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The relative bargaining power of rulers and right-holders is thought to be a key determinant of property rights, but because it both shapes and is shaped by property rights, it is difficult to estimate the impact of bargaining power on property rights. We take advantage of a natural experiment by comparing the responses of managers interviewed just before and just after a surprising parliamentary election in Russia that weakened the relative bargaining power of the ruling party. This electoral shock had little impact on the perceived property rights of the average firm, but firms with close economic ties to the state viewed their property as more vulnerable after the election. By exploiting largely exogenous variation in the timing of survey interviews, we estimate the impact of bargaining power on property rights with greater precision. We also contribute to the literature on elections under autocracy by focusing on their economic, rather than political impacts on individuals.

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Introduction

Property rights are a key feature of all political and economic systems that shape the prospects for economic growth and political order (North and Thomas 1973; Lindblom 1977; Acemoglu and Robinson 2012; Boone 2014). As such, accounting for the great variation in the structure of property rights across countries and time has long been a central focus for political scientists and economists.

Many works argue that the bargaining power of the ruler relative to their rivals and constituents is a key determinant of the nature of property rights. In her theory of predatory rule, Levi (1988: 17) observes: "Rulers will be better able to set favorable terms of trade the less they depend on others and the more others depend on them. Rulers whose power diminish will either have to offer more in exchange or give up some of their ends." Many empirical studies also emphasize the importance of the relative bargaining power of the ruler as a key determinant of the structure of property rights (c.f, Bates 1989; Fisman 2001).

Yet, the impact of the relative bargaining power of the ruler on property rights is difficult to demonstrate due to endogeneity concerns. The rulers' relative bargaining power is a function of many things, including the current distribution and security of property rights. Because the ruler's relative bargaining both shapes and is shaped by the distribution and security of property rights, it is difficult to make strong causal claims about the impact of one on the other.

We take advantage of a plausibly exogenous shift in the bargaining power of the ruling United Russia party in Russia to estimate the impact of bargaining power on perceptions of property rights. More specifically, we examine the perceived security of property rights of company managers interviewed just before and just after a political shock - the surprisingly poor showing of United Russia in the parliamentary election of December 4, 2011 – which weakened the relative power of the ruling party. By comparing the responses of the "control" group of managers interviewed just prior to the election with the "treatment" group interviewed just after the election, we can estimate the impact of this political shock to the bargaining power of the ruling party on perceptions of property rights.

We find that on average the shift in the relative bargaining power of the ruler had little effect on perceptions of property rights for the average firm. However, such a shift had strong effects on firm managers with closer ties to the state. Firms that received aid from the state, provided public goods on behalf of the state, or sold their goods to the state - perceived a hostile takeover to be far more likely following the parliamentary elections than before. Indeed, managers who provided public goods on behalf of the state were more than 20 percentage points more likely to view their firm as "very likely" to be the target of a hostile takeover after the elections than before.

These results are surprising in that the elections saw the ruling United Russia's vote share fall sharply, but did not lead to a turnover in government. In addition, the Russian parliament is less important than the Presidency in shaping public policy and the results did little to undermine the expectation that then Prime Minister Putin would return to the Presidency in the following year. Moreover, if firm managers anticipated the poor showing of United Russia in the parliamentary elections, it would only weaken the impact of the shift in bargaining power on perceptions of property rights after the election.

At the same time, shifts in the relative bargaining power of the ruler as a determinant of property rights may be especially important in non-democracies such as Russia where constraints on the actions of the ruler are weaker. In these settings firm managers often rely on informal relationships with state officials rather than impersonal formal legal procedures (Kang 2002; Ledeneva 2013). This contextual factor suggests that the impact of shifts in bargaining power may be easier to detect where formal institutions for protecting property rights are weaker, as in many autocracies.

This work makes three broader contributions. By taking advantage of the plausibly exogenous timing at which interviews are conducted, we are able to better estimate causal relationships than is typically possible in observational research. We treat the surprising outcome of the election of December 4th, 2011 as an exogenous political shock to the relative bargaining power of the ruler and his party. The main identifying assumption is that firms interviewed just before and just after these shocks do not differ from each other in ways that would influence their perceptions of the likelihood of a corporate raid. To the extent that the two groups differ only in their exposure to the new information generated by the election results, we can attribute differences in mean response of these two groups to this political shock (Dunning 2012). This difference in difference research design can be used to study other types of political shocks that occur while surveys are already in the field (c.f, Garcia-Ponce and Pasquale 2014).

In addition, our results inform debates on the impact of bargaining power of rulers and right-holders on perceptions of the economic environment. Many studies have found that powerful right-holders -- those on whom the ruler depends for revenue or support - tend to receive stronger and more extensive property rights. We too examine how individual features of the bargaining power of right-holders and rulers shape property rights, but we are able to examine the impact of a critical political institution – elections – on perceptions of property rights. The findings help to bring political institutions back into the study of property rights.

The work also contributes to the broader debate on the impact of elections under autocracy. There is a growing literature on the political impacts of elections under autocratic rule (c.f., Magaloni 2006; Hyde 2011). Scholars have demonstrated that autocrats who have institutionalized elections have longer tenures (Geddes 1999) and engage in political business cycles (Magaloni 2006; Blaydes 2011). We have, however far fewer studies that examine the impact of elections under autocracies using micro-level data. Those works that due focus on individual-level behavior tend to focus on political rather than economic attitudes and behavior (Lust-Okar 2006; Greene 2007; Simpser 2014). Here we demonstrate, albeit with some exceptions, that plausibly exogenous shifts in bargaining power induced by elections shape the perceptions of firms with close ties to the incumbents about their property rights. This result adds credence to arguments for studying the impact of elections under non-democratic rule, but also departs from much existing literature by focusing on economic rather than political attitudes and behavior.

Finally, much, but far from all, existing literature on the economic impacts of political shocks focuses on firms whose shares are freely traded on stock exchanges as changes in stock prices are one easy to obtain measure of the value of property rights. However, publicly traded firms differ from other firms in important ways that may be correlated with the security of property rights and are often only a small fraction of firms in many countries. This work departs from the literature by focusing on run of the mill firms rather than publically traded firms.

The analysis focuses on the conditions under which the political shock of a surprising election result altered perceptions of the likelihood of a hostile takeover. With this design we are not able to measure the incidence of hostile takeovers directly because we interview respondents shortly after this political shock. This caveat is important to bear mind.

I. Theory

Property rights are typically treated as a bundle of rights, including the right to use an asset, to earn income from an asset, and to transfer an asset (Barzel 1989). They may be held by individuals, groups, or the state. Economists have long been interested in how property rights influence economic development as property rights guide incentives to invest, lend capital, and provide collateral (c.f., Coase 1960; North and Thomas 1973; Besley and Ghatak 2009). Property rights are never fully complete as it simply too costly to write down every possible contingency under which property rights may be exercised *ex ante* (Coase 1960; Grossman and Helpman 1986). For example, use or ownership rights may be contested by competing groups staking claims to the asset or use rights may bring objections from groups harmed by the exercise of those rights, as in the case of pollution. This incompleteness opens up a role for state officials in the design, adjudication, and enforcement of property rights. As such, the analysis of property rights have long been of interest to political scientists (c.f., Riker and Sened 1991; Boone 2014).

Both political scientists and economists have devoted much attention to understanding the great variations in the structure of property rights that we see over space and time. One central theme in the political economy of property rights is the importance of the bargaining power of the ruler relative to elite challengers and subjects. In his canonical work on the topic, Douglass North (1981) argues that rulers trade services and protection of property rights for revenue with right-holders, but that the ruler and his agents strive to act as a discriminating monopolist that uses their bargaining power to limit competition and to extract rents from economic actors. The structure of the bargains that rulers strike with their competitors and constituents over the distribution of property rights depend in part on the relative power of the latter and the former. Rulers with greater bargaining power - larger majorities in parliament, larger independent sources of revenue, greater popularity – can strike more favorable bargains with constituents and potential rivals which should be reflected in the distribution and security of property rights.

Similarly, scholars have emphasized that the relative bargaining power of right-holders themselves also shapes property rights. In his study of property rights institutions in post-colonial Kenya, Bates (1989:90) emphasizes the power of investor interests on whom rulers depended for revenue: "Time and again, constraints designed to institutional rules were clearly supplied to assuage the concerns of big interests, most prominently the investors of capital." Similarly, Goldstein and Udry (2008) study more than 500 small plots of land in Eastern Ghana over two-years and find that politically connected farmers were far less likely to have their land expropriated when it is fallow and have far higher yield rates than those with weaker connections. Reflecting on their study, Goldstein and Udry (2008:26) note: "Rights over a particular plot of land are political: they depend on the farmer's ability to mobilize support for their right over the spot." Kwaja and Mian (2005) find that borrowers in Pakistan who had run for office received loans on far more favorable terms than those without political connections and were significantly more likely to fail to repay their loans than their less politically connected borrowers. These studies demonstrate how political power shapes property rights. Some scholars more strongly emphasize the bargaining power of rulers in a "top-down" approach, while others point to features of the right-holders in a more "bottom-up fashion", but both are clearly important.

While many studies have examined the relationship between bargaining power and property rights, it is difficult to estimate the causal impact of bargaining power on property rights due to endogeneity concerns between property rights and bargaining power (Bates 1989; Boone 2014: 7). By gaining greater control over property rights, rulers can augment their power and rulers who bolster their political power often use it to gain control over property.

One approach to this problem relies on finding exogenous shifts in the relative bargaining power of rulers and right-holders. For example, scholars have explored how changes in the partisan stripe of the government have shaped various forms of market behavior (Alt and

Chrystal 1983; Alesina and Rosenthal 1995). Goriaev and Sonin (2005) study how unexpected legal actions against the large private oil company YUKOS in Russia shaped investor behavior in private and state owned firms as revealed by stock market prices. Fisman (2001) analyzes how Indonesian President Suharto's bouts of bad health influenced the asset prices of firms with close ties to the regime. Earle and Gehlbach (2015) trace dramatic productivity changes of large manufacturing firms in Ukraine to the changing partisan alignments induced by the Orange Revolution, while Malesky and Samprhanthanak (2008) demonstrate that plausibly exogenous political turnover in regional governments in Vietnam reduced corruption in the short-run by increasing uncertainty about the reliability of firm managers' partners in bribery.[1]

A political shock may change the relative bargaining power of the ruler viz-a-viz all firms. However, the importance of this political shock may depend on the degree of a firm's ties to the state. Firms with few ties to the state may perceive little change in the nature of their property rights as the bargaining power of the ruler declines. However, firms with closer ties to the incumbent regime, may view their property rights as more intimately tied to the relative bargaining power of the ruler and his party. Firms who depend on good relations with the ruler and his agents to protect them from potential raiders within the state or the private sector may view their position as more vulnerable after a negative shock to the bargaining power of their patrons. For these firms the bargaining power of the ruler is a critical issue. Thus, when the relative bargaining power of the ruler declines, we might expect firms with close ties to the ruler and his agents to view their property rights as less secure.

II. Background: A Shift in Bargaining Power

The parliamentary elections on December 4, 2011 in Russia was both a political shock and a major disappointment for the ruling United Russia party. Few foresaw the sharp drop in votes for United Russia or the crudity of the electoral falsifications used to shore up these declines. There were good reasons to be caught off guard. The popularity of then Prime Minister Vladimir Putin and then President Dmitri Medvedev declined before the elections, but their approval rates were still above 60 percent. Leading public opinion organizations predicted that

[1] Boone (2014:7-8) treats rising competition for land as an exogenous shock to status quo property rights and then studies how political institutions mediate outcomes over the property rights that follow.

United Russia would receive fewer votes than in 2007 but still easily win a majority. In the end of November, forecasts of voting for United Russia in the elections of December 4th made by three leading public opinion organizations (the Russian Public Opinion Research Center [WCIOM], the Public Opinion Foundation [FOM] and the Levada-Center), were in the range of 53-54%. Most experts saw little political change on the horizon. Roth (2011) notes: "The days are dwindling down to the elections, and no one has really decided yet what to expect from them. It is unlikely that we will see an electoral revolution in Moscow - the most exciting thing that may happen is United Russia losing its constitutional majority, and the only real question for the elections is how far United Russia's polling numbers have dropped in recent months."[2]

However, to the surprise of the public, the pollsters, and the government, United Russia, fared badly. Compared to the 2007 parliamentary elections, United Russia's total vote share fell by 15 percentage points overall and by more than 30 percentage points in large regions in the Russian Far East and in Moscow (see Table 1). This decline happened despite the fidelity of all governors of these regions to the Kremlin, and a reliance on "administrative resources" on a large scale. After the elections, a pollster at the Levada Center called the sharp fall in in support for United Russia from 55-61 percent two weeks before the election to just 49 percent on election day "unexpected" (Khamraev, December 8, 2012).[3]

[2] Forecasts made by experts from the Center for Strategic Research (CSR) were the great exception to this rule, because as early as spring of 2011, relying on in-depth interviews and focus groups, they predicted that sentiments of social protest would rise, and support for the "party of power" would decrease (Belanovsky and Dmitriev 2011; Belanovsky et al. 2011). These reports gathered little attention at the time, but proved prescient. The disparity between the assessments made by CSR, which used focus groups, and those using mass surveys are in line with Kuran (1991), who emphasizes that the political views of citizens in non-democratic countries are private information that they are often reluctant to reveal in public.
[3] Ironically, the pollster complained that the ban on surveys during the week of the election exacerbated uncertainty about the final outcome.

Table 1. Turnout and Vote Totals for United Russia

		2007 Elections		2011 Elections	
	Number of Voters (2011)	**Turnout (%)**	**Votes for United Russia (%)**	**Turnout (%)**	**Votes for United Russia (%)**
Russia	109.2m	63.7	64.3	60.2	49.3
Primorskii Krai (+7 hours)*	1.5m	56.9	54.9	48.7	33.0
Irkutsk Oblast (+5 hours	1.9m	58.8	58.7	47.1	34.9
Krasnoyarsk Krai (+4 hours)	2.2m	59.5	60.7	47.1	34.9
Moscow	7.2m	55.1	54.2	61.7	46.6

* in brackets, time difference with Moscow

As the vote totals from the Far East rolled in, United Russia faced the prospect of losing control of the parliament. United Russia appears to have turned to electoral fraud on a large scale in the European part of Russia (including Moscow which has 6.6 percent of all voters) after polls closed in the Far East.[4] The expanded scale of fraud may have allowed United Russia to retain its control over the State Duma, but at the same time, it gave rise to mass protests of voters in Moscow. The first protest march took place in the evening of December 5th – just after the publication of preliminary results of the elections. Protest organizers expected about 400 participants, but 5000 protestors took to the streets. Police detained about 300 of participants when they made an attempt to approach the Kremlin (Shuster 2011; Elder 2011).

Most surprising, just six days after the election, roughly 40,000 protestors gathered in central Moscow to challenge the results (Barry 2011). This was the largest demonstration in Moscow since the early 1990s and saw Russia's emerging middle class take to the streets to oppose the electoral results and call for new elections. In sum, the parliamentary elections of December 2011 generated a political shock that weakened the ruling party.

[4] Indeed, Enikolopov et al. (2012) conducted a field experiment that randomly assigned monitors to electoral precincts in Moscow and found that United Russia vote totals were about 11 percentage points higher in districts that lacked independent election monitors.

Note that this political shock did not produce a change in government as United Russia allied with "systemic" opposition parties to create a new government. Similarly, while most observers noted that the electoral results caught the Kremlin by surprise, few thought that they would threaten then Prime Minister Putin's bid for the Presidency in elections scheduled for March 2012. At the same time, the election result cost United Russia its two-thirds majority in the Duma making it harder to change the Constitution, and perhaps, more importantly, shattered the aura of invincibility that surrounded the party in the previous elections.

Hostile Takeovers and Property Rights

Hostile takeovers of the property rights of firms that include threats of violence, criminal activity, and the involvement of state officials have been an integral part of the business landscape in Russia over the last 15 years. It is difficult to identify the exact scale of corporate raiding, commonly called "*raiderstvo*" in Russian, but reports of takeovers of business using threats of state violence to take control of firms are commonplace (Sakwa 2011; Ledeneva 2013; Rochlitz 2014; Yakovlev et al. 2014).

In the standard economic theory of corporate takeovers, firms in economic distress transfer control to takeover specialists who reform the firm and sell what is left to outside investors with the hope of creating a more efficient firm (c. f., Romano 1992; Tirole 2006). Yet, the process typically follows a far different pattern in Russia as corporate raiding frequently veers into criminality, particularly in the corruption of state officials. Thomas Firestone, a former US Department of Justice Official in Moscow (2008: 1218) observes: "*raiderstvo* relies on criminal methods, such as fraud, blackmail, obstruction of justice and actual and threatened physical violence. At the same time, it is not just simple thuggery. In contrast to more primitive criminals, Russian "*raideri*" rely on courts, resolutions of shareholders and boards of directors, bankruptcy proceedings and other "ostensibly legal" means as a cover for their criminal activity."

Common tactics include forced bankruptcies that allow creditors to take control of healthy firms with minimal debts. Volkov (2002; 2004) estimates that roughly 30 percent of bankruptcies between 1998 and 2002 when the law was changed were so-called "contract bankruptcies" that were part of hostile takeover efforts by rival firms working arm in arm with state officials. Other tactics include the creation of fraudulent titles, company charters, and powers of attorney that allow raiders to transfer control to front companies, who in turn, quickly sell the assets to a third party just before the front companies goes out of business. Russian law is quite protective of third-party buyers who buy such assets in "good faith." Once the transfer of assets has occurred to a good faith purchaser, the raid is "practically irreversible" (Firestone 2008). Moreover, the penalties for providing false evidence in court are rather mild compared to the possible economic gains of taking over a firm.

Prior to a hostile takeover attempt, corporate raiders often seek to gain minority shares in a firm and use their insider position to drive down the value of the firm so that it can be bought at a lower price, often accompanied by a threat of coercion. One hostile takeover specialist with ties to the security services in Russia noted (Shvartsman 2006): "There are not raids. We do not take enterprises away. We minimize their market value by means of various instruments. As a rule these are voluntary-coercive methods… (using) various administrative levers. However, people usually figure out where we come from." It is this mix of coercion accompanied by legal formalities that distinguishes corporate raiding in Russia.

In collusion with private firms, state officials often bring criminal charges against economic rivals. Indeed, state agents of coercion play a key role in corporate raiding. For example, in a sharp rebuke of state agents involved in corporate raiding, none other than President Putin decried "extortionists masquerading in the guise of state service" (*Moscow Times*, March 06, 2013). Firestone (2008:1218) notes that "corruption in law enforcement is a major cause of raiding"… and concludes that "state charges play an extraordinarily important role in raiding schemes." In sum, hostile takeovers, often in the most literal sense of the term, are prevalent in Russia and frequently involve state officials.

Academic literature on hostile takeovers in Russia is not especially large, but is growing. Barnes (2006) provides an overview of various forms of hostile takeovers in Russia in the 1990s and early 2000s. Gans-Morse (2012) vividly depicts a shift in threats to property rights from mafia-like groups in the 1990s to state actors in the 2000s. Relying on case studies and survey data from 2007 of more 500 industrial firms in Russia and Ukraine, Markus (2015) finds that firms that create alliances with foreign companies and firms that report “very significant” levels of support from the community perceive weaker threats of corporate takeover. Kapeliushnikov et al. (2012) use survey evidence from a representative sample of 957 manufacturing firms in Russia conducted in early 2009 and find that state-owned, smaller, and more poorly performing firms perceived a greater threat to their property rights and that the perceived likelihood of raiding dampened investment. In her study of renationalizations among 153 listed and non-listed companies in Russia between 2000 and 2004, Chernykh (2010) concludes: “Contrary to commonly held beliefs, there is little evidence that renationalizations in Russia are driven by economic factors: the government neither systematically ‘cherry-picks’ best performers nor addresses market failures by rescuing underperformers.” In a study of bankruptcies that went to court between 1998 and 2002 in Russia, Lambert-Mogiliansky et al. (2007) find that judicial decisions were deeply politicized as powerful regional governors subverted the process to reward local constituents at the expense of the federal government and Moscow-based banks. Finally, in his study of examples of corporate raiding reported in the Russian press between 1999 and 2010, Rochlitz (2013) reports a positive correlation between the share of the vote for United Russia in the most recent parliamentary elections in a region and the number of raider attacks reported in the press in a given region in a given year.[5]

III. Data and Identification Strategy

We seek to identify the impact of a shift in bargaining power on perceptions of the security of property rights as measured by respondents’ views of the likelihood of a hostile takeover. Our initial identification strategy is to assign firms to a “control” group of respondents interviewed just prior to the parliamentary election and a “treatment” group of respondents interviewed just after the parliamentary election. We conducted a survey of 922 firm managers in 15 regions in Russia.[6] Fortunately, slightly more than half of the respondents in the sample (56%) were polled in the two weeks before the election, while the rest were polled in the two weeks after the election. The two groups of firms are statistically indistinguishable in almost all

[5] See Allina-Pisano (2008) for an excellent of property rights in agriculture in Russia and Ukraine.

[6] We chose firms from 15 of Russia’s 83 regions and included at least one region from Russia’s seven Federal Regional Territories. The sample was stratified by size into three groups and into 24 sectors. We included industrial firms and firms in the service sector, but we did not include firms in agriculture, health, education, or natural monopolies. The response rate was 76 percent and 20 percent of respondents were called back to check on the quality of the interviews. Interviewing began November 15, 2011 and ended December 22, 2011. The survey was conducted by VCIOM, a Russian polling agency selected by tender.

respects, including many firm characteristics, past investment behavior, access to credit markets, demographic traits, and the number of managers supporting United Russia. They are also balanced across 11 economic sectors included in the survey save for a significantly larger number of light industry firms in the pre-election group (.25 versus .18, p = .02). On average, firms interviewed after the elections were slightly larger. The log number of employees of firms interviewed after the election were slightly larger (4.16 versus 3.93, p = .07). To account for the possible impact of these two variables on perceptions of property rights, we control for these factors in our analysis.

The pre and post-election distribution of interviews is not balanced by region. In 10 of the 15 regions, we find significant differences at the .10 level in the share of respondents interviewed before and after the elections. In five regions (Moscow, Tula, Voronezh, Rostov, and Ekaterinburg) more respondents were interviewed before the election, while in five regions (Kursk, Nizhny Novgorod, Ufa, Kemerovo and Smolensk) more respondents were interviewed after the election. This imbalance seems to have been generated by factors internal to the survey company rather than to any immediately obvious characteristics of the regions that might be correlated with perceptions of property rights. In the multivariate regressions that follow we control for region. Balance statistics for the political variables, director traits, firm characteristics, sector and region are reported in Appendices I-III.

IV. Analysis

In our survey, we asked a top manager in each firm questions about their property rights, their ties to the state, and other factors. Given the sensitive nature of the topic, it is difficult to measure the extent of fears of corporate raiding. To reduce anxiety among the respondents, we asked a prospective question that did not inquire about the respondent's past experiences with corporate raiding. This strategy follows Kapeliushnikov et al. (2012) who surveyed firms on a similar topic in Russia in 2009. As in Kapeliushnikov et al. (2012) we asked: "About how likely is it that your firm will experience one of the following in the next 2-3 years?"

Table 2. Perceived Threats of Hostile Takeover

	Very Likely	Unlikely	Very Unlikely	Hard to Say
1) Become the target of raider attack	.03	.36	.53	.08
2) Fall under the de facto control of the regional or local government	.08	.36	.47	.09
3) Fall under the de facto control of the federal government	.05	.36	.50	.09

These three questions are meant to capture a range of ways that respondents might view an attack on their property rights by corporate raiders. The question in Row 1 implies a hostile takeover that could come either from the private sector or state agents, while the questions in Rows 2 and 3 specifically identify a takeover by state agents. Given that private sector corporate raiders rely heavily on their ties to incumbent judges, politicians, and bureaucrats, it is reasonable to expect that a shift in the incumbent's bargaining power may influence perceptions of property rights even when the raid is initiated by a private sector agent.

As indicated by the results in Column 1 in Table 2, only a small number of respondents believe that their firm is "highly likely" to be the target of a hostile takeover in the next 2-3 years. Taken together, 12 percent of all firms – roughly 1 in 8 - reported that at least one of these three types of threats were "highly likely" in the near future. The figures reported in Table 2 have greater import than their relatively small numbers would suggest, in part because even a slight chance of the catastrophic event of a corporate raid (from the point of the firm) can change behavior. We are especially interested in explaining why some respondents viewed a hostile takeover as "highly likely," but others saw their property rights as more secure. For clarity, we begin by creating a dummy variable, *Secure Property Rights*, which equals 1 for all firms that did not view any of these three threats as "highly likely" in the next 2-3 years. Eighty-eight percent of firms thus take the value of 1, and 12 percent of firms take the value of 0. This will be our main dependent variable of interest in the analyses that follow.

Roughly 35 percent of firms considered it "unlikely" that their firm could be taken over by raiders, regional authorities, or the federal government in the next 2-3 years. Roughly fifty percent of respondents believed that any of these types of attack was “very unlikely” in the next 2-3 years.

We measure a firm’s relations with the state in three ways. We argue that firms that provided public goods on behalf of the local or regional government in the last two years (39 percent of the sample), firms that received either financial or organization assistance from the state in the last two years (17 percent of the sample), and firms that sold goods to the state (45 percent of the sample) have closer ties to the state than firms that do not engage in these activities.

The relations between firms that sell to the state or receive aid from the state are rather straightforward to understand, however, understanding the motivations of firms that provide public goods on behalf of the state requires some discussion. Firms in Russia provide public goods for the government – sponsoring community events, sports clubs, taking part in regional development programs, etc. - at a fairly high rate. For medium and large firms this may be a legacy of the shared governance of the planned economy. Determining the motivations of firm managers who provide public goods on behalf of the government is difficult. Some may provide public goods willingly in hopes of building good relations with the authorities, while others may do so only because they “asked” by state officials. Of course, even those “asked” to provide public goods may receive a benefit in return. The sums that firms spend on public goods are often not large as 21 percent of all firms reported spending less than .3 percent of their total sales on public goods for the region, but these contributions are an opportunity to advertise their ties to the state and their support for the local community (Frye 2006).[7]

The sample is balanced in two of our main variables of interest, including the share of firms that provided public goods on behalf of the state and the share of firms who sell their goods to a state agency.[8] Of the 39 percent of firms who provided public goods for the state, 37 percent were interviewed before the elections and 41 percent were interviewed after the elections ($p = .22$). Similarly, 44 percent of firms who sell goods to the state were interviewed prior to the elections and 46 percent were interviewed after ($p = .53$). The sample is not balanced with

[7] We speculated that if most firm managers who provided public goods were forced to do so, they might express less support for state officials. We find that controlling for size, region, and sector, there is no difference in the ratings of the performance of the governor, the regional Duma, the Mayor, and the City Duma between those who did and not provide public goods for the authorities. This analysis is only a very rough cut, but suggests that motivations for providing public goods are not easy to divine.
[8] For precise question wording see Appendix V.

respect to one variable of interest. Of the 17 percent of firms that received financial or organizational aid from the local, regional, or federal government, 11 percent were interviewed before December 5th, and 21 percent were interviewed after election (p =.0003). This is perhaps not surprising given that larger firms are more likely to receive aid and firms in the post-election sample are slightly larger. Because this variable is not balanced across treatment and control, we include this possible confounder in the regression analyses that follow.

As a first cut at the data, we present simple bivariate comparisons between responses of all firm managers interviewed before and after the election. As described above, respondents who did not see any of these three threats of hostile takeover as "highly likely" are scored 1 and others as 0. In Row 1 we report the responses of all managers and here we see no significant difference in the responses of the average firm in the treatment and control groups (.89 versus .87, p = .35).

In the next six rows, we examine the pre- and post-election responses of firms that did and did not have close ties with state interviewed before and after the election. In Rows 2 and 3, we find that 90 percent of firm managers who provided public goods for the local or regional government and were interviewed prior to the election viewed their property rights as either unlikely or very unlikely to be the subject of an attack by corporate raiders. However, only 76 percent of those who provided public goods on behalf of the state interviewed after the election held this view. This decline of 14 percentage points is statistically significant. Similarly, respondents who sold goods to the state saw significant declines in the perceived security of their property rights after the election as reported in Row 4. Respondents who received aid from the state also reported also perceived a steep fall in the security of their property rights from a raider attack after the election as reported in Row 6. This last result should be interpreted with caution as significantly more respondents who received aid from the state were interviewed, thereby violating the assumption of balance across samples. In addition, only a total of 44 respondents who received aid from the state were interviewed after the election.

Table 3: Simple Comparisons

	Pre-Election	**Post-Election**	**Difference Pre-Post Election (p-value)**
1. All Firms	.89 (n = 466)	.87 (n = 350)	.02 (p = .35)
2. Gave Aid to the State	.90 (n = 175)	.76 (n = 149)	.14 (p=.00)
3. Did Not Give Aid to the State	.89 (n= 271)	.95 (n = 201)	-.06 (p = .01)
4. Sells to the State	.90 (n = 195)	.83 (n = 159)	.07 (p = .07)
5. Does Not Sell to the State	.88 (n = 241)	.90 (n = 184)	-.02 (p = .67)
6. Received Aid from the State	.90 (n = 93)	.77 (n =44)	.13 (p = .03)
7. Did Not Receive Aid from the State	.88 (n = 339)	.88 (n = 332)	.00 (p = .87)

n = number of observations in each cell

This bivariate analysis provides an indication that firms with close ties to the state perceived a change in the security of their property rights, but because these results may be influenced by imbalances in the sample, we turn to regression analyses where we control for possible confounders. In our\analysis, we analyze variation in the perceptions of the security of property rights of managers with different relations to the state who were interviewed before and after the elections of December 4, 2011. The dependent variable is *SecurePropertyRights* which equals 1 for any firm that did not view their firm as "highly likely" to be the subject of any type of corporate raid in the next 2-3 years. As noted above, eighty-eight percent of firms fall into this category. We created dummy variables for each of our three measures of ties to the state and interact these dummies separately with a dummy variable for firms interviewed after the election.[9] More specifically, we created a dummy variable *HelpToState,* that equals 1 for firms that provided public good goods for the state and interacted this term with a dummy variable, *PostElection*, that equals 1 for firm managers interviewed after the election. We then repeated this procedure with *SellState*, for firms that sold goods to the state, and with *HelpFromState* for firms that received financial or organizational aid from the state. In all our estimations we introduce controls for region, light industrial firms, and the size of the firm as measured by the log number of employees. We also introduce a control for firms that received aid from the state, as *HelpFromState* is not balanced across the two periods. We estimate a probit model in Columns1-6 where the coefficients represent the marginal effects of a one unit change in the variables of interest.

[9] We have only 33 fully state owned firms in the sample which is too few for analysis.

Table 4. Perceptions of the Security of Property Rights from Takeover

	Secure Property Rights 4.1	Secure Property Rights 4.2	Secure Property Rights 4.3	Secure Property Rights 4.4	Secure Property Rights 4.5	Secure Property Rights 4.6
PostElection	.00 (.03)	.09** (.03)	.04 (.03)	.02 (.03)	.13** (.04)	.10*** (.03)
HelpToState		.03 (.03)				
HelpToState* PostElection		-.27** (.08)				
SellState			.05 (.03)			
SellState* PostElection			-.12** (.06)			
HelpFromState	-.03 (.04)	-.01 (.03)	-.03 (.04)	.02 (.04)		
HelpFromState* Post-Election				-.14* (.10)		
CloseToState					.01 (.03)	
ClosetoState* PostElection					-.25*** (.08)	
ClosetoStateIndex						.02 (.02)
ClosetoStateIndex* PostElection						-.09*** (.02)
p-value of interaction term = component		.00	.04	.20	.01	.00
N	753	753	739	753	739	739
Prob >F	.0005	.0000	.0002	.0000	.0000	.0000
R^{sq}	.08	.12	.10	.09	.12	.12

* = p<.10, ** = p <.05, *** = p<.01, 15 Region and 1 Sector Dummy, and a control for firm size (logged) included, but not reported. Robust standard errors. Positive coefficient means more secure property rights. Coefficients represent marginal effect of a discrete change in a dummy variable reported. Dependent Variable =1 for firms that did not report any of the three threats as "highly likely."

Model 4.1 reported in Table 4 explores the impact of the change in bargaining power of the ruling party on the average firm in the sample and uses the dummy variable, *Secure Property Rights*, as a dependent variable. Here we find little difference on average between the perceptions of managers interviewed before and after the election as captured by the statistically insignificant coefficient on *PostElection*. In Model 4.2, we explore the effects of this shift in bargaining power conditional on a firm's relations with the state. In this case, we find that firms that provided public goods for the state viewed their firms are significantly more vulnerable to hostile takeover after the elections than before. Indeed, as indicated by the coefficients of *HelpToState* and *HelpToState*PostElection*, respondents were about 24 percentage points (.03-.27) less likely to consider their firm as free from any of the three types of corporate raids identified above after the election. Firms that did not provide any public good for the state viewed their property rights as more secure after the election as indicated by the coefficient on *PostElection*. The dummy variable for firms that received aid from the state which is included in this analysis as a control variable, *HelpFromState*, is unrelated to perceptions the security of property rights.

Column 3 repeats the analysis, but measures a firm's ties to the state with the dummy variable *SellState*. Here too we find that firm managers with closer ties to the state viewed their property rights as significantly less secure after the elections as indicated by the coefficients on *SellState* and *SellState*PostElection.* The impact of the election in somewhat smaller in this case (.05-.12), but still substantial at 7 percentage points.

Column 4 presents similar results. We see that firms with closer ties to the state, measured as firms that received aid from the state, *HelpFromState* perceived a hostile takeover as more likely after the election. And again, the size of this impact, about 12 percentage points, is substantial (.02.-14). However, the interpretation of this particular result requires some discussion because the sample is imbalanced in *HelpFromState*. Twenty percent of firms that received aid from the state were interviewed prior to the election and only 12 percent after the election. Thus, we are not able rule out the possibility that the results are due to the significantly larger number of respondents who received help from the state prior to the election rather than from the shift in bargaining power induced by the election.[10] Bearing this caveat in mind, however, results from Model 4.4 are consistent with the argument that firms who received help from the state saw their property rights as significantly less secure after the election. This

[10] We include firm size in the regression, a variable that is highly correlated to *HelpFromState*.along with controls for region. Including other variables that may be correlated with *HelpFromState* and *SecurePropertyRights*, such as sector, director age, intensity of competition, or past investment activity has little impact on the results. These approaches mitigate, but do not resolve the problem of imbalance in *HelpFromState* across the two periods.

relationship is somewhat surprising to find given that only 44 of the 137 respondents who received aid from the state were interviewed after the election.

To assess robustness of the results to particular coding decisions, we created a dummy variable, *ClosetoState* for firms that scored a 1 on any of the three measures of relations with the state. Taken together, 63 percent of firms fall into this category. We also created a simple additive index of each of three measures of relations with the state that ranges from 0 to 4 *CloseToStateIndex*. We then includes these variables separately in the regression analysis. As reported in Models 4.5 and 4.6, we find that the results are robust to these changes in the coding of the independent variable.

Figure 1. The Conditional Impact of a Shift in Bargaining Power

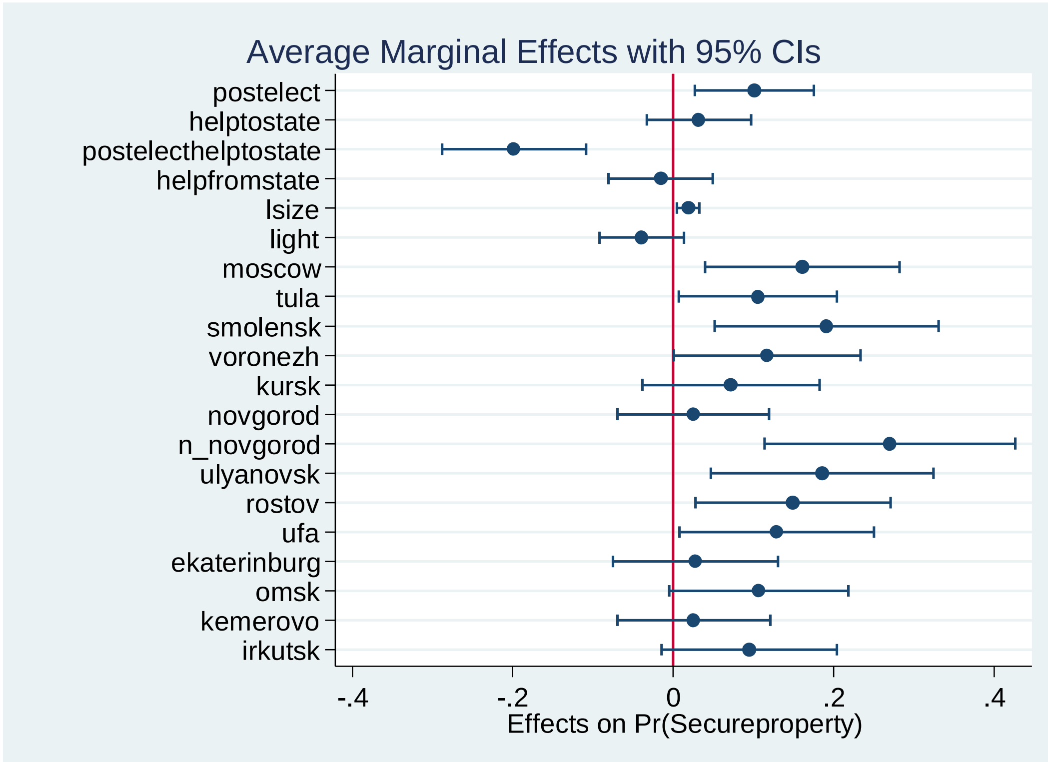

Figure 1 provides a visual presentation of the results from Model 2 of Table 4. Here we see the large and statistically significant difference in the responses of firm managers who provided public goods to the state and were interviewed before the elections (*Helptostate*) and after the election (*PostelectHelptoState*).

As a further robustness check, we repeated our analysis, but recoded our dependent variable as an index that equals 1 for the 12 percent of firms who reported any of the three types of corporate raids as "highly likely"; 2 for the 46 percent of firms who reported any of the three threats as "unlikely" and 3 for the 42 percent of firms who reported all three types of corporate raids as "very unlikely." We report the results in Table 5. The results are largely unchanged in columns 5.1, 5.2, 5.4, and 5.6. In these cases we see that firms with close ties to the state measured in various ways viewed their property rights as significantly less secure after the election. However, in Model 5.3 and 5.6 we do not detect any differences in the pre- and postelection responses of firm managers using this recoded dependent variable. Thus, these results are largely robust to a re-coding of the dependent variable.

Table 5. A Robustness Check

	Property Rights Index 5.1	Property Rights Index 5.2	Property Rights Index 5.3	Property Rights Index 5.4	Property Rights Index 5.5	Property Rights Index 5.6
PostElection	-.05 (.10)	.14 (.12)	-.09 (.12)	.03 (.10)	.07 (.15)	.12 (.13)
HelpToState		.06 (.12)				
HelpToState* PostElection		-.45** (.17)				
Sell State			.03 (.13)			
SellState* Post Election			.06 (.18)			
HelpFromState	-.04 (.13)	-.02 (.14)	-.07 (.14)	.16 (.17)		
HelpFromState* Post-Election				-.56** (.27)		
CloseToState					.00 (.13)	
CloseToState* PostElection					-.20 (.17)	
ClosetoStateIndex						.04 (.06)
ClosetoStateIndex* PostElection						-.18** (.09)
Cut Points	-.73, .73	-.70, .77	-.75 .72	-.69 .77	-.73 .74	-.68 .79
p-value of interaction term = component		.06	.94	.07	.46	.12
N	753	753	739	753	739	739
Prob >F	.0000	.0000	.0000	.0000	.0000	.0000
R^{sq}	.05	.05	.05	.05	.05	.05

* = p<.10, ** = p <.05, *** = p<.01, Ordered Probit Estimation, 15 Region and 1 Sector Dummy, and a control for firm size (logged) included, but not reported robust standard errors. Positive coefficient means more secure property rights. Dependent Variable is an index of secure property rights ranging from 1-3 described in the text.

These results are also robust to changes in the sample size. We re-estimated the models above using only firms with 10 employees or more and 15 employees or more as corporate raiding may be more relevant to larger firms and found little substantive differences in the results. In sum, firms with strong ties to state viewed their property rights as more vulnerable to a corporate raid after the election which weakened the relative bargaining power of the ruler. [11]

VI. Challenges to Causal Inference

Thus far, the analysis has taken advantage of the largely exogenous variation in the timing of a respondent's interview to document a robust relationship between a political shock to the relative bargaining power of the ruler and right-holders' perceptions of the likelihood of a hostile takeover. A number of challenges to causal inference can be brought to bear. Non-response bias may present a challenge to the results. Respondents who fear for the security of their property rights may be more likely to answer "it is hard to say" to one or all of the questions about various threats to the security of their property rights after the election. Examining the "hard to say" responses from the three questions that comprise the dummy variable, *SecurePropertyRights*, indicates that 11 percent of respondents gave this answer. Dividing these "hard to say" responses into pre and post-election interviews indicates that firms that provided public goods for the state and firms that sold goods to the state were less likely to give non-responses before the election than after (.06 vs. .14, $p = .02$ and .08 vs .15, $p = .03$, respectively). To the extent that these non-responses are motivated by greater concerns about admitting their fears about their property rights, the impact of the election results on perceptions of property rights may be larger than the results reported above. Thus, the results may understate the impact of the electoral shock to the bargaining power of the ruler on perceptions of property rights.

One assumption of our strategy is that the underlying economic environment did not change for the two types of firms across the pre- and post-election periods. This seems reasonable as we know of no new economic news that would have altered perceptions of secure rights across the two periods. Moreover, it seems likely that changes in economic fundamentals between the two periods would have affected all firms rather than have disproportionate effects on firms that did or did not have close relations with the state.

[11] In a similar fashion we tried to examine the impact of the large protest of December 10, 2011 on perceptions of the security of property rights, but we have only 99 valid responses after December 10, and much smaller samples of firms that had close relations to the state as measured here.

One might be concerned that a firm's relations with the state are correlated with unobserved factors that color perceptions of the security of property rights. However, relying on the logic of difference in difference estimations, these unobserved factors are likely to be present both before and after elections which make its less likely that these factors account for the results.

One shortcoming of our analysis is that we ask respondents about their perception of the likelihood of a hostile takeover rather than identifying the determinants of actual hostile takeovers. We have no means to determine whether the respondent actually experienced a hostile takeover. We also rely on the respondent's honesty. Although each respondent's accuracy in answering this question is unobservable, it would be odd to find a difference in accuracy between those interviewed before and after the elections. Asking about hostile takeovers in the future shortly after a political shock has one important advantage. It reduces the possibility of "hindsight bias" by which respondents shape their assessments of past behaviors in light of current information. Numerous studies in social psychology find that respondents adjust their assessment of past events to fit the observed outcome (Roese and Vohs 2012). This generally reduces respondents' evaluations of the uncertainty they associated with particular outcomes when asked retrospectively. In light of this bias, Gilbert (2008) suggests that the best time to ask respondents about an event is while they are experiencing it.

Context and the specific features of the political shock are likely to influence perceptions of the security of property rights. These results here are taken from one country at one time and examine only one political shock. It is also difficult to identify whether the political shock produced lasting effects on perceptions of property rights because we can focus only on the immediate post-election period. Thus, leaping to broad generalizations is ill advised. Yet, this study offers the rare opportunity to tap the roots of the perceptions of businesspeople in real time as they face threats to the security of their property rights in the face of a political shock.

VIII. Conclusion

This work aims to contribute to important debates in comparative politics and political economy. First, it suggests a novel means to estimate a response to a political shock. Much literature uses some form of event-history analysis to examine how stock or bond market prices respond to political shocks, such as surprising election results. In contrast, this work takes advantage of exogenous variation in the timing of interviews to estimate how exposure to a political shock shapes perceptions of the security of property rights. In doing so, it hopes to improve causal identification about the relationship between political shocks and economic outcomes.[12]

Second, it suggests that a shift in a ruler's relative power can shape perceptions of the security of property rights. This is far from the first work to point to the importance of relative bargaining power for property rights. However, by taking advantage of a plausibly exogenous shock in the relative bargaining power of the ruling party, it is able to better estimate the impact of this type of political shock on property rights.

Finally, the work adds to the growing literature on the importance of elections in non-democracies. For many years, scholars treated elections held in non-democracies as little more than facades created to please foreign audiences. However, more recently scholars have argued that elections in non-democracies can provide important information for the ruler, divide the opposition, and allow the ruler to demonstrate strength in a setting of imperfect information (Magaloni 2006; Simpser 2014). In this sense, elections in non-democracies have real consequences for politics even where the elections are highly managed. For all its strengths, this body of work has focused far less attention on the economic impacts of elections in non-democracies. In contrast, this study finds that elections, even highly imperfect ones, can shape perceptions of the security of property rights. Indeed, the study of the economic impacts of elections in non-democracies on individual behavior is a topic worthy of more research.

[12] Acemoglu et al. (2014:31) apply event history analysis to the impact of protest on firm value during the Arab Spring, but also suggest the potential of using natural experiments to examine political change on firm behavior.

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Appendix I.

Balance by Region

Regions	**Pre-Election Before 12/4/11**	**Post-Election After 12/4/11**	**Abs. Difference Between Post-Election and Pre-Election p-value in par.**
Moscow	.11	.03	.08 (.00)
Tula	.13	.03	.10 (.00)
Smolensk	.05	.08	.03 (.07)
Voronezh	.10	.04	.06 (.00)
Kursk	.03	.09	.06 (.00)
Nizhnii Novgorod	.07	.07	.00 (.96)
Novgorod	.03	.11	.08 (.00)
Ulyanovsk	.07	.05	.02 (.20)
Rostov	.08	.04	.05 (.02)
Ufa	.02	.12	.10 (.00)
Ekaterinburg	.11	.02	.09 (.00)
Omsk	.06	.07	.01 (.56)
Kemerovo	.02	.15	.13 (.00)
Irkutsk	.07	.05	.02 (.20)
Khabarovsk	.07	.06	.01 (.63)

Appendix II.

Balance by Sector

	1 **Pre-Election**	**Post-Election**	**3** **Difference Between Post-Election and Pre-Election** **p-value in par.**
Retail Trade	.19	.22	.03 (.28)
Energy	.01	.01	.01 (.37)
Heavy Industry	.15	.14	.01 (.57)
Light Industry	.17	.23	.06 (.03)
Transport	.05	.05	.00 (.93)
Construction	.11	.10	.01 (.44)
Communications	.04	.05	.02 (.22)
Financial	.08	.06	.02 (.28)
Real Estate	.08	.07	.01 (.52)
Forestry	.03	.02	.01 (.17)

Appendix III.

Balance by Firm and Manager Characteristics

	Pre-Election	**Post Election**	**Abs. Difference between Post-Election and Pre-Election (p-value)**
Size (# of employees)	281	.219	253 (.12)
Size (logged)	4.16	3.93	.23 (.07)
Foreign Ownership	.06	.07	.01 (.76)
Sell State	.44	.46	.02 (.53)
Export	.13	.14	.01 (.86)
Business organization	.14	.14	.00 (.96)
Competition as problem	3.50	3.53	.03 (.46)
Investment Index (1-8)	3.58	3.49	.09 (.45)
Member of Industrial Group	.14	.14	.00 (.90)
Major Investment in 2010-12 (1-3)	1.59	1.64	.05 (.37)
Time Horizon (1-4)	1.94	1.88	.06 (.33)
Firm Head Supports United Russia	.40	.37	.03 (.50)
Age of the Director	44	45	01 (.55)
Higher Education	.90	.88	.02 (.38)
Tenure with firm	17.92	17.03	.88 (.25)

.

Appendix IV.

Summary Statistics from Regression

	Mean (Std. Dev.)	N	Min/Max
Secure Property Rights	.88 (.32)	796	0/1
Security Property Rights Index	2.30 (.67)	796	0/3
HelpToGovernment	.39 (.48)	922	0/1
HelpFromGovernment	.17 (.37)	899	0/1
SellState	.45 (.50)	894	0/1
Size, (number of employees, log)	4.05 (1.84)	893	.01/8.77
Size (number of employees)	253 (600)	893	1/6500
State Owned	.04 (.19)	922	0/1
Energy	.01 (.11)	922	0/1
Oil	.01 (.10)	922	0/1
Heavy Industry	.15 (.35)	922	0/1
Forestry	.03 (.16)	922	0/1
Light Industry	.20 (.40)	922	0/1
Construction	.11 (.31)	922	0/1
Transportation	.05 (.22)	922	0/1
Communications	.04 (.20)	922	0/1
Financial	.07 (.25)	922	0/1
Real Estate	.07(.26)	922	0/1
Trade	.26 (.44)	922	0/1

Appendix V. Question Wordings for Variable of Interest

HELPFROMSTATE

In 2010-2011 Did your firm receive any **organizational support** from the federal, regional, or local authorities?

Federal	Yes	No	Hard to Say
Regional	`Yes	No	Hard To Say
Local	Yes	No	Hard to Say

In 2010-2011 Did your firm receive any **financial support** from the federal, regional, or local authorities?

Federal	Yes	No	Hard to Say
Regional	`Yes	No	Hard To Say
Local	Yes	No	Hard to Say

HELPTOSTATE

In 2010-11 did your firm provide any aid to the local or regional government to promote social development of the regions (e .g, preserving public spaces and housing, sponsoring regional development programs, etc.)

Yes No Hard to Say

SELLSTATE

Does your firm sell goods or services to state agencies or firms (including schools, hospitals, etc.)?

Yes No Hard to Say

Contact details

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