	0.04**	0.01	0.01	0.01
Population ($t - 1$)	1.70*	0.99	0.34	1.07
M2/GDP ($t - 1$)	0.01	0.01	—	—
FGN BANK ($t - 1$)	—	—	0.12**	0.04
GDP ($t - 1$)	0.69	0.45	0.62	0.55
GDPpc ($t - 1$)	1.09*	0.67	1.16*	0.62
Inflation ($t - 1$)	0.00	0.00	0.00	0.00
Polity ($t - 1$)	-0.09**	0.03	-0.08**	0.03
AIDpc ($t - 1$)	0.21*	0.13	0.27**	0.13
Polity variance	0.00	0.01	-0.01	0.01
IMF	0.27	0.20	0.50**	0.16
Default	0.29	0.21	-0.03	0.19
N (no. of countries) =	1,667 (117)		1,327 (87)	
Adjusted R^2	0.23		0.19	
Model χ^2 (d.f.)	317** (20)		104** (20)	

*Significant at the 0.1 level or better; **significant at the 0.05 level or better (two-tailed test). Constant not estimated. See Appendix for details on the variables.

effective policy outcomes. Future research could study how political or nonmarket strategies of MNEs systematically vary within and across countries, and how this variation translates into political efficacy. In particular, we have treated FDI as homogeneous and uniform. This assumption clearly must be relaxed. We believe that both organizational level and structural variables (e.g. asset specificity) will play a crucial role in this regard.

We have also treated government as a black box. Clearly the ability of MNEs and local actors to affect the policy environment will depend on any number of political and institutional factors, presenting a wide open area for future research. How might FDI interact with local political institutions (if at all) to affect the policy environment? How malleable are the actual institutions of developing countries when faced with the considerable economic resources controlled by the biggest MNEs? What can we expect of voters and other local interest groups? These issues have only just begun to be explored.

As the mode of entry literature suggests, when there are uncertainties in the host markets, firms are inclined to use partnerships and/or strategic alliances with local firms. Our aggregate FDI inflow data cannot determine whether FDI was via partnerships and

alliances or in the form of wholly-owned subsidiaries. Further, our aggregate data do not differentiate the size of the FDI into a country. Presumably, the political externalities generated by one single MNE that invests say \$100 million would be different from the ones generated by 10 MNEs investing \$10 million each. Future research could focus on studying the political and policy consequences of FDI for the host economy by employing FDI data disaggregated by mode of entry as well numbers of MNEs.

Finally, our paper points to the international sources of domestic policy changes. While FDI is the key variable of interest in this paper, our analyses suggest that foreign aid and other international actors are also strongly positively associated with CIM. In other words, linkages with global governmental and (possibly) civil society are associated with the better enforcement of property rights. While our data do not permit us to draw any authoritative inferences about the causal mechanisms that link aid and global civil society to improved enforcement of property rights, future research can explore these issues. We speculate that the causal mechanism that links foreign aid to improved contract enforcement is as follows: Donors typically require recipient countries to improve their “governance” and improved contract enforcement is an outcome (a policy spillover) of such improved governance. Regarding global civil society, world society scholars (Boli & Thomas 1999) have argued that international networks of INGOs can serve as conveyor mechanisms of global norms and values, of which property rights protection has taken a center stage in the 1990s. Future research could therefore explore how international economic and normative influences shape the policy environments in host, developing countries.

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Notes

- 1 But see Chung *et al.* (2003).
- 2 For a review of FDI’s impact on economic development, see Moran *et al.* (2005).
- 3 While there is evidence that FDI tends toward democracies and countries with lower corruption, these relationships are dwarfed by the major economic determinants of FDI: market size, growth, and human capital levels.
- 4 http://www.chinadaily.com.cn/china/2006-04/19/content_571373.htm; accessed 18 February 2008.
- 5 http://english.peopledaily.com.cn/200704/19/eng20070419_368048.html; accessed 18 February 2008.
- 6 http://english.ipr.gov.cn/ipr/en/info/Article.jsp?a_no=161524&col_no=927&dir=200712; accessed 18 February 2008.

- 7 Chen and Puttitanun (2005) report that IPR protection has a non-linear relationship with GDP: countries with the highest and the lowest GDPs had the most strict IPR systems.
- 8 On NAFTA's expansive definition of expropriation, see Hufbauer *et al.* (2000).
- 9 MNEs may seek to mitigate foreignness liability by a variety of strategies including partnering with local firms. Broadly, on the subject of liability of foreignness see Kostava and Zaheer (1999), and King and Shaver (2001), and also the emerging literature on the conditions under which host governments privilege MNEs over domestic firms (Huang 2003).
- 10 MNEs lobby home governments as well. For example, US based MNEs ask the office of the USTR to use the Special 301 provision of the 1974 Trade Act to put pressure on countries to protect the intellectual property rights of US based MNEs (Sell & Prakash 2004).
- 11 Host governments may not treat FDI as an undifferentiated actor; they may intervene differently in the affairs of MNEs in the same industry. On the Venezuelan petroleum industry, see Makhija (1993).
- 12 FDI may stimulate the emergence of new domestic firms or create new infrastructure altering subnational actors' interests. For example, MNEs may require their first-tier suppliers to subscribe to international standards such as ISO 9000 (Guler *et al.* 2002) and ISO 14001 (Prakash & Potoski 2006). First-tier suppliers may then encourage similar codification of management practices from second-tier suppliers. Such formalization is likely to nudge suppliers to move from systems of informal contracting to formal contracting.
- 13 MNEs are not the only transnational actors seeking an influence on local politics. There is micro-level evidence of NGO activity affecting voter behavior independent of the NGO's ideological goals (Brown *et al.* 2008).
- 14 For example, in Model 4 reported below (the most expansive model including an FDI covariate), using the restricted version of CIM yields 43 countries and 869 country-years whereas using the more expansive version of CIM (reported in Table 2) we have 109 countries and 2,183 country-years.
- 15 If we use the ICRG composite score rather than CIM as dependent variable in the models below, results for the FDI stock variables are unchanged in the PCSE and (unreported) GEE models. Using ICRG, the IV models do not perform as well (instruments are very weak and the sign of the estimate switches for model). Sign also switches in the ECM models. Elsewhere (Ahlquist & Prakash 2008) we document a positive relationship between prior FDI and the quality of local contract enforcement in a cross-section of developing nations using a different dependent variable.
- 16 We conduct the regression analysis in STATA 9 using the `xtpcse`, `xtivreg2` (Schaffer 2007), and `xtgee` commands.
- 17 All models presented here are "within-country" models. Models fit using the GEE estimator (not reported here) also show that the positive FDI-CIM relationship holds at the population averaged level.
- 18 Substituting private credit extended by banks as % GDP (Beck *et al.* 2000; Beck & Al-Hussainy 2007) for either the M2/GDP or the Fraser Institute measure leaves substantive findings unchanged. This variable does appear as an important predictor of CIM.
- 19 Findings are unchanged if the persistence of Polity (i.e. years since the score last changed) is substituted for Polity variance or included concurrently.
- 20 In an identical model replacing the broader with the more restricted version of CIM, the coefficient increases in size by about 70% and is significant at better than the 0.01 level.

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Appendix I

Table A1 Variable definitions and sources

Variable	Description	Source
AIDpc	Log of foreign aid per capita (\$US)	WDI
CIM	Contract-intensive money: (M2-M1)/M2. See text.	IMF
Control of corruption	Composite index of corruption (high corruption–low corruption)	Kaufmann <i>et al.</i> (2005)
ICRG	Composite risk rating	ICRG
Contract enforcement costs	Cost to collect a debt through the legal system as percent of debt value	World Bank (2005)

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Table A1 *Continued*

Variable	Description	Source
Rule of law	Composite index of the quality of the rule of law (low–high)	Kaufmann <i>et al.</i> (2005)
Government effectiveness	Composite index of government effectiveness (low–high)	Kaufmann <i>et al.</i> (2005)
Bank density	Bank branches/km	Beck <i>et al.</i> (2005)
Branches/1000 people	Average number of bank branches per 1,000 people	Beck <i>et al.</i> (2005)
ATM density	Average ATMs/km	Beck <i>et al.</i> (2005)
ATM/1000 people	Average number of ATMs per 1,000 people	Beck <i>et al.</i> (2005)
Default	Indicator = 1 if a country is in default on international obligations	See text
FDI stock	Inward FDI stock (% GDP)	UNCTAD
Foreign bank	Lack of restrictions on foreign bank competition, interpolated for non-reported years	Fraser Institute
Population	Log population (MM)	WDI
GDP	Log GDP (\$US MM)	WDI
GDPpc	Log GDP per capita, PPP (\$US)	WDI
Growth	% Change in GDP	WDI
IMF	Indicator = 1 if a country is under any IMF agreement (see text)	IMF
LDC	Indicator = 1 if a country is not a “wealthy OECD” country	World Bank (2006)
Inflation	% change in GDP deflator	WDI
M2/GDP	M2/GDP	WDI
Polity	Polity IV score (0–20)	Polity IV
Polity variance	Variance in polity between t and $t - 5$	Polity IV

WDI, World Development Indicators.