

The Uneven Effects of Political Connections on Investment

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Abstract

This paper presents an experiment to understand whether corporate political contributions encourage or discourage investors from investing in a company. Our data come from a survey of 5,247 firm employees and managers in Venezuela, Ukraine and Egypt. The experimental results reveal very heterogenous effects for politically-connected companies: respondents from highly connected companies prefer to invest in companies with political connections, while respondents at less-connected companies prefer to invest in companies without political connections. We believe that what explains this finding is previously unreported aspects of political connections governing relationships *between* companies. Companies with political connections are more likely to use informal means to resolve disputes, and as a result those who have access to such connections may be more likely to trust and thus invest in each others' companies.

1 Introduction

Firms operating in high-corruption countries with weak property right often rely on informal connections to political agents to succeed in an environment fraught with risks (Fisman 2001; Faccio, Masulis and McConnell 2006; Markus 2012, 2015). These types of non-market strategies can be effective in securing preferential access to loans and contracts, as well as providing protection from predation by government agents. A large body of work shows that political connections are an important aspect of business-government relations and firms' non-market strategies in countries with weak institutions (Shleifer and Vishny 1993; Samphantharak and Malesky 2008). However, our understanding of the relationship between political connections and inter-firm cooperation is very limited. In this paper, we examine how political connections affect firms' willingness to engage in cooperation and mutual investment.

Firms cooperate in a variety of ways to improve market position and increase profits. In high-corruption environments, cooperation between domestic and foreign firms is often necessary to avoid expropriation or secure access to international arbitration (Henisz 2000; Betz and Pond 2019). Politically connected firms are thus more attractive partners for cooperation since partner firms may share some of the benefits of political connections (Bhandari 2020). Alternatively, connected firms may be unattractive partners since such firms may be more likely to break contracts and engage in opportunistic behavior (Williamson 1979). Connected firms may also have the "wrong" type of connections to political agents out of favor with the ruling regime in a given country (Albertus and Menaldo 2012; Frye and Yakovlev 2016). Cooperation is less attractive if firms with the "wrong" connections, along with their partner firms, face more expropriation and government predation. Despite these competing answers, existing research has not systemically examined how political connections affect firms' willingness to cooperate.

We focus on domestic firms and argue that firms prefer to cooperate with other firms that have similar types of business-government relations. An important aspect of firm het-

erogeneity with respect to political connections and business-government relations is access to formal vs. informal means of redress (Gans-Morse 2017; Marques, Levina, Kazun and Yakovlev 2020; Markus 2012). Unconnected firms are more likely to use formal means of dispute resolution, such as courts, to address conflicts with business partners. In high-corruption countries, these institutions are likely to be weak and ineffective. Connected firms, on the other hand, are more likely to rely on informal means by leveraging their connections to government agents. These informal methods, involving extralegal economic exchanges or direct interventions by powerful government officials, may be more effective in resolving disputes and generating favorable outcomes for connected firms.

Although cooperation between connected and unconnected firms may be useful for unconnected firms hoping to benefit from their partner's connections, this type of cooperation is also more risky. Since unconnected firms lack access to informal means of redress, a mismatch in business-government relations creates a power imbalance. Connected firms may engage in opportunistic behavior costly to business partners with impunity since connected firms may rely on connections and informal dispute resolution to escape penalties and ensure a favorable result (Qian, Pan and Yeung 2010). Forward-looking unconnected firms may anticipate this and would thus be less likely to cooperate with connected firms. Firms are therefore likely to cooperate with firms that have similar relations with government agents and access to similar means of redress: unconnected firms are more likely to cooperate with other unconnected firms, while connected firms are more likely to cooperate with other connected firms.

To evaluate this logic, we conducted an online survey using Facebook advertisements to recruit 5,247 business employee or manager respondents in Egypt, Ukraine and Venezuela. While these countries represent diverse regions and economic conditions, corruption is considered to be a major problem in each country. Survey respondents were asked to describe their firm's characteristics, degree of political connections, and experience with government predation and expropriation. These data represent a unique source of information on the

relationship between political connections, firm characteristics, and expropriation. By using Facebook advertisements, we are able to gather data in countries where traditional surveys are more difficult to conduct. We are thus able to generate valuable firm-level insights regarding the relationship between political connections and inter-firm cooperation.

We implemented an investment choice experiment in the survey that allows us to experimentally manipulate company political connections along with other company-level variables such as profitability, size and country of origin. Respondents were presented with characteristics of two hypothetical firms and asked to choose how much money to invest in each. On the whole, respondents were *less* likely to choose companies with political connections. Examination of treatment heterogeneity showed that this effect is driven by the experiences of respondents at their companies. Respondents at companies with more political connections (and specifically more *valuable* political connections) prefer to invest in connected companies, while respondents at non-connected companies (i.e., the majority of the sample) prefer to invest in non-connected businesses. We also present observational evidence demonstrating that connected firms are more likely to rely on informal means of redress.

This paper makes several important contributions to research on political connections, inter-firm cooperation, and business-government relations. To our knowledge, this paper is the first to directly evaluate how political connections affect inter-firm interactions. While other research has focused on factors such as trust, and cultural distance to explain interaction among firms (Farrell 2005; Nielsen 2007), we show that a firm’s political strategy plays an important role in affecting that firm’s attractiveness as a business partner. Our theory and results suggest that firms operating in high-corruption environments must consider not only the risk of expropriation and opportunism by government agents but also risks associated with their business partners (Henisz 2000; Qian, Pan and Yeung 2010). This contributes to a large literature on property rights, expropriation, and political risk in political science, economics and management that has largely focused on acts of expropriation by government agents (Kobrin 1987; Jensen 2003, 2008; Li and Resnick 2003; Li 2009). In adopting a cross-

national approach, we are also able to analyze the role of political connections and inter-firm cooperation across countries with differing political systems and levels of development.

2 Theory

A large literature on business-government relations points to the importance of political connections as a component of firms' political, non-market strategies. Past studies in politics and economics have argued that companies' experiences in high-corruption states are strongly affected by informal ties; firms with strong political connections receive significant preferential treatment (e.g. better access to credit market and contracts) from governments. Political connections involve direct ties between a firm and government structures.¹ Politically connected firms are likely to invest more and are likely to be positively correlated with the value of firms.² For example, [Faccio, Masulis and McConnell \(2006\)](#) find that politically connected firms are more likely to be bailed out relative to comparable non-connected firms. Similarly, [Claessens, Feijen and Laeven \(2008\)](#) show that firms with political connections enjoy better access to bank financing.

We conceptualize political connections as the presence of informal ties to central government institutions. These informal ties may involve a CEO's, board member's, or manager's past or current appointments to positions in governmental institutions. These ties may also involve personal relationships and can involve company owners, managers, and board members. Alternatively, political connections may include membership in political parties, past or present positions in government, or direct family ties to presidents or prime ministers.

When predation is common, officials may create exclusive "spheres of influence" that corresponds to formal and informal hierarchical relationships. The presence of these ties implies that officials hold some stake in the survival of the firm and are willing to use influence to intervene on behalf of the firm. Given this, officials may be more reluctant to target firms

¹[Samphantharak and Malesky \(2008\)](#), [Schoenherr \(2018\)](#)

²[Roberts \(1990\)](#), [Fisman \(2001\)](#)

that have ties to other, potentially more influential, government officials.³ Political ties can work as insurance and protection from uncontrolled and unpredictable predation if some subset of officials, who would otherwise target a firm, are deterred from interfering with its operations.⁴ Firms with political connections may thus incur fewer political risks and will be able to operate more efficiently compared to politically unconnected firms.^{5,6}

How do political connections affect inter-firm cooperation? Firms cooperate by entering into strategic alliances such as joint ventures or equity alliances in order to leverage resource complementarities and improve market share. Political factors may also drive incentives to cooperate if strategic alliances reduce risks of expropriation and predation by government agents. Firms may thus enter into joint ventures with foreign or domestic firms to increase protection of property rights.⁸ Cooperation is not without risks; transaction costs, risk of hold-up and opportunism, and incomplete contracts generate new uncertainties and costs for cooperating firms. Existing research has examined structural factors such as institutions, as well as firm-level characteristics, that increase the likelihood and efficiency of inter-firm cooperation.⁹ However, we know little about the effect of political connections on cooperation.

Existing research suggests that firms may be more likely to cooperate with politically connected firms to seek protection

As an illustration, we present some descriptive patterns from the firm survey we describe in this paper. We ask respondents to describe their firm's level of political connections on a 10-point scale, ranging from unconnected at 0, to strong political connections at 10. We also ask respondents to describe the efficacy of their connections on a 10 point scale. This variable ranges from "hurt by connections" at 0, to "benefits from connections" at 10. Figure 1

³Fried, Lagunes and Venkataramani (2010)

⁴Keillor, Wilkinson and Owens (2005), Campos, Lien and Pradhan (1999)

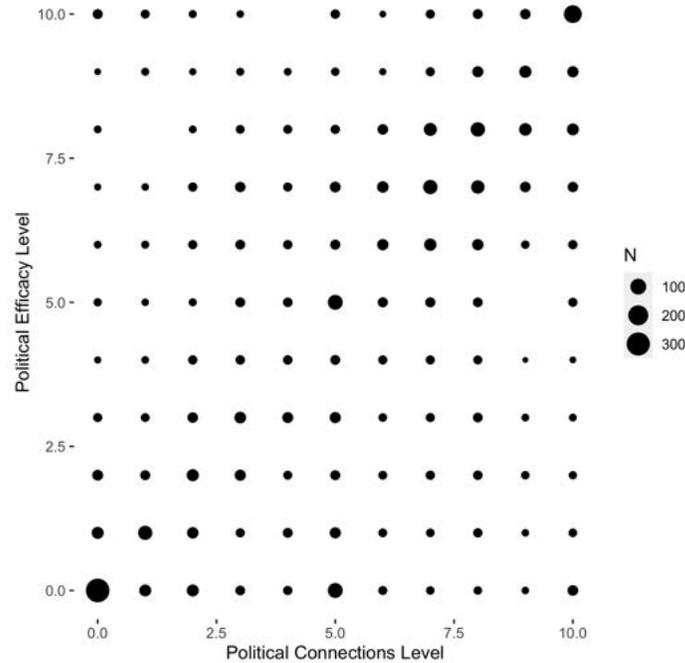
⁵Galang (2012)

⁶This does not necessarily imply that politically connected firms incur no costs. In building ongoing relationships with government officials, politically connected firms may simply be transforming the unpredictable costs of corruption (e.g. unanticipated and intermittent incidents of expropriation) into a stabler stream of ongoing costs to nurture the political connections (e.g. bribes).⁷

⁸Henisz (2000), Betz and Pond (2019)

⁹Farrell (2005), Nielsen (2007)

Figure 1: Political Connections and Efficacy



plots the relationship between these variables. While the two variables are highly correlated (correlation coefficient of .6), suggesting that firms tend to benefit from political connections, we observe a considerable amount of off-diagonal cases as well. Some highly connected firms thus report that they are hurt by their connections, suggesting that effects of political connections are not uniform.

Our experiment allows us to examine political connections in much greater detail than has previously been possible. To examine the relationship between investment and political connections, we intend to test the following hypothesis:

H1: Politically-connected companies should receive more investment than non-connected companies.

We believe this hypothesis expresses the conventional wisdom that political connections make companies more valuable and hence more likely to be good candidates for investment.

3 Methods and Results

In this section, we describe our research design. We conducted an online survey using Facebook advertisements in three countries: Ukraine, Egypt and Venezuela. Our survey contains a survey experiment as well as questions that allow us to collect observational firm-level characteristics. Ukraine, Egypt and Venezuela are appropriate countries for this type of analysis since these are high corruption countries where firms face political risks including demands for bribes, harassment, and shake-downs by government agents and a higher risk of expropriation. Both of these countries are near the bottom of the 2019 Transparency International Corruption Perception Index: Ukraine ranks 126/198, Egypt is 106/198 while Venezuela is 173/198. However, Venezuela, Egypt and Ukraine have very different institutions: Venezuela and Egypt are authoritarian regimes while Ukraine is a democracy where elections are generally recognized to be free and fair (though high levels of conflict undermine government sovereignty in the eastern part of the country). Using these countries for our sample makes it possible to examine the causes of government predation while also analyzing differences in general practices across institutional types.

Our survey targeted individuals 18-64 who own or are currently employed across all firms in Ukraine, Egypt and Venezuela. We collected responses from 5,247 individuals, including employees, managers and CEOs of companies in the target countries. These individuals represent firms varying across sectors, income, number of employees, and includes both domestic as well as wholly owned subsidiaries and joint ventures of foreign firms. Our sample is split fairly evenly, with 59.08% employee respondents and 40.92% management respondents.

We present some descriptive information on the distribution of firms across sectors and sizes in Figures 2 and 3. We use NACE two-digit sector codes to classify firm sectors. Figures 2 and 3 demonstrate that our data contain information on firms of of varying sizes operating across a wide variety of sectors. To compare how our sampled data compared to the observed distribution of firms, we use sector data from the Ukrainian firm census. While we are unable to use a similar census to examine the representativeness of our Venezuelan or Egyptian

Figure 2: Sample Sector Distribution

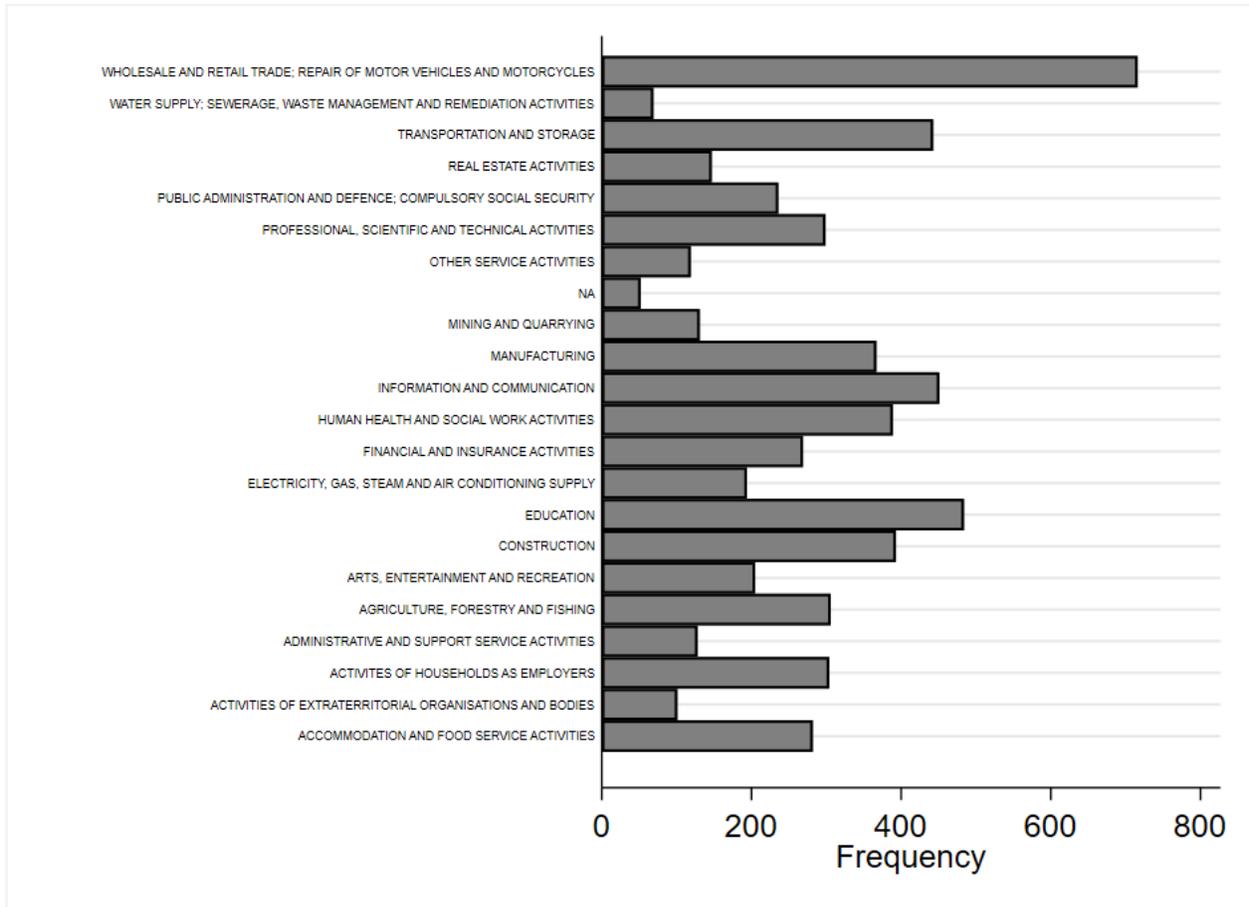


Figure 3: Sample Firm Size Distribution

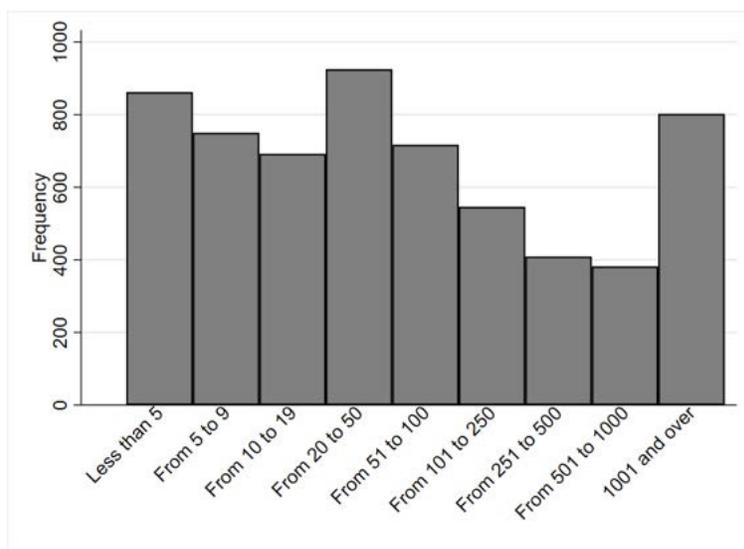
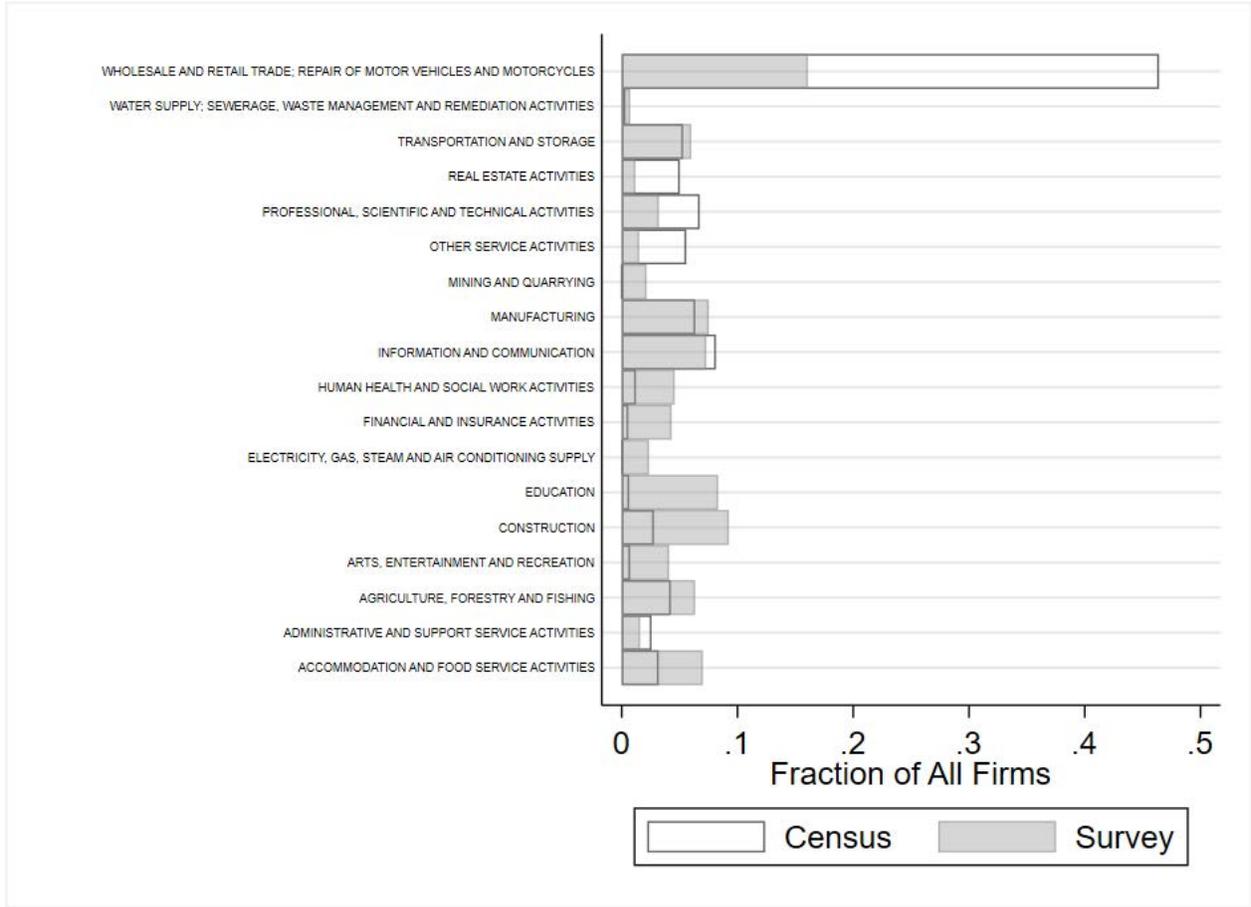


Figure 4: Ukraine Sample and Census Sector Distribution



sample, the difference between firm proportions in our sample vs. the Ukrainian firm census is still informative. We present these differences in Figure 4. While our data over-samples educational firms and under-samples retail firms, our sampled sector distributions generally approximate the proportions reported in the firm census. This increases our confidence that our sample is generally representative of the distribution of firms in the economy.

Respondents to the survey were asked to answer a variety of questions soliciting information on firm characteristics, experiences with governments involving direct occurrences and interactions, as well as various opinions and perceptions.

To measure political connections, we use information from two variables. First, we ask respondents to rate the *political connections* of their firms on a scale ranging from 0-10, where

0 indicates no connections and 10 indicates very strong connections.¹⁰ This formulation is more perceptual: we rely on the respondent's idiosyncratic estimation and interpretation of the firm's political connections. Second, we ask respondents if their firm has a manager, CEO, owner or board member who are current or former Members of Parliament and/or High/low ranking bureaucrats. We use a count of *high-ranking officials and parliament members* that are associated with a given firm. Firms are likely to have strong political ties if multiple high-ranking officials or parliament members have a stake in ensuring the continued success of a firm and have an incentive to use their influence on behalf of the firm.

¹⁰The Appendix contains the questions used in these analyses.

4 Experiment

4.1 Setup

In this three-country survey we included a conjoint experiment for identification of the causal relationship between a firm’s political connections and the level of investment it might receive. To do so, we asked respondents to evaluate a series of hypothetical investment scenarios in which they divide some amount of money between two firms. Respondents are presented with a variety of information on firms’ characteristics, including political ties. In theory, if political connections are valuable to the firm—as much of the existing literature holds to be true in general—then we should expect more connected firms to receive more investment. By including numerous other attributes, we can marginalize our treatment effect over significant firm heterogeneity while separately learning about other covariates that might affect corporate investment.

Our experiment has the format of a choice-based conjoint design between two alternatives, except that in this case, the respondent is choosing how to allocate a \$100 investment between two companies. The possible attributes for this experiment include company ownership, company country of origin, sector, number of employees, current assets (\$), total sales (\$), total profit (\$), age of firm, and political connections.

For the economic attributes of the firm, we simulate from continuous distributions to approximate realistic investment decisions. We first draw the number of employees from series of uniform distributions that take 20% of samples from the following bounds: (10 - 50), (50 - 100), (100 - 500), (500 - 1000) and (1000 - 5000). This produces a distribution with substantial mass in medium and small firms, with relatively fewer larger firms (greater than 1,000 employees). We draw the amount of capital as dollars per employee from a uniform distribution with a minimum of \$100 and a maximum of \$10000, and we draw a number of years for firm age from a uniform distribution between 3 and 65.

One of the challenges in designing a realistic investment scenario is to have data that

an investor might expect about firm performance. Due to our uncertainty about how best to show data about a company, we take two approaches to manipulating corporate performances. First, we draw from a simple Likert list of attributes for firm profitability that run from Losing a Lot of Money to Very Profitable (5 categories). This approach uses heuristics to reduce information load for the respondent when evaluating treatment profiles at the risk of reduced realism for the profiles.

Our second approach was to provide the respondent with much more detailed randomized information about firm performance. To accomplish this, we generated individualized time series for each investment profile, which we then presented as time series graphs to the respondent. To generate the series, we drew time-varying total factor productivity a_{it} value for each treatment. Conditional on these draws, we then calculated the amount of sales q_{it} and profit p_{it} for firm i in time t through a Cobb-Douglas production function given fixed values for labor L_i , capital K_i , and time-varying TFP a_{it} :

$$q_{it} = a_{it}\sqrt{L_i}\sqrt{C_i}$$

$$p_{it} = q_{it} - \sqrt{L_i}\sqrt{C_i}$$

We used the square root of capital and labor to ensure constant returns to scale. Profit p_{it} is equal to the amount of sales minus the same production function with unit TFP. In other words, TFP determines the amount of profit a firm receives.

To allow TFP to vary over the lifetime of the firm, we drew two parameters C_1 and C_2 and generated TFP a'_{it} via a quadratic function on the real line as a function of time t :

$$a'_{it} = \alpha + C_1 a_{it} t + C_2 a_{it} t^2$$

$$a_{it} = e^{a'_{it}}$$

We exponentiated a'_{it} to a_{it} because TFP must be a strictly positive parameter. Using a quadratic function for TFP allows the performance of the firm to vary over time in relatively smooth shapes, either concave-up, concave-down, convex-up or convex-down. It is also possible to have concave-convex and convex-concave shapes over the span of the firm, which would constitute S-curves where company performance decreased for a period and then increased for a period. To illustrate what the resulting TFP values look like, we drew 1000 random variates for a 100-time point trend and plotted them in Figure 5. This figure shows that we can capture a wide variety of shapes in this distribution that are all plausible ways that productivity (and hence profitability) could change in a firm over time. The respondent was not shown the TFP values directly (as they are in principle unobservable), only the net profit above/below sales. The potential drawback of this approach is that it increased the information load of the treatment, possibly making it more difficult for the respondent to evaluate the treatment profile and leading to satisficing. The advantage of this version of the treatment is that it is much more realistic and detailed than the Likert scale. Because of our uncertainty about which version would produce the most valid results, we randomized equally whether the respondent received a Likert scale for profitability or a full time series plot.

The rest of the attributes have discrete values, which we show in Table 1. We measure political connections in numerous ways to try to capture the variety of relationships a company could have with the state. For example, either an owner or a board member could be politically-connected, and this relationship could be one of professional acquaintance (i.e. a former minister or bureaucrat) or one of friendship (former classmate) or familial tie (son-in-law, daughter-in-law, etc). This diversity in treatment type allows us to marginalize over all these possible kinds of connections so that when we present aggregated results we can know with confidence that the results are not simply due to the particular political connection of a certain type. In addition, we can know with much more precision what kind of political connections tend to be most or least valuable.

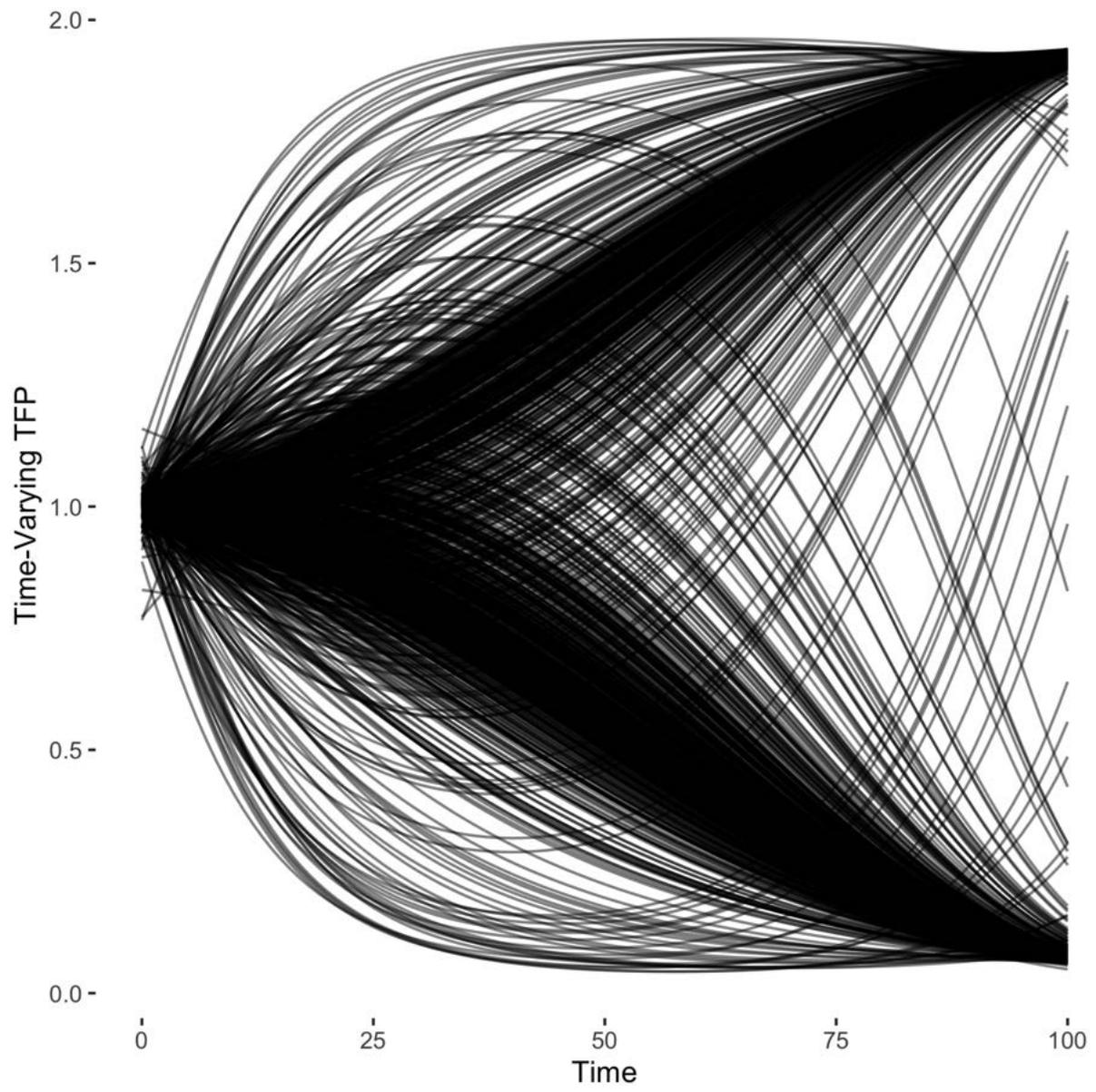


Figure 5: 1000 Draws of Random Time-Varying TFP Trajectories

Table 1: Treatment Profiles for Investment Conjoint Survey Experiment

Number	Attribute	Values
1	Ownership	100% Foreign-Owned, Domestic Private, Domestic Public
2	Country of Origin	United States, Germany, Saudi Arabia, China, Russia, Brazil, South Korea, Japan, Saudi Arabia
3	Sector	Telecommunications, Construction, Manufacturing, Agriculture, Retail, Energy, Financial Services
4	Government Relations	Member of Parliament is on board of company, Head of ministry is on board of company, Mid-level bureaucrat is on board of company, Owner is a former member of parliament, Owner is a nephew/niece of prime minister, Owner is former general in the military, Owner is former officer in the police, Owner is former classmate to the President, Owner is married to the President’s daughter/son, Owner is member of the President’s political party, President’s son/daughter is on the board of the company, Owner has no interest in politics

In the experiment, respondents view two randomly generated company profiles paired together and are asked to choose some investment amount $x \in [0, 100]$ to invest in one firm versus the other. Respondents evaluate four sets of investment pairs (i.e., tasks) and consequently assign investment amounts to 8 hypothetical firms. We present one example of a pair of randomly generated profiles in Figure 6. This version of the figure shows the time-varying profitability and sales of the firm as parallel plots. We believe that this visual depiction communicates more realism about the hypothetical companies, though possibly also produces an additional informational burden on the respondent. As we discussed, for this reason we randomly substituted a Likert scale in 50% of the profiles.

4.2 Experimental Results

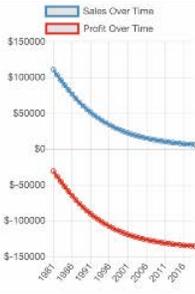
We present the experimental results both in terms of dis-aggregated treatments (i.e., all the different types of political connections) along with several treatment interactions.

Figure 6: Conjoint Experiment

English

We would now like to ask your opinion about a possible investment scenario. Suppose that you have \$100 to invest in the domestic economy. How would you divide the \$100 between these two companies?

The following table contains data about these two investment options:

		
Domestic - Public	Ownership	Domestic - Private
Egypt	Country	Egypt
Telecommunications	Sector	Manufacturing
24	Employees	473
\$166.89k	Current Assets (\$)	\$1.56M
40 years	Age of Firm	49 years
Owner is married to the President's son	Government Relations	Member of parliament is on board of company
	Company Performance (\$)	
\$50	Amount Invested	\$50



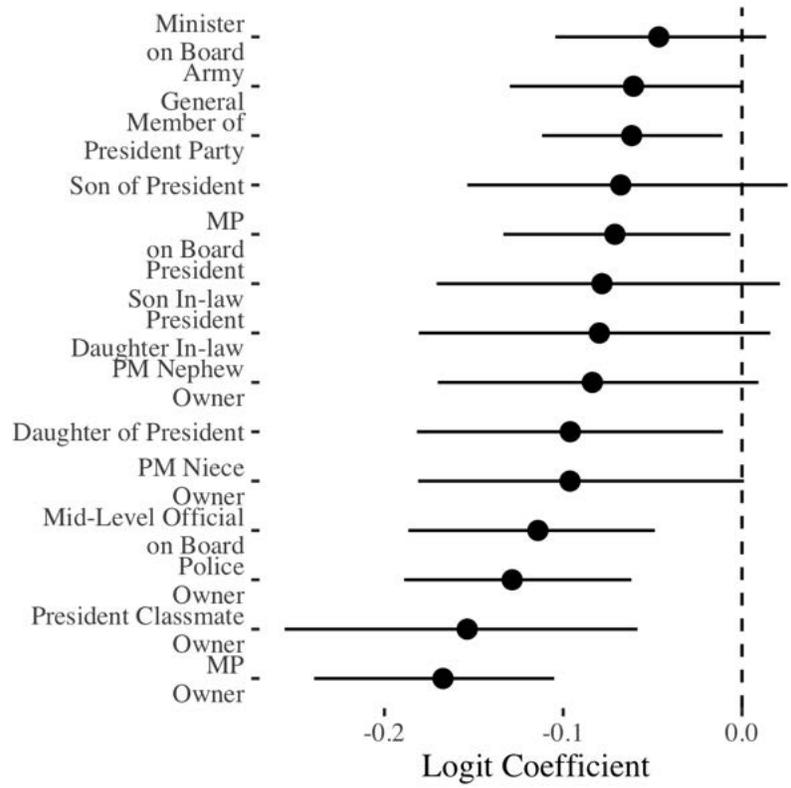
The treatment interactions are very important to know whether the strength of the treatment tends to vary as predicted by our theory. To model the outcome, which is a bounded variable between 0 and 1, we use a modified form of beta regression (Kubinec 2020) with Bayesian Markov Chain Monte Carlo estimation with Stan (Carpenter, Gelman, Hoffman,

Lee, Goodrich, Betancourt, Brubaker, Guo, Li and Riddell 2017). The results are presented as logit coefficients and have a similar interpretation to standard logistic regression.¹¹

Figure 7 shows all of the possible versions of political connections disaggregated in the standard form for presenting conjoint results, while Figure 8 shows the rest of the conjoint survey attributes along with a collapsed binary indicator for whether a company had any type of political connections. As can be seen, while there are a wide varieties of ways that we coded political connections, the results show that the effect of connections is always negative. While some effects are larger than others—generally speaking, having an owner who is politically connected appears to be worse than having a board member who is politically connected—on the whole, there is considerable uniformity in how respondents evaluated political connections: they did not like them. This result went against both our intuitions and what we believe to be the dominant message in the literature that political connections help companies secure higher returns and thus should be more attractive vehicles for investment.

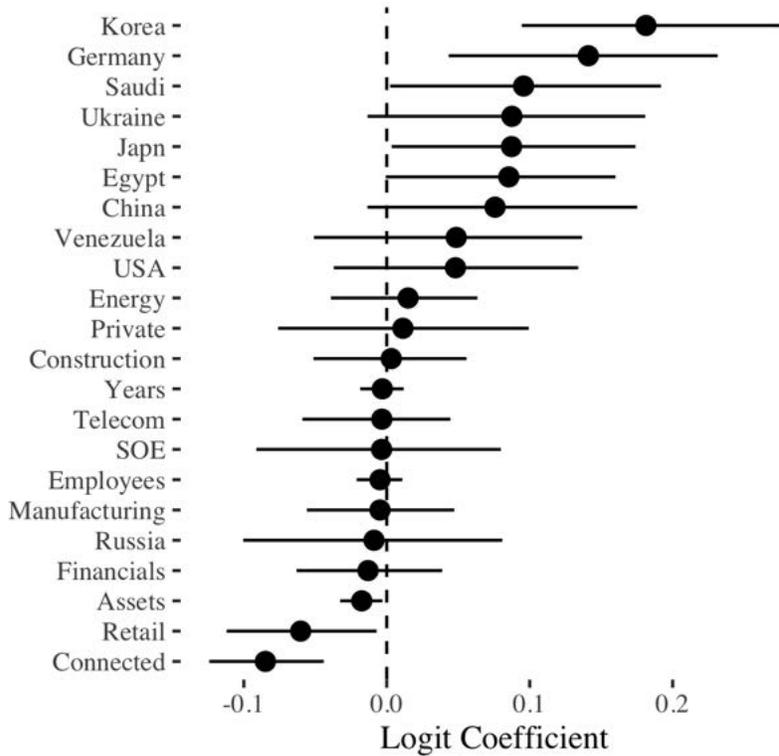
Figure 8, which shows the rest of the attributes that we randomized, shows that the factors that seemed to influence respondents most strongly were those related to country of origin. Interestingly, companies originally from South Korea and Germany were selected as being more attractive for investment. Egypt and Ukraine also rank highly, and as these were also locations where the survey was conducted, indicate a preference for domestic companies over some foreign companies, particularly those from Russia. We note as well that several of the factors did not seem to have much of an effect on investments, at least for the sample as a whole. The age of the firm, the type of firm (i.e. state-owned versus private), and the sector of the firm were not strong predictors of investment decisions. The exception are firms in the retail sector, which were relatively un-favored. Also, we note that respondents did not prefer companies with larger amounts of assets, though as we lack a clear theory to explain this result, we do not further comment on it.

¹¹OLS results are similar for most models though we present these results as the distribution of the error term is more realistic for a DV with upper and lower bounds.



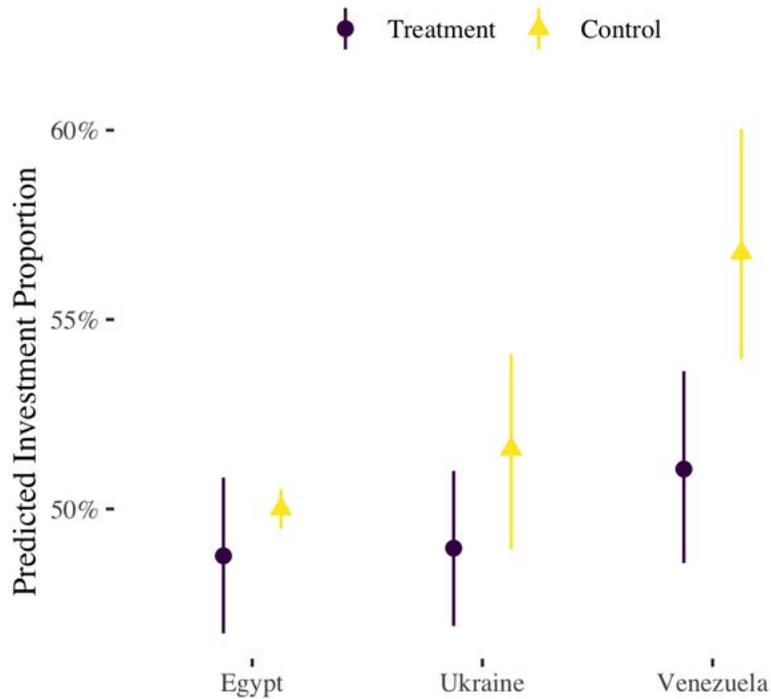
Estimates derived from Bayesian logistic regression model. Point estimates are posterior medians and the intervals are 5% to 95% quantiles of the empirical posterior distribution.

Figure 7: Dis-aggregated Political Connection Treatments



Political connection treatments are collapsed to a single connected vs. un-connected binary treatment. Estimates derived from Bayesian logistic regression model. Point estimates are posterior medians and the intervals are 5% to 95% quantiles of the empirical posterior distribution.

Figure 8: All Attributes in Conjoint Experiment

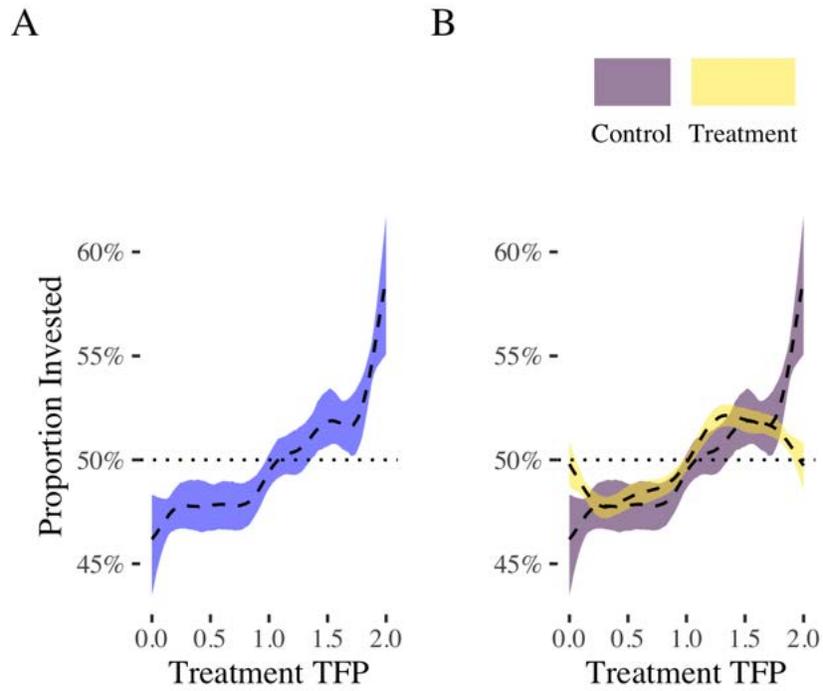


Plot shows political connection treatment interacted with country intercepts. Estimates derived from Bayesian logistic regression model. Point estimates are posterior medians and the intervals are 5% to 95% quantiles of the empirical posterior distribution.

Figure 9: Interaction of Connections and Respondent Country

One aspect that is notable in Figures 7 and 8 are that the coefficients are not very large in magnitude. This suggests that there is considerable heterogeneity in how respondents are evaluating companies. We look at treatment effect heterogeneity by country, by treatment profile profitability, and by the political connectedness of the respondent's company. First, Figure 9 shows predicted values for investment decisions for treatment (connected) and control (unconnected) profiles by country (connections are coded as a binary variable). As can be seen, the treatment group receives less investment than the control group across all three countries, suggesting uniformity in how the treatment operates, though we note that the effect is noticeably larger in Venezuela than other countries.

Next we examine how firm performance affects respondents' willingness to invest. In Figure 10 we show how our time-varying TFP measure affected the willingness of respondents



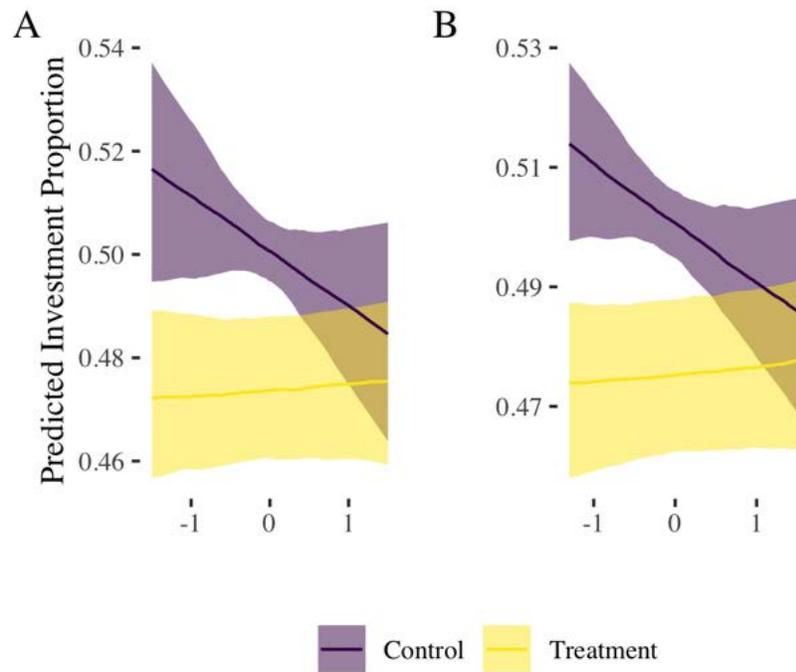
Plot shows marginal effect of TFP on respondent choosing a profile (A) and TFP interacted with political connection treatment (B). Estimates derived from Bayesian logistic regression model. Point estimates are posterior medians and the intervals are 5% to 95% quantiles of the empirical posterior distribution.

Figure 10: Treatment Total Factor Productivity and Investment Proportion

to invest by modeling TFP with a spline to permit non-linear effects. Respondents of course did not observe TFP, only the time series plot of sales and profits. Because TFP represents a measure of how effective or efficient a firm is, it should increase investment. We do observe a very clear association between rising TFP and rising willingness to invest. The average treatment effect for TFP is plotted in panel A of Figure 10, while the ATE is plotted separately for the control and treatment (any political connection) separately in panel B. Interestingly, the control group tracks more closely with the overall effect of TFP in that it is uniformly positive. However, for connected firms, TFP does not have as clear an effect. Those with the highest and lowest TFP have approximately equal investment shares. It would appear based on this finding that respondents tended to discount both very bad and very good performance for politically-connected firms. While we lack a specific theory to explain these results, we do note that it is an intriguing finding given the fact that politically-connected firms can obtain benefits that have little if anything to do with efficiency, and so it would make sense that TFP would not have a monotonic effect on politically-connected companies.

Finally, we also examine whether a respondent's companies' political connections moderates the relationship between political connections as a treatment and investment decisions. To do so, we interact our two measures of respondent political connections, the 1-10 scores for total connections and the efficacy of connections, with a binary variable for connected vs. non-connected treatment profiles. The results are shown in Figure 11. Panel A in the figure shows the political connections score and panel B the efficacy of those connections, but as can be seen, the results are nearly identical. In either case, as a respondents' companies' connections increase, the probability of selecting a company for investment converges to the control distribution. In other words, respondents at companies that have high political connections that are helping their company do not penalize treatment profiles with connections.

The clear nature of this relationship suggests that a respondents' companies' political



lot shows political connection treatment interacted with the respondent's political connections (A) and the efficacy of those connections (B). mates derived from Bayesian logistic regression model. Point estimates are posterior medians and the intervals are 5% to 95% quantiles of the empirical posterior distribution.

Figure 11: Interaction of Connections and Respondent Political Connection Variables

connections is indeed a strong moderator of how and whether they penalize a company for being politically-connected. Indeed, this interaction also helps us explain why the aggregate effect of connections is negative for the sample as a whole: because most respondents work at non-connected companies, they are subsequently less likely to select companies for investment that are connected. If our sample was composed entirely of respondents at politically-connected companies, we would likely to observe either a null or positive relationship between connections and investment.

While this subgroup relationship sheds light on the negative finding for the relationship between connections and investment, it is still not entirely clear why a respondent's company's connections should matter so much. We believe that this association is explained by similarities in how politically-connected companies operate which encourage cooperation. In particular, we know based on other questions in the survey that politically-connected companies are more likely to use informal rather than formal means of dispute resolution. These back-door, unofficial dispute resolution mechanisms could well dissuade potential investors who fear losing their investment to unaccountable company managers. To test this, we interact the binary treatment with the same count variable for informal means of dispute resolution that we used earlier (i.e., we count all the times that a company reported it used informal means to resolve some problem). We interact this variable and report the results in Figure 12. While the relationship in Figure 12 is less precise than the political connections interaction, we can identify a very similar pattern: respondents at companies that are more likely to use informal means of dispute resolution are less likely to penalize companies with political connections as potential investment vehicles. While the strength of the relationship does not permit us to make conclusive inferences, we believe that it provides at least some support as a potential mechanism through which respondents evaluate politically-connected companies. The limitation in terms of uncertainty at the top end of the scale is largely an artifact of the sample because we only a minority of respondents are at politically-connected companies that use informal means of dispute resolution. As a result, the relationship is

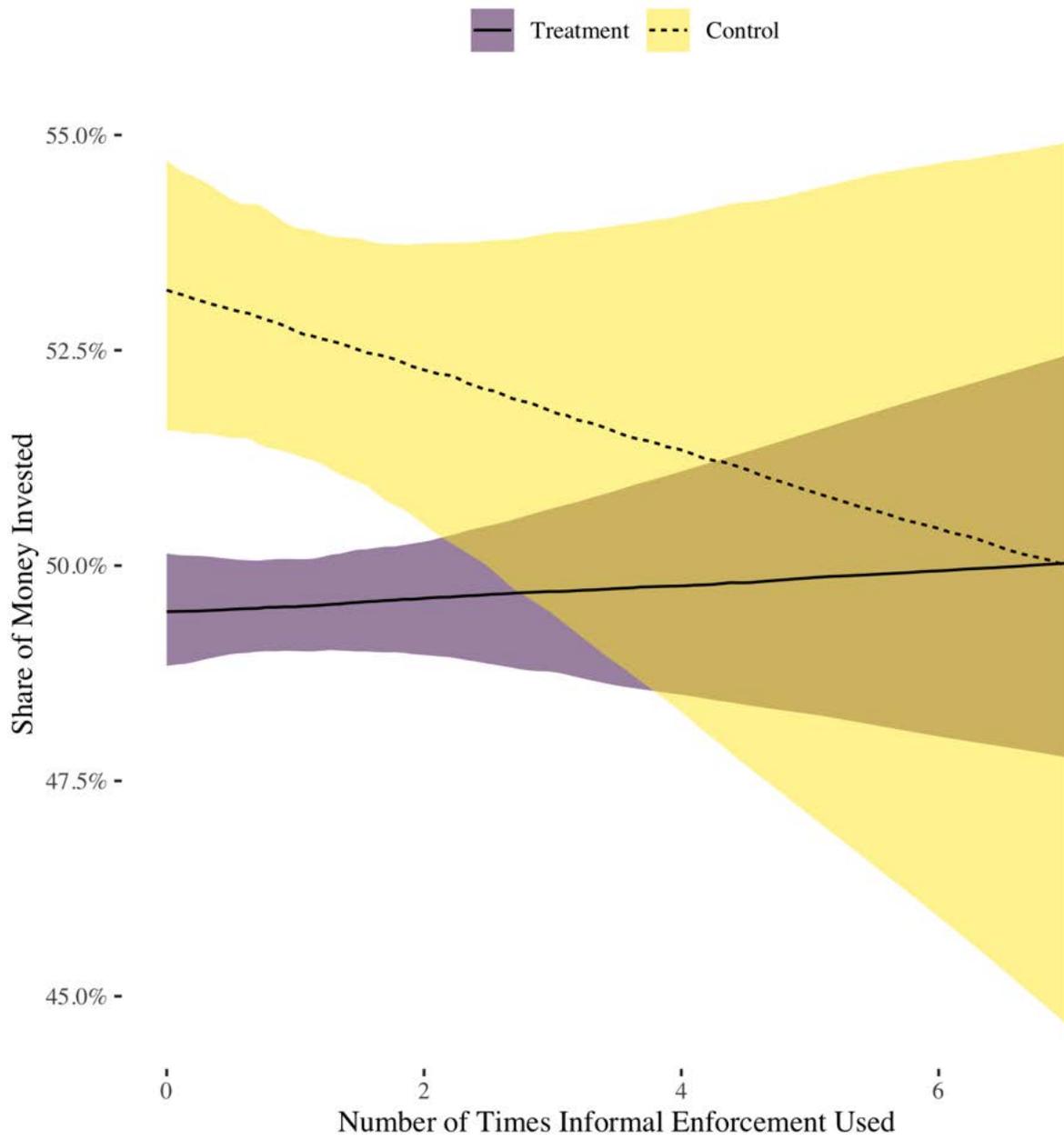


Figure 12: Interaction of Political Connections and Informal Means of Enforcement

much more precise for the larger number of companies that do not use informal means of dispute resolution.

5 Conclusion

In this paper, in order to better understand how people make investment decisions in countries with poor quality of institutions, we implement an online survey using Facebook advertising to recruit subjects who are either business employees or managers. Unlike existing studies, we use much more finely grained information about political connections and experimental manipulations to be able to assess the role of political connections as opposed to other factors. Also, in contrast to other studies, we find that political connections can be a barrier rather than an aid to inter-firm investment.

On the whole, political connections discourage investment in companies in our experiment, but we find that such an effect is partly explained by the role of political connections at the respondent's company. Respondents in more connected companies and companies that benefited from connections were more likely to choose connected companies, and vice versa. This result strongly suggests that the benefits of political connections to a company are not unequivocal but depend on that company's position vis-a-vis those who are currently in power.

For these reasons, we believe that political connections are a more risky strategy for companies than has often been acknowledged in the literature. At first glance, it seems counter-intuitive that stronger political connections can lead to more government predation or expropriation, and that investors do not seem to prefer politically-connected companies. However, these findings are driven by the highly conditional effects of connections.

6 Appendix

6.1 Questions Used to Code Key Independent Variable "Political Connection"

1. On a scale of 0 (Unconnected to Politicians) to 10 (Strong Political Connections), how highly would you rate your firm's political connections?

2. Does Your Firm Have Any of the Following?

	Former Member of Parliament	Current Member of Parliament	Former High-ranking Bureaucrat	Current High-ranking Bureaucrat	Former Low-ranking Bureaucrat	Current Low-ranking Bureaucrat
Manager who is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CEO who is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Board member who is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Owner who is...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.2 Questions Used to Code Key Dependent Variables "Political Predation"

6.2.1 De Facto Measure of Political Predation

1. Over the last two years, have any of the following been confiscated by government officials without fair compensation from your firm? (select 1 or more)

- Property/Assets
- Income/Profits

2. Over the last year, how many times was this establishment inspected by the following agencies?

	Number of Inspections
Tax Agency	<input type="checkbox"/>
Police/Law Enforcement	<input type="checkbox"/>
Safety Inspectors	<input type="checkbox"/>
Health Inspectors	<input type="checkbox"/>

6.3 Questions Used to Code Dependent Variables "Informal Mean of Redress"

3. Has your company used any of the following measures to deal with [unfair tax practices/unfair police practices/confiscation of property or assets without compensation/unfair treatment by the court system/unfair regulatory changes].¹²

- Made gift or payment
- Reached out to home government or embassy
- Used the international court system
- Used the domestic court system
- Contacted other groups/individuals

4. On average, what percentage of income does your firm typically pay per annum in unofficial payments to public officials?

¹²Respondents were asked the above questions if they had indicated that their firm experienced the relevant interactions with state agents.

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