

# Modern Day Merchant Guilds: Supply Chains and Informal Property Rights Enforcement\*

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## Abstract

Most prior accounts of informal property rights rely upon reputational motives: scholars argue that a host government is less likely to expropriate from a foreign firm if it believes that other firms will withhold future investment in the host country. However, firms often lack incentives to enforce the contracts of others. We construct an alternative account of informal property rights that is inspired by the development of medieval merchant guilds. Should a firm be targeted for expropriation, we argue that another firm will provide enforcement if it is economically integrated with the targeted firm. Property rights are thus protected based on economic links, and host governments are most likely to target firms that are not integrated with others. We test our theoretical argument with observational data, a survey of US multinational subsidiaries in Russia, and case studies from Azerbaijan. Our findings imply that one benefit of outsourcing is the creation of a network of merchant guild-like partners.

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# 1 Introduction

All multinational corporations (MNCs) face political risks in countries that lack strong institutions to protect property rights, but some are more vulnerable than others. For example, a major Turkish power provider in Azerbaijan tried to use political connections to prevent adverse government treatment, but it ultimately suffered expropriation and sued the Azerbaijani state in 2006.<sup>1</sup> BP, in contrast, has benefitted from an informal *krissha* or “roof” under which both it and its network of suppliers have enjoyed good relations with the Azerbaijani regime.<sup>2</sup> Why are some foreign firms, like the Turkish power provider, more vulnerable to adverse government treatment than others, like BP and its suppliers? What determines the likelihood that a host government will break or honor its contract with a foreign firm?

Scholars and policy-makers often argue that the ebb and flow of global capital in itself constrains a government from breaking its contracts with foreign firms. If expropriation triggers the exit of existing firms or deters the entry of new firms, then a capital-seeking government has incentives to protect foreign investment. Market forces could thus constrain a host government. However, this argument does not help us to understand why some firms are more desirable targets than others. Additionally, it relies upon the tenuous assumption that firms have a common interest. An existing or future firm may not incur the cost of foregoing an investment opportunity in response to the host government’s past treatment of another firm.

We argue that contracts are most secure when individual firms are directly linked by their economic activities. In medieval Europe, which lacked strong institutions to protect property rights, individual merchants linked their economic activities by creating guilds. These merchant guilds coordinated the activities of their members and created economic incentives for an individual member to enforce the property rights of other guild members. Modern day supply chains play a similar role, ensuring that an individual firm creates economic benefits for its suppliers. These benefits provide a direct economic incentive for supply chain members to enforce the property rights of other firms in the chain. Property rights are thus created not by the uncoordinated ebb and flow of investors committed to an abstract concept, but rather through the conscious and coordinated efforts of firms acting to preserve the economic benefits created by their partner firms.

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<sup>1</sup>Barmek v. Azerbaijan (ARB/06/16), under the Energy Charter Treaty.

<sup>2</sup>Interviews (4), executives at MNC subsidiaries, Baku, Azerbaijan, July 2013. See section 4.3 below.

Under our argument, a firm should provide informal enforcement of a contract if it is economically linked with the targeted firm. This leads to the key empirical implication of our theoretical argument: host governments are least likely to target firms that are more linked with others. Our formal model and empirical findings suggest that it is not faceless global capital but variation in the direct costs of expropriation that creates variation in government treatment of FDI.

In our empirical tests, we find evidence that foreign firms that are more linked with domestic firms are less likely to face government interference with their property rights. We employ multiple methods to conduct our tests. We first demonstrate the plausibility of our argument by showing that in countries with more US supply chain activity, US MNCs take fewer international legal actions against host governments. We then present results from a novel survey of government affairs representatives at US MNC subsidiaries that operate in Russia. Finally, we discuss individual cases that illustrate our argument, drawing on field interviews with 14 MNC executives and officials in Azerbaijan. Our results show that, indeed, firms with more supply chain activity in a given host country are less likely to suffer property rights violations.

The paper proceeds as follows. In the next section, we discuss how our argument differs from previous explanations. We go on to develop a formal model of informal property rights enforcement. We then describe our multi-pronged research design and present results consistent with the model's implications. We summarize our argument and findings in the concluding section.

## **2 Informal Protection of Foreign Direct Investment**

Previous research on foreign direct investment (FDI) argues that host governments face a commitment problem (Guzman, 1998; Jensen et al., 2012).<sup>3</sup> Before receiving an investment, the host government has incentives to write contracts that grant favorable treatment to a foreign investor. However, after receiving the investment, the host government can be tempted to break its contract by renegeing on contracted terms and/or violating treaty obligations by forcibly changing ownership of or unlawfully devaluing foreign-owned assets. Contract breach is often an attractive option because of two common attributes of FDI. First, since FDI often involves illiquid assets, contracts

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<sup>3</sup>Commitment problems are also sometimes referred to as dynamic (or time) inconsistency problems. For ease of exposition, we exclusively use the term “commitment problem.”

“obsolesce” because it is difficult for investors to retrieve their initial investment (Vernon, 1971). Second, foreign investors must often pay high initial fixed costs. Once these costs are sunk, the host government can increase its taking because the investor operates based on marginal costs of production (Guzman, 1998, 661-665).

There is a growing body of international law on foreign investment. States routinely use treaties to create legal commitments to protect foreign investment and legal institutions to remedy alleged violations of these commitments (Büthe and Milner, 2008, 2014; Milner, 2014; Simmons, 2014; Allee and Peinhardt, 2014). Yet it is often difficult for foreign investors to secure compensation, in either a domestic or an international legal body, when the host government breaks its commitments (Lowenfeld, 2008; Sornarajah, 2004; Johnston, 2013). When firms invest in countries that lack strong domestic judicial institutions, they are effectively engaging in commerce under anarchy.

Previous scholars have emphasized the role of repeated interactions and reputation in creating informal property rights (Ahlquist and Prakash, 2010; Albertus and Menaldo, 2012; Allee and Peinhardt, 2010; Cole and English, 1991; Dixit, 2004). Suppose that foreign investors are unwilling to invest in a country where a government has previously broken its contract with another foreign investor. If past government behavior affects future investment decisions, then a capital-seeking government may honor its commitments to foreign investors even if it is not constrained by a judicial institution that can enforce these commitments. Because the government must repeatedly seek capital, it has incentive to cultivate a reputation for honoring its contracts with foreign investors. The loss of future investment is thus the punishment associated with breaking a contract, and future investors indirectly enforce the rights of current investors.

However, scholars often overlook two major challenges for such informal enforcement. First, such enforcement is costly for those who provide it.<sup>4</sup> The loss of future capital is only a credible (and hence effective) punishment if future investors would actually invest in the absence of a prior contract breach. Therefore, for such informal enforcement to work, future investors must incur an

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<sup>4</sup>Most prior accounts of commerce under anarchy avoid this problem by assuming that actors are playing an infinitely-repeated Prisoner’s Dilemma (e.g. Dixit, 2004; Milgrom, North and Weingast, 1990; Greif, 2006). In these games, if a player violates his commitments—by defecting while his partner cooperates—his future partners “punish” him by defecting in future periods. Since mutual defection is an equilibrium, every future partner has incentive to impose the punishment (by defecting) if she believes that the violator expects to receive the punishment (by also defecting). This Prisoner’s Dilemma framework is of limited use for our purposes because strategic interactions between foreign investors and host governments are inherently sequential games with commitment problems.

opportunity cost—they must forgo profitable investments.<sup>5</sup> Second, these informal enforcement schemes implicitly rely on a perception of common economic interests. A firm will accept the opportunity cost of not investing in a country with a bad reputation only if it believes that the host government will break future contracts with it. That is, a firm must believe that it is sufficiently similar to previous investors that the government’s past treatment of those investors indicates its treatment of the firm in the future.<sup>6</sup>

Economic historians have shown that similar challenges hindered international commerce in the medieval era. The absence of the modern nation-state meant that political actors could easily violate legal protections that were promised to foreign merchants. In some societies, foreign merchants coordinated their economic activities on the basis of religion or clan membership (Greif, 2006, 58–90; Miller, 1990). These social bonds created perceptions of common interest and facilitated contract enforcement. In their absence, individual merchants often found it difficult to coordinate their activities.<sup>7</sup>

Merchants in many parts of medieval Europe overcame the challenge of commerce under anarchy by creating guilds (Greif, 2006; Lloyd, 1991; Renard, 1968). These guilds were formal organizations that coordinated the actions of tradespeople from a specific territorial area, such as a city-state. If a guild member was mistreated in a foreign territory, the guild could intervene by representing its member in negotiations with foreign authorities and even the crown. These guilds had bargaining leverage because they coordinated the activities of all their members. Guilds could organize boycotts, withhold tax payments, and grant loans to the crown, thus “oiling the wheels of justice” (Lloyd, 1991, 23). These guilds faced the same challenges as modern investors: the guild’s activities were only successful if individual members believed that they shared common economic interests and hence were willing to bear the individual cost of enforcing the contracts of other guild-members.

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<sup>5</sup>If the future investment is not profitable, then the future investors would have no reason to invest, ensuring that there is no reputational cost to breaking contracts today.

<sup>6</sup>Countries can sometimes use reciprocity to enforce agreements even when they lack a perception of common interests. A country may pay the cost of enforcement today if it believes that others will enforce on its own behalf in the future (Keohane, 1986; Johns, 2012). This is not feasible in standard reputational accounts of foreign investment. When an investor enforces previous contracts by refraining from investment, she cannot expect to receive the benefit of protection by others in the future because there is nothing to be protected. That is, there is a short-term cost of enforcement, but no long-term benefit.

<sup>7</sup>Economic historians also emphasize the importance of limited information during the medieval era (e.g. Milgrom, North and Weingast, 1990). However, this concern is less relevant in the modern era.

Merchant guilds were successful in part because they changed the cost-benefit calculations of their members. Membership had its benefits. Guilds were often granted preferential tax rates and regulatory authority that allowed them to control retail trade within their territory (Greif, 2006, 101-110). Powerful guilds, such as the German Hanse, were also able to secure legal rights for their members, such as immunity from arrest (Lloyd, 1991, 26-27). Guilds thus “generated a stream of rents that depended on the support of other members and so served as a bond, allowing members to commit themselves to collective action in response to a ruler’s transgressions” (Greif, 2006, 104).

A guild could expel members who refused to follow its rules. Expulsion from a guild was costly since it often meant that a merchant could no longer engage in commerce in the guild’s territory. Such a merchant could not easily move and join another guild because many guilds coordinated across multiple territories, and guilds often imposed high entry barriers to protect existing members from economic competition (Lloyd, 1991; Renard, 1968). Even if a non-member could engage in commerce in the guild’s territory, he faced higher taxes and fewer legal protections, making him an attractive target for mistreatment. Both the benefits of membership and the costs of expulsion gave a merchant a strong incentive to pay the individual cost of protecting the collective interests of the guild.

Today, industrial organization is characterized by a world of largely “deverticalized” firms. MNCs routinely sub-contract or outsource the development and distribution of new products and services to other firms (Davis, Diekmann and Tinsley, 1994; Mosley, 2010). Activities that in the 1970s and 1980s were kept within a firm’s four walls are now often separate from the parent firm but linked to it through supply chains (Locke, 2013).<sup>8</sup> In modern firms linked by supply chain activities, we see a dynamic similar to that among medieval guild members. Modern day supply chains ensure that an individual firm has an economic interest in maintaining the property rights of a collective group of firms. An individual firm has a direct economic interest in the treatment of other firms in its supply chain, because if the host government breaches its contract with another firm in the chain, then all members of the chain are harmed. At one extreme, supply chain members may be making relationship-specific investments in each other, or “investments whose returns depend on

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<sup>8</sup>For example, see Gertner (2012) for a discussion of the evolution and eventual separation of AT&T and Bell Labs.

the investment’s continuation” (Crawford, 1990, 561). At the other extreme, upstream suppliers may see their downstream customers as relatively interchangeable (though changing relationships would create transaction costs). Nonetheless, in either case a firm in the supply chain derives benefits (of whatever size) from the continuation of contractual relationships. Supply chains can thus create enforcement communities by ensuring that an individual firm’s profit is dependent on the collective enforcement of contracts. Because firms vary in their economic links to other firms, our account of informal property rights provides a compelling explanation for variation in government treatment of different foreign investors.

Previous accounts of variation in the treatment of foreign investors have largely focused on the role of asset specificity. Asset specificity is the “degree to which an asset can be redeployed to alternative uses and/or by alternative uses without sacrifice of productive value” (Henisz, 2000). For example, an industrial boiler is not a specific asset: its steam can be used to turn, heat, propel, and so on. In contrast, a drag line for a surface mine is a specific asset, designed for the life of the mine at that location (and not sufficiently valuable to be sold as scrap). Because its assets are not redeployable, an investor that uses specific assets has less bargaining power vis-a-vis the host government and is thus a more desirable target for mistreatment (Vernon, 1971).<sup>9</sup>

Most scholars treat asset specificity as an industry-level attribute, separating industries like energy and mining from manufacturing and services. In our analysis, too, we are careful to control for the industry of the firms in our sample, partly to ensure that we have adequately controlled for the impact of asset specificity.<sup>10</sup> However, while the industry level of aggregation can be useful (and is often necessary, given data constraints), it does not allow us to explain variation within given industries. Immobility is not absolute: even a surface mine—a canonical example of an immobile asset—uses both redeployable boilers and a specific drag line. Acknowledging variation within immobile industries helps to explain why BP enjoys secure contracts in Azerbaijan while Barmek was expropriated.<sup>11</sup> By examining firm-level economic links, our analysis complements

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<sup>9</sup>Frieden (1994) argues that, because the host government cannot easily redeploy assets in manufacturing subsidiaries, their specificity protects against nationalization. This interpretation is consistent with our use of the term “capacity” in the model and empirical analysis below, which captures the government’s ability to profitably use assets. More broadly, our argument can be read as taking up Frieden’s challenge that measuring property rights management outcomes other than colonialism “is much more controversial (and may not even be possible)” (Frieden, 1994, 574).

<sup>10</sup>As discussed in our empirical analysis, industry can also drive supply-chain characteristics.

<sup>11</sup>See section 4.3 below.

previous research on asset specificity and allows us to examine variation at a finer grade of detail than is possible with standard approaches to specificity.

In the next section, we present a simple formal model that examines the impact of economic linkages between firms. We argue that when a government threatens to break its contract with a target firm, another firm will provide enforcement only if it receives positive benefits from the target. A firm that is economically integrated with others thus receives more informal enforcement, meaning that a host government is less likely to target a firm that is integrated with others. We go on to demonstrate this relationship with observational, survey, and case study evidence focusing on supply chain relationships.

### 3 Theoretical Argument

#### 3.1 Model

The players in our model are: a host government ( $G$ ), a target firm ( $T$ ), and a set of partner firms ( $P$ ) that are linked to the target. We denote the number of partner firms by parameter  $\rho$ . The game begins when Nature chooses the host government's type,  $\alpha$ , which is the political and/or economic pressure on the host government to break its contract with the firm.<sup>12</sup> The host government receives a benefit from breaking the contract when  $\alpha > 0$ . A variety of circumstances might cause this: breach might enable a government to survive in power, to respond to the particular demands of a sector or industry, to cater to domestic interests, to achieve foreign policy goals, or to commit corruption (Wellhausen, Forthcoming; Fails, 2012; Kobrin, 1984). The benefits of breach may vary with economic conditions and the partisan or institutional structure of the government (Pinto, 2013; Li, 2009; Jensen and Johnston, 2011). Since expropriation can also generate costs, we allow for the possibility that breach is sometimes costly,  $\alpha < 0$ . For example, the host government might derive ongoing political and economic benefits from FDI that would be lost with expropriation (Eaton and Gersovitz, 1984). Regardless of how we substantively interpret parameter  $\alpha$ , it represents the firms' uncertainty about how willing the host government is to break its contract. We remain agnostic about the government's motives for breach, simply acknowledging that a variety of circumstances may lead a government to believe that breaking a contract will generate an overall benefit or cost.

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<sup>12</sup>Assumptions about the distribution of  $\alpha$  are contained in the Appendix.

After the host government learns its true type, each firm simultaneously chooses a level of effort,  $e_i \geq 0$ , to spend on protecting the target firm from expropriation. Firms want the host government to honor its contract, so we assume that effort represents any action that is costly to the firm and that increases the government’s payoff from honoring the contract. For example, effort might represent a monetary payment, such as a campaign contribution or a bribe, from a firm to the government. This is a standard assumption in models of special interest groups, including the literature on endogenous trade policy (e.g. Grossman and Helpman, 1994, 1996). We can also interpret effort more generally as costly activities like publicly supporting the host government or providing goods and services that benefit local citizens, such as infrastructure and public health programs. After the target and partner firms choose their level of effort, the host government decides whether to break or honor its contract with the target. Table 1 shows the utility functions for each player and each possible outcome.

[Insert Table 1 here.]

If the government breaks its contract, it is in essence reducing the value of the target firm. In the case of outright expropriation, the government might seize a physical asset such as an oil well or an electricity grid. In the case of indirect (creeping) expropriation, the host government may impose discriminatory regulation or taxation that redirects profit from the target firm to the government. We therefore assume that breaking a contract shifts value from the target firm to the government. We let parameter  $v > 0$  represent the total value of the firm’s operations in the host country.<sup>13</sup> If the government breaks its contract, the target firm receives a payoff of zero, and the government receives a share of the target firm’s total value plus the government’s payoff from the pressure to breach,  $\sigma v + \alpha$ .<sup>14</sup> We refer to parameter  $0 < \sigma < 1$  as the host government’s capacity to extract value from the target’s assets. This capacity can be affected by many different factors that are government-, industry-, and firm-specific, some of which are discussed in section 4.2. To allow for the possibility that partner firms may receive some economic benefits even if the government

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<sup>13</sup>For the sake of parsimony, we often refer to this as the firm’s “value.” However, this should be interpreted as only the value of the firm’s activities in the host country, not worldwide.

<sup>14</sup>Setting the firm’s payoff to zero normalizes the payoff structure to reduce the number of parameters—we need not assume that the target firm goes completely out of business. Additionally, we could easily model payoffs by single parameters instead of shares, such as  $\chi = \sigma v$ . We prefer the  $\sigma v$ -framework because it demonstrates that we are controlling for the total value of the target firm when we take comparative statics, and it allows the host government and the partner firms to have correlated preferences.

breaks its contract, we assume that a partner firm  $i$  receives payoff  $\gamma_i v$  where  $0 \leq \gamma_i < 1$ .

If the government honors its contract, it receives a payoff that is equal to the effort invested by the target and its partner firms,  $e_T + e_P$ . The target firm retains its total value and loses only the cost of its own effort,  $v - e_T$ . A partner firm  $i$  receives a share of the firm's value less its own effort,  $(\gamma_i + \lambda_i)v - e_i$  where  $\gamma_i + \lambda_i < 1$ . Since  $\gamma_i v$  represents a partner firm's payoff when the government has broken the contract, the quantity  $\lambda_i v$  represents the added benefit that  $i$  receives when the target's contract is honored. We refer to parameter  $0 < \lambda_i < 1$  as the economic link between the target and partner firm  $i$  because larger  $\lambda_i$ -values indicate that a partner firm has more incentive to protect the target's contract with the government. This parameter can represent transactions in which the target buys and/or sells intermediate goods to partner  $i$ , as well as non-monetary benefits, such as the ability to share expertise or technology.

### 3.2 Results

We derive the weak Perfect Bayesian equilibrium of this game in the Appendix and focus here on the comparative statics of the model. When the target firm has stronger links to its partners (larger  $\lambda_i$ -values), those partners benefit more from the survival of the target. They therefore invest more effort in protecting the target. This increase in effort will make it more attractive for the host government to honor, rather than break, its contract.

**Proposition 1.** *An increase in the target's link to a partner firm ( $\lambda_i$ ) reduces the probability that the government breaks its contract.*

While the reasoning here is simple, it is important to recognize what this result does *not* say. We do not need to assume that economic interactions are infinitely-repeated in order to have stable property rights (Milgrom, North and Weingast, 1990; Greif, 2006). Similarly, we do not need to assume that actors operate on the basis of reciprocity, protecting the rights of others today so that their rights are protected by others in the future (Keohane, 1986; Johns, 2012). Proposition 1 shows that neither of these mechanisms is necessary to create endogenous property rights, as short-term self-interest can generate stable property rights when firms are economically linked to one another. In the real-world, however, all of these factors—repetition, reciprocity, and economic links—are likely at work.

The willingness of the host government to honor its contract is driven in large part by its temptation to take value from the firm. Short-term political and economic fluctuations ( $\alpha$ ) change the government's calculations, but so do certain fixed attributes of the government, industry, and firm. The government's willingness to take an asset is driven by its capacity ( $\sigma$ ) to use that asset in a way that promotes the government's interests. For example, a country like Ecuador, which for decades has contracted with foreign partners in the natural resources sector, should have over time acquired relatively high capacity to manage and extract value from resource investments. This reasoning is consistent with Ecuador's 2007 announcement that it would no longer consent to international investment arbitration in natural resource sectors such as oil, gas, and minerals. In contrast, Ecuador likely has low capacity to operate firms in the services sector, consistent with the success of foreign investors like US retail and restaurant franchises and European-owned breweries. When the host government's capacity increases, it is better able to extract value from the target firm, increasing the probability that it breaks its contract.

**Proposition 2.** *An increase in the host government's capacity ( $\sigma$ ) increases the probability that the government breaks its contract.*

The impact of the target firm's value ( $v$ ) is more complex. When the target's value increases, every player's payoffs are affected. An increase in the target's value has a direct effect on the host government's decision-making: it makes breaking the contract more attractive. However, each firm will receive a higher utility if the contract is honored, making these firms more willing to spend effort to protect the target. This increase in effort makes honoring the contract more attractive to the host government. This latter effect dominates the former in our model because we assume that the host government has less capacity to generate economic value than the firms can collectively generate. Increased effort by the firms will always outweigh the government's ability to directly generate value.

**Proposition 3.** *An increase in the value of the target firm ( $v$ ) reduces the probability that the government breaks its contract.*

Finally, we should emphasize that all of our previous results hold despite the fact that the target and partner firms face a collective action problem. When a firm in our model invests effort in protecting the target, it is paying a private cost ( $e_i$ ) to increase the probability that the contract

is honored, which benefits all of the firms. Each firm is accordingly tempted to free-ride on the effort of others. This problem is exacerbated as the number of firms increases.

**Proposition 4.** *An increase in the number of partner firms ( $\rho$ ) increases the probability that the government breaks its contract.*

This last result suggests that there is a sub-optimal level of effort in equilibrium. Even though each firm is tempted to free-ride, each firm would be better off if all of the firms were forced to increase their effort. Nevertheless, our model demonstrates that economic links, through supply-chains and similar exchanges, can lead to endogenous property rights. There is an inherent limitation to this mechanism because a group of firms will always face a collective action problem: in a network of uncoordinated autonomous actors, what is optimal for an individual firm is not necessarily what is optimal for the group of firms as a whole. However, a key benefit of economic links is that they provide protection that: (1) does not rely upon a central actor—such as a guild—to coordinate protection; and (2) does not suffer from an enforcement problem—that is, the temptation for a member to not provide the protection that is mandated by the central actor.

### 3.3 Robustness

We have presented the simple model above so that we can clearly identify the mechanism that drives our argument: an increase in economic links generates more aggregate firm-level effort to protect the target, thus reducing the probability that the host government breaks its contract with the target. Nevertheless, it is worth asking whether our results are robust to alternative assumptions and complicating factors.<sup>15</sup>

Uncertainty plays a key role in our model because breach occurs when firms underestimate the host government’s true net benefit from breaking the contract and hence choose too little effort. If firms could perfectly observe the true value of  $\alpha$ , then the firms could almost always induce the government to honor its contract. The only situation in which they could not deter breach would be if the government is under so much pressure that it would break its contract even if all of the firms spent all of their profits on effort (i.e.  $e_T = v$  and  $e_i = \lambda_i v$  for all partners). Since governments often break contracts even when they are not under such extreme pressure, we must

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<sup>15</sup>Formal analysis for all of the extensions discussed here is available upon request.

have uncertainty in our model for its observable outcomes to match real-world events. We could alternatively allow the government to send a cheap talk signal to the firms about its true value of  $\alpha$ . However, such an extension would yield the same mechanism and equilibrium outcomes because the government would always have incentive to over-report its type (i.e. claim that its value of  $\alpha$  is larger than the true value) in order to extract more effort. Any attempt by the government to communicate would be ineffective because rational firms would understand that the government does not have an incentive to tell the truth.

Another key component of the model is that we focus on firms that receive benefits from the target. Such partner firms want the host government to honor its contract with the target. However, a target may also harm competitor firms that want the host government to break its contract. We can easily include competitor firms in our model and allow them to invest effort in trying to get the government to break its contract. This more complex model yields the same basic results. We can also include firms that are not affected by the target, either positively or negatively. These firms would never invest effort—either for or against contract breach—because they would be unaffected by the host government’s decision.

Our model can also easily accommodate additional variation in firm-level attributes. For example, we might imagine that the host government is more responsive to firms that are located in politically valuable areas or owned by political allies. Similarly, some firms may find it less costly to spend effort than others. Larger firms may find it easier to hire full-time staff to manage their government relations than smaller firms. We remain agnostic about such factors, and note only that our results are robust to including firm-level variation in the cost of effort and its benefit to the government.

Finally, we should comment on our assumption that economic links are exogenous. If links are endogenous, then potential target firms should build economic links when possible to provide long-term protection from future contract breach. While we believe that this is one major implication of our argument, we recognize that there are inherent limits in the ability of firms to create these links. First, it is unlikely that a firm can change its economic links immediately after being targeted for a possible contract breach. In this sense, every target’s links are exogenous in the short-term. Second, while links may provide protection from contract breach, they can come with other costs, such as transaction costs and economic inefficiencies. Our model provides intuition

about one possible benefit of economic links, but it does not fully consider their potential costs. Third, some firms will find it difficult to construct links because of the nature of their industry or form of production. For example, firms that produce intermediate goods, such as electronic componentry, should find it easier to create economic links than firms that do not.

### 3.4 Empirical Implications

Our model shows that economic links play a key role in the endogenous protection of property rights. Host governments are most likely to break contracts with firms that are not integrated with others. One way to measure economic links is to consider supply chains. Supply chains create transactions that link the activities of firms in the chain. A contract breach against one firm can easily spill over to others, disrupting economic activities. Breach at one link would likely cause other firms in the chain to reduce investments to account for expected changes in inputs. Government breach of contract may even trigger automatic exit by other firms in the chain if, for example, it limits the ability of firms to do business in the host country.

Our key comparative static, Proposition 1, considers how variation in the size of a target's links affects the likelihood that the government breaks its contract. One possible determinant of the size of a target's links is its relative position within a supply chain. As a simple illustration, consider two firms, A and B, that are linked in a chain. Suppose that firm A is a supplier that sells a good to firm B, its customer. If the government breaks a contract with the supplier (firm A), the customer (firm B) is likely to experience some harm, as government interference will likely generate either higher prices for firm B or require firm B to find a new supplier. So the supplier creates a relatively small, albeit positive, benefit for its customer.<sup>16</sup> In contrast, if the government breaks a contract with the customer (firm B), then the supplier (firm A) is likely to experience much greater harm, *ceteris paribus*, since demand for the supplier's good is reduced. That is, the customer should generate a relatively large benefit for its supplier. By the logic of Proposition 1, this asymmetry implies that the customer (which generates larger benefits) should be less likely to experience contract breach than the supplier (which generates smaller benefits). Put differently, a host government is less likely to break contracts with "downstream" firms, which purchase more goods from other firms. This is our main empirical hypothesis for the next section of our paper:

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<sup>16</sup>Note that this benefit increases as the availability of substitute suppliers decreases.

**Hypothesis 1.** *A host government is less likely to break its contract with a firm if the firm purchases more goods in the host country.*

We also examine two additional empirical implications of our argument. First, Proposition 2 suggests that the government will be less likely to break its contract when it lacks capacity to extract value from the target firm. We measure capacity using various measures of operational expertise, thereby generating our second empirical hypothesis:

**Hypothesis 2.** *A host government is less likely to break its contract with a firm if the firm is located in an industry in which the host government does not have operational expertise.*

Finally, Proposition 3 states that the government is less likely to break contracts with high-value firms. As we emphasized in section 3.1, this parameter refers to the total value of the firm's operations in the host country, not worldwide. We accordingly measure a firm's value by the size of its investment in the host's economy, creating our final empirical hypothesis:

**Hypothesis 3.** *A host government is less likely to break its contract with a firm that has made larger investments in the host's economy.*

## 4 Empirics

Our argument is difficult to test for empirical reasons. The ideal dependent variable would capture government breach of contract in all its forms, from outright nationalization to more subtle, but nonetheless costly, forms of contract violations such as discriminatory regulation. However, we cannot observe all of these violations. As such, we do not know whether the absence of a breach indicates that the government was deterred based on the (expectation of) efforts of linked firms, whether the government simply was not tempted to break the contract in the first place, whether the government and a firm reached a private settlement, or whether a firm chose not to challenge the government's action.

To get around these problems, we marshal evidence of contract breach in several ways. We first measure breach with a new time-series cross-sectional dataset on international investment arbitration. This analysis cannot serve as a definitive test of our argument because this data only includes investment disputes that are so contentious that they result in public arbitration.

Nevertheless, this analysis demonstrates the plausibility of our argument using the best-available observational data.

Second, we present the results of a survey that we administered to US MNCs with operations in Russia. This survey captures the self-reported experiences and perceptions of government affairs executives regarding contract breach in Russia. While this research strategy has its own inherent limitations, it allows us to hold constant the government under question. Further, by collecting data at the firm level we avoid ecological inference problems inherent in aggregated units of analysis. This survey evidence thus complements the evidence from observational data.

Third, we provide qualitative evidence based on our own interviews of executives at foreign firms operating in Azerbaijan. We use a most-similar case design to compare the experiences of two different foreign firms (George and Bennett, 2004). This selection method allows us to directly contrast one firm’s honored contract with a second firm’s broken contract while controlling for alternative hypotheses about industry vulnerability, firm size, and political prominence. Our case studies also provide evidence that actors on the ground recognize the importance of our causal mechanism.

Each of these research designs has its own strengths and limitations. Nevertheless, we believe that the combination of these three designs provides a compelling variety of evidence that firms that purchase more goods in a host country are less likely to face government breach of contract.

#### **4.1 Observational Evidence**

To demonstrate the plausibility of our argument, we look at the relationship between US intra-firm trade and public international investment arbitration from 2002 to 2012. Our explanatory variable, *US intra-firm trade* (or related-party trade), includes transactions “involving trade between a US entity and an entity that receives the export shipment where either party owns directly or indirectly 10 percent or more of the other party” (US Census Bureau). In other words, intra-firm trade involves exchange between entities that are economically linked through ownership stakes. Our theory suggests that firms with more intra-firm trade in a host country are less likely to experience contract breach. Unfortunately, trade data are aggregated at the national- rather than the firm-

level.<sup>17</sup> Nevertheless, we still expect that if *US intra-firm trade* in a given host country is higher, then the host country will break fewer contracts with US firms (Hypothesis 1).

Our ideal dependent variable would be the percentage of contracts breached with US firms in each country-year. As the best observational proxy, we measure the amount of public investment arbitration between US firms and host governments while controlling for host governments' opportunities to break contracts. A public investment arbitration captures a contract dispute contentious enough that a firm brings an international case against an offending government. By using this measure, we account for an important albeit partial piece of the distribution of contract breaches.<sup>18</sup> Even though such an arbitration is "public," the specific details of a case (such as claim sizes) are usually private because these cases are filed by firms as private actors.<sup>19</sup> We make the admittedly strong assumption that more US-filed arbitration cases are correlated with more expropriation against US firms in the country. We collect data about public investment arbitrations brought by US firms against host governments from 2002 to 2012.<sup>20</sup> There are a total of 87 US-filed public investment arbitrations in our dataset, ranging from 1 to 5 per country-year (Argentina in 2003).

To control for the fact that a host country with more FDI has more opportunities to break contracts, we must scale US public investment arbitrations by US-origin FDI stock. Scaling allows us to meaningfully compare breach across countries that differ in their opportunity for breach. This ratio is our standardized dependent variable, *Arbitration*. The variable ranges from 0 to 1, with a mean of 0.002 investment arbitrations filed by US firms per US\$1 million in US-origin FDI stock.<sup>21</sup> Based on our theoretical arguments, we hypothesize that more *US intra-firm trade* is associated with less *Arbitration*. The time series for Kazakhstan is illustrative. US intra-firm trade had been growing but plateaued after 2007, as the country came to face three US-origin public investment arbitrations in oil and gas and electricity. It appears Kazakhstan recognizes this connection, as the

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<sup>17</sup>We log the variable to account for skewed data.

<sup>18</sup>From the firm's point of view, the government has broken its contract regardless of the outcome of arbitration. Thus, the filing (and not the resolution) of a dispute is the appropriate measure. The full population of arbitrations is unknown, because firms and governments can sometimes keep them private.

<sup>19</sup>This stands in stark contrast to most other kinds of international dispute settlement. For example, only governments, rather than firms or industries, have standing to file trade disputes at the WTO. Foreign investment law is one of the few areas in which individuals and firms have standing to sue on their own behalf. Accordingly, the details of investment cases are usually more private and less transparent than other kinds of international disputes (Hafner-Burton, Steinert-Threlkeld and Victor, 2014).

<sup>20</sup>We collected this data from ICSID, UNCTAD, and secondary sources, including international and local business journalism. See Wellhausen (Forthcoming).

<sup>21</sup>For ease of interpretation, the denominator is US-origin FDI stock in US\$ millions. The variable equals 1 for Rwanda in 2010.

US Ambassador now “participates in every meeting of the Prime Minister’s Council to Improve the Investment Climate.”<sup>22</sup>

Investment arbitration is usually facilitated by bilateral investment treaties (BITs).<sup>23</sup> Most BITs allow investors to bring disputes to third party arbitrators in international venues. We use two specifications to account for BITs’ relationship to the data. First, we limit the sample to only those country-years for which a US BIT exists and use country and year fixed effects. Second, we treat the data as cross-sectional. The sample includes all countries that have a BIT with the US whether in the whole period or in part. Analyses are OLS regressions with robust standard errors clustered by host country.

Table 2 provides evidence that more US intra-firm trade in a host country is associated with fewer public investment arbitrations relative to the population of US-origin FDI. A one-standard deviation increase in intra-firm trade is associated with a decrease of up to 1.4 percent in *Arbitration*. Results on *US intra-firm trade* are within standard levels of significance for Models (1) and (2). While this plausibility probe is consistent with our argument, we now use novel survey evidence that more directly gets at the relationship in question.

[Insert Table 2 here.]

## 4.2 Survey Evidence

We created and administered a survey of government affairs executives in US MNCs operating in Russia to directly test Propositions 1-3. These hypotheses and our empirical measures are summarized in Table 3. Russia is an appropriate setting, as expropriation of various kinds has taken place in various industries since Russia’s independence (Gustafson, 2012). The firms in our sample are all members of the US-Russia Business Council (USRBC).<sup>24</sup> The USRBC’s mission is to provide “significant business development, dispute resolution, government relations, and market intelligence services” to its members.<sup>25</sup> The organization occasionally acts on behalf of particular

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<sup>22</sup>2013 Investment Climate Statement - Kazakhstan, US State Department Bureau of Economic and Business Affairs.

<sup>23</sup>We collected our BIT data from UNCTAD. We also include NAFTA and CAFTA-DR as US BITs because they have investment arbitration provisions.

<sup>24</sup>We collected this sample without the participation or sponsorship of the USRBC, which is in no way involved with this research.

<sup>25</sup>[www.usrbc.org/aboutus](http://www.usrbc.org/aboutus). Accessed February 2014.

members that are facing possible expropriation by the Russian government.<sup>26</sup> An advantage of our survey is that the respondents, predominately located in Moscow or Washington, D.C., are responsible for their firms' relationships with the Russian government. Thus, we can reasonably expect our respondents to be informed about actual or potential government interference with the firm's operations. Further, by surveying only US actors, we can exclude potential complications that variation in diplomatic relations could interpose.

[Insert Table 3 here.]

We emailed respondents an anonymous online survey, with two follow-up emails and one follow-up phone call to each person in the sample. Of 703 people contacted, we had 64 responses or a 9.1 percent response rate.<sup>27</sup> The firms represented in our sample have been in Russia for an average of 8.9 years with a standard deviation of 6.8 years. Firms span the full range of new entrants to Russia in 2013 to firms that were present in Russia in 1990. Twenty-five percent of the sample reported that their firms had less than US\$500,000 of investments in Russia, and 25 percent reported investments greater than US\$200 million, meaning that our sample includes firms of a variety of sizes. As shown in Table 4(a), respondents came from a variety of industries, with manufacturing and services particularly well represented, which is notable because previous research on expropriation often views such industries as relatively mobile and therefore less prone to expropriation (e.g. Kobrin, 1987; Vernon, 1971).

[Insert Table 4 here.]

We relied on a respondent's expertise to report past experience as well as expectations about future experience with breach of contract at the firm. We prompted respondents with the statement: "Sometimes, government actions lower the value of foreign investments in ways that violate contractual obligations or general expectations of fairness." We then ask how important this issue has been "for your firm in Russia" and how important "do you expect this issue to be in the next five years," in four categories from "not very important" to "very important." Our first dependent variable, *Lowers value*, averages responses to the current and five-year projections. We prompted respondents a second time with the statement: "Sometimes, government actions

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<sup>26</sup>Interviews (2), Washington, D.C. and Moscow, Russia, 2013.

<sup>27</sup>This is on par with similar surveys of MNC executives (Jensen et al., 2012).

transfer ownership of foreign investments to the state or state-owned entities.”<sup>28</sup> We form our second dependent variable, *Transfers ownership*, out of parallel issue importance questions. Our third dependent variable, *Total breach*, sums the values of *Lowers value* and *Transfers ownership*.

For each issue, we went on to ask respondents how important “is this issue for your non-Russian competitors”? Respondents on average reported that their foreign-owned competitors face significantly more problems with ownership transfer ( $p < 0.01$ ).<sup>29</sup> This result works to our advantage. It could be that respondents are systematically underestimating their own risks, which would lead us to underestimate any effect of suppliers on *Transfers ownership*. Or, it could be that those firms we surveyed are indeed better risk managers than their competitors, meaning that our sample would be a more difficult one in which to find effects.

To measure our main covariate of interest, we focus on a firm’s upstream economic linkages with Russian firms (Hypothesis 1). For our primary measure, we asked respondents, “Approximately what proportion of your supplies do you buy from Russian firms”? Results are summarized in Table 4(b). Of the 63 respondents who answered this question, only 7 said that none of their supplies come from Russian firms, while 29 said that 75 percent or more of their supplies come from Russian firms. We also asked how many Russian-owned firms the respondent’s firm uses as suppliers. Fifty-one percent answered our maximum category, “10 or more,” while only one respondent reported having only one Russian supplier.<sup>30</sup> We can thus have confidence that, on the whole, the economic linkages captured with the proportion question include benefits that are spread across multiple domestic Russian firms. Our main explanatory variable, *Proportion of Russian suppliers*, is measured as a categorical variable. Our excluded category is firms with a proportion of 75 percent or more, and we compare this to firms with 0, 1-24 percent, 24-49 percent, and 50-74 percent.<sup>31</sup> Thus, we expect positive coefficients: relative to the excluded category, respondents with fewer economic linkages should report more breach of contract.

As an ancillary test of Hypothesis 1, we examine another form of economic link: joint ventures. When a foreign-owned firm creates a joint venture with a domestic firm in its host

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<sup>28</sup>This survey also included questions on respondents’ perceptions of territorial disputes. Following demographic and supply chain questions, the order of these two sections was randomized.

<sup>29</sup>There was no statistically significance difference on the value-lowering prompt.

<sup>30</sup>Thirteen percent of respondents answered “none” on the proportion question and reported no Russian suppliers.

<sup>31</sup>We exclude 75%+ because we do not know whether those reporting 0 percent suppliers have only non-Russian suppliers or no suppliers at all. Thus we are uncomfortable using this as the excluded category. When 1-24 percent is the excluded category, results on larger categories are correctly (negatively) signed across specifications.

country, it links their economic activities (Henisz, 2000). This suggests that any harm that is experienced by the foreign-owned firm will spill over and hurt its domestic partners. Accordingly, we asked survey respondents whether their firm has a joint venture with a Russian entity. Our theory therefore suggests that the coefficient for the dummy variable *Joint venture with Russian entity* should be negative.

We examine the impact of government capacity (Hypothesis 2) using two measures. First, we create a dummy variable *Interactions with SOEs* that equals 1 if a firm has business interactions with state-owned entities (SOEs) at least weekly. We expect that more interactions with SOEs indicates that the host government has more capacity to extract value from foreign-owned assets, making breach more likely. We therefore expect the coefficient for *Interactions with SOEs* to be positive. Second, we create a dummy variable called *Foreign-owned market share* that equals 1 if foreign-owned firms dominate the Russian market (i.e., control 50 percent or more of the industry's market, as reported by respondents). In this case we expect a negative sign, as more foreign control in the market suggests less government capacity to successfully operate expropriated assets.

To test Hypothesis 3, we use two measures that account for the value of a targeted firm. We aggregate each firm's *Size of Russian investments* into four categories: less than \$500,000; \$500,000-10 million; \$10-200 million; and over \$200 million. We use firms with over \$200 million in Russian investments as the excluded category. Next, we use a dummy called *Sales in Russia* that equals 1 if 50 percent or more of a firm's sales are in Russia. Consistent with Hypothesis 3, we expect that firms with more investment and more sales in Russia will be less likely to face breach of contract.

We include two important control variables. First, we create a dummy called *Immobile industry* to control for whether a firm is in an industry characterized by low mobility, which in our sample are firms in energy/mining, telecommunications, and transport. Finally, we control for a firm's *Years in Russia* since 1990. We are generally agnostic as to whether these controls suggest that firms should face more or fewer risks of breach. We use Tobit regressions with robust standard errors clustered by industry to examine the data. We report our regression results in Models (3) through (7) in Table 5. Sample size varies due to respondent drop-outs on particular questions, which we assume to be random.

[Insert Table 5 here.]

Our analysis supports Hypothesis 1. We see consistent evidence, across a variety of forms of the dependent variable, that respondents at firms with a lower proportion of Russian suppliers report significantly more breach as compared to the excluded category, which includes respondents at firms with a very high proportion of Russian suppliers. In the reduced form Model (3), where breach is captured by *Lowers value*, respondents at firms in supplier categories ranging from 1-49 percent report significantly more concerns about breach than firms with more than 75 percent or more Russian suppliers. In the fully specified Model (4), our results show that respondents with lower proportions of Russian suppliers report significantly more concerns about breach. In the reduced form Model (5) the dependent variable is *Transfers ownership*. Results are positive and significant for firms with 1-24 percent Russian suppliers. In the fully specified Model (6), firms with 0-24 percent Russian suppliers report significantly more concerns. Because these analyses treat the four categories “very unlikely” to “very likely” as a continuous four-point scale, we can interpret coefficients as such: in Models (3) through (6), respondents at firms with lower proportions of Russian suppliers are between 0.7 and 1.9 points closer to “very likely” on their responses than are respondents at firms with 75 percent or more Russian suppliers. Model (7) sums the *Lowers value* and *Transfers ownership* dependent variables into one scale, *Total breach* (ranging from 2 to 8). Respondents at firms from 0-49 percent Russian suppliers report significantly more breach than firms with 75 percent or more Russian suppliers. Coefficients for firms in the 50-74 percent range are positive across all models, as expected, but not consistently significant. Setting aside findings for those firms with no Russian suppliers (which may or may not be in a position to have suppliers at all), the magnitude of coefficients follows the pattern predicted by the theory: those with smaller proportions of Russian suppliers are associated with higher levels of breach. As our theory suggests, the sign of the coefficient for the dummy variable *Joint venture with Russian entity* is consistently negative. However, it falls short of statistical significance.

We also find evidence that supports Hypothesis 2 in Models (4), (6), and (7). Firms that regularly interact with SOEs report more concerns about breach. Additionally, firms that operate in industries with a large foreign-owned market share are less fearful of contract breach. These results suggest that when a government decides whether to break a contract with a foreign investor, it is mindful of its own capacity to extract value from the target firm.

Finally, we find some modest support for Hypothesis 3. Models (6) and (7) suggest that

when the *Size of Russian investments* is smaller, respondents report more concerns about contract breach. Additionally, firms with more *Sales in Russia* report less concern about contract breach, but this relationship is not strong enough to be statistically significant. With regard to control variables, we find that firms in a *Immobile industry* report no more concern about breach than firms in other industries, and a firm's *Years in Russia* does not have a significant impact on its perceptions of breach.

Levels of support for Hypotheses 1 through 3 are consistent across multiple robustness checks, including using an ordered logit approach and operationalizing dummy variables with different cut points. Results on Hypothesis 1 are also consistent albeit somewhat weaker when replacing the *Proportion of Russian suppliers* with a measure of the actual *Number of Russian suppliers*.<sup>32</sup> These weaker results correspond with a key element of our theory: firms face a collective action problem when they must jointly protect the property rights of other firms (Proposition 4). While each firm within a supply chain has an incentive to protect other firms in the chain, this incentive must be balanced against the temptation to free-ride on the effort of other firms in the chain.

One possible issue with our findings, particularly for Hypothesis 1, is reverse causality: perhaps firms that believe they have secure property rights are those that are more likely to create links to domestic suppliers. Why would secure firms be more likely to contract with domestic suppliers? First, it could be that domestic suppliers have a negative effect on property rights protections, which already secure firms can better overcome than their insecure counterparts. However, if this were the case, we would expect respondents that report more breach to be the ones that report fewer, rather than more, domestic suppliers. Second, it could be that an omitted variable creates reverse causality issues, which would imply that there might be no association between property rights and domestic suppliers. We are skeptical of this possibility for two reasons. First, our theoretical model demonstrates clear conditions under which there is a relationship between domestic suppliers and property rights. Second, our results are robust to controlling for a number of characteristics of respondents' firms—including industry, size, interaction with the host government, sales, market share, joint venture status, and experience—that could potentially cause concern.

With our novel survey of government affairs representatives at US MNCs operating in

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<sup>32</sup>This variable equals 0 if the respondent reports fewer than 10 Russian suppliers (48 percent of sample) and 1 if she reports 10 or more Russian suppliers (52 percent of sample). Results are robust with the *Lowers value* dependent variable, whereas coefficients are negative but not significant for *Transfers ownership* and *Total breach*.

Russia, we find evidence from MNC executives that a greater proportion of domestic suppliers goes together with less government breach of contract. In the next section, we use foreign firms' experiences in another host country, Azerbaijan, to describe how domestic suppliers might provide property rights security in practice.

### 4.3 Case Study Evidence

We now examine relationships between the Azerbaijani government and two foreign-owned firms to demonstrate how upstream economic links can protect firms against breach of contract (Hypothesis 1).<sup>33</sup> These cases involve two similar firms: BP, a British oil and gas firm that leads operations in the Caspian Sea; and Barmek, a Turkish energy firm that ran the privatized power grid in Baku, Azerbaijan's capital and largest city. These firms were very similar on many dimensions—they were both leaders in immobile industries core to Azerbaijan's economy, local actors report that investors of each nationality are respected in the country, both received considerable political and press attention, and both have contributed considerably to government coffers. For example, Barmek reported that it paid US\$54.6 million in taxes to Azerbaijan from 2001 to 2006.<sup>34</sup> However, despite these similarities, they received dramatically different treatment from the Azerbaijani government. BP's contract with the government remains solid as of 2014 while Barmek sued Azerbaijan for expropriation in 2006.<sup>35</sup>

The oil and gas industry is highly politicized in oil-rich Azerbaijan. As the leader of the Caspian Sea drilling consortium, BP regularly interacts with the government. The two sometimes disagree on issues like quotas for hiring domestic workers, the rights of foreign workers, and production levels. However, none of these disagreements have triggered public discussion of expropriation. Local interview respondents struggled to come up with an example of government interference with BP's operations.<sup>36</sup>

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<sup>33</sup>This section draws on 14 interviews conducted in Baku, Azerbaijan in June 2013. Respondents included heads of national chambers of commerce (4), oil and gas industry executives (4), as well as executives in the IT (1), legal (1), and infrastructure (1) sectors. Firms were targeted based on their membership in of commerce. Three respondents were government officials responsible for foreign investor-government relations.

<sup>34</sup>Because both firms made large investments in Azerbaijan, these cases do not provide an adequate test of Hypothesis 2. Nor are these cases appropriate to test Hypothesis 3, as observers agree that government capacity to operate either set of assets without foreign support is low.

<sup>35</sup>Barmek v. Azerbaijan (ARB/06/16), under the Energy Charter Treaty. Press reports suggest Barmek requested US\$291 million in compensation.

<sup>36</sup>Interviews (4), energy industry, manufacturing, environmental NGOs, Baku, Azerbaijan (June 2013).

To explain the lack of expropriation disputes, several respondents stated that BP benefits from a kind of *krisha* or “roof” established by its suppliers. The Russian term *krisha* has historically been associated with protection rackets under which firms make payments to a mafia connection to ensure their safety. But here, in a benign way, firms that have “strategically overlapping interests” with BP generate informal protection for BP from the Azerbaijani government. One well-placed executive explained his use of the term *krisha* by pointing out that BP’s “Tier 1, 2, or 3 suppliers are as strong as the firm is with the government.”<sup>37</sup> A Tier 1 supplier is a supplier closest in the chain to BP, while Tier 2 and 3 suppliers are two or three links away, respectively. That the *krisha* has such a deep reach reinforces the finding from our formal model that any firm that receives a benefit from the target—no matter how far removed—can play a role in protecting the target. Further, BP is involved in joint ventures with SOCAR, Azerbaijan’s state-owned oil firm, which reinforce BP’s *krisha*.<sup>38</sup> In short, a number of Azerbaijani firms, both large and small, receive benefits from BP’s presence and would be hurt by BP’s expropriation. Executives on the ground recognize that BP’s economic links form a *krisha* that protects BP, likely helping to keep BP’s regular interactions with the Azerbaijani government from generating risks of breach of contract.

The situation of BP and its *krisha* stands in contrast to the Azerbaijani government’s expropriation of the Turkish firm Barmek. Similar to BP, Barmek had a central role in the Azerbaijani economy: it won the 2001 privatization tender to manage the electricity grid for Baku for 25 years. Germany’s Siemens was the first foreign owner of Baku’s grid, but after the firm disagreed with the Azerbaijani government over the grid’s development, Siemens exited. Siemens’s dispute, as well as the subsequent international privatization tender process, revealed considerable information about the Azerbaijani government’s preferences over the operation of the grid. In light of this information, Barmek decided to actively manage its government relations through close personal contacts with top officials.<sup>39</sup> In fact, it is widely believed that Barmek’s relationship with the Minister of Economic Development, Farhad Aliyev, helped Barmek to win the tender. When the government contained Barmek supporters, the government would have received a low benefit from expropria-

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<sup>37</sup>The *krisha* can go both ways, helping suppliers maintain their own good relations with the government as well. Interview, energy industry, Baku, Azerbaijan (June 2013).

<sup>38</sup>Interview, former SOCAR executive, Baku, Azerbaijan (June 2013). Note that this link is both a joint venture and an interaction with an SOE, the second of which is indicative of government capacity (Hypothesis 2). That BP’s operations carry this risk factor makes the absence of expropriation in BP’s case the more notable.

<sup>39</sup>Interview, former Barmek executive, Baku, Azerbaijan (June 2013).

tion ( $\alpha$  in our model), making Barmek secure. However, Aliyev was arrested in October 2005 on charges of conspiring to overthrow the government prior to the November parliamentary elections. This change in the government’s composition increased the government’s benefit from breaking its contract with Barmek and triggered an immediate decline in Barmek’s relationship with the government. By 2006, Azerbaijan had brought 30 criminal cases against Barmek employees, accusing them of “abuse and misappropriation of money by inspectors.”<sup>40</sup> These prosecutions sent a clear message: the government wanted Barmek to leave. Eventually the government decreed a forced change to Azerbaijani ownership.

We contend that this expropriation was possible in part because Barmek lacked relationships with local suppliers and hence lacked a protective *krisha*. Barmek’s particular ownership did not confer substantial benefits on the power plants that were its sole local suppliers, leaving supply chain links weak and the likelihood of an effective enforcement community low. Power plants had a reliable market in Baku’s grid and were still able to supply their product after Barmek’s ouster, despite the fact that the grid’s operations suffered under the government’s low operational capacity. Any costs emanating from ousting Barmek did not spread up a supply chain impacting private investment as would, say, a similar action against BP. One former government official noted the difference in the supplier base between BP and Barmek explicitly. Recalling Barmek’s lobbying efforts to save its investments, he said the firm failed because it “tried to act independently.”<sup>41</sup>

Despite their similarity, BP and Barmek received starkly different government treatment. BP, with a *krisha* formed by links to local suppliers, was able to protect its government contracts, while Barmek, a firm without deep economic links, was not. Barmek sought protection directly from its government relations, but this choice did not compensate for its missing *krisha*. BP, despite being in a vulnerable position in an oil-rich state, benefitted from economic ties in a way that was recognized by foreign executives both in and out of the energy industry.

Here we focused on the experiences of BP and Barmek because they match the requirements of a most-similar case design to test Hypothesis 1, the effects of economic links on contract breach (George and Bennett, 2004). Our field interviews with executives in other Azerbaijani firms reinforced our findings. For example, when we interviewed the CEO of a small financial software

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<sup>40</sup>“Anti-Corruption Department to Deal with Inspectors,” Turan Information Agency 7 August 2006.

<sup>41</sup>Interview, former Azerbaijani official involved with MNC relations, Baku, Azerbaijan (June 2013).

firm in Azerbaijan, he lamented that he did not have a *krisha* of related firms to protect his operations.<sup>42</sup> The CEO could not easily build economic links because his product simply does not require many suppliers. Conscious that his firm is somewhat stranded without a supply chain to provide protection, the CEO is considering increasing foreign ownership or accessing multilateral financing in order to protect the firm from government breach of contract. Our analysis implies that, without a built-in set of partners interested in his firm’s property rights, the CEO would do well to take extra measures to mitigate risks.

## 5 Conclusion

Foreign firms investing in countries with weak domestic political institutions rely on a mix of international legal and informal mechanisms to enforce their contracts with host governments. Nevertheless, host governments sometimes break contracts, whether through outright nationalization or more subtle means of devaluing foreign property. How does a host government choose which firms to target for contract breach? Why do some firms, like BP, benefit from secure property rights while other firms, like Barmek, do not?

We argue that a host government is most likely to honor its contracts with foreign firms that are economically linked to others and to break its contracts with foreign firms that operate in isolation. Other firms invest in informal property rights enforcement if and only if a target firm provides them with economic benefits, thus forming a *krisha* over economically linked firms. Supply chains can generate such benefits, giving firms incentives to protect each other’s property rights. As such, our argument implies that offshoring and sub-contracting in a host country brings with it protections against government interference with property rights. In the absence of a *krisha* formed by economic links, a firm like Barmek was left to “act independently” and suffer breach when an unexpected change in the Azerbaijani government left it vulnerable. Our argument also implies that concerns rooted in dependency theory that economic integration leads to the prioritization of “multinational needs to the detriment of host authorities” may be apt (Moran, 1978, 93).

We use multiple sources of evidence to support our theory. In addition to case studies from Azerbaijan, we examine new observational data and show that US firms were less likely to file

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<sup>42</sup>Interview, Baku, Azerbaijan (June 2013).

arbitration claims against countries with more US inter-firm trade. Our firm-level evidence comes from a survey that we administered to US MNCs that operate in Russia. We show that MNCs with fewer Russian suppliers report more past contract breaches and greater concern about future breach.

Variation in firms' willingness to participate in informal property rights enforcement is not new. For merchants in medieval Europe, guilds generated the kinds of economic links that made members support each other. Modern day supply chains thus play the same role as medieval guilds: they link together the economic activities of individual firms, creating incentives for firms to participate in informal property rights enforcement and giving firms the power to deter opportunistic governments.

## Appendix

We assume that the host government's type has a uniform distribution,  $\alpha \sim U[\alpha_L, \alpha_H]$ . Define  $A \equiv \alpha_H - \alpha_L$  and let  $\hat{\alpha}$  denote the type of government that is indifferent between breaking and honoring the contract. We solve for the model's weak Perfect Bayesian Equilibrium, which requires that the strategy profile is sequentially rational, and players update their beliefs according to Bayes' rule when possible. We do not need to impose any additional equilibrium refinements. We then derive the comparative statics that are contained in the main text.

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**Lemma 1.** *In an interior equilibrium:*

$$\begin{aligned} e_T^* &= \frac{(1 + \sigma + \rho - \lambda_P)v + \alpha_L}{\rho + 2} \\ e_P^* &= \frac{[2\lambda_P - (1 - \sigma)\rho]v + \alpha_L\rho}{\rho + 2} \\ \hat{\alpha}^* &= \frac{(1 - \sigma + \lambda_P)v + \alpha_L(\rho + 1)}{\rho + 2} \end{aligned}$$

*Proof of Lemma 1.* The host government will break its contract if and only if:

$$\sigma v + \alpha \geq e_T + e_P \quad \Leftrightarrow \quad \alpha \geq e_T + e_P - \sigma v \equiv \hat{\alpha}$$

The firms therefore believe that the *ex ante* probability that the government honors the contract is  $F(\hat{\alpha})$ , and the *ex ante* probability that the government breaks the contract is  $1 - F(\hat{\alpha})$ . To ensure that both breaking the contract and honoring it sometimes occur in equilibrium, we focus on an interior equilibrium in which  $\hat{\alpha} \in (\alpha_L, \alpha_H)$ .

For the target firm:

$$\begin{aligned} EU_T(e_T) &= F(\hat{\alpha})(v - e_T) = \left(\frac{\hat{\alpha} - \alpha_L}{A}\right)(v - e_T) \\ \frac{\partial EU_T(e_T)}{\partial e_T} &= -\left(\frac{\hat{\alpha} - \alpha_L}{A}\right) + \left(\frac{1}{A}\right)(v - e_T) = 0 \\ \Leftrightarrow e_T &= \frac{1}{2}[(1 + \sigma)v - e_P + \alpha_L] \end{aligned}$$

For a partner firm  $i \in P$ :

$$\begin{aligned} EU_i(e_i) &= [1 - F(\hat{\alpha})]\gamma_i v + F(\hat{\alpha})[(\gamma_i + \lambda_i)v - e_i] = \gamma_i v + \left(\frac{\hat{\alpha} - \alpha_L}{A}\right)(\lambda_i v - e_i) \\ \frac{\partial EU_i(e_i)}{\partial e_i} &= -\left(\frac{\hat{\alpha} - \alpha_L}{A}\right) + \left(\frac{1}{A}\right)(\lambda_i v - e_i) = 0 \\ \Leftrightarrow e_i &= (\lambda_i + \sigma)v - e_T - e_P + \alpha_L = \frac{1}{2}[(\lambda_i + \sigma)v - e_T - e_{-i} + \alpha_L] \end{aligned}$$

where  $e_{-i}$  is the aggregate effort of all partner firms except  $i$ .

Define  $\lambda_P = \sum_{i \in P} \lambda_i$ . Then the aggregate effort of all partner firms is:

$$e_P = \sum_{i \in P} e_i = \frac{\lambda_P v + \rho(\sigma v - e_T + \alpha_L)}{\rho + 1}$$

Combining this with the best response functions yields the values of  $(e_T^*, e_P^*)$  above. To show that such an interior equilibrium exists, assume that  $\rho = 3$ ,  $\lambda_1 = 0.5$ ,  $\lambda_2 = 0.55$ ,  $\lambda_3 = 0.6$ ,  $\sigma = 0.4$ ,  $v = 100$ , and  $\alpha_L = 0$ . Then  $e_T^* = 55$ ,  $e_1^* = 5$ ,  $e_2^* = 10$ ,  $e_3^* = 15$ , and  $\hat{\alpha} = 45$ . We have a well-defined interior equilibrium iff  $\alpha_H > 45$ . Interested readers can easily derive more general conditions on parameter values using the information above.  $\square$

\*\*\*

*Proof of Proposition 1.*

$$\frac{\partial \hat{\alpha}^*}{\partial \lambda_P} = \frac{v}{\rho + 2} > 0$$

$\square$

*Proof of Proposition 2.*

$$\frac{\partial \hat{\alpha}^*}{\partial \sigma} = -\frac{v}{\rho + 2} < 0$$

$\square$

*Proof of Proposition 3.*

$$\frac{\partial \hat{\alpha}^*}{\partial v} = \frac{1 - \sigma + \lambda_P}{\rho + 2} > 0$$

$\square$

*Proof of Proposition 4.*

$$\begin{aligned} \hat{\alpha}^*(\rho' + 1) < \hat{\alpha}^*(\rho') &\Leftrightarrow \frac{(1 - \sigma + \lambda_P)v + \alpha_L(\rho' + 2)}{\rho' + 3} < \frac{(1 - \sigma + \lambda_P)v + \alpha_L(\rho' + 1)}{\rho' + 2} \\ &\Leftrightarrow \alpha_L < (1 - \sigma + \lambda_P)v \end{aligned}$$

This parameter restriction holds in an interior equilibrium because it is necessary to ensure that the government sometimes honors the contract; that is, that  $\alpha_L < \hat{\alpha}^*$ .  $\square$

## References

- Ahlquist, John S. and Aseem Prakash. 2010. "FDI and the Costs of Contract Enforcement in Developing Countries." *Policy Sciences* 43:181–200.
- Albertus, Michael and Victor Menaldo. 2012. "If You're Against Them You're With Us: The Effect of Expropriation on Autocratic Survival." *Comparative Political Studies* 45:973–1003.
- Allee, Todd and Clint Peinhardt. 2010. "Delegating Differences: Bilateral Investment Treaties and Bargaining Over Dispute Resolution Provisions." *International Studies Quarterly* 54:1–26.
- Allee, Todd and Clint Peinhardt. 2014. "Evaluating Three Explanations for the Design of Bilateral Investment Treaties." *World Politics* 66:47–87.
- Büthe, Tim and Helen V. Milner. 2008. "The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through International Trade Agreements?" *American Journal of Political Science* 52:741–762.
- Büthe, Tim and Helen V. Milner. 2014. "Foreign Direct Investment and Institutional Diversity in Trade Agreements: Credibility, Commitment, and Economic Flows in the Developing World, 1971–2007." *World Politics* 66:47 – 87.
- Cole, Harold L. and William B. English. 1991. "Expropriation and Direct Investment." *Journal of International Economics* 30:201–227.
- Crawford, Vincent P. 1990. "Relationship-Specific Investment." *Quarterly Journal of Economics* 105:561–574.
- Davis, Gerald F., Kristina A. Diekmann and Catherine H. Tinsley. 1994. "The Decline and Fall of the Conglomerate Firm in the 1980s: The Deinstitutionalization of an Organizational Form." *American Sociological Review* 59:547–547.
- Dixit, Avinash K. 2004. *Lawlessness and Economics: Alternative Modes of Governance*. Princeton University Press.
- Eaton, Jonathan and Mark Gersovitz. 1984. "A Theory of Expropriation and Deviations from Perfect Capital Mobility." *The Economic Journal* 94:16–40.
- Fails, Matthew D. 2012. "Inequality, Institutions, and the Risks to Foreign Investment." *International Studies Quarterly* 56:516–529.
- Frieden, Jeffrey A. 1994. "International Investment and Colonial Control: A New Interpretation." *International Organization* 48:559–593.
- George, Alexander and Andrew Bennett. 2004. *Case Studies and Theory Development in the Social Sciences*. MIT Press.
- Gertner, Jon. 2012. *The Idea Factory: Bell Labs and the Great Age of American Innovation*. Penguin Press.
- Greif, Avner. 2006. *Institutions and the Path to the Modern Economy*. Cambridge University Press.
- Grossman, Gene M. and Elhanan Helpman. 1994. "Protection for Sale." *American Economic Review* 84:833–850.

- Grossman, Gene M. and Elhanan Helpman. 1996. "Electoral Competition and Special Interest Politics." *Review of Economic Studies* 63:265–286.
- Gustafson, Thane. 2012. *Wheel of Fortune: The Battle for Oil and Power in Russia*. Belknap Press.
- Guzman, Andrew T. 1998. "Why LDCs Sign Treaties That Hurt Them: Explaining the Popularity of Bilateral Investment Treaties." *Virginia Journal of International Law* 38:639–6688.
- Hafner-Burton, Emilie M., Zachary C. Steinert-Threlkeld and David G. Victor. 2014. "Transparency of Investor-State Arbitration." UC San Diego Working Paper.
- Henisz, Witold J. 2000. "The Institutional Environment for Multinational Investment." *Journal of Law, Economics, and Organization* 16:334–364.
- Jensen, Nathan M., Glen Biglaiser, Quan Li, Edmund Malesky, Pablo M. Pinto, Santiago M. Pinto, and Joseph L. Staats. 2012. *Politics and Foreign Direct Investment*. University of Michigan Press.
- Jensen, Nathan M. and Noel P. Johnston. 2011. "Political Risk, Reputation, and the Resource Curse." *Comparative Political Studies* 44:662–688.
- Johns, Leslie. 2012. "Courts as Coordinators: Endogenous Enforcement and Jurisdiction in Adjudication." *Journal of Conflict Resolution* 56:257–289.
- Johnston, Noel P. 2013. "The Politics of Compensation for Expropriation." PhD thesis, Washington University in St. Louis.
- Keohane, Robert O. 1986. "Reciprocity in International Relations." *International Organization* 40:1–27.
- Kobrin, Stephen J. 1984. "Expropriation as an Attempt to Control Foreign Firms in LDCs: Trends from 1960 to 1979." *International Studies Quarterly* 28:329–348.
- Kobrin, Stephen J. 1987. "Testing the Bargaining Hypothesis in the Manufacturing Sector in Developing Countries." *International Organization* 41:609–638.
- Li, Quan. 2009. "Democracy, Autocracy, and Expropriation of Foreign Direct Investment." *Comparative Political Studies* 42:1098–1127.
- Lloyd, T.H. 1991. *England and the German Hanse, 1157-1611*. Cambridge University Press.
- Locke, Richard. 2013. *The Promise and Limits of Private Power*. Cambridge University Press.
- Lowenfeld, Andreas F. 2008. *International Economic Law*. Oxford University Press.
- Milgrom, Paul R., Douglass C. North and Barry R. Weingast. 1990. "The Role of Institutions in the Revival of Trade: the Law Merchant, Private Judges, and the Champagne Fairs." *Economics and Politics* 2:1–23.
- Miller, William Ian. 1990. *Bloodtaking and Peacemaking: Feud, Law, and Society in Saga Iceland*. University of Chicago Press.
- Milner, Helen V. 2014. "Introduction: The Global Economy, FDI, and the Regime for Investment." *World Politics* 66:1–11.

- Moran, Theodore H. 1978. "Multinational Corporations and Dependency: A Dialogue for Dependistas and Non-Dependistas." *International Organization* 32:79–100.
- Mosley, Layna. 2010. *Labor Rights and Multinational Production*. Cambridge University Press.
- Pinto, Pablo. 2013. *Partisan Investment in the Global Economy*. Cambridge University Press.
- Renard, Georges. 1968. *Guilds in the Middle Ages*. August M. Kelley Publishers.
- Simmons, Beth A. 2014. "Bargaining over BITs, Arbitrating Awards: The Regime for Protection and Promotion of International Investment." *World Politics* 66:12–46.
- Sornarajah, M. 2004. *The International Law on Foreign Investment*. Cambridge University Press.
- Vernon, Raymond. 1971. *Sovereignty at Bay: the Multinational Spread of U.S. Enterprises*. Basic Books.
- Wellhausen, Rachel. Forthcoming. "Investor-State Disputes: When Governments Break Contracts." *Journal of Conflict Resolution* xx:xx–xx.

Table 1: Utility Functions for the Theoretical Model

	Break Contract	Honor Contract
Host government	$\sigma v + \alpha$	$e_T + e_P$
Target firm	0	$v - e_T$
Partner firm	$\gamma_i v$	$(\gamma_i + \lambda_i) v - e_i$

where  $e_P$  is the aggregate effort of partner firms

Table 2: Intra-Firm Trade Reduces Arbitration

Dependent Variable: Arbitration		
	(1)	(2)
US intra-firm trade	-0.006* (0.004)	-0.002* (0.001)
Constant	0.112 (0.071)	0.038 (0.021)
Model	Country and Year FE	Average 2002-2012
Observations	346	45

Significance levels: \*  $p < 0.1$

Notes: Robust standard errors clustered by country. Arbitration measures the count of public US international investment arbitrations per US FDI.

Data sources: US Census Bureau, UNCTAD, author's records.

Table 3: Empirical Implications

Hypothesis Number	Theoretical Parameter	Empirical Measure	Expected Impact on Breach
1	Firm links ( $\lambda_P$ )	Russian suppliers* Joint venture with a Russian entity	Decrease Decrease
2	Government capacity ( $\sigma$ )	Interactions with SOEs Foreign-owned market share	Increase Decrease
3	Value of target firm ( $v$ )	Size of Russian investments* Sales in Russia	Decrease Decrease

\* In our empirical analysis, the sign for this variable should be reversed because we exclude the largest category.

Table 4: Survey Respondent Characteristics

(a) “In what industry is your firm?”

Industry	Count
Services	28
General (5)	
IT (5)	
Legal (13)	
Healthcare (3)	
Trade (1)	
Media (1)	
Non-profit/Education	10
Finance/Insurance	8
Consumer products	3
Engineering/Environment	2
Environmental (1)	
Aerospace (1)	
Manufacturing	5
General (4)	
Bio/chemical (1)	
Energy/Mining	5
Energy (4)	
Mining/metals (1)	
Telecommunications	1
Transport	2
Total	64

(b) “Approximately what proportion of your supplies do you buy from Russian firms?”

Amount	Count
None	7
1–24%	7
25–49%	11
50–74%	9
75% or more	29
Total	63

Table 5: Firms with Fewer Economic Links Report More Concern over Breach

Dependent Variable: Current and Future Concerns about Breach					
	(3)	(4)	(5)	(6)	(7)
	Lowery value (1-4 range)	Lowery value (1-4 range)	Transfers ownership (1-4 range)	Transfers ownership (1-4 range)	Total breach (2-8 range)
<u>Firm Economic Links</u>					
Proportion of Russian suppliers					
0	-0.128 (-0.823)	0.916* (-0.531)	-0.41 (-0.705)	1.275*** (-0.285)	0.891** (-0.341)
1-24%	1.785*** (-0.637)	1.893*** (-0.561)	1.390*** (-0.303)	1.839*** (-0.273)	1.683*** (-0.334)
25-49%	0.718** (-0.27)	1.285*** (-0.468)	0.395 (-0.478)	0.817 (-0.611)	0.867** (-0.393)
50-74%	0.407 (-0.257)	0.747* (-0.441)	0.146 (-0.438)	0.382 (-0.776)	0.425 (-0.456)
Joint venture with Russian entity					
		-0.488 (-0.64)		-0.002 (-0.722)	-0.347 (-0.506)
Government Capacity					
Interactions with SOEs					
		0.612** (-0.277)		1.562** (-0.667)	0.889** (-0.368)
Foreign-owned market share					
		-0.891 (-0.562)		-1.327*** (-0.474)	-0.755** (-0.328)
<u>Value of Target Firm</u>					
<u>Size of Russian investments</u>					
Less than \$500,000					
		-0.189 (-0.453)		0.324 (-0.485)	0.226 (-0.386)
\$500,000-10 million					
		0.141 (-0.286)		0.883** (-0.428)	0.557** (-0.234)
\$10-200 million					
		-0.003 (-0.574)		0.131 (-0.803)	0.265 (-0.5)
Sales in Russia					
		-0.319 (-0.482)		-0.018 (-0.591)	-0.069 (-0.451)
<u>Control Variables</u>					
Immobile industry					
		0.399 (-0.527)		-0.486 (-0.474)	0.156 (-0.433)
Years in Russia					
		-0.009 (-0.027)		-0.008 (-0.022)	-0.006 (-0.019)
Constant					
	1.721*** (-0.26)	1.903*** (-0.418)	1.682*** (-0.291)	0.983* (-0.51)	1.302*** (-0.32)
Pseudo R2					
	0.05	0.1	0.03	0.09	0.09
Observations					
	53	47	56	49	47

Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$   
Robust standard errors clustered by industry.