Elections, Protest, and Investment Plans:

Evidence from a Natural Experiment in Russia

Timothy Frye* and Andrei Yakovlev**

March 10, 2013

Draft, Comments Appreciated.

How do political shocks influence economic behavior? We take advantage of a natural experiment to identify the effects of two political shocks on investment plans in Russian firms: the December 4th parliamentary elections and the protests of December 10th 2011. By comparing the responses of the "control" group of managers interviewed prior to the shock with those in the "treatment" group interviewed just after the shock, we estimate the impact of this political shock on reported economic plans. We find little support for the "political uncertainty" argument as firm managers were 12 percentage points more likely to report plans for a major investment after the protest shock than before. We find strong evidence for the "partisan" view of investment as firms with weak ties to the regime were about 12 percentage points more likely to report investment plans after the elections, while firms with strong ties to the regime were about 9 percentage points less likely to report plans for investment after the election. This paper contributes to debates on the economic impacts of political events, the value of political connections, and the importance of partisan preferences of economic agents. Moreover, it advances the literature by measuring managers' political preferences directly rather than inferring them from firm characteristics.

* Columbia University and Center for the Study of Institutions and Development, Higher School of Economics, Moscow

** Center for the Study of Institutions and Development, Higher School of Economics, Moscow

Introduction

How do political shocks shape economic behavior? Observers often argue that these shocks lead businesspeople to postpone investment until the uncertainty is resolved. This "uncertainty" argument suggests that political shocks are associated with lower levels of investment. Indeed in the face of public protest and opposition autocratic rulers frequently invoke the mantra that more political instability will hurt the economy in hopes of keeping their political rivals off the street.

Others argue that while political shocks may heighten uncertainty for the average firm, they also tend to benefit some firms and harm others. This "partisan" argument implies that firms that expect to benefit from changes in policy associated with the political shock are likely to increase their investment. For example, when the opposition faces a political shock that weakens its position, we might expect managers who support the ruling party to increase their investments as the likelihood of an unfriendly turn in policy declines.

Despite the longstanding interest in how businesspeople respond to political shocks, there is still much that we do not know. Some of the most persuasive evidence comes from established democracies that are rich in information about economic behavior and political events (Alesina and Rosenthal 1995; Franzese 2002; Bernhard and Leblang 2006; Julio and Yook 2012). We know less about how unexpected political events shape economic behavior in autocratic or hybrid regimes, (but see Fisman 2001 and Goriaev and Sonin 2005). In addition, numerous studies examine how political events shape bond and stock prices using cross-national data. This approach has great appeal, but also raises the usual concerns about model specification and measurement common to cross-country regressions analyses (c. f., Durnev 2010). Indeed, while cross-national research on the topic has become increasingly sophisticated in recent years, Bernhard and Leblang (2006: 10) note: "Surveying the literature on market behavior surrounding political events, few consistent patterns emerge." Similarly, Durnev (2010: 1) argues that while there are many works that analyze how politics shape economic outcomes "only a few studies explore how political forces influence managerial decisions at the corporate level."[1]

We take advantage of a natural experiment in Russia by examining the reported investment plans of company managers interviewed before and after a political shock - the parliamentary election of December 4, 2011. Comparing the responses of the "control" group interviewed prior to the election with those in the "treatment" group interviewed after the election, we can cleanly estimate the impact of this political shock on reported economic plans.

[1] Julio and Yook (2012: 45) cite Bertrand et al. (2006); Faccio (2006); Oberholzer (2006) and Ramanna and Roychowdhury (2009), as examples.

We follow a similar strategy in examining the impact of a large and unexpected post-election protest held on December 10, 2011.

We find that new information revealed by the December 4th parliamentary election had a surprising and substantively large effect on the reported investment plans of firms. In contrast to the uncertainty argument, firms polled after the parliamentary election were 9 percentage points more likely to report plans for a major investment in the coming year than those polled before the election. In addition, in line with the partisan investment argument, firms whose managers did not support the ruling party were 12 percentage points more likely to reports plans to invest, while those who lacked personal connections with the governor or mayor were about 11 percentage points more likely to do so.

In addition, firm managers interviewed after the surprisingly large protests of December 10th, 2011 were about 14 percentage points more likely to report plans for investment in the coming year. These gains were especially pronounced among managers who did not support United Russia, had no experience working in government, and were no personally acquainted with the governor or mayor.

These results suggest several broader points. First, electoral shocks need not reduce planned investment, despite the protestations of autocratic rulers. Indeed, firms whose outlook brightens thanks to the political shock may become more likely to invest. Second, while we often treat firms as apolitical responders to different types of political shocks, it is valuable to conceive of firms as having partisan preferences that influence their economic behavior. It suggests both the importance of political connections for investment as connected firms are significantly more likely to report plans for investment prior to elections, but also suggests that political shocks can weaken the impact of strong ties to the government.[2] Finally it points to the importance of measuring manager preferences directly rather than inferring them from firm characteristics, such as sector or property type.

I. Theory

Two broad classes of explanations capture how political events shape investment. One view suggests that political shocks that heighten uncertainty about future economic policy should dampen investment as businesses hedge their bets until the uncertainty is resolved. Rather than risking their capital in an investment that will only bear fruit in the future, capital owners will seek more predictable and stable sources of investment. This "uncertainty" hypothesis suggests that on balance firms should reduce their investment in response to a political shock that increases uncertainty about future policy. Related arguments examine how political institutions mediate political uncertainty generated by exogenous political shocks (c.f., Eichengreen et al.

[2] See Durnev et al. (2012) for a similar finding using data on foreign direct investment.

1995; Alesina and Rosenthal 1995; Bernhard and Leblang 2002; 2006). They pay particular attention to how political institutions that insulate political actors from popular pressure or increase the number of veto points can mitigate the impact of political shocks on uncertainty about future economic policy.

A second view recognizes that political shocks that increase uncertainty may also have strong partisan effects. This "partisan" view suggests that firms respond to political shocks according to the distributional consequences of a potential change in policy. According to this argument, firms calculate the probability of a beneficial change in policy following the political shock and adjust their investment plans accordingly. Firms that increase their assessment of a beneficial turn in policy in light of information revealed by a political shock are likely to increase investment.

Related work examines how changes in the partisan stripe of the government and the partisanship composition of cabinets have shaped various forms of market behavior (Alt and Chrystal 1983; Alesina and Rosenthal 1995; Franzese 2002). Working from the assumption that political shocks may produce winners and losers, others have examined how economic sectors and even specific firms respond to political shocks with strong distributional consequences. For example Goriaev and Sonin (2005) explore how unexpected legal actions against the large private oil company YUKOS shaped investor behavior in private and state owned firms as revealed by stock market prices. Still others explore how exogenous political shocks shape firms with and without personal political connections to incumbents. Most prominently, Fisman (2001) analyzes how Indonesian President Suharto's bouts of bad health influenced the asset prices of firms with close ties to the regime.

Most studies of political shocks have been conducted in democratic settings. Fewer studies have been conducted in semi-competitive or non competitive political settings where election results are likely to be especially volatile. There are two primary sources of uncertainty about elections in non-democratic settings. One is the real distribution of preferences in society given the incentives of citizens to keep their political views private (Kuran 1991). The lack of public information about private preferences and imperfections in the voting technology make exogenous shocks more likely in less competitive political settings (Tucker 2007). A second source of uncertainty surrounds the reporting of electoral results. Prior to the actual election it is difficult to estimate the extent to which regimes are willing to engage in vote fraud.

Indeed, the dynamics of political uncertainty in hybrid and autocratic regimes likely differs from that in democracies. In a democratic setting scholars often argue that the run up to elections may be marked by high uncertainty, but once a victor is declared uncertainty about the future course of economic policy declines (Julio and Yook 2012). In a hybrid or autocratic regime, elections may heighten uncertainty by revealing new information about the strength of the incumbent. To push this point a little, we might argue that in an autocratic or hybrid regime

setting the period prior to elections may have low uncertainty as the outcome of the election is rarely in doubt while surprising election results will only heighten uncertainty about future policy. Far from resolving uncertainty, elections in a non-democratic setting may make future policy more difficult to predict. Indeed, in the setting at hand, the parliamentary elections of December 4th and the surprising protests of December 10th revealed new information about the vulnerability of the ruling party which heightened uncertainty about future economic policy.

This work differs from much existing research in several respects. First it takes place in an authoritarian setting in which election results may increase uncertainty about future economic policy. Second, while much of the literature focuses on political institutions alter the uncertainty generated by the run up to democratic elections, this work holds political institutions constant as the study takes place in a single country. Third, in testing the 'partisan" theory it uses direct measures of the partisan preferences and political connections of firm managers while controlling for firm-level characteristics, such as sector and property type. This gives micro-level evidence that is difficult to come by in other settings. In addition, it offers a new approach to testing the "partisan" argument. Rather than testing how the partisanship of the government influences heavier in response to a shock, this work examines the impact of partisanship at the firm level.

Most importantly, this paper uses a different causal identification strategy than much of the literature which typically identifies the covariates of changes in stock or bond market returns following a political shock. Instead, this work begins by treating the election of December 4th, and the large protests of December 10th as exogenous political shocks. It then analyzes how firms responded to these shocks. 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 investment patterns. To the extent that the two groups differ only in their exposure to the new information generated by the election results and the protests, we can attribute differences in mean response of these two groups to these shocks (Dunning 2012).

One caveat is in order. The analysis focuses on how these political shocks alter reported plans for investment and we are not able to measure investment directly because we interview respondents shortly after these political shocks. While we do not measure investment directly, we are able to cleanly estimate the impact of these shocks on plans for investment in the coming year. Suggestive evidence from the stock market response to these shocks provides a validity check on the survey results.

II. Background

The first political shock occurred during parliamentary elections on December 4, 2011 as few foresaw the sharp drop in votes for United Russia or the crudity of the falsifications on election day. There were good reasons to be surprised. The popularity of Vladimir Putin and

Dmitry Medvedev declined before the elections (see Appendix 1), but their approval rates were still above 60 percent. An index of public sentiments calculated by the Levada-Center, which presents a composite assessment of trends in social, economic and political sentiments in the society, - remained stable in 2010-2011, and its absolute values were high and on par with pre-financial crisis levels experience in 2007 (see Appendix 2).

Leading public opinion organizations predicted that the ruling party, 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 4, 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 only real question for the elections is how far United Russia's polling numbers have dropped in recent months."[3]

However, to the surprise of the public, the pollsters and the government, United Russia, fared quite 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 happened in spite of the fidelity of all governors of these regions to the Kremlin, and probably despite their reliance on "administrative resources" on a traditional scale.

[3] Forecasts made by experts from the Center for Strategic Research (CSR), perhaps, were the only exception to this rule, because as early as in 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). We can notice post factum that the disparity between the assessments made by CSR, which used a deep qualitative analysis based on focus groups, and the forecasts issued by leading sociological firms, which were based on formalized mass surveys of the Russian population, are in line with the argument of Timur 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.

Table 1. Data on attendance of voting public and ballot for the United Russia in some regions in the 2007 and 2011 elections

		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%
Khabarovsk Krai (+7 hours)	1.1m	61.4%	60.7%	53.2%	38.1%
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, the "party of power" faced the prospect of losing control of the parliament. After polls closed in the Far East, United Russia likely turned to electoral fraud on a large scale in the European part of Russia (including Moscow which has 6.6% of all voters).[4] The expanded scale of fraud finally allowed "the power party" 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 5 – just after preliminary results of the elections were published. Contrary to expectations of its organizers (who calculated on about 300 to 400 participants), the number of those who came to the demonstration was 5,000 to 7,000. Police detained about 300 of participants (including its main organizers) when they made an attempt to approach the Kremlin (Shuster 2011; Elder 2011).

Russia experienced a second political shock roughly six days after the election, when, roughly 30-50,000 protestors gathered in central Moscow on December 10, 2011. This was the

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

largest demonstration in Moscow since the early 1990s and saw Russia's emerging middle-class take to the streets to oppose the electoral results of December 4th and to call for a new round of elections. Even in the immediate the run-up to the demonstration, most observers predicted far smaller crowds (Rose 2011). Organizers themselves optimistically predicted that 10,000 people would take to the streets. Skepticism toward the likelihood of a mass demonstration was certainly reasonable because the massive vote fraud of previous elections had not spawned large public protest.

III. Data and Identification Strategy

Our initial identification strategy is to assign firms to a "control" group of respondents interviewed prior to the parliamentary election and a "treatment" group of respondents interviewed after the parliamentary election. In a similar fashion, we examine the impact of the protest of December 10 on investment plans. The second shock was hardly independent from the first shock and that firms managers interviewed after the protest may also have been responding to results of the election. To isolate the effect of protests independent of elections, we later analyze the responses of managers in three periods: 1) before the elections; 2) after elections, but before the protest, and 3) after the protests.

We conducted a survey of 922 firm managers in 15 regions in Russia. Fortunately, slightly more than half of the respondents in the sample (56%) were polled in the two weeks prior to the election, while the rest were polled in the two weeks following the election. The two groups of firms are statistically indistinguishable in almost all respects, including region, firm characteristics, past investment behavior, access to credit markets, demographic traits of the respondents, 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 retail trade firms in the post-election group (.13 versus .18). A simple difference in means test between these two groups reveals a p-value of .04. This distribution of trade firms introduces a bias against the argument as trade firms are, on average, less likely to be planning a major investment in the next 12 months. Firms included in the post-election sample are slightly larger than those interviewed before 224 versus 290, although this difference lies just outside the bounds of statistical significance ($p = .11$).

Thirteen percent of firms in the sample were interviewed after the protest of December 10th. While the number of retail trade firms is larger prior to the protest than before, the average size of the firms in the pre and post-protest samples are very similar 255 versus 237. In the multivariate regressions that follow we will introduce controls for size and sector to account for these imbalances in the sample. Balance statistics for the political variables, director traits, firm characteristics, sector and region are reported in Appendix III and IV.

IV. Analysis

To assess the impact of an electoral shock on investment plans, we asked a top manager in each firm questions about their investment plans, partisanship, and ties to the government. To begin, we asked: "Are you planning in the next 12 months to make a major investment in your firm (e.g., new construction, reconstruction, a repair of building/equipment, upgrading machinery)? Twenty-nine percent answered yes. However, as reported in the top row of Table 2, the responses differed significantly between those polled before and after the election. Of those polled prior to the election, 25 percent answered yes, while 34 percent of those polled after the election answered yes. The 9 percentage point increase in planned investments suggests that an electoral shock that increases political uncertainty need not dampen investment.

In addition, we probed the partisan identification of the manager of the firm. We asked: "Which of the following phrases best describes the relationship of the head (*pervogo litsa*) of your firm to political parties." Thirty-nine percent of respondents said that their firm head either was a member of United Russia or supported United Russia, while 61 percent said that their manager either supported another party or movement or did not support any party or movement. Table 1 indicates that firms headed by supporters of United Russia did not vary their investment plans in response to the electoral results of December 4. Among firms headed by United Russia supporters, 34 percent of those polled prior to the election planned a significant investment in the coming 12 months, while 33 percent of those polled after the election did so.[5] However, Table 1 also indicates that the electoral results of December 4th strongly influenced managers of firms who did not support United Russia. Among this group, 16 percent of respondents polled prior to the election planned to make a significant investment in the coming year, while 28 percent of respondents polled after the elections planned to do so. Thus, the revelation of the electoral results of December 4th is associated with a 12 percentage point increase in the probability that a firm in this group of non-supporters planned a major investment in the coming year.

A similar pattern emerges in analyzing the response of firms whose managers have strong and weak political connections as measured by their past work experience. We measure political connections by whether any of the top company managers had previous work experience within the federal, regional, or municipal government within the last 10 years. Twelve percent of firms fit this category. As depicted in Rows 4 and 5, we find that firms whose managers had strong political connections to the ruling elite via their past work experience increased their reported plans for investments after the election, but this increase falls short of statistical significance. In contrast, those managers who lacked political connections were about 12 percentage points more likely to report plans for investment, an increase that is statistically significant.

[5] As we shall see later much of the direct effect of elections on investment plans is due to respondents interviewed after the protests. When controls are introduced the direct relationship between elections and reported investment plans is weaker.

Finally in Rows 6 and 7, we examine whether firms whose managers were personally acquainted with the governor or mayor altered their investment plans following the electoral shock of December 4. This is an indirect test because governors and mayors were not on the ballot and were not directly affected by the poor results of United Russia in parliamentary elections. There is however evidence from previous national elections that governors in regions where United Russia performed poorly were less likely to be reappointed (Reuter and Robertson forthcoming). In our study, managers who were personally connected to the mayor or governor were much more likely to report plans for an investment if they were interviewed after the election (60 versus 45 percent), but this difference is not statistically significant, in part due to the small numbers of respondents in these groups. In contrast, managers who were not personally connected to the mayor or governor were about 11 percentage points more likely to report plans to invest when they were interviewed after the December 4th election. These findings again are consistent with the partisan view of investment.

These results not only support the "partisan" hypothesis; they also point to the value of close ties to the regime both prior to and after the elections. United Russia supporters invest at much higher rates than do regime non-supporters prior to elections (.34 versus .16) and after elections (.33 versus .28). Rates of investments for those with strong and weak political connections to the regime and strong and weak personal connections to the regime well a similar story. These results give some sense of magnitude of the importance of close ties to the regime in accounting for investment behavior, but they also indicate how political shocks may dampen the value of political connections.

Table 2. Elections, Partisanship, and Plans to Invest in 2012

	Plans to Invest Interviewed Pre-Election	Plans to Invest Interviewed Post-Election	Difference Between Column 2 and 1 Fisher Exact in par.
1. All firms	25 N= 476	.34 N=357	.09 (.005)
2. Firm Head Supports United Russia	.34 N= 140	. 33 N= 98	.01 (1.00)
3. Firm Head Does Not Support United Russia	.16 N = 229	.28 N = 175	.16 (.003)
4. Politically Connected	.44 N= 50	.48 N = 48	.04 (.839)
5. Not Politically Connected	.21 N= 367	.32 N= 266	.11 (.002)
6. Personally Connected	.45 N = 55	.60 N= 55	.15 (.181)
7. Not Personally Connected	.19 N=384	.28 N =271	.09 (.009)

We also examined how the surprisingly large demonstrations to protest electoral fraud held on December 10, 2011 influenced firms' investment plans. As only 13 percent of respondents were interviewed after the protests, more caution is warranted in interpreting these results. In addition, those interviewed after the protest had also witnessed the results of the parliamentary elections, which makes it difficult to isolate the independent effect of the demonstrations in this analysis. Nonetheless, we find in Table 3quite similar and, in some respects, stronger results. Of those polled prior to the protests, only 27 percent said that they were planning to make a significant investment in the coming year, while 41 percent of those polled after the protest said that they were planning to do. Again, among firms headed by United Russia supporters, we find no significant differences in the investment plans of those polled before and after the protests (.31 versus .34); while among firms headed by those who did not

support United Russia, those polled after the protests were 15 percentage points more likely to report planning an investment in the coming year (.19 versus .34). Indeed, in the postprotest period, there is little difference in the responses of firms supporting and opposing United Russia.

Firms whose managers were not politically connected via past employment in the federal, regional, or municipal government were about 9 percentage points more likely to report plans for investment after the protest of December 10 than before. This difference is statistically significant. Firms that had a manager with political connections were no more likely to invest after the protest (.44 versus .48).

Finally, firms with personal connections to the governor or mayor were significantly more likely to report plans to invest after the protests (.47 versus .88), but only 16 firms whose managers had personal connections were interviewed after the protest which makes it difficult to put great confidence in this finding. Firms whose managers lacked political connections were about 12 percentage points more likely to report plans to invest after the protest shock and this result is statistically significant. This outcome is surprising given that mayors and governors were only indirectly affected by the poor showing of United Russia at the polls and the subsequent protests.

The behavior of United Russia loyalists who do not alter their investment plans in light of the election results of December 4th and the large protest of December 10th appears to be a puzzle. If the partisan view of investment held for them as well, we would have expected them to reduce their investment in light of the results of the election and the protest, but we see no consistent evidence of that. However, this puzzle is resolved when additional controls are introduced into the analysis. As we shall see in the next section, after controlling for size, sector, and region dummies, United Russia supporters report significantly lower levels of investments after the two dual shocks of the December 4th elections and the December 10th protests.

Table 3. Protest, Partisanship and Plans to Invest in 2012

	1 Pre-Protest Before 12/10/11	2 Post-Protest After 12/10/11	3 Difference between Column 2 and 1 Fisher Exact Test in par.
1. All firms	.27 N= 725	.41 N=108	.14 (.004) N = 833
2. Firm Head Supports United Russia	.33 N= 211	.37 N= 27	.04 (.67) N= 238
3. Firm Head Does Not Support United Russia	.19 N = 351	.34 N = 53	.15 (.018) N = 404
4. Politically Connected	.44 N=86	.58 N= 12	.12 (.375) N = 98
5. Not Politically Connected	.21 N = 367	.32 N = 266	.11 (.002) N = 633
6. Personally Connected	.47 N = 94	.88 N = 16	.41 (.003) 110
7. Not Personally Connected	.22 N = 578	.34 N = 77	.12 (.030) 655

This table reports the percentage of firm managers who reported plans to invest in 2012.

V. Controlling for Size and Sector

To address the possibility that differences in the size and sectors in the samples are influencing the results, we also ran a probit estimation that controlled for these factors. We estimated a probit model predicting whether respondents reported plans for a significant investment in the coming year. Model 1 in Table 4 indicates that even controlling for imbalance

in the sample produced by the somewhat larger firm size in the treatment category, respondents interviewed after the election were 9 percentage points more likely to report planning a major investment in the coming year. Models 2 and 3 which introduce region dummies with and without sector dummies respectively produce similar results, save for the slightly larger standard errors in model 3 where standard errors are clustered on region.

Table 4: Elections and Investment

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Post Elect	.09** (.04)	.09*** (.03)	.08^ (.05)	.12*** (.04)	.13*** (.05)	.12** (.07)
UR Supporter				.09** (.04)	.10** (.04)	.17** (.05)
PostElect*UR Supporter				-.12* (.04)	-.13** (.05)	-.14** (.06)
Size (,000 Employees)	.11*** (.04)	.09*** (.03)	.09*** (.03)	.11*** (.03)	.10*** (03)	.08** (.04)
Region Dummies	YES	YES	NO	YES	YES	NO
Sector Dummies	NO	YES	YES	NO	YES	YES
Cluster	Sector		Region	Sector		Regions
Observations	811	811	811	624	624	624
Waldchi2	915	129	189	1555	110	227
Prob >chi2	.0000	.0000	.0000	.0000	.0000	.0000
Log Likelihood	-414.15	-403.13	-459	-284.9	-278	-328
Pseudo R-Sq	.14	.16	.05	.18	.20	.06

The dependent variable is a dummy variable that equals 1 for firms planning to make an investment in the next 12 months. Probit estimation. Marginal Effects Reported. Coefficients represent the discrete change of a dummy variable from 0 to 1. ^ p =.11

In Model 4-6, we extend the analysis by examining how firms with different partisan preferences responded to the political shock of December 4. More specifically, we interact a dummy variable for firms headed by United Russia partisans and a dummy variable for whether the firm was interviewed before or after the election. The coefficient on *Postelect* is positive and statistically significant indicating that firms whose managers did not support United Russia were about 12 percentage points more likely to report a planned investment compared to those

interviewed prior to the election. The coefficient on *United Russia Supporter* implies that firm managers who supported United Russia were about 9 percentage points more likely to report a planned investment than were non United Russia supporters prior to the election. The coefficient on the interaction term indicates that when interviewed after an election United Russia supporters reported significantly lower plans for investment compared to those interviewed prior to an election. Indeed, their responses completely erase the increase the heightened investment reported by United Russia supporters prior to the election.

We repeat this strategy in examining the impact of the protests of December 10th on reported investment plans for the coming year and find similar results. Models 1-3 in Table 5 indicate that controlling for size and various combinations of sector and region dummy variables, managers interviewed after the protests were at least 14 percentage points more likely to report a planned investment in the coming year than those interviewed before the protests. Models 4-6 indicate that comparing the responses of partisan managers interviewed before and after the protest produces report somewhat similar, although less robust effects. The coefficient on *Post Protest* indicates that non-United Russia supporters were about 21 percentage points more likely to report plans for an investment after the protests. The coefficient on the interaction terms indicates that United Russia supporters were less likely to reports plans for a major investment in the coming year when interviewed after the protest, although the precision of this estimate depends somewhat on model specification.

Table 5. Protests and Investment

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Post Protest	.18***	.18***	.14**	.21***	.21***	.17**
	(.05)	(.05)	(.07)	(.08)	(.08)	(.07)
UR Supporter				.05	.05	.12**
				(.04)	(.04)	(.05)
PostProtest* URSupporter				-.13*	-.13*	-.13
				(.05)	(.06)	(.09)
Size (,000 Employees)	.12***	.10***	.10***	.12***	.10***	.09**
	(.04)	(.03)	(.06)	(.03)	(03)	(.04)
Region Dummies	YES	YES	NO	YES	YES	NO
Sector Dummies	NO	YES	YES	NO	YES	YES
Cluster	Sector		Region	Sector		Region
Observations	811	811	811	624	624	624
Waldchi2	718	132	189	5246	117	83
Prob >chi2	.0000	.0000	.0000	.0000	.000	.000
Log Likelihood	-411.72	-400.84	-458.82	-284.9	-277	-328
Pseudo R-Sq	.14	.17	.05	.18	.20	.06

The dependent variable is a dummy variable that equals 1 for firms planning to make an investment in the next 12 months. Probit estimation. Marginal Effects Reported. Coefficients represent the discrete change of a dummy variable from 0 to 1.

In sum, the regression analyses largely confirm the results presented in Tables 2 and 3. In addition, firms increased reported investment plans in following the electoral shock of December 4, 2011 and the protest shock of December 10, 2011.

Robustness Tests: Three periods

Dividing the data into three periods: 1) a pre-election before December 5th; 2) a pre-protest period (December 5-10th; and 3) a post-protest period (after December 10th) produces largely similar results, but finds that protests have a strong impact on investment plans, even controlling for period 2. Breaking the data into three groups reduces the sample size

dramatically in the comparison between the pre-protest and the post-protest period. We have 476, 249, and 108 observations in Periods 1, 2, and 3, respectively. Prior to the elections 25 percent of managers reported plans to invest in the coming year versus 31 percent in the pre-protest period ($p = .09$). Following the protest, 41 percent of respondents were planning a major investment versus 31 percent in the six days of the pre-protest period ($p = .07$). Surely the post-protest period investment decisions made by the managers were influenced by the impact of the election results at well. Yet, it is interesting to note that even with a reduced sample size, there is a statistically significant difference between the responses of those interviewed in the pre-protest period of December 5-10 and the post-protest period after December 10. Moreover, the 16 percentage point difference in responses between managers interviewed before the election and managers interviewed after the protest is large and statistically significant.

Indeed examining the direct effects of protests controlling for the impact of elections on investment points to the considerable importance of protests. Model 1 in Table 6 introduces dummy variables for respondents interviewed during Period 2 (December 5-10th) and Period 3 (after December 10th) with controls for firm size, sector, and region. Managers interviewed in Period 3 were significantly more likely to report plans for investment than managers interviewed prior to elections as indicated by the coefficient on Period 3. Managers interviewed after the elections, but before the protest (Period 2) were no more likely to report plans to invest than their counterparts interviewed before the election ($p = .19$).

Models 2 and 3 explore whether the partisan effects on investment plans identified above are affected by dividing the analysis into three periods. Model 2 examines the interaction of the managers' partisanship and exposure to information on election controlling for the post-protest period. As in previous analyses, non-UR supporters are significantly more likely to invest after elections than before and UR supporters are significantly less likely to report investment plans after the elections. Model 3 explores how the partisanship of manager is influenced by the political shock of the protests controlling for the impact of the elections (Period 2). We find that the results are largely unchanged. Indeed the coefficients on the variables of interest in Models 2 and 3 in Table 6 are largely unchanged from previous analyses. Thus, the partisan theory of investment retains it support in a "three-period" analysis.

Table 6. Three Period Comparison

	Model 1	Model 2	Model 3
Period 2 (12/5-12/10)	.05 (.04)	.10* (.07)	.03 (.04)
Period 3 (After 12/10)	.20*** (.06)	.10** (.05)	.22*** (.08)
URSupporter		.10** (.05)	.06 (.04)
Period2* URSupporter		-.13** (.05)	
Period3* UR Supporter			-.13* (.06)
Observations	811	624	624
Waldchi2	132	121	189
Prob >chi2	.0000	.0000	.0000
Log Likelihood	-399.99	-276	-458.82
Pseudo R-Sq	.17	.20	.05

The dependent variable is a dummy variable that equals 1 for firms planning to make an investment in the next 12 months. Probit estimation. Marginal Effects Reported. Coefficients represent the discrete change of a dummy variable from 0 to 1. Controls for region, sector, and size of firm included, but not reported. Period 2 = December 5=10th; Period 3 = After December 10th.

We conducted a placebo test to determine whether past investment patterns were correlated with the assignment of firms to treatment and control conditions. We asked firms whether they had made an investment in the period 2010-11.As reported in Table 4, 42 percent of firms reported making an investment in the firm in the last two years. Row 1 in Table 7 reveals no significant difference in the past investment patterns in the treatment and control groups. Rows 2 through 7 provide additional confirmation that past investment plans are unrelated to the assignment of firms to treatment or control groups. Table 8 reports similar results for managers interviewed before and after the protests of December 10.

Table 7. Placebo Test of Elections and Past Investment Patterns

	Pre-Election Before 12/4/11	**Post-Election After 12/4/11**	**Difference between column 2 and 1 Fisher Exact Test in par.**
All firms	.43 N= 488	.41 N=376	.02 (.68) N = 864
Firm Head Supports United Russia	.55 N= 150	.52 N= 110	.03 (.66) N= 260
Firm Head Does Not Support United Russia	.29 N = 230	.27 N = 176	.02 (.71) N = 406
Politically Connected	.55 N= 53	.67 N =51	.12 (.23) N = 104
Not Politically Connected	.41 N= 378	.40 N = 280	.01 (.81) N=658
Personally Connected	.65 N= 66	.67 N =60	.02 1.00 N = 126
Not Personally Connected	.38 N= 340	.34 N = 284	.04 (.26) N = 674

This table reports the percentage of firm managers who reported having made an investment in the last year.

Table 8. Placebo Test of Protest and Past Investment Patterns

	1 Pre-Protest Before 12/10/11	2 Post-Protest After 12/10/11	3 Difference between column 2 and 1 Fisher Exact Test in par.
All firms	.43 N= 752	.39 N=112	.04 (.65) N = 864
Firm Head Supports United Russia	.54 N= 228	.53 N= 32	.01 (.04) N= 260
Firm Head Does Not Support United Russia	.29 N = 354	.23 N = 52	.06 (.86) N = 406
Politically Connected	.62 N= 91	.54 N =13	.08 (.53) N = 104
Not Politically Connected	.40 N= 572	.40 N = 86	.00 (.15) N=658
Personally Connected	.66 N= 112	64 N =14	.02 (.13) N = 126
Not Personally Connected	.37 N= 590	.35 N = 84	.02 (.43) N = 674

This table reports the percentage of firm managers who reported having made an investment in the last year.

Finally, it is instructive to examine how economic agents in other sectors responded to these political shocks. For example, the Russian stock market which is dominated by large, politically influential companies in the natural resources and financial sectors saw a sharp decline in the weeks following the December 4th elections. The dollar based MSCI Russia Index, and international benchmark that includes stocks traded abroad fell by 13 percent between

December 2 and December 12. Given that many of the listed firms are on friendly terms with the Putin administration the decline in the market index is consistent with both the "uncertainty" and the "partisan' theories cited above. Yet, even within this group of Kremlin friendly countries listed in Russia, the losses were especially concentrated in firms with close ties to the Putin administration. For example, Novatek, a gas trading company headed the long time associate of President Putting, Gennady Timchenko, saw the largest decline in the week after the parliamentary elections.[6] Comparisons between the investment decisions of run of the mill Russian firms included in our survey and the small number of economic giants traded on the Russian stock market makes comparisons difficult. Yet, it is interesting to note the support for the partisan hypothesis reflected in our survey is also apparent on the Russian stock market.[7]

VI. Mechanism

Thus far, the analysis has documented a robust relationship between political shocks and reported plans for investment. Yet, it has not examined the mechanism by which these shocks may influence investment plans. This is not an easy task. One possible explanation consistent with the "uncertainty" argument suggests that political shocks influence investment plans by altering the time horizons of business owners. To assess this possibility, we analyzed responses to the following question. All respondents were asked: "When the shareholders and managers discuss their plans for development today, about what is the longest period for which they can make plans?" About 34 percent of respondents said less than a year, 41 percent said 1 to 3 years, 13 percent said 3 to 5 years, 7 percent said more than five years and 5 percent found it hard to answer. Little difference is found in the responses of those interviewed before and after the parliamentary elections (1.89 versus 1.96, $t = 1.25$).

These results are also not driven by a change in perception of the performance of state institutions. It may be that respondents witnessing the fraud in the elections were reminded or received new information about the capacity of state institutions. We asked respondents about their evaluations of the performance of 13 state institutions, including various courts, regulatory bodies, and executive and legislative officials. However, firm managers interviewed before and after the exhibit no difference in their assessments of the performance of state institutions.

A third possibility is that non-supporters of the government experience a "warm glow" following the poor showing of the government and the large demonstrations of December 10, 2011 that simply yields a more optimistic outlook across issues. Yet, the optimism of those non-supporters of the government is restricted to their investment plans. Non supporters of United Russia interviewed before and after these political shocks do not report differences in levels of

[6] See Douglas Busvine, (2011). "Russian Politics Hits 'Putin' Stocks." Reuters. December 13, 2011.

[7] Thanks to Maria Petrova for this insight.

corruption, problems with organized crime, or other measures of the business environment. The same holds for supporters of United Russia.

There are no direct measurements of expected anticipation of changes in policy in the survey, but this interpretation is consistent with the results found that support the partisan view of investment. That is, the electoral shock and the surprisingly large protests appear to have changed perceptions of regime supporters and non-supporters about the likelihood of a future change in policy.

VII. Caveats

One shortcoming in the analysis is that we ask respondents about their plans for future investment rather than about actual investments. We have no means to determine whether or not the respondent actually followed through on their investment plans. 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 future economic plans shortly after a political shock also has advantages. For example, 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. 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 how they feel about an event is while they are experiencing it.

It is also helpful to note that the responses do not seem to be influenced by non-response bias in the most relevant categories. The "don't know" responses to the investment plan question are equally distributed between pre-election and post-election groups (.08 and .11, $t = 1.3$) and between pre-protest and post-protest groups (.09 and .11). In addition, respondents were just as willing to report support for United Russia before and after the election (.39 versus .38, $t = .31$) and before and after the protest (.39 versus .37, $t = .29$).

These results are taken from one country at one point in time and examine only set of political shocks. Thus, leaping to broad generalizations is ill advised. Yet, this study offers the rare opportunity to tap directly the preferences of economic agents in real time as they make investments plans in the face of exogenous political shocks.

Finally, interpreting the impact of the December 10th protests on investment plan precisely is difficult given that this event occurred on the heels of December 4th election. Some respondents interviewed after the protests likely took into account outcome of the elections. We

control for this somewhat in the three-period analysis reported in the robustness checks, but separating the independent impact of the protests is a challenge.

VIII. Conclusion

By taking advantage of a natural experiment to estimate the impact of two political shocks on proposed plans for investment in contemporary Russia, this work offers insights into debates into important debates in political economy. First, it reiterates the importance of political ties for economic behavior at the level of the firm. Firms with close ties to the regime are more likely to report plans for investment both before and after these political shocks. Yet it also indicates that political shocks can reduce the value of these ties significantly.

Second, it finds that political shocks need not dampen investment and that the partisanship and political connections of firms are import predictors of their investment plans. Indeed, managers who did not support United Russia, had no experience working in government, and did not know their mayor or governor, significantly increased their investment plans in response to these electoral shocks which reflected badly on the incumbent government.

Third, it speaks to the importance of measuring the partisan preferences of economic agents directly rather than inferring them from property type or sector. Here we find that partisan identification influences economic behavior even controlling for firm and sector-level variables.

These results also generate an important normative result. Autocratic leaders often respond to political shocks by arguing that protests and other forms of opposition activity will hurt the economy. Yet, the evidence presented suggests that at least for this case political shocks did not hurt proposed plans for investment even controlling for a wide range of factors. These results provide one reason to be skeptical of the dire predictions for economic declines made by autocrats in the face of political instability.

References

Alesina, Alberto and Alan Rosenthal. 1995. *Partisan Politics, Divided Government and the Economy*. New York: Cambridge University Press.

Alt, James and Alex Chyrstal. 1983. *Political Economics*. Berkeley: University of California Press.

Barry Ellen. "Tens of Thousands Protest Against Putin in Moscow." *The New York Times*. December 11, 2011, page A1 (New York edition). http://www.nytimes.com/2011/12/11/world/europe/thousands-protest-in-moscow-russia-in-defiance-of-putin.html

Belanovsky Sergei & Mikhail Dmitriev. 2011. "Political Crisis in Russia and How it May Develop." Moscow: Center for Strategic Research, March 2011.

Belanovsky Sergei, Mikhail Dmitriev, Svetlana Miskhina, Tatyana Omelchuk. 2011. "Socio-Economic Change and Political Transformation in Russia." Moscow: Center for Strategic Research, November 7th, 2011.

Bernhard, William and David Leblang. 2006. *Democratic Processes and Financial Markets: Pricing Politics*. Cambridge: Cambridge University Press.

-- 2002. "Polls and Pounds: Political Expectations and Exchange Rate Volatility in Britain." *Quarterly Journal of Political Science*. 1:1. 26-61.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences*. New York: Cambridge University Press.

Durnev, Art. 2010. "Real Effects of Political Uncertainty: Elections and Investment Sensitivity to Stock Prices." Working paper.

Elder, Miriam. "Russia election descends into violence as riot police clash with protesters." The Guardian, Monday 5 December 2011. H ttp://www.guardian.co.uk/world/2011/dec/05/russia-election-violence-arrests-moscow

Enikolopov Ruben, Vasily Korovkin, Maria Petrova, Konstantin Sonin, and Alexei Zakharov 2012. "Field experiment Estimate of Electoral Fraud in Russian Parliamentary Elections. "Proceedings of the National Academy of Sciences of the United States of America, December 2012. http://www.pnas.org/content/early/2012/12/19/1206770110.full.pdf

Faccio, Mario. 2006. “Politically Connected Firms.” *American Economic Review* 96: 369-386.

Fisman, Ray. 2001. “Estimating the Value of Political Connections.” *American Economic Review* 91:1. 1095-1102.

Franzese, Robert. 2002. “Electoral and Partisan Cycles in Economic Policies and Outcomes.” *American Journal of Political Science*. 44:3, 449-468.

Gilbert, Daniel. 2008. *Stumbling on Happiness*. New York: Vintage Press.

Goriaev, Alexei and Konstantin Sonin. 2005. “Is Political Risk Company-Specific: The Market Side of the YUKOS Affair.” New Economics School, Moscow, ms.

Julio, Brandon and Yook, Youngsook. 2012. “Political Uncertainty and Corporate Investment Cycles.” *Journal of Finance* 67:1, 45-83.

Kuran, Timur. 1991. “Now Out of Never: The Element of Surprise in the Revolutions of 1989.” *World Politics*.

Reuter, Ora John and Graeme Robertson. forthcoming. “Sub-national Appointments in Authoritarian Regimes: Evidence from Russian Gubernatorial Elections.” *Journal of Politics.*

Roth, Andrew. 2011. “Slowly but Surely: The Duma Elections Will Promise No Great Surprises, But Analysts Are Taking the Long View.” Russia Profile. December 1.

Shpilkin, Sergei. 2009. “Statistical Examination of the Results of Russian Elections in 2007.” Troitsky Variant. № 40, с. 2. (in Russian) http://trv-science.ru/2009/10/27/statisticheskoe-issledovanie-rezultatov-rossijskix-vyborov-2007-2009-gg/

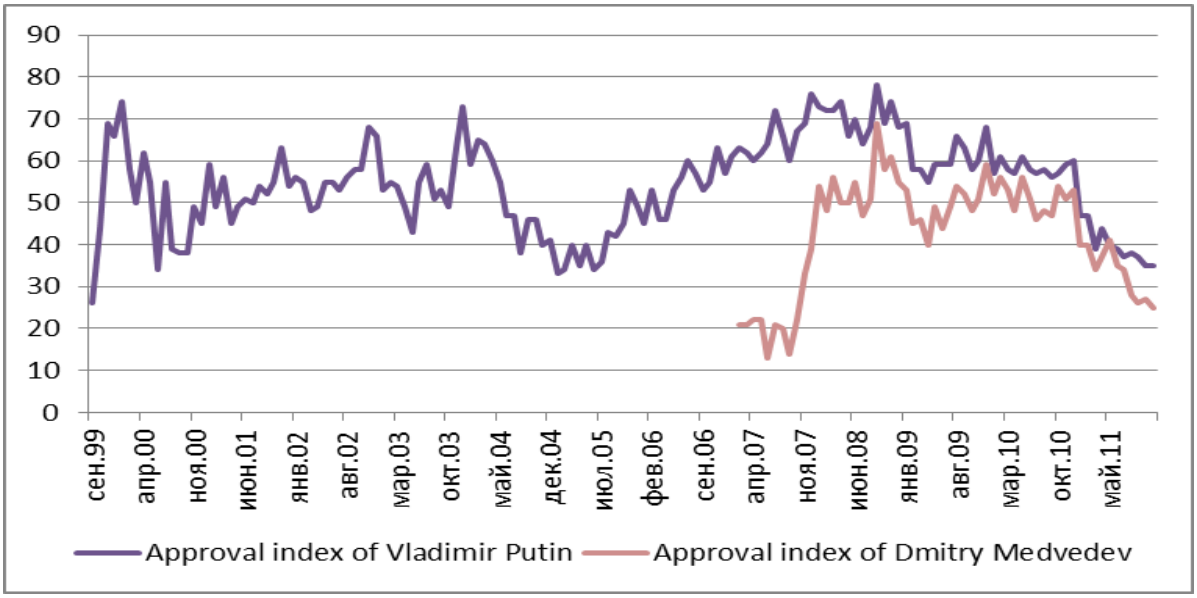
Shuster Simon. “Occupy the Kremlin: Russia's Election Lets Loose Public Rage. Time. December 5th, 2011. http://www.time.com/time/world/article/0,8599,2101569,00.html#ixzz2JCgJpyx1

Tucker, Joshua. 2007. “Enough! Electoral Fraud, Collective Action and Post-Communist Colored Revolutions.” Perspectives on Politics. 5:3, 535-551.

Vasilyeva, Nataliya. 2011. “Russian Independent Election Watchdog Found Guilty.” Associated Press. December 2.

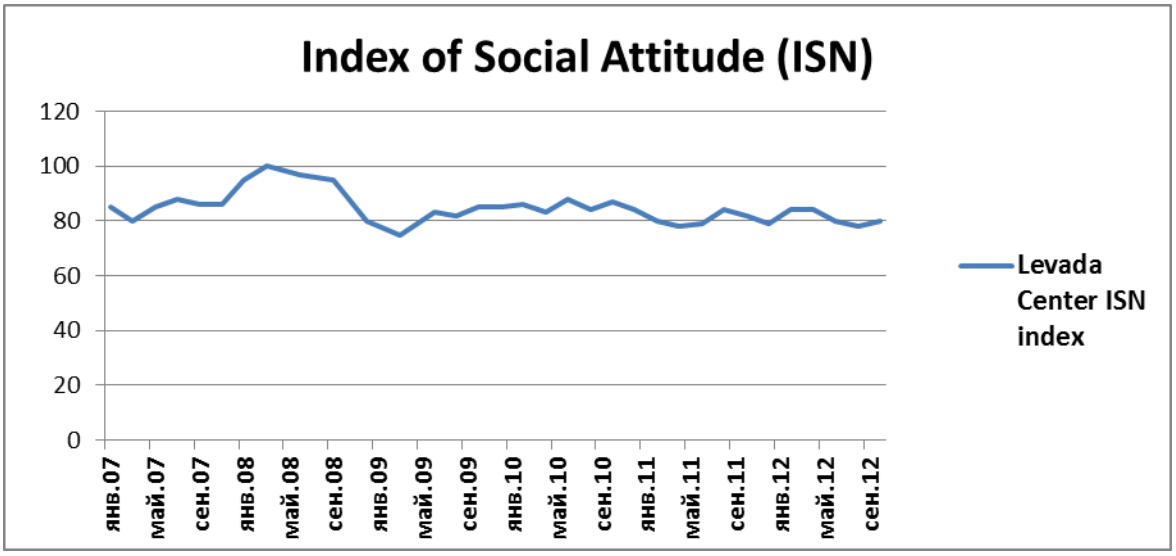
Appendix I.

Approval rates of Vladimir Putin and Dmitry Medvedev from regular All-Russian surveys carried out by the Levada-Center



* The Chart gives data for the period from September 1999 till November 2011. Index values were calculated as difference between the share of respondents who had approved activities of Mr. Putin and Mr. Medvedev, respectively, in the past month, and the share of respondents who had disapproved their activities.

Appendix II



This chart begins with May 2007 and ends with September 2012 and represents the sum total of a range of questions measuring attitudes about the direction of the country.[8]

[8] For details, see http://www.levada.ru/obnovlennaya-metodika-izmereniya-indeksa-sotsialnykh-nastroenii-isn Their report "Political Crisis in Russia and How it May Develop" became more famous after the protests than before.

Appendix III. Balance Tests for Election

Partisanship and Political Ties

	1 Pre-Election Before 12/4/11	2 Post-Election After 12/4/11	3 Difference between column 2 and 1 T-test in par.
Firm Head Supports United Russia	.39 N= 400	.38 N= 302	.01 (.31)
Politically Connected	.13 N = 445	.16 N = 347	.03 (1.40)
Personally Connected	.15 N= 480	.18 N =364	.03 (1.19)
Age of the Director	44.3 N = 510	44.4 N = 390	.01 (.12)
Higher education	.88 N= 494	.91 N= 379	.03 (1.59)
Tenure with firm	17.1 N = 414	18.0 N= 325	.09 (1.12)

Sector and Firm Characteristics

	1 **Pre-Election** **Before 12/4/11**	**2** **Post-Election** **After 12/4/11**	**3** **Difference between column 2 and 1** **T-test in par.**
Number of Employees	**224**	**290**	**66 (1.61)**
Retail Trade	**.18**	**.12**	**.06 (2.04)**
Wholesale Trade	.11	.10	.01 (.34)
Energy	.01	.01	.00 (.13)
Heavy Industry	.16	.13	.03 (1.21)
Light Industry	.19	.21	.02 (.76)
Construction	.11	.11	.00 (.06)
Banks	.05	.09	.00 (.06)
Transport	.05	.05	.00 (.18)
Insurance	.02	.05	.03 (2.80)
Real Estate	.06	.09	.03 (1.73)
Forestry	.03	.03	.00 (.45)

Region

Regions	Pre-Election Before 12/4/11	Post-Election After 12/4/11	Difference T-test in par.
Moscow	.08	.06	.02 (.97)
Tula	.07	.09	.01 (.1.02)
Smolensk	.06	.06	.00 (.19)
Voronezh	.08	.07	.01 (.42)
Kursk	.05	.06	.01 (.94)
Nizhnii Novgorod	.07	.06	.01 (.16)
Novgorod	.06	.07	.01 (.64)
Ulyanovsk	.07	.06	.01 (.43)
Rostov	.05	.07	.00 (1.24)
Ufa	.06	.06	.00 (.19)
Ekaterinburg	.07	.06	.01 (.54)
Omsk	.07	.06	.01 (.16)
Kemerovo	.08	.07	.01 (.17)
Irkutsk	.07	.05	.02 (1.28)
Khabarovsk	.07	.06	.01 (.44)

Firm Characteristics

	Pre-Election	Post Election	Difference (t-stat)
State Owned	.04	.03	.01 (.50)
Foreign Ownership	.06	.06	.00 (.07)
Sell to the State	.45	.44	.01 (.17)
Lack of credit as problem	2.6	2.5	.01 (.96)
Sales change since 2007	111.9	111.7	.2 (.03)
Received Government Support	.47	.41	.06 (.88)
Govt Interference as problem	2.18	2.07	.09 (1.24)
Competition as problem	3.58	3.48	.12 (1.6)
Unstable Legislation As problem	2.94	2.92	.02 (.23)
Lack of managers	2.71	2.73	.21 (.23)
Lack of skilled workers	2.87	2.84	.03 (.29)

Appendix IV: Balance Tests for Protest

Partisanship and Political Ties

	1 Pre-Protest Before 12/4/11	2 Post-Protest After 12/4/11	3 Difference between column 2 and 1 T-test in par.
Firm Head Supports United Russia	.39 N= 611	.37 N= 91	.02 (.31)
Politically Connected	.14 N = 689	.13 N = 104	.01 (.21)
Personally Connected	.16 N= 738	.16 N =106	.00 (.26)
Age of the Director	44.3 N = 781	44.9 N = 119	.04 (.69)
Higher Education	.89 N= 755	.90 N= 118	.01 (.27)
Tenure with firm	17.3 N = 637	19.1 N= 102	1.8 (1.63)

Sector

	1 **Pre-Protest** **Before 12/4/11**	**2** **Post-Protest** **After 12/4/11**	**3** **Difference between column 2 and 1** **T-test in par.**
Retail Trade	**.17**	**.06**	**.11 (3.19)**
Wholesale Trade	.11	.10	.01 (.39)
Energy	.01	.01	.00 (.13)
Heavy Industry	.15	.13	.02 (.48)
Light Industry	.19	.25	.06 (1.51)
Transport	.05	.07	.02 (.65)
Construction	.11	.10	.01 (.30)
Banks	.02	.04	.00 (2.10)
Insurance	.03	.05	.02 (1.2)
Real Estate	.07	.10	.03 (1.54)
Forestry	.03	.03	.00 (.45)
Investment Company	.01	.03	.02 (1.71)

Firm Characteristics

	1 Pre-Protest Before 12/10/11	2 Post-Protest After 12/10/11	3 Difference between column 2 and 1 T-test in par.
State Owned	.04	.02	.02 (1.24)
Foreign Ownership	.06	.05	.01 (.07)
Sell to the state	.45	.44	.01 (.17)
Size (#of employees)	255	237	22 (.03)
Lack of Credit as a problem	2.6	2.6	0 (.34)
Sales change since 2007	112.3	108.0	4.3 (.60)
Total Government Support	.45	.41	.04 (.42)
Govt Interference as problem	2.14	2.09	.05 (.34)
Competition as problem	3.52	3.48	.12 (.30)
Unstable Legislation As problem	2.92	3.07	.15 (1.10)
Lack of managers	2.73	2.86	.13 (1.30)
Lack of skilled workers	2.87	2.78	.09 (.76)

Region

	Pre-Protest Before 12/10/11	Post-Protest After 12/10/11	Difference T-test in par.
Moscow	.07	.05	.02 (1.03)
Tula	.08	.07	.01 (.60)
Smolensk	.06	.05	.01 (.67)
Voronezh	.07	.07	.00 (.37)
Kursk	.05	.07	.02 (.59)
Nizhnii Novgorod	.07	.05	.02 (.81)
Novgorod	.07	.07	.00 (.36)
Ulyanovsk	.07	.06	.01 (.42)
Rostov	.06	.09	.03 (1.46)
Ufa	.07	.04	.03 (1.47)
Ekaterinburg	.07	.08	.01 (.70)
Omsk	.06	.09	.03 (1.15)
Kemerovo	.08	.07	.01 (.19)
Irkutsk	.06	.07	.01(.35)
Khabarovsk	.06	.09	.03 (1.15)