Supplementary Information for "Electoral Protests and Political Attitudes Under Electoral Authoritarianism"

SI 1: Summary and descriptive statistics

A Survey items

Table A1: **Description of the survey variables**

	Source/ Description/ Question	Range/ Answer
Share protesters' demands	**(White – c29)** Do you share the demands of the protestors? (**RES –v30**) What is your attitude to these demands advanced at demonstrations taking place during the last Duma and presidential elections?	*Continuous:* 1: Fully Disagree; 4: Fully Agree *Dummy:* 1: Agrees 0: Disagrees
Unfair duma	(**White – c4a**) Thinking about the most recent parliamentary elections to the State Duma, please evaluate on a five-point scale how honestly and fairly they were conducted. (**RES –v27**) Speaking of the recent elections to the Duma, how fair do you think were these elections on a scale from 1 to 5?	1: Fair 5: Unfair
Protest item	(**Protest Event Dataset)** Counts the frequency of rallies taking place in a respondent's region up to the day of their interview	0: One regional protest event prior to a respondent's interview - 88 protests
Protesters	(**Protest Event Dataset)** We present this measure only for respondents interviewed in January 2012. It captures the average number of rally participants taking to streets in a region up to the day of a respondent's interview	0- 11 413 protesters
Repression	(**Protest Event Dataset)** Police-led violence used during a political protest event taking place up to the day of any respondent's interview	1: Repression used 0: No repression
Watches News	(**White – f3.1**) How often do you take an interest in political news on television? (**RES v5**) Do you ever watch daily political news programs (on television)?	1: Watches news 0: Does not watch news/ hardly ever does
Employed	(**White –g12**) What is your primary occupation? (**RES -139**) Which answer best describes your employment status at present time?	1: Employed 0: Not Employed
Education	(**White –g3 & RES -v120**) What is your education?	1: Lower 2: Secondary 3: Higher
Nationality	(**White –g7**) What is your nationality? (**RES –v121**) Who do you consider yourself to be by nationality?	1: Russian 0: Non-Russian
Gender	Respondent's sex	1: Male 0: Female
Age	Respondents' age	18-92

Protested in the past	(**White – b25 e**) In the past two years, have you taken part in a demonstration, picket, march or protest meeting? (**RES v105**) Have you ever in your life participated in any kind of street demonstration, regardless of whether this was about your local problems or problems of the country as a whole?	1: Yes 0: No
Household Economic Circumstances	(**White – a3**) Economic Position of the Family – past 12 months (**RES –v128**) How has your family's material situation changed over the past 12 months?	1: Improved 2: Same 3: Deteriorated
Duma Vote	(**White – c13**) Which party did you vote for in the elections of the State Duma on December 4 2011? (**RES**) 80. Did you cast a ballot in the election to the state duma, on December 4th, 2011? 81. Would you mind saying for which party or bloc you voted?	1: Voted for UR 0: Did not vote for UR
Urban/ Rural	(**White – y1_5 & RES - status**) Settlement Status	1: Urban 0: Rural

Notes Regarding the Surveys

The empirical analysis relies on the combination of items from two different, nationally representative public opinion surveys. The first survey was administered in January, and the second in April/May 2012. Where different coding schemes applied in the two questionnaires, the variables were recoded for consistency. Overall, however, the demographic variables we control for in the analysis are asked in a straightforward way. The question regarding electoral falsifications, is also repeated almost verbatim. We provide details of our coding scheme below.

Share Demands

The questions regarding awareness of, and attitudes towards, the demands of the protesters were less consistent across the two surveys, in that the RES informed respondents that "during the protests elections were called dishonest and unfair, and demands were made for new, early, honest elections," yet similar enough to allow meaningful comparisons. Most importantly, both surveys allow respondents to state (i) whether they are aware of the unfolding events first, and (ii) whether they agree with the demands of the opposition next. In the White Survey, only respondents who know about the meetings and protests that took place in Moscow and other Russian cities are asked whether they know about or share their demands. If respondents admit to "knowing anything, or almost anything" refuse, or find it difficult to answer the question on whether they know about the protest events, numerators

are asked to proceed to the next set of questions. In other words, for the Stephen White survey, only respondents who know about the meetings and the general demands of the protesters are asked whether they agree with them. This is also the case for the Russian Election Study Respondents. We provide the exact question wordings below:

From the survey led by Stephen White:

c27: How much do you know about the meetings and protests that took place in Moscow and other Russian cities after the elections to the State Duma? 1: I know a lot – I follow the news attentively; 2: I know rather a lot; 3: I know a little, but not much; 4: I don't know anything, or almost anything (Go to question C30); 5: (Hard to Say) (Go to question C30) 6: (Refused to Answer) (Go to question C30).[1]

c28: Do you know anything about the general demands of the protestors? 1: I know a lot – I follow the news attentively; 2: I know rather a lot; 3: I know a little, but not much; 4: I don't know anything, or almost anything (Go to question C30); 5: (Hard to Say) (Go to question C30); 6: (Refused to Answer) (Go to question C30)

c29**:** Do you share the demands of the protestors? 1: I totally share their demands; 2: I somewhat share their demands; 3: I somewhat disagree with their demands; 4: I completely disagree with their demands; (We drop response categories 5 (Hard to Say) and 6: (Refused to Answer)). The analysis presented in Table 1 of the manuscript relies on this survey item. Only respondents who provide response categories 1-4 are included in the analysis.

From the Russian Election Study (RES):

V30. During the last State Duma and presidential elections, a fairly large number of street demonstrations took place during which these elections were called dishonest and unfair, and demands were made for new, early, honest elections. What is your attitude to these demands advanced at these demonstrations? 1: Fully agree; 2: tend to agree; 3: tend not to agree; 4: completely disagree; 5: Don't know about these demonstrations; 6: Don't know about these demands; 7: Hard to say; 8: Refused.

The analysis presented in the manuscript relies on the combination from survey items c29 and v30. We drop respondents who do not know about the protesters and their demands. As such, our main dependent variable ranges on a scale from 1 to 4, with higher values denoting greater support for the protesters and their demands.

[1] The analysis presented in Section 3A of the SI relies on this item. Respondents who don't know about the meetings and protests are assigned a value of 1. Respondents who offer response categories 1-3 are assigned a value of 0.

We also probe robustness, using an item that taps into respondents' evaluations of electoral falsifications. Across the two surveys, this question is posed as follows:

Unfair Duma – results presented in the Appendix:

The falsifications question in the Stephen White Survey is posed as follows: **"**c4a. In some countries people are sure that elections are conducted honestly and fairly. In other countries people are sure that elections are not fairly conducted. Thinking about the most recent parliamentary elections to the State Duma, please evaluate on a five-point scale how honestly and fairly they were conducted. 1: Elections were conducted dishonestly and unfairly 5: Elections were conducted fairly and honestly 6: (Hard to Say) 7: Refused to Answer**."** The same question appears as follows in the Russian Election Study survey: "q27: In some countries, people believe their elections are conducted fairly. In other countries, people believe that their elections are conducted unfairly. […] And, if we talk about elections to the State Duma this past December, how fair in your opinion were these elections? 1: Last Duma Elections Were Fair; 5: Last Duma Elections Were Unfair; 7: Hard to Say; 8: Refusal." The two variables are recoded, and subsequently combined as follows:

1: Elections Were Conducted Fairly,

5: Elections were Conducted Unfairly,

Don't Know, Hard to Say, No Answer 98/99=[2].

B Protests and Repression

Protest events: Information on protest events is sourced from *namarsh.ru*. Electoral or political protests mainly include anti-government protests. Protests may include other issues, but criticism of regime/ government policy/ politics or demands for the protection of political rights form the crux of the event. These protests are often organized by the political opposition, though they are not exclusive to one particular party or civic movement; they include events like the March of the Millions, a mass civic march organized by the political opposition, and *Strategiya*-31 civic meetings organized in support of the right to peaceful assembly. Both movements were particularly active during the 2011-2012 protest movement. Anti-government protests organized by nationalist activists (excluding those sponsored by the government) are also coded as political protests; protests challenging electoral fraud, as well

[2] We replicate the analysis by placing Don't Know/ Hard to tell in the middle of the distribution, that is, by placing them in the third category of the "unfairness" variable which ranges on a 5-point scale. The results of the statistical analysis remain consistent.

as protests against local and regional instances of electoral fraud; protests featuring calls for resignation of elected or appointed officials at all levels of government (regional and local politicians and other public officials); protests against political repression, such as rallies calling for the release of political prisoners; and protests organized by the group Memorial in support of political activists and against police abuse and repression of political activists. Because we create the dataset ourselves we are confident that the protest events considered only include anti-regime political protest events that are directly or indirectly related to electoral outcomes at the local and federal level, political abuses and the arrest of protest participants during this period. This is a distinct advantage of our data collection strategy. Protest events that take place on the same date but are organised in different regions, or even in different squares in the same region, and led by different groups are coded as separate entries.[3] We are fully aware that the *namarsh* source does not contain data on each and every protest event considering the over- and under-reporting of activism in particular regions. Together with additional sources that we also employ, namely the IKD protest data, they provide a reasonably reliable picture of spatial and temporal trends in activism across Russia.

Figure B1 below gives the distribution of the protest item as it appears in the paper. The top figures offer the distribution of the protest item before and after log transformation for respondents interviewed in January 2012. The lower part of the graph offers the distribution of the protest item before and after log transformation for respondents interviewed in both January 2012, and April/May 2012. Figure B2 gives the distribution of the protesters' indicators used in the analysis. In the manuscript and appendix, we probe robustness using pre, and post-logarithmically transformed iterations of the protest frequency and size indicators. We also check robustness using models that consider respondents in areas with and without protest events. We finally run analysis restricting the sample to respondents in areas with protest events alone.

[3] Namarsh.ru reports one of the entries (protest in St. Petersburg and Tomsk) as taking place on both December 28th and January 28th. While we have been able to find alternative resources reporting on the events in St Petersburg on December 28th, we have not found an additional report of the event in Tomsk. For this reason, we omit this event from all the analyses we run. Yet, results are not sensitive to this choice. In the protest-event dataset uploaded on Dataverse, we have marked this entry with an asterix.

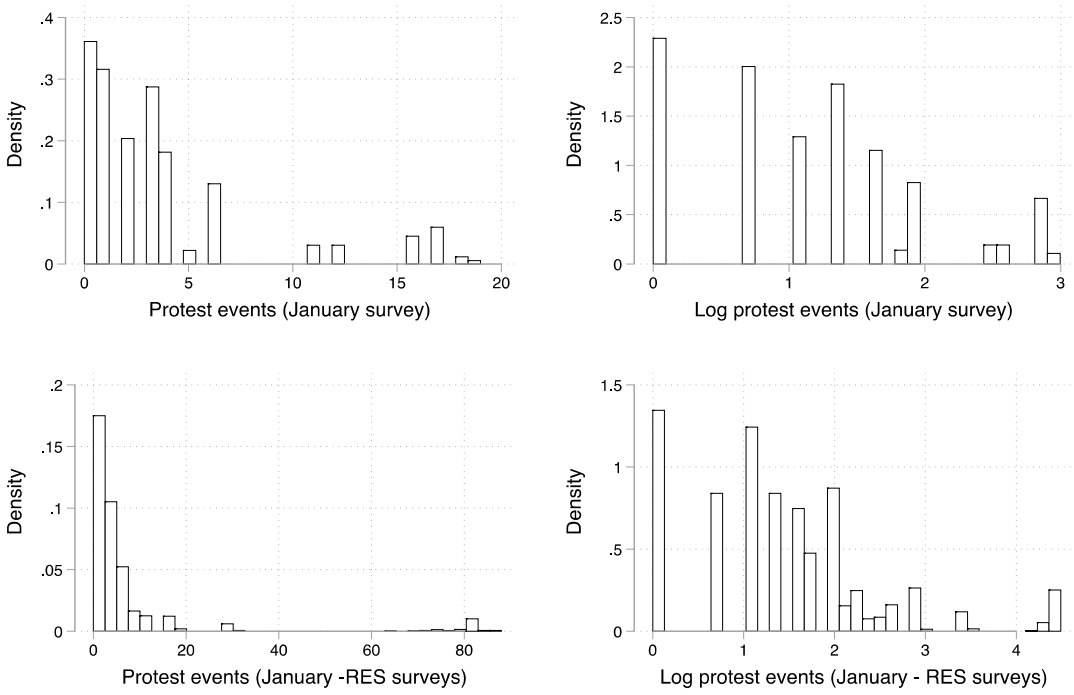

Figure B1: **Distribution of the protest events indicators used in the manuscript**.

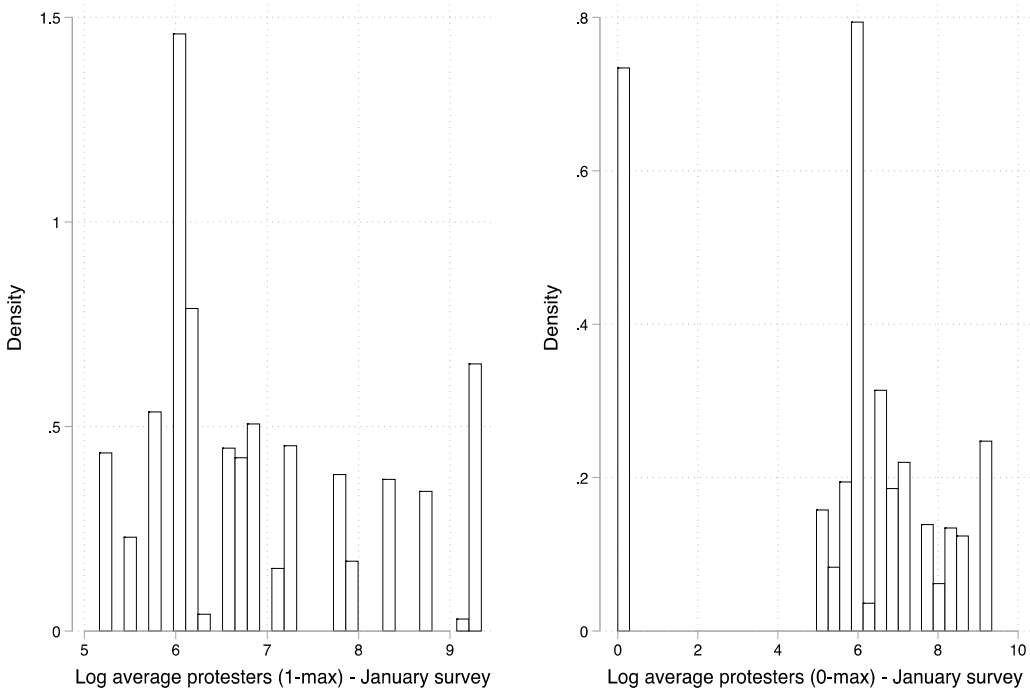

Figure B2: **Distribution of the protest size indicators used in Tables 1&2 of the manuscript (January survey only)**

Repression: The repression indicator captures attempts by the public authorities, police or pro-government groups to disrupt a protest and carry out repressive activities, including arrests of protesting activists. Active disruption implies that we do not simply record a repression event when police are present at an event observing the participants. For repression to occur, protesters have to be disrupted either through forced dispersal, physical attacks or arrest. The dataset also includes a "pre-emptive repression" variable, which captures whether protest events are being thwarted by police before they take place. It is often the case for example that one or several activists gather in a square in anticipation of others to join, but the OMON, or police forces interfere before others join-in. One could plausibly assume that these protests were less likely to have been authorized. The correlation between this measure and the variable that captures active use of violence against protesters during the period covered in the data is positive, but small (r=.23, 0.01). In the early months of the protest movement, repression against protesters was used rarely. We estimate for example, that the percentage of violently repressed protest events dropped from approximately 30% in December 2011 to around 10% in January 2012. Yet, the use of repression against activists taking to the streets grew in the spring months. In the spring months of 2012, approximately one in every three protests was subject to some form of violent repression by the police forces. The coverage of violent, or disruptive, protest events in state-controlled media, also increased over-time. Drawing on evidence from the coverage of protests in state-controlled newspapers and TV stations during this period, Figures B3 below shows precisely how the coverage of police-led arrests of protesters, and the use of violence in state-controlled media varied during this period.

Figure B3 relies on the coverage of protest stories across the following state-controlled newspapers *Izvestiya (dataset identifier: 2573 and 74); Komsomolskaya Pravda (id: 464 and 10690); Rossiyskaya Gazeta (id: 145)* and TV-channels: *Pervyi Kanal (id: 1178 and 21141), Rossiya 1 (code 9830)* and NTV (id:8268 and 8264). Using the total sample of stories that contain the word protests, i.e. (протест*) published in these media outlets and downloaded from the online database *Integrum*, vertical bars count monthly references to "arrests" (арест*/ задерж*), while the dotted line counts monthly references to the "OMON," (омон*) Russia's special police forces. The corpus of downloaded stories on which Figure B3 relies has been made available on the Dataverse page for this article.[4]

[4] We are grateful to Kohei Watanabe for assistance with collecting the corpus of stories.

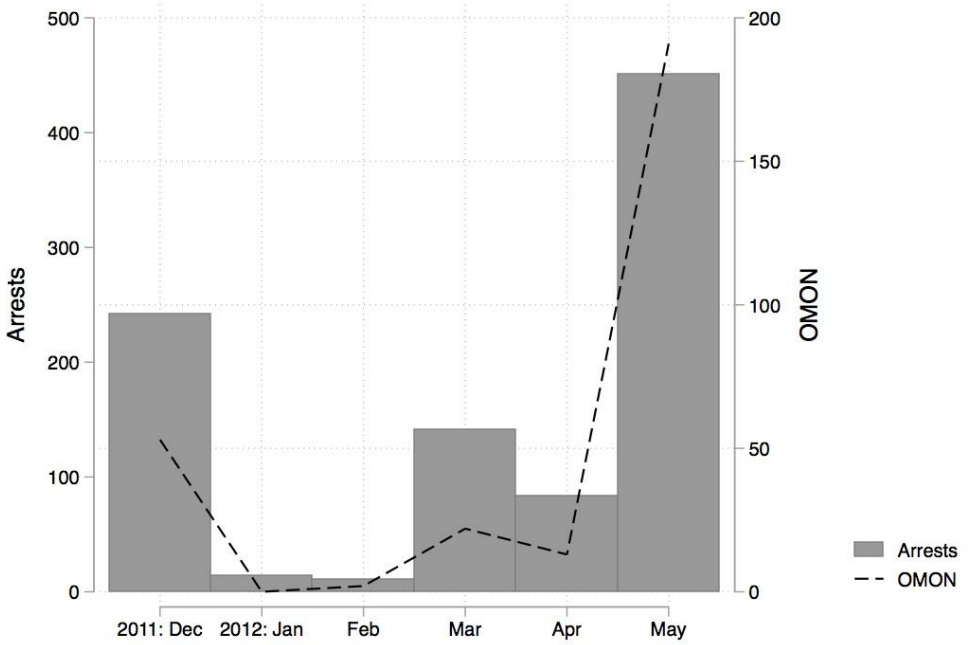

Figure B3: **Coverage of violent protests and arrests across state-controlled media.**

C Regional democracy indicators

Indicators of regional democratic performance come from the Petrov and Titkov index of regional democracy in Russia. This index is based on expert ratings of the following: (1) *Regional political organization*: it evaluates the balance of powers between the executive and the legislative branches, independence of the courts and of law enforcement agencies, violations of citizens' rights. (2) *Openness of regional political life* and the transparency of regional politics. (3) The *democratic nature of elections* at all levels: free and fair elections, electoral competition, manipulations and restrictions on active and passive electoral rights. (4) *Political pluralism*: the stability of the party system, representation of parties in the regional parliaments, presence of political coalitions. (5) Mass media independence from federal and regional control. (6) *Corruption*: evaluating the link between economic and political elites, corruption scandals. (7) *Economic liberalization*: regional law and law enforcement, conflicts regarding property rights. (8) *Civil society*: freedom of NGOs,

referenda, public protest activity. (9) *Elites*: the composition and pluralism of elites and mechanisms of rotation of leaders, pluralism of elites. (10) *Municipal autonomy*: presence of elected municipal government institutions, their powers. A five- point scale was used to assess each region in each of the ten categories, with "the higher the number, the more democracy". The average democracy rating is calculated by adding up individual ratings in each of the ten categories. The highest possible score is fifty. (Data and discussion of the indices are available from: *Sotsial'nyy atlas rossiyskikh regionov: Integral'nye indeksy*: http://atlas.socpol.ru/indexes/index_democr.shtml#methods). In the analysis presented in the manuscript, we rely on the most recent scores of regional democratic performance. The indicators we draw on cover the period 2006-2010.

SI 2: Full model specifications and robustness checks

A. Evidence from the first weeks of the protests: Robustness checks for Table 1 in the manuscript

Table 2A1 probes robustness using alternative specifications of the protest item:

- Model 1, uses the binary indicator of protests. Results are consistent.
- Models 2 and 3 use two non-logarithmically transformed indicators of protest events and participants. Results are consistent.
- Models 4 and 5 only consider respondents in places with protest events prior to their interview. Results are consistent.

Table 2A2 probes robustness using alternative model specifications:[5]

- Models 1 and 2 reports coefficients from ordered logistic models. Results are consistent.
- Models 3 and 4 report coefficients from probit models. Results are consistent.
- Models 5 and 6 report coefficients from OLS models that cluster standard errors by districts, while Models 7 and 8 cluster standard errors by settlements. Results are consistent.

Table 2A3 shows that the results are robust when we drop Moscow and St Petersburg from the analysis. Models 1-3 report coefficients from OLS models that cluster standard errors by regions. Models 4-6 report coefficients from Ologit models that also cluster standard errors by regions.

- Models 1 and 4 use the binary indicator of protests
- Model 2 and 5 use the log indicator of protest events
- Model 3 and 6 use the log indicator of protest participants.

[5] When relying on evidence from the early weeks of the protest movement, we do not report results from regional fixed effects models. This is because the regional clusters in our sample have as little as 18 or 20 observations. In other words, when we draw on evidence from the January 2012 survey alone, we have a small number of observations which does not justify the use of regional fixed effects models. The coefficients on the protest-event variables, however, do not change if we run analysis with regional fixed effects. In OLS models with robust standard errors and regional fixed effects, we see that a 10 percent increase in protests will increase support for the protesters by approximately .5. This change is statistically significant at the 5 percent level. The binary protest coefficient in similar models is 1.25, and statistically significant at the 1 percent level. In analyses that rely on the combination of the January 2012 and RES surveys, regional fixed effects models are reported consistently.

Table 2A1: **Alternative specifications of the protest item**

	(1)	(2)	(3)	(4)	(5)
Protest dummy	0.36***				
	(0.08)				
Events (non-log)		0.03***			
		(0.01)			
Participants (no-log)			0.00***		
			(0.00)		
Log events (1-max)				0.11***	
				(0.03)	
Log participants (1-max)					0.10***
					(0.03)
Watches TV	0.05	0.17	0.21	-0.28**	-0.20*
	(0.18)	(0.18)	(0.18)	(0.12)	(0.12)
Protested past	0.50***	0.52***	0.49***	0.45***	0.40***
	(0.12)	(0.12)	(0.12)	(0.13)	(0.13)
Education	0.03	0.02	0.03	0.03	0.04
	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)
Male	0.08	0.07	0.08	0.11*	0.11
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Age	0.00*	0.00*	0.00*	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.03	0.05	0.05	-0.00	-0.01
	(0.09)	(0.10)	(0.10)	(0.10)	(0.11)
Urban	0.01	-0.05	-0.04	-0.01	-0.01
	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)
UR voter	-0.78***	-0.80***	-0.79***	-0.80***	-0.80***
	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)
Pocketbook worse	0.06	0.08*	0.08*	0.09*	0.11**
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
Employed	-0.06	-0.05	-0.05	-0.09	-0.09
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Media_indepv2	-0.08*	-0.06	-0.04	-0.09**	-0.12***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Constant	2.62***	2.61***	2.51***	3.19***	2.63***
	(0.29)	(0.29)	(0.29)	(0.29)	(0.35)
Observations	850	850	850	666	666
R-squared	0.19	0.19	0.18	0.21	0.22

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Source: 2012 January survey and protest-event dataset.

Table 2A2: **Alternative model specifications**

	Ologit models		Probit models		OLS, SE clustered by districts		OLS, SE clustered by settlements	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Events (log)	0.45***		0.35***		0.20***		0.20***	
	(0.09)		(0.06)		(0.06)		(0.06)	
People (log)		0.15***		0.10***		0.06***		0.06***
		(0.03)		(0.02)		(0.02)		(0.02)
Watches TV	0.21	0.20	0.10	0.06	0.12	0.11	0.12	0.11
	(0.39)	(0.38)	(0.28)	(0.28)	(0.24)	(0.25)	(0.24)	(0.25)
Protested	1.32***	1.23***	0.82**	0.69*	0.52***	0.48***	0.52***	0.48***
	(0.40)	(0.39)	(0.37)	(0.38)	(0.12)	(0.11)	(0.12)	(0.11)
Education	0.05	0.06	0.05	0.05	0.02	0.02	0.02	0.02
	(0.10)	(0.10)	(0.08)	(0.08)	(0.05)	(0.05)	(0.05)	(0.05)
Male	0.20	0.19	0.03	0.04	0.08	0.07	0.08	0.07
	(0.14)	(0.14)	(0.10)	(0.10)	(0.06)	(0.06)	(0.06)	(0.06)
Age	0.01**	0.01**	0.01	0.00	0.00*	0.00*	0.00*	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.22	0.18	0.08	0.05	0.05	0.03	0.05	0.03
	(0.22)	(0.22)	(0.19)	(0.19)	(0.08)	(0.08)	(0.08)	(0.08)
Urban	-0.09	-0.04	-0.12	-0.07	-0.04	-0.01	-0.04	-0.01
	(0.16)	(0.16)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.10)
UR voter	-1.7***	-1.7***	-0.9***	-0.9***	-0.8***	-0.8***	-0.80***	-0.79***
	(0.16)	(0.16)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Pocketbook	0.18*	0.19*	0.12	0.13*	0.08	0.08	0.08	0.08
	(0.10)	(0.10)	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)	(0.06)
Employed	-0.09	-0.09	-0.03	-0.03	-0.05	-0.05	-0.05	-0.05
	(0.16)	(0.16)	(0.11)	(0.12)	(0.07)	(0.07)	(0.07)	(0.07)
Media	-0.25**	-0.3***	-0.06	-0.10	-0.08	-0.11*	-0.08	-0.11
	(0.10)	(0.11)	(0.07)	(0.07)	(0.06)	(0.06)	(0.07)	(0.07)
Constant	-1.8***	-1.7***	0.04	0.09	2.64***	2.63***	2.64***	850
	(0.67)	(0.65)	(0.48)	(0.48)	(0.37)	(0.36)	(0.39)	(0.38)
Observations	850	850	850	850	850	850	850	850

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Source: 2012 January survey and protest-event dataset.

Table 2A3: **We probe robustness while excluding Moscow and St Petersburg from the analysis.**

	OLS models			OLogit models		
	(1)	(2)	(3)	(4)	(5)	(6)
Protest dummy	0.32***			0.75***		
	(0.08)			(0.20)		
Log events		0.22***			0.54***	
		(0.05)			(0.13)	
Log protesters			0.06***			0.13***
			(0.01)			(0.03)
Watches news	0.45*	0.42*	0.46**	0.93*	0.86	0.98**
	(0.24)	(0.25)	(0.23)	(0.52)	(0.56)	(0.50)
Protested before	0.51***	0.54***	0.48***	1.31***	1.38***	1.26***
	(0.14)	(0.14)	(0.14)	(0.44)	(0.44)	(0.45)
Education	0.02	0.03	0.02	0.06	0.07	0.06
	(0.05)	(0.05)	(0.05)	(0.11)	(0.11)	(0.11)
Male	0.14**	0.14**	0.14**	0.33**	0.34**	0.33**
	(0.06)	(0.06)	(0.06)	(0.15)	(0.15)	(0.15)
Age	0.00	0.00	0.00	0.01	0.01	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.00	0.02	0.00	0.10	0.14	0.10
	(0.11)	(0.10)	(0.10)	(0.24)	(0.24)	(0.24)
UR voter	-0.82***	-0.82***	-0.83***	-1.73***	-1.73***	-1.75***
	(0.08)	(0.08)	(0.08)	(0.17)	(0.17)	(0.17)
Pocketbook worse	0.13***	0.13***	0.14***	0.27***	0.29***	0.31***
	(0.05)	(0.05)	(0.05)	(0.10)	(0.10)	(0.10)
Employed	-0.09	-0.08	-0.08	-0.18	-0.17	-0.17
	(0.08)	(0.08)	(0.08)	(0.17)	(0.17)	(0.17)
Media	-0.08*	-0.06	-0.10**	-0.24**	-0.20*	-0.29***
	(0.05)	(0.04)	(0.05)	(0.11)	(0.10)	(0.11)
Urban	-0.02	-0.03	-0.02	-0.04	-0.06	-0.05
	(0.07)	(0.07)	(0.07)	(0.16)	(0.16)	(0.16)
Constant	2.24***	2.18***	2.23***	-0.90	-0.82	-0.90
	(0.34)	(0.35)	(0.33)	(0.77)	(0.79)	(0.75)
Observations	726	726	726	726	726	726

Robust standard errors, clustered by regions in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
Source: 2012 January survey and protest-event dataset.

B. Evidence from the first weeks of the protests: IV estimation and robustness

1. Extended discussion

Using evidence from the first few weeks of the protest wave alone, we instrument the frequency and size of protest events by exploiting variation in weather conditions across regional capitals (see also: Collins and Margo 2007; Madestam et al. 2013; Sobolev 2013). As an instrument, we use the deviation of the average regional temperature during the first weeks of the protest wave from the long-term average temperature for the months of December and January. The instrument, just like the protest measure we employ, varies across regions and over time, i.e. it is sensitive to the timing of survey respondents' interview. To construct it, we ask how much colder, or warmer the weather from the December 4th 2011 election and up to the day of a respondent's interview in January 2012 was from the long-term average temperature in a region for this period.[6] This measure varies across regions and takes into account information for days that had and did not have any rallies.

Taking variation in the timing of respondents' interview is important, as respondents in the same region were often interviewed weeks apart - in Tomsk for example, while some survey respondents were interviewed on January 9th others were interviewed on January 22rd. The instrument we use assumes that the number of protests and protesters is influenced by two factors: (i) (the deviation of) the temperature on the days *with* protests from the long-term average, and also (ii) the deviation of the temperature from the long-term average on days *without* protests. For example, if there is only one protest taking place in Tomsk in December 2011 and January 2012, this could well be because of two types of temperature deviations: one on the day that the protest did happen, and the other one on days without protests, during which the weather could have been much colder than average.

Moreover, we think of the number and size of protests as an outcome that is determined by protest organizers on the one hand, and protest participants on the other. We assume that when the weather forecast predicts colder than average temperature for a region, protest organizers will be less likely to stage protests. If protests have been scheduled to take

[6] For some month/regions we were unable to find relevant information through either the Russian meteorological service or *Gismeteo*, even when we tried to use weather stations in airports – and not in the capital. We therefore treat the following month/regions as missing observations: *Voronezh*: January-December: 1995-7, December 1998, 2000, 2001 and 2002; *Krasnodar*: December 1997; *Rostov*: December 1997. *Stavropol*: December 1995-January 1998; *Samara* and *Leningrad oblast*: January 1995-December 2007; *Irkutsk*: January 1995-2002.

place weeks in advance, unusually cold weather may also prevent multiple, usually smaller, rallies and spontaneous protests staged in support of the big protest in the regional capital, from taking place. As such, colder than average weather could reduce the number of protests that would take place in a region on any given day. We also assume that colder than average weather affects rally attendance, as it makes participation less pleasant, and that 'weather shocks' influences affect attitudes toward the protest movement only through the frequency of protests and size of protesters. This hypothesis is in line with existing research documenting that rainfall or cold weather more broadly, reduce rally attendance (see Collins and Margo 2007; Madestam et al. 2013; Sobolev 2013).

As discussed in the manuscript, we think of the frequency and size of protests as an outcome that is determined by political leaders, or protest organizers on the one hand, and protest participants on the other. We assume that when the weather forecast predicts cold weather, or when protest organisers wake up and the temperature is very low, they will be *less* likely to stage any protests. In case protests have been scheduled to take place weeks in advance, cold weather could prevent multiple, usually smaller, rallies and spontaneous protests staged in support of the "big" protest in the regional capital, from taking place. Consider the following example: on December 24th, 2011, the day Gorbachev called on Putin to resign, several protest events took place across the country. On that day, our evidence suggests that 3 protest events took place in Samara, and 2 in Nizhny Novgorod. Our hypothesis predicts that cold weather could influence not only whether protests would take place, but also how many regional protests will occur. We also assume that cold weather affects rally attendance. This expectation is straightforward, and it has been repeatedly documented that colder weather – as well as rainfall for example - could reduce participation in rallies. Focusing on the 2011-2012 electoral protests in Russia, Anton Sobolev also documents a positive correlation between the average regional temperature in January and participation in protests (Sobolev 2013).

As with every instrumental design, we need to make some assumptions: *First*, we assume that temperature shocks are random, that is, not necessarily correlated with other factors that affect political outcomes. Yet, one potential concern is that colder places also tend to share certain political characteristics. This would arguably be a greater concern if we relied on average monthly temperature across regions, or if we used a measure of average temperature on days of rallies, as opposed to an indicator of "temperature shocks." In other words, using a measure of "temperature shocks" could facilitate identification. Yet to address

such concerns, the IV regressions presented in the manuscript also control for regional democracy, using a media independence variable as a proxy.

Second, we assume that cold weather affects awareness and support for the protest movement only through the number of protest events and protesters that take to the streets. This exclusion restriction is well established in the literature, yet several concerns remain unresolved. Madestam et al. acknowledge two ways in which this assumption could be violated (Madestam et al. 2013). First, bad weather could make a rally less pleasant for actual attendees, which would subsequently energize them less. As we are concerned with protest effects on bystanders, and control for prior protest attendance in the analysis, this is perhaps a smaller concern for our work. Here, we assume that bystanders infer the power of the movement by mainly looking at the number and average size of events that take place in their region; such "exposure" could be either direct, as when people see the events themselves, or mediated as when bystanders learn about the events through word of mouth or social media. Second, Madestam et al. (2013) suggest that weather could directly affect the likelihood that mass media cover the protests. Although previous research has established a robust correlation between the frequency of protests in Russia and their coverage in national, state controlled media, we are not in a position to document how the coverage of protest in regional media varied over time (Lankina, Watanabe, and Netesova 2016), p. 20). This is a limitation we acknowledge in the concluding section of the manuscript, and a fruitful avenue for future research. Yet, even with these two caveats in mind, and in line with prior research, we believe that instrumenting protest effects on public opinion with temperature can be worthwhile.

B2. Full model specifications and robustness.

- **Table 2B1** provides full results for the second stage IV regressions presented in Models 1 and 2, Table 2 in the manuscript

- **Table 2B2** provides full results for the first stage IV regressions presented in Models 1 and 2, Table 2 in the manuscript

- **Table 2B3** replicates the analysis in Models 1 and 2, Table 2 of the manuscript using a binary outcome variable and employing two-stage probit models with endogenous regressors. Here, we assign respondents who 'fully, or partly' share the demands of the opposition a value of 1 and those who 'partly, or fully disagree' with them a value of 0. The results remain consistent.

- **Table 2B4** uses an instrument that does not consider variation in respondents' interview dates and two continuous indicators of protest events. This iteration of the instrument used here compares how much colder, or warmer the *average* regional temperature in December 2011 and January 2012 was from the long-term temperature for the two months.

Table 2B1: **Second stage IV regressions.**

	(1)	(2)
Protest item (log)	0.319**	0.113**
	(0.133)	(0.047)
Watches news	0.146	0.134
	(0.167)	(0.150)
Protested before	0.502***	0.424***
	(0.126)	(0.134)
Education	0.008	0.009
	(0.047)	(0.048)
Male	0.072	0.070
	(0.060)	(0.060)
Age	0.004	0.004
	(0.002)	(0.002)
Russian	0.047	0.021
	(0.093)	(0.094)
Urban	-0.071	-0.028
	(0.075)	(0.071)
Voted UR	-0.808***	-0.804***
	(0.074)	(0.074)
Pocketbook worse	0.090*	0.096**
	(0.046)	(0.047)
Employed	-0.033	-0.024
	(0.070)	(0.071)
Media independence	-0.139**	-0.207**
	(0.071)	(0.096)
Constant	2.679***	2.673***
	(0.280)	(0.274)
	First stage: Instrumenting protests	
Temperature deviations	0.122***	0.346***
	(0.014)	(0.032)
Controls	Yes	Yes
	Model statistics	
Observations	850	850
F-test of excluded instruments	71.4	115.6
Cragg-Donald F statistic	66.20	46.12

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. *Source*: Protest-Event Dataset and 2012 January survey

Table 2B2: **First stage IV regression coefficients for Table 1 in the manuscript**

	(1) DV: Protest events (log)	(2) DV: Protesters (log)
Temperature shocks	0.122***	0.346***
	(0.014)	(0.032)
Controls		
UR voter	0.046	0.094
	(0.061)	(0.212)
Protested past	0.122	1.039***
	(0.136)	(0.398)
Education	0.063	0.171
	(0.043)	(0.148)
Male	0.016	0.060
	(0.053)	(0.182)
Age	-0.001	-0.005
	(0.002)	(0.006)
Russian	-0.083	0.003
	(0.120)	(0.396)
Urban	0.216***	0.229
	(0.056)	(0.216)
Watches news	-0.170	-0.376
	(0.203)	(0.608)
Pocketbook: worse	-0.109***	-0.362***
	(0.035)	(0.125)
Employed	-0.106*	-0.386*
	(0.064)	(0.210)
Local media	0.527***	2.094***
	(0.036)	(0.123)
Constant	-1.068***	-2.965***
	(0.301)	(0.993)
Observations	850	850
R-squared	0.265	0.297

Notes: First stage IV Regression coefficients. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Source: 2012 January survey and protest-event dataset.

Table 2B3: **Results from first and second stage probit models with continuous endogenous regressors**

	Model 1: Log protest events		**Model 2**: Log average protesters		**Model 3**: Protest events		**Model 4**: Average protesters	
	2nd stage	1nd stage	2nd stage	1nd stage	2nd stage	1nd stage	2nd stage	1nd stage
Protest item	0.72***		0.24***		0.12***		0.00***	
	(0.19)		(0.06)		(0.03)		0.00***	
Temp dev		0.12***		0.35***		0.79***		509.26***
		(0.01)		(0.03)		(0.08)		(46.88)
Media	-0.22**	0.53***	-0.36***	2.09***	-0.13	2.65***	-0.06	1,342.40***
	(0.10)	(0.04)	(0.13)	(0.12)	(0.09)	(0.17)	(0.07)	(102.61)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Constant	0.16	-1.07***	0.20	-2.97***	0.03	-6.00***	-0.37	-1,485.28
	(0.46)	(0.30)	(0.44)	(0.99)	(0.47)	(1.78)	(0.47)	(1,164.49)
F (12, 837)[7]		25.20		29.44		25.61		22.07
Observations	850	850	850	850	850	850	850	850

Table 2B4: **Robustness: Alternative instrument specifications:** IV-probit models. The instrument we use here does not consider variation in respondents' interview dates.

	(1.1) Shares demands 2nd stage	(1.2) Log protests 1st stage	(2.1) Shares demands 2nd stage	(2.2) Protests 1st stage
Protest events item	0.07***		0.49***	
	(0.03)		(0.18)	
Average temp deviation		1.32***		0.19***
		(0.10)		(0.02)
Media independence	-0.04	2.55***	-0.12	0.51***
	(0.08)	(0.18)	(0.10)	(0.04)
Controls	✓	✓	✓	✓
Constant	-0.03	-2.77*	0.07	-0.54*
	(0.48)	(1.61)	(0.48)	(0.29)
F (12, 835)		29.35		34.71
Observations	850	850	850	850

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Models control for respondents' prior protest participation, education, gender, age, ethnicity, settlement status,

[7] F-statistics obtained with the two-step option in ivprobit

news watching, partisanship, pocketbook assessments and employment status. *Source*: Protest-Event Dataset and 2012 January survey

C. Regional Protests and Regime Strategies: Evidence from the Protest Wave

Robustness for Table 3 in the manuscript

Table 2C1 presents the following robustness checks:
Alternative specifications of the protest item:

- **Model 1.1** uses a logarithmically transformed indicator of protests. Yet, this item only considers respondents in areas with protests. In other words, we restrict the analysis to the "treated" group of respondents. We drop Moscow and St Petersburg in Model 1.2

Alternative specifications of the outcome variable:

- **Models 2.1 and 2.2** treat the outcome variable as ordered, and presents results based on ordered logistic regressions. We drop Moscow and St Petersburg in Model 2.2
- **Model 3.1 and 3.2** recode the outcome variable into a dummy and presents probit coefficients. We drop Moscow & St Petersburg in Model 3.2

Table 2C2 presents the following alternative model specifications:

- **Models 1-2** replicates the analysis in Table 3 of the manuscript, but cluster standard errors by regions.
- **Model 3** uses the log protest indicator and runs analysis without the survey, or region fixed effects.
- **Model 4** uses the binary protest indicator and runs analysis without the survey, or region fixed effects
- **Model 5 and 6** replicates the analysis in Models 1.1 and 1.2, Table 3 of the manuscript but controls for a binary indicator that takes the value of 1 if respondents live in Moscow and St Petersburg, and zero otherwise
- **Model 7** runs analysis restricting the sample to respondents in Moscow and St Petersburg
- **Model 8** runs analysis restricting the sample to respondents in Moscow and St Petersburg and controls for time fixed-effects

Table 2C1: **Robustness checks for Table 3 in the manuscript**

	OLS		Ologit		Probit	
	(1)	(1.2)	(2.1)	(2.2)	(3.1)	(3.2)
Protest log (1-max)	-0.02	0.04				
	(0.08)	(0.08)				
Protest log (0-max)			-0.24	-0.06	-0.22	-0.04
			(0.20)	(0.22)	(0.14)	(0.16)
Protested past	0.29***	0.18**	0.75***	0.56***	0.45***	0.32**
	(0.08)	(0.09)	(0.18)	(0.20)	(0.12)	(0.14)
Education	0.02	0.02	0.04	0.05	0.06	0.05
	(0.03)	(0.03)	(0.06)	(0.06)	(0.05)	(0.05)
Male	0.03	0.06	0.03	0.07	-0.01	-0.03
	(0.04)	(0.05)	(0.09)	(0.09)	(0.06)	(0.07)
Age	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.04	0.05	0.14	0.14	0.11	0.08
	(0.08)	(0.08)	(0.16)	(0.17)	(0.12)	(0.13)
Urban	0.06	0.08	-0.01	-0.00	-0.04	-0.04
	(0.06)	(0.06)	(0.12)	(0.13)	(0.09)	(0.08)
Watches News	-0.09	0.04	-0.01	0.23	0.05	0.19
	(0.09)	(0.10)	(0.19)	(0.21)	(0.15)	(0.17)
UR voter	-0.68***	-0.64***	-1.45***	-1.40***	-1.03***	-1.00***
	(0.05)	(0.05)	(0.10)	(0.10)	(0.07)	(0.08)
Pocketbook	0.12***	0.17***	0.25***	0.32***	0.12**	0.16***
	(0.03)	(0.03)	(0.07)	(0.07)	(0.05)	(0.05)
Employed	0.04	0.01	0.13	0.08	0.02	-0.01
	(0.05)	(0.05)	(0.10)	(0.11)	(0.07)	(0.08)
Survey FE	-0.67***	-0.69***	-1.17***	-1.23***	-0.82***	-0.85***
	(0.10)	(0.11)	(0.24)	(0.25)	(0.16)	(0.16)
Region FE	✓	✓	✓	✓	✓	✓
Moscow/ SP	✓	–	✓	–	✓	–
Constant	2.94***	2.31***	-3.31***	-2.59***	1.53***	0.64
	(0.27)	(0.26)	(0.70)	(0.48)	(0.53)	(0.42)
Observations	1,648	1,379	1,980	1,711	1,980	1,711

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 2C2. **Robustness checks for Table 3 in the manuscript**.

	(1.1)	(1.2)	(2.1)	(2.2)	(3)	(4)	(5)	(6)	(7)	(8)
Log events	-0.15		-0.06		-0.05**		-0.11***		-0.57***	-0.14
	(0.17)		(0.18)		(0.02)		(0.03)		(0.07)	(0.16)
Protest (0-1)		0.10		0.05		-0.02		-0.03		
		(0.15)		(0.15)		(0.06)		(0.06)		
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	-	-	-	-	-	-
Survey FE	-0.46*	-0.60***	-0.48*	-0.53***	-	-	-	-	-	-
	(0.23)	(0.12)	(0.24)	(0.15)						
Media					0.07***	0.05**	0.06**	0.04	-0.41***	-
					(0.03)	(0.03)	(0.03)	(0.03)	(0.13)	
M/SP (0-1)					-	-	0.30***	0.07	-	-0.55**
							(0.08)	(0.07)		(0.24)
Constant	3.32***	2.76***	3.17***	3.11***	2.34***	2.35***	2.43***	2.38***	6.97***	4.15***
	(0.67)	(0.27)	(0.22)	(0.23)	(0.18)	(0.18)	(0.18)	(0.18)	(0.71)	(0.62)
Observations	1,980	1,980	1,711	1,711	1,980	1,980	1,980	1,980	269	269
R-squared	0.28	0.28	0.27	0.27	0.17	0.17	0.17	0.17	0.36	0.35

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1
Source: 2012 January survey, 2012 RES and author protest-event dataset.

D. News watching and support for the protesters

Robustness and extended discussion for Table 4 in the manuscript

Table 2D1. **Full results for Table 4 in the manuscript**

	(1.1) Log protest events	(1.2) Protest before (0-1)	(2.1) Log protest events	(2.2) Protest before (0-1)
	Full sample		*Without Moscow & St Petersburg*	
Protest item	0.041	0.573*	0.105	0.412
	(0.111)	(0.302)	(0.148)	(0.305)
News watching	0.377**	0.410*	0.365*	0.428*
	(0.165)	(0.249)	(0.202)	(0.247)
Protest X News interaction	-0.207***	-0.501*	-0.183	-0.389
	(0.076)	(0.264)	(0.126)	(0.265)
Protested before	0.328***	0.322***	0.240***	0.235***
	(0.077)	(0.077)	(0.085)	(0.085)
Education	0.014	0.014	0.019	0.018
	(0.027)	(0.027)	(0.029)	(0.029)
Male	0.013	0.008	0.031	0.029
	(0.039)	(0.039)	(0.042)	(0.042)
Age	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Russian	0.042	0.049	0.045	0.052
	(0.074)	(0.074)	(0.079)	(0.079)
Urban	0.011	0.005	0.015	0.013
	(0.054)	(0.054)	(0.055)	(0.054)
Voted UR	-0.692***	-0.691***	-0.667***	-0.667***
	(0.043)	(0.043)	(0.046)	(0.046)
Pocketbook worse	0.105***	0.104***	0.139***	0.139***
	(0.030)	(0.030)	(0.031)	(0.031)
Employed	0.043	0.048	0.024	0.026
	(0.044)	(0.044)	(0.048)	(0.048)
Survey fixed effects	-0.449***	-0.600***	-0.473***	-0.529***
	(0.100)	(0.057)	(0.103)	(0.069)
Region fixed effects	Yes	Yes	Yes	Yes
Constant	2.997***	2.383***	2.643***	2.467***
	(0.335)	(0.332)	(0.267)	(0.338)
Observations	1,980	1,980	1,711	1,711
R-squared	0.282	0.280	0.275	0.275

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1
Source: 2012 January survey, 2012 RES and author protest-event dataset.

Table 2D.1A: **Protest effects conditional on news watching**

	Full sample		*Without Moscow & St Petersburg*	
	Watches news	Does not watch news	Watches news	Does not watch news
Log protest item: 0	2.73	2.35	2.55	2.18
Log protest item: mean	2.49	2.41	2.46	2.31
Δ.	-.24 (-.43,.-.04)	.06 (-.20, .31)	-.10 (-27, -.09)	.12 (-.16, .41)
Log protest item: Mean + 1 SD	2.32	2.45	2.40	2.18
Δ.	-.40 (-.75, -.06)	.10 (-.34, .55)	-.15 (-.44, -.15)	.20 (-.26, .66)

Notes: Results are based on the interaction terms in Models 1.1., and 2.1, Table 2C1. 90 percent confidence intervals shown in parenthesis.

.

Table 2D2 presents the following robustness checks:
Alternative specifications of the protest item:

- **Model 1** replicates the analysis using a non-log transformed protest indicator
- **Model 2** uses a logarithmically transformed indicator of protests. This item only considers respondents in areas with protests. In other words, we restrict the analysis to the "treated" group of respondents. Moscow and St Petersburg are omitted in Model 2
- **Models 3 and 4** replicate the analysis in the manuscript, but clusters standard errors by regions

Table 2D3 presents the following robustness checks:
Alternative specifications of the outcome variable:

- **Models 1 and 2** treats the outcome variable as ordered, and presents results based on ordered logistic regressions. We drop Moscow and St Petersburg in Model 1.2
- **Models 3 and 4** recodes the outcome variable into a dummy and presents results based on probit regressions. We drop Moscow & St Petersburg in Model 2.2

Alternative model specifications:

- **Models 5 and 6** run analysis without the survey, or region fixed effects.
- **Model 7** replicates the analysis in Models 1.1 and 1.2, Table 4 in the manuscript and controls for a binary indicator that takes the value of 1 if respondents live in Moscow and St Petersburg, and zero otherwise
- **Model 8** presents analysis that restricts the sample to respondents in Moscow and St Petersburg

Table 2D2: **Robustness checks for Table 4 in the manuscript**

	(1.1)	(1.2)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)
	Non-log (0-1)		*Log (1-max)*		*Log (0-max)*	*(0-1)*	*Log (0-max)*	*(0-1)*
Protest item	0.00	0.03	0.12	0.05	0.04	0.57	0.11	0.41
	(0.00)	(0.03)	(0.10)	(0.13)	(0.22)	(0.44)	(0.28)	(0.44)
Watches news	0.16	0.28*	0.20	0.06	0.38	0.41	0.37	0.43
	(0.10)	(0.16)	(0.16)	(0.18)	(0.23)	(0.39)	(0.30)	(0.38)
News X Protest	-0.01**	-0.04	-0.15*	-0.02	-0.21**	-0.50	-0.18	-0.39
	(0.00)	(0.03)	(0.08)	(0.12)	(0.09)	(0.40)	(0.17)	(0.39)
Region fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Survey fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Moscow /St Peter	✓	-	✓	-	✓	✓	-	-
Constant	2.99***	2.67***	2.67***	2.80***	3.00***	2.38***	2.64***	2.47***
	(0.19)	(0.23)	(0.30)	(0.24)	(0.71)	(0.44)	(0.39)	(0.42)
Observations	1,980	1,711	1,648	1,379	1,980	1,980	1,711	1,711
R-squared	0.28	0.27	0.31	0.30	0.28	0.28	0.28	0.28

Table 2D3: **Robustness checks for Table 4 in the manuscript**

	Ologit models				Probit models				OLS models						
	(1.1) Log (0-max)	(1.2) (0-1)	(2.1) Log (0-max)	(2.2) (0-1)	(3.1) Log (0-max)	(3.2) (0-1)	(4.1) Log (0-max)	(4.2) (0-1)	(5.1) Log (0-max)	(5.2) (0-1)	(6.1) Log (0-max)	(6.2) (0-1)	(7.1) Log (0-max)	(7.2) (0-1)	(8) Log (0-max)
Protest item	0.18	1.18	0.30	0.87	0.02	0.85	0.21	0.63	0.08**	0.27**	0.06	0.19*	0.13*	0.56***	-0.27
	(0.51)	(1.00)	(0.65)	(1.00)	(0.34)	(0.69)	(0.39)	(0.67)	(0.04)	(0.11)	(0.06)	(0.12)	(0.07)	(0.21)	(0.21)
News	0.77	0.82	0.73	0.84	0.47*	0.60	0.50	0.62	0.25***	0.30***	0.26***	0.30***	0.54***	0.59***	0.78
	(0.50)	(0.88)	(0.66)	(0.87)	(0.26)	(0.40)	(0.32)	(0.39)	(0.08)	(0.10)	(0.09)	(0.10)	(0.15)	(0.20)	(0.74)
Interaction	-0.45**	-1.04	-0.40	-0.81	-0.26***	-0.76*	-0.28	-0.64	-0.12***	-0.32***	-0.11*	-0.24**	-0.26***	-0.62***	-0.32
	(0.19)	(0.91)	(0.37)	(0.90)	(0.10)	(0.42)	(0.19)	(0.41)	(0.04)	(0.12)	(0.06)	(0.12)	(0.07)	(0.22)	(0.22)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
Survey FE	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
Media									0.05***	0.04***	0.04***	0.04***	0.06**	0.04	-0.42***
									(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.13)
M/SPcontol													0.30***	0.06	
													(0.08)	(0.07)	
M/SP	✓	✓	-	-	✓	✓	-	-	✓	✓	-	-	✓	✓	✓
Constant	-2.59*	-1.57	-2.15**	-1.85**	1.13	0.17	0.37	0.17	0.26**	0.23*	0.28**	0.23*	2.01***	1.91***	6.03***
	(1.53)	(0.97)	(0.84)	(0.94)	(1.14)	(0.69)	(0.58)	(0.66)	(0.11)	(0.13)	(0.12)	(0.13)	(0.21)	(0.25)	(0.90)
Observations	1,980	1,980	1,711	1,711	1,980	1,980	1,711	1,711	1,980	1,980	1,711	1,711	1,980	1,980	269

News watching: Extended discussion

In our paper, we assume that the presentation of information about the protests in national media could moderate the effects of protests on public opinion. More specifically, we expect that the largely hostile framing of the protest movement in national media may influence the effect of protest on public opinion and attitudes. Our models therefore include interactions between the protest item and news consumption. The "news watching" variable we rely on asks whether and how often people watch political news on TV.

Yet, according to one view, people with pre-formed opinions about electoral fairness and/ or support for the demands of the protesters could "self-select" in terms of whether, or how often they will be watching political news across a range of TV outlets. Opposition supporters, for example, may be less likely to watch political news on TV, as they know that information projected in national media is highly likely to be unreliable and/ or falsified. If this is the case, it could be that the "news watching," or exposure to the state's framing of the protest events via national media has no effect—whether direct or conditional—on opinions about electoral falsifications and/ or support for the demands of the opposition. The argument goes that people who watch political news on TV, or who watch political news more often, should also be more likely to disagree with the demands of the opposition and to report lower levels of fraud, as they already have pre-formed opinions about fraud and the opposition.

In the Russian context, there are good reasons to believe that exposure to the state's rhetoric about the protest movement via the mass media conditions the effect of protests on public opinion. Existing research on media effects under electoral authoritarianism shows that even opposition supporters, or citizens who are particularly wary of the state's attempt to manipulate information in national media, often watching political news on TV, likewise regard state media as trustworthy. According to Smyth and Oates, state–run television remains one of the most trusted and authoritative institutions in Russia (Smyth and Oates

2015). It is also worth noting that in Russia, most households are equipped with a TV antenna that enables free access to a number of federal and regional channels. The leading state-controlled TV channels have maximum regional and audience penetration, for instance, with 100 percent for Russia 1 and Channel 1 and 99.9 percent for NTV. Moreover, most citizens in Russia derive news information from the leading 4 national channels (Russia 1, NTV, Channel 1 and Russia 24). Last but not least, television remains an important source of information for a large proportion of Russia's population. The respected Levada polling agency has consistently found high levels of TV viewing among the population, even in recent years as the state consolidated control over the media landscape. For instance, a Levada poll conducted in December 2016 revealed that 91% of the population watch news on TV "at least once a week or more often." This is consistent with the data we obtain from the analysis of our sample – where just 8 percent of respondents report to hardly ever watch political news. 6 percent of them never watch political news on TV. Another interesting aspect of viewership revealed by Levada's media analysis is that many viewers report to watch news on state-controlled channels because of their "entertainment" value—in what would further support the argument that individuals with varied political preferences watch news on state-controlled television. Empirically we perform several tests to probe the robustness of the results.

- *First*, we examine whether news watching predicts political attitudes. We do not find support for the hypothesis that respondents who watch news have more pro-conservative, or pro-regime attitudes.

- *Second*, we used Coarsened Exact Matching to reduce imbalance between respondents who watch and do not watch news, and replicate the analysis presented in Table 2 of the manuscript. The results remain consistent.

- *Finally*, we generate additional visualizations of the interaction models.

We present these steps below.

News watching and political attitudes.

To begin with, Table 2C4 uses the news watching variable employed in the manuscript to assess whether individuals who differ in their patterns of media consumption also differ in their political dispositions. Looking at the results, we see that when it comes to prior political attitudes and prior activism, the two groups are barely distinguishable. A key set of differences across all three groups that could pose concern relates to reported vote, and Medvedev's approval. Respondents who watch political news on TV appear more likely to vote for parties other than United Russia, and/or to abstain, as they are less likely to disapprove of Medvedev.

Table 2D4: **Watches News vs Does Not: Means differences**

	Does not watch news	*Watches news*	Diff.
Voted for United Russia	.28	.34	.08
Disapproves of Medvedev (both surveys)	.27	.23	.04
Shares the demands of protesters	2.45	2.49	.04
The 2011 Duma elections were unfair	3.01	3.02	.01
Has previously participated in protests	.06	.05	.01
Unconstrained leader not a good fit for Russia	.50	.52	.02

Yet, one could argue that people watch TV and then decide whether to vote for the party of power, or to update their views on the performance of political leaders. Moreover, evidence from the two surveys we use in this paper, as well as evidence from the Levada Centre indicates that both Medvedev's and Putin's approval fluctuated significantly during the course of the 2011-2012 protest wave. While around 66 per cent of respondents approved of Medvedev in the January survey for example, this percentage was down to ~78 percent by the spring months when the Russian Election Survey was in the field. Measures of approval, therefore, are less likely to proxy for long-term partisanship or attitudes and personality traits.

Nevertheless, as we show in Table 2C5 below, these differences fail to reach statistical levels of significance when we use simple probit regressions to evaluate differences in support for UR and President Medvedev.

Table 2D5: **Differences in support for United Russia and Medvedev**

	DV: Voted for United Russia		*DV: Disapproves of Medvedev's performance*	
	(1.1)	(1.2)	(2.1)	(2.2)
News watching	0.12	0.13	-0.12	-0.04
	(0.11)	(0.12)	(0.11)	(0.12)
Protested past	-0.00	0.05	0.35***	0.34***
	(0.11)	(0.11)	(0.11)	(0.12)
Education	0.04	0.05	-0.03	-0.01
	(0.04)	(0.04)	(0.04)	(0.04)
Male	-0.31***	-0.28***	0.24***	0.22***
	(0.05)	(0.05)	(0.05)	(0.06)
Age	0.01***	0.01***	-0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
Russian	-0.24***	-0.28***	0.32***	0.34***
	(0.08)	(0.08)	(0.10)	(0.11)
Urban	-0.40***	-0.39***	0.21***	0.21***
	(0.06)	(0.06)	(0.06)	(0.07)
Pocketbook deteriorated	-0.30***	-0.29***	0.29***	0.31***
	(0.04)	(0.04)	(0.04)	(0.04)
Employed	-0.02	0.00	0.06	0.05
	(0.05)	(0.06)	(0.06)	(0.06)
Media independence	-0.11***	-0.11***	0.06*	0.08**
	(0.03)	(0.03)	(0.03)	(0.03)
Moscow/St Petersburg	Yes	Yes	Yes	Yes
Constant	0.54***	0.49**	-1.78***	-2.04***
	(0.20)	(0.21)	(0.23)	(0.25)
Observations	3,047	2,712	2,902	2,584

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Next, we use nearest neighbour matching to estimate the average treatment effect of news watching on 1) awareness of fraud and 2) support for the demands of the protesters, and also report balance. In three different models, respondents are matched using the Mahalanobis distance defined by (i) demographics and (ii) demographics, household assessments, protest participation, and support for the ruling regime party and candidate. Because existing research shows that NNM estimators are not consistent when we match on

two or more continuous covariates, we also use the bias-adjust estimator. In all models reported below, respectively, news watching fails to reach statistical levels of significance. This suggests that when it comes to awareness of fraud and/or support for the protesters, respondents who watch news, and those who hardly ever watch news, are statistically indistinguishable.

Moreover, to test whether the "news watching" variable is a proxy for having pre-conceived ideas about the regime and the opposition, we rely on a variable that taps into people's authoritarian attitudes instead, as they bring us a step closer to operationalizing long-term political attitudes and attachments. If the news watching variable is a proxy for less pro-democratic attitudes, then it should also predict other political positions that are associated with having pre-conceived views about the regime. For example, individuals who are *less* likely to watch political news on TV should equally be more likely to hold *more* liberal views. We therefore follow Reuter and Szakonyi (2015) and check whether the frequency of political news watching predicts support for liberal views and find that it does not. The dependent variable we use below is a dummy coded as 0 if respondents feel that a strong, unconstrained, leader would be a good fit for the country and 1 if they disagree. This is a classic question traditionally used in the literature to ascertain citizens' authoritarian versus democratic leaning preferences. The results presented below rely on NN matching, using the Mahalanobis distance and the bias-adjust estimator. The expectation that individuals who watch political news on TV, or those who more often do so, should have more authoritarian views is falsified.

Table 2D6: **News watching treatment effects: *Unfair Duma Election***

ATE (Coef & SE)	-.10 (.13)		10 (.11)	
	Control (0)	*Treated (1)*	*Control (0)*	*Treated (1)*
Covariate Balance (Means)				
Education (continuous)	1.99	1.98	1.99	1.98
Male	.39	.44	.39	.43
Age	41.16	46.10	40.07	46.00
Russian	.91	.91	.91	.90
Urban settlement	.79	.75	.78	.75
Employed	.61	.61	.63	.62
Household finances			1.96	1.93
Protested in the past			.07	.05
Voted for United Russia			.30	.35
Disapproves of Medvedev			.26	.22
Raw observations	184	3,145	162	2,734

Table 2D7: **News watching treatment effect: *Shares the demands of the protesters***

ATE (Coef & SE)	.11 (.14)		.18 (.13)	
Covariate Balance:	*Control (0)*	*Treated (1)*	*Control (0)*	*Treated (1)*
Education	2.13	2.03	2.10	2.04
Gender	.45	.45	.44	.45
Age	39.26	46. 40	39.18	46.16
Ethnicity	.93	.90	.94	.90
Urban settlement	.80	.74	.81	.74
Employed	.64	.62	.67	.63
Household finances			1.95	1.92
Protested before			.10	.06
Voted for UR			.35	.36
Disapproves of Medvedev			.31	.23
Observations	87	1,934	78	1,796

Table 2D8: **"News watching" does not predict political attitudes**. The dependent variable captures whether respondents disagree with the statement that "a strong, unconstrained leader would be a good fit for Russia.

Treatment	.06 (.05)		.05(.05)	
Covariate Balance:	*Control (0)*	*Treated (1)*	*Control (0)*	*Treated (1)*
Education	2.0	2.0	2.0	2.0
Gender	.42	.45	.42	.45
Age	39.90	45.98	39.15	45.75
Ethnicity	.92	.90	.92	.91
Urban settlement	.78	.75	.78	.75
Employed	.62	.62	.64	.62
Household finances			1.97	1.94
Protested before			.07	.05
Voted for UR			.28	.35
Disapproves of Medvedev			.28	.23
Observations	153	2598	137	2,419

Coarsened Exact Matching Results

In this section, we perform Coarsened Exact Matching (CEM) to improve the estimation of the effect of news watching on attitudes. Matching reduces imbalance in covariates between respondents who watch and do not watch political news on television. For the analysis, we use automated coarsening with STATA 12 and implement the CEM algorithm described in Iacus et al. (2012). The matching variable, news watching is a binary indicator assigned a value of 1 for respondents who watch news on TV, and zero for those who do not.

We begin by matching respondents on the full set of covariates reported in the manuscript. First, we match respondents on demographics alone: education, gender, age, ethnicity, urban settlement, and employment status. Next, we also match respondents on household conditions and prior protest participation. Finally, we perform matching on demographics, prior protest participation and household finances, as well as prior vote, and assessments of Medvedev. The pre-matching L_1 statistic for the three samples – a measure of imbalance with respect to the full joint distribution is as follows: .55, .76 and .89

respectively. The post-matching L_1 statistic for the same three samples – a measure of imbalance improvement after matching is: .18, .04 and .26 respectively. By comparing the imbalance results, we can see that the matching algorithm has achieved a substantial reduction in imbalance in the marginal and joint distributions of the data. As some imbalance remains in the data, we also adjust for remaining imbalance via the statistical models we present below. While the sample size from Models 1 to 2 and 3 drops as we match on a larger number of covariates, the coefficient on the interaction term in both tables 2D.9 and 2D.10 (which use a logarithmically transformed indicator of protest events, and a binary indicator of protests respectively) remains remarkably stable: just like in the manuscript, it is negatively signed and statistically significant.

Table 2D9: **CEM results: News watching and political attitudes**

	(1.1) Regional media control	(1.2) Fixed effects	(2) Fixed effects	(3) Fixed effects
Protest events (log)	0.198***	0.024	0.106	0.353
	(0.067)	(0.128)	(0.187)	(0.304)
News watching	0.561***	0.366**	0.535***	0.871***
	(0.159)	(0.160)	(0.185)	(0.251)
Protest X News watching	-0.290***	-0.222***	-0.260***	-0.333***
	(0.071)	(0.070)	(0.086)	(0.113)
Protested before	0.241**	0.404***	0.349	0.964
	(0.099)	(0.098)	(0.355)	(0.762)
Education	-0.048	-0.025	0.084	0.176**
	(0.040)	(0.039)	(0.060)	(0.089)
Male	0.019	-0.021	-0.025	0.101
	(0.056)	(0.054)	(0.083)	(0.124)
Age	-0.004**	-0.003**	-0.001	0.003
	(0.002)	(0.002)	(0.002)	(0.004)
Russian	0.045	0.038	-0.577	-1.583*
	(0.220)	(0.215)	(0.407)	(0.819)
Urban	0.004	-0.044	-0.220*	-0.140
	(0.075)	(0.079)	(0.127)	(0.206)
UR voter	-0.720***	-0.692***	-0.798***	-0.610***
	(0.058)	(0.057)	(0.081)	(0.126)
Pocketbook deteriorated	0.117***	0.105***	0.035	-0.013
	(0.039)	(0.039)	(0.069)	(0.108)
Employed	0.038	0.058	0.091	0.093
	(0.066)	(0.064)	(0.093)	(0.134)
Regional media control	Yes	-	-	-
Region fixed effects	-	Yes	Yes	Yes
Survey fixed effects	-	Yes	Yes	Yes
Constant	1.746***	3.244***	3.467***	3.225**
	(0.322)	(0.466)	(0.748)	(1.299)

Observations	1,133	1,133	583	285
R-squared	0.189	0.291	0.323	0.426

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Model 1.1 is a random effects model. Models 1.2-3 introduce region, and survey fixed effects. To obtain balance in Models 1.1 and 1.2 we use news watching as the treatment, and match respondents on: education, gender, age, ethnicity, settlement status and employment. To obtain balance in Model 2 we use news watching as the treatment, and match respondents on: education, gender, age, ethnicity, settlement status, employment, participation in protests, and pocketbook concerns. In Model 3, we match on the same covariates as in Model 2, plus vote cast in the 2011 Duma election, and evaluations of Medvedev.

Table 2D10: **CEM results: News watching and political attitudes**

	(1.1) Regional media	(1.2) Fixed effects	(2) Fixed effects	(3) Fixed effects
Protest dummy (0-1)	0.538**	0.720**	0.835	1.381
	(0.221)	(0.355)	(0.521)	(1.729)
News watching	0.583***	0.318	0.545**	0.937***
	(0.206)	(0.207)	(0.230)	(0.317)
Protest X News watching	-0.666***	-0.464**	-0.602**	-0.848**
	(0.233)	(0.233)	(0.267)	(0.359)
Protested before	0.242**	0.403***	0.327	0.745
	(0.099)	(0.098)	(0.356)	(0.885)
Education	-0.046	-0.024	0.090	0.195**
	(0.040)	(0.039)	(0.060)	(0.089)
Male	0.012	-0.032	-0.035	0.084
	(0.056)	(0.054)	(0.083)	(0.125)
Age	-0.004**	-0.003**	-0.001	0.003
	(0.002)	(0.002)	(0.002)	(0.004)
Russian	0.093	0.053	-0.538	-1.468*
	(0.220)	(0.216)	(0.408)	(0.817)
Urban	-0.019	-0.049	-0.231*	-0.143
	(0.075)	(0.079)	(0.128)	(0.207)
UR voter	-0.717***	-0.695***	-0.797***	-0.612***
	(0.058)	(0.057)	(0.081)	(0.127)
Pocketbook deteriorated	0.120***	0.096**	0.036	0.009
	(0.039)	(0.039)	(0.069)	(0.108)
Employed	0.051	0.062	0.107	0.110
	(0.066)	(0.064)	(0.093)	(0.135)
Survey fixed effects	-	-0.516***	-0.464***	-0.586***
		(0.074)	(0.105)	(0.154)
Media independence	0.125***			
	(0.033)			
Region fixed effects		Yes	Yes	Yes
Constant	1.741***	2.460***	2.753***	2.592
	(0.347)	(0.429)	(0.690)	(1.937)
Observations	1,133	1,133	583	285
R-squared	0.180	0.287	0.319	0.419

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Model 1.1 is a random effects

model. Models 1.2-3 use region, and survey fixed effects. To obtain balance in Models 1.1 and 1.2 we use news watching as the treatment, and match on: education, gender, age, ethnicity, settlement status and employment. In Model 2 we use news watching as the treatment, and match on: education, gender, age, ethnicity, settlement status, employment, participation in protests, and pocketbook concerns. In Model 3, we match on the same covariates as in Model 2, plus vote cast in the 2011 Duma election, and evaluations of Medvedev.

Alternative interactions and additional visualisations

In the manuscript, we propose that the effect of protests on support for the demands of the opposition is conditional on respondents' news watching patterns. In the sections below, we illustrate the flip side of this interaction. More specifically, we present plots that investigate whether the conditional marginal effect of news watching on support for the demands of the protest movement changes across different levels of the protest indicator, which we now treat as the moderator. To begin with, Figure 2D1 compares the distribution of the moderator, in this case, of the protest indicator in groups of respondents who watch, and do not watch news. We do so in order to judge the range of common support there is in the data. The plots suggest that at different levels of protests, there is variation in the treatment, news watching.

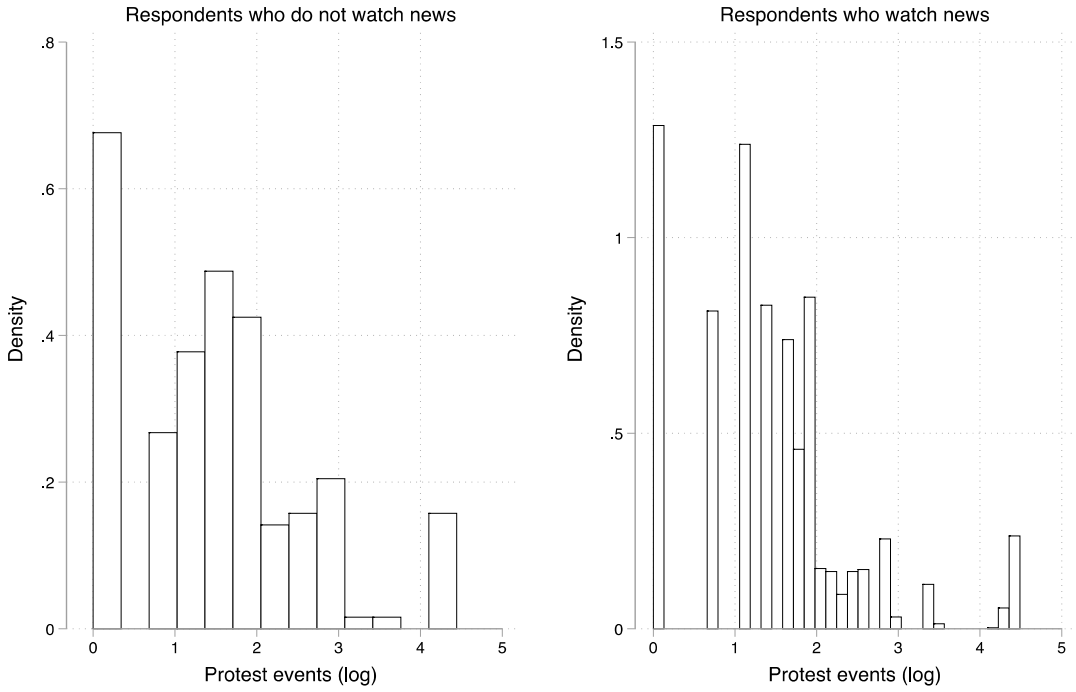

Figure 2D.1. **Distribution of the moderator, protest events, in the control and treatment groups, i.e. among respondents who watch and do not watch political news on TV.**

Next, in the left-hand plot of Figure 2D.2, we plot the conventional linear marginal effects, with 95% CI. In the histogram across the x-axis, the total height of the stacked bars refers to the distribution of the protest events in the pooled sample. The red and grey shaded bars refer to the distribution of the moderator in the treatment and control groups respectively. As also made clear in Figure 2D.1, there is only a small number of respondents who do not watch political news on TV. The left-hand plot of Figure 2D.2 relies on region random effects models that control for regional media independence and use robust standard errors. The right-hand plot of the same figure presents results that rely on the binning approach. As before, we use robust standard errors. In this case, we see that the Wald test rejects the null hypothesis that the linear interaction model and the three-bin model are statistically equivalent (p=0.04). The results are consistent when we increase the number of bins in Figure 2D.3. In this final case, we can firmly reject the Wald test null hypothesis. (p=0.00).

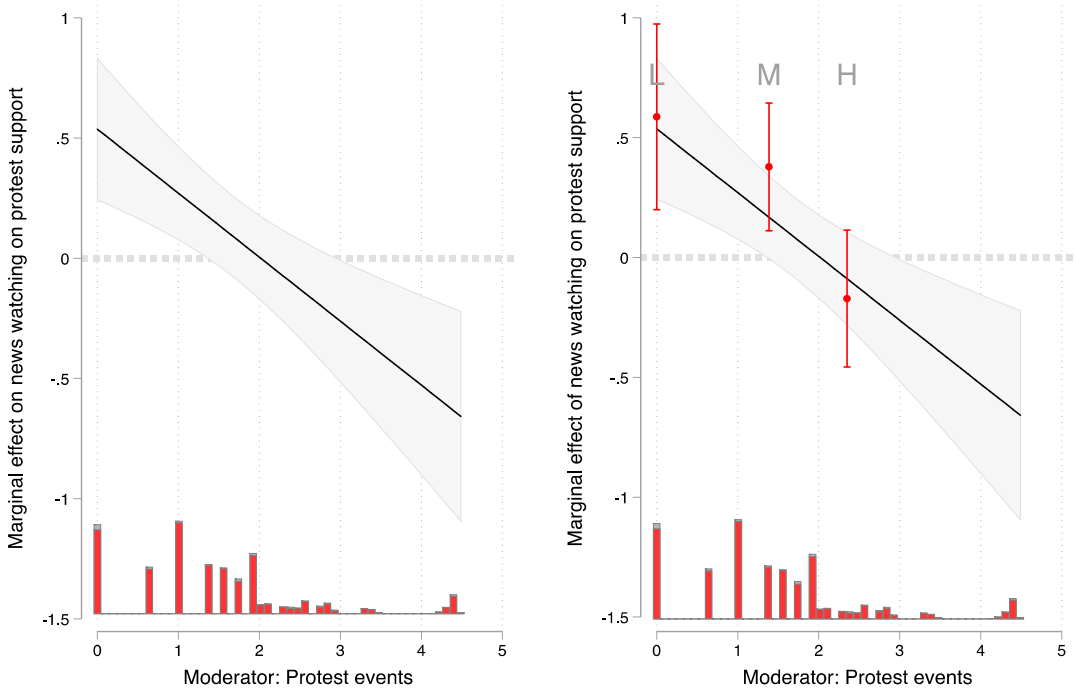

Figure 2D.2

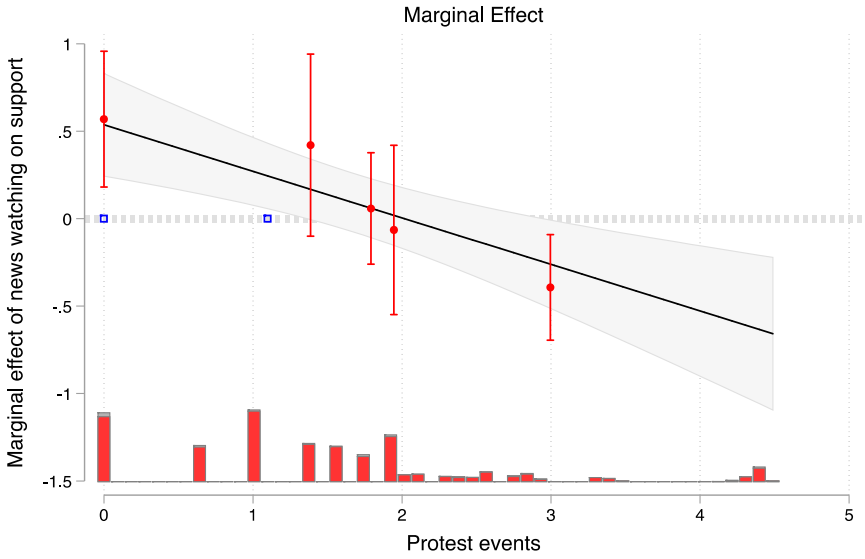

Figure 2D.3

Notes: The plots in Figures 2D.2 and 2D.3 rely on models that control for regional media independence and use robust standard errors. The plots present the marginal effects of news watching (y-axis) on support for the demands of the protesters, conditional on the regional frequency of protest events. 95% confidence intervals shown throughout. Vertical bars represent the histogram of the protest variable. Coloured in red in the vertical bars are respondents who watch news, and in grey those who do not. Graphs produced with interflex (Hainmueller *et al*. 2018).

Finally, in Figure 2D.4, we present marginal effects estimates from the kernel smoothing estimator. The kernel estimator, which is an application of the semi-parametric smooth varying coefficients models, relaxes the linearity assumption (see Hainmueller et al. 2018, pp.18-20. Standard errors and confidence intervals are estimated using a bootstrap. In this case, the confidence intervals are generated using 2,000 iterations of a non-parametric bootstrap. Stacked histograms are once more presented at the bottom of the figure. The estimates, are a close approximation of the main effects presented earlier. Confidence intervals grow wider at points where the logarithmically transformed protest indicator is greater than the value of 3. This reflects the fact that there is less data to estimate the marginal effects at those points.

Figure 2D.4: **Marginal effects estimates from the kernel smoothing estimator.**

E. Repression and support for the protesters: Robustness for Table 5

Table 2E1 Robustness checks for Table 5 in the manuscript.

Alternative model specifications:

- Models 1.1 and 1.2 replicate the analysis in Models 1 and 2, Table 5 of the manuscript but cluster standard errors by protesting regions.
- Models 2.1 and 2.2 omit the regional fixed effects, controlling for media independence
- Models 3.1 and 3.2 replicate the analysis in Models 1 and 2, Table 5 of the manuscript but control for the protest indicator.
- Models 4.1 and 4.2 replicate the analysis in Models 1 and 2, Table 5 of the manuscript but control for a logarithmically transformed protest indicator.
- Models 5.1 and 5.2 interact the logarithmically transformed indicator of protests with the repression item.

Alternative specifications of the outcome variable:

Models 6.1 and 6.2 treat the outcome variable as ordered, and presents results based on ordered logistic regressions.

Models 7.2 and 7.2 recode the outcome variable into a dummy and presents results based on probit regressions.

											OLogit		Probit	
	(1.1)	(1.2)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)	(6.1)	(6.2)	(7.1)	(7.2)
Repression	-0.80***	-0.80***	0.11	0.13	-0.75***	-0.58***	-0.37**	-0.50***	-0.26	-0.63***	-0.84**	-1.13***	-0.65**	-0.88***
	(0.12)	(0.11)	(0.11)	(0.14)	(0.14)	(0.15)	(0.16)	(0.16)	(0.17)	(0.20)	(0.36)	(0.38)	(0.29)	(0.29)
Protest					-0.02***	-0.06***								
					(0.00)	(0.01)								
Protest (log)							-0.39***	-0.27***	-0.30***	-0.30***	-0.89***	-0.64***	-0.66***	-0.43***
							(0.05)	(0.06)	(0.07)	(0.07)	(0.11)	(0.13)	(0.08)	(0.10)
Re X Protest									-0.15*	0.12				
									(0.09)	(0.12)				
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Media control			0.05	0.07										
			(0.06)	(0.06)										
Constant	3.35***	1.64***	2.23***	1.90***	4.03***	1.68***	4.28***	1.66***	4.41***	3.09***	-5.80***	-3.27***	3.29***	1.18**
	(0.33)	(0.23)	(0.35)	(0.31)	(0.23)	(0.24)	(0.24)	(0.25)	(0.25)	(0.24)	(0.58)	(0.56)	(0.46)	(0.49)
Observations	1,648	1,379	1,648	1,379	1,648	1,379	1,648	1,379	1,648	1,379	1,648	1,379	1,641	1,372

Table 2E1 Robustness checks for Table 5 in the manuscript.

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The analysis also controls for education, gender, age, ethnicity, pocketbook conditions, partisanship, prior protest participation and employment status. *Source*: 2012 January survey, 2012 RES survey and author protest-event dataset.

Additional hypotheses

Models 1 and 2 in Table 2E2 investigate whether impact of police repression on attitudes is conditioned by political orientations, or support for the ruling regime. They do so by interacting the suppression and vote indicators. Model 1 uses the full sample of respondents, while Model 2 drops Moscow and St Petersburg from the analysis. In both sets of models, the effect of suppression is negative, and statistically significant. The interaction terms, while failing to reach statistical levels of significance are also negatively signed. Consider Model 1 for example. Holding all other covariates in their empirical means, we see that for respondents who did not vote for United Russia, support for the demands of the opposition was around 3 points in areas with peaceful protests (95%CI: 2.9, 3.15) and just around 2.3 in areas with at least one violently suppressed protest event (95% CI: 2.1, 2.5). For United Russia voters, support for the demands of the protesters is around 2.4 (95% CI: 2.2, 2.5) in regions with peaceful protests, and just around 1.5 (95% CI: 1.3, 1.7) in areas with at least a single violent event.

Table 2E2: **Repression effects conditional on political orientations – Dependent variable: support for the demands of the protesters.**

	(1) (OLS)	(2) (OLS)
Repression	-0.74***	-0.75***
	(0.15)	(0.15)
UR voter	-0.65***	-0.64***
	(0.06)	(0.06)
Repression X UR voter	-0.13	-0.13
	(0.09)	(0.11)
Protested past	0.27***	0.17*
	(0.08)	(0.09)
Education	0.01	0.02
	(0.03)	(0.03)
Male	0.03	0.06
	(0.04)	(0.05)
Age	-0.00	-0.00
	(0.00)	(0.00)
Russian	0.04	0.03
	(0.08)	(0.09)
Urban	0.05	0.06
	(0.06)	(0.06)
Watches news	-0.11	0.04
	(0.09)	(0.10)
Pocketbook worse	0.15***	0.20***
	(0.03)	(0.03)
Employed	0.05	0.01
	(0.05)	(0.05)
Region fixed effects	✓	✓
Moscow & SP	✓	-
Constant	3.32***	3.00***
	(0.24)	(0.25)
Observations	1,648	1,379
R-squared	0.26	0.28

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1
Source: 2012 January survey, 2012 RES and author protest-event dataset.

S.I. 3: Additional Results

A: Alternative outcome variables

Drawing on evidence from the January 2012 survey, Table 3A1 shows that unfolding protests increased awareness of fraud in the 2011 Duma election (Models 1 and 2) and dampened the likelihood that survey respondents would report to know 'little, or almost nothing about the national protest movement (Models 3 and 4). Model 5 shows that perceptions of electoral fraud are also lower among respondents who report not to be aware of the protest events.[8] The 'fraud' indicator is measured on a continuous, 5-point scale, with higher values denoting greater awareness of fraud. The protest awareness indicator is a binary variable coded as 1 if respondents report to know little, or almost nothing about the demands of the protesters and zero if otherwise.

Table 3A1: **Evaluations of fraud and awareness of the protests**

	Fraud evaluations (OLS)		Not aware of the protests (Logit)		Fraud evaluations (OLS)
	(1) Protest (1-max)	(2) Protest (1-max log)	(3) Protest (1-max)	(4) Protest (1-max log)	(5)
Protest item	0.02***	0.10***	-0.04***	-0.10**	
	(0.01)	(0.04)	(0.01)	(0.05)	
Unaware of protests					-0.23***
					(0.06)
Media independence	-0.13***	-0.12***	0.15***	0.13***	-0.14***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)
Controls	✓	✓	✓	✓	✓
Constant	2.77***	2.74***	-0.39	-0.40	3.42***
	(0.32)	(0.33)	(0.40)	(0.40)	(0.28)
Observations	1,142	1,142	1,138	1,138	1,463

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. *Source:* 2012 January survey and protest-event dataset. Models also control for respondents' age, gender, education, ethnicity, settlement status, employment status, evaluations of pocketbook conditions, vote cast, news watching and prior protest participation.

To assess the effect of protests on awareness of fraud across the protest wave, Table 3A2 draws on evidence from the January and spring surveys. The protest item in Models 1 and 3 ranges from one to the maximum number of events. The protest item in Models 2 and 4 considers respondents in areas with and without protests, i.e. it ranges from 0 to the maximum number of events. Models 3 and 4 drop Moscow and St Petersburg from the

[8] We are grateful to the anonymous reviewer for this suggestion.

sample. This results in the loss of 335 observations. The protest coefficient in Models 1 and 2 suggests that across the country, unfolding protests increased awareness of fraud. Yet, the protest item loses its significance in Models 3 and 4. The sign of the protest coefficient flips in Model 4. The negatively signed survey fixed effects suggest that - just like support for the protesters- awareness of fraud was higher in the winter, as opposed to the spring months.

Table 3A2: **Protests and awareness of fraud (OLS models): Evidence from the protest wave**

	Full sample		Without M & St P	
	(1)	(2)	(3)	(4)
	(1-max)	(0-max)	(1-max)	(0-max)
Protest item	0.01**	0.01*	0.03	-0.01
	(0.00)	(0.00)	(0.02)	(0.02)
Watches news	-0.03	0.06	-0.09	0.04
	(0.11)	(0.10)	(0.12)	(0.11)
Protested past	0.38***	0.36***	0.41***	0.38***
	(0.10)	(0.10)	(0.11)	(0.11)
Education	0.07**	0.06*	0.08**	0.06*
	(0.03)	(0.03)	(0.04)	(0.03)
Male	0.05	0.05	0.04	0.04
	(0.05)	(0.04)	(0.05)	(0.04)
Age	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.18**	0.14*	0.19**	0.15*
	(0.08)	(0.08)	(0.09)	(0.08)
Urban	0.17***	0.16***	0.17***	0.17***
	(0.06)	(0.05)	(0.06)	(0.05)
UR voter	-0.83***	-0.81***	-0.80***	-0.78***
	(0.05)	(0.05)	(0.05)	(0.05)
Pocketbook worse	0.25***	0.21***	0.26***	0.21***
	(0.04)	(0.03)	(0.04)	(0.03)
Employed	0.03	0.03	0.02	0.02
	(0.05)	(0.05)	(0.05)	(0.05)
Survey fixed effects	-0.29***	-0.23***	-0.41***	-0.20*
	(0.08)	(0.08)	(0.12)	(0.11)
Region fixed effects	✓	✓	✓	✓
Constant	2.37***	2.48***	2.41***	2.64***
	(0.22)	(0.21)	(0.35)	(0.31)
Observations	2,518	3,047	2,183	2,712
R-squared	0.22	0.22	0.21	0.21

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1 *Source:* 2012 January survey, 2012 RES and protest-event dataset.

B: Did more democratic regions protest more? And, did they suppress protesters less?

To probe whether (i) there is a tendency for anti-regime protest events to occur in regions that traditionally feature a wider pool of activists and pro-democratic attitudes amongst the population, and (ii) the relationship between suppression and regional democracy, we perform tests employing regional democracy indices covering the years 2006-2010. The indices were devised by experts on Russian political geographers Nikolay Petrov and Alexei Titkov and are widely employed in studies of Russian regional politics.[9] The media independence, political pluralism and democracy of elections variables are measured on a 1-5 scale, with higher values denoting more democratic regions. The 'aggregate democracy' indicator is measured on a 1-50 scale instead. In the period under consideration, the mean value of this indicator is 30, and the maximum is 43. The protest variables used for this part of the analysis describe the total number of relevant protest events that took place across Russia's 83 regions from December 4th, 2011 to May 31st, 2012. The repression variable used for this part of the analysis is a binary indicator coded as one for regions with violent protests and zero otherwise. Both indicators come from the protest-event dataset assembled for this work.

As illustrated in Column 1, Table 3B1, the correlation between regional democratic indicators, measured with the use of several proxies from the Petrov and Titkov Index and the protest item is well below the .5 threshold. Column 2 in Table 3B1 considers the correlation between regional democracy scores and repression. Once more, the relationship between the variables appears weak. Moreover, with the exception of the media independence variable, the bivariate correlations reported in both columns fail to reach statistical levels of significance.

Table 3B1: **Bivariate correlation between regional democratic indicators, (i) the regional protests taking place between December 2011 and May 2012 (Column 1), and (ii) the use of repression against protesters (Column 2)**

	(1)	**(2)**
	Protest frequency (n=83 regions)	Repression used against protesters (n=83 regions)
Media Independence	.31 (.00)	.20 (.08)
Political Pluralism	.10 (.36)	.09 (.44)
Democracy of Elections	-.07 (.52)	-.09 (.44)
Average Democracy Score	18. (.10)	.14 (.18)

[9] Information on the composition of the indices is provided in Section 1C of this Appendix.

Next, we turn to explore whether regional democracy indicators predict the number of political protest events that took place across Russia's 83 regions between December 2011 and May 2012. The dependent variable in this set of models ranges from zero protest events to 105. We summarize findings from four different models in the left-hand panel of figure 3B1. This plots coefficients from OLS models with robust standard errors, but the coefficients on the variables of interest do not change if we use negative binomial regressions instead. Russia's 83 regions are the unit of analysis. In the left-hand panel of Figure 1, the aggregate democracy indicator emerges as a statistically significant predictor of the frequency of protest events at the 1% level. A unit increase in the democracy index for example, predicts an increase of protest frequency by less than .38 (SE .12). The media independence indicator reaches statistical levels of significance at the 5% level. Results suggest that a unit- increase in regional media independence, is associated with approximately four additional protest events. The coefficient on the indicator designed to capture how democratic regional elections have been in the past is negative, and fails to reach statistical levels of significance. When we replicate the analysis restricting the sample to those regions that experienced some form of unrest during this period, i.e. to regions with at least one single protest event, the correlation between regional democracy indicators and protest frequency appears weaker. Of all the indicators considered, only the regional media indicator reaches statistical levels of significance at the 1 percent level. This suggests that regional democracy indicators poorly predicted the frequency of regional protests taking place across Russia's protesting regions this period.

The right-hand panel of Figure 3B1 considers the correlation between the same indicators of regional democracy and the use of repression against protesters. Here, the dependent variable is a dummy, coded as one if repression was used against protesters and zero if not. Reported coefficients rely on four sets of probit models, with robust standard errors. Once more, we observe a weak relationship between regional democratic indicators and the use of repression against protesters. Results reported here do not change when we restrict the sample to those regions that experienced some form of unrest during this period, i.e. to regions with at least one single protest event. In all models we run with the reduced sample, the regional democracy indicators fail to reach statistical levels of significance

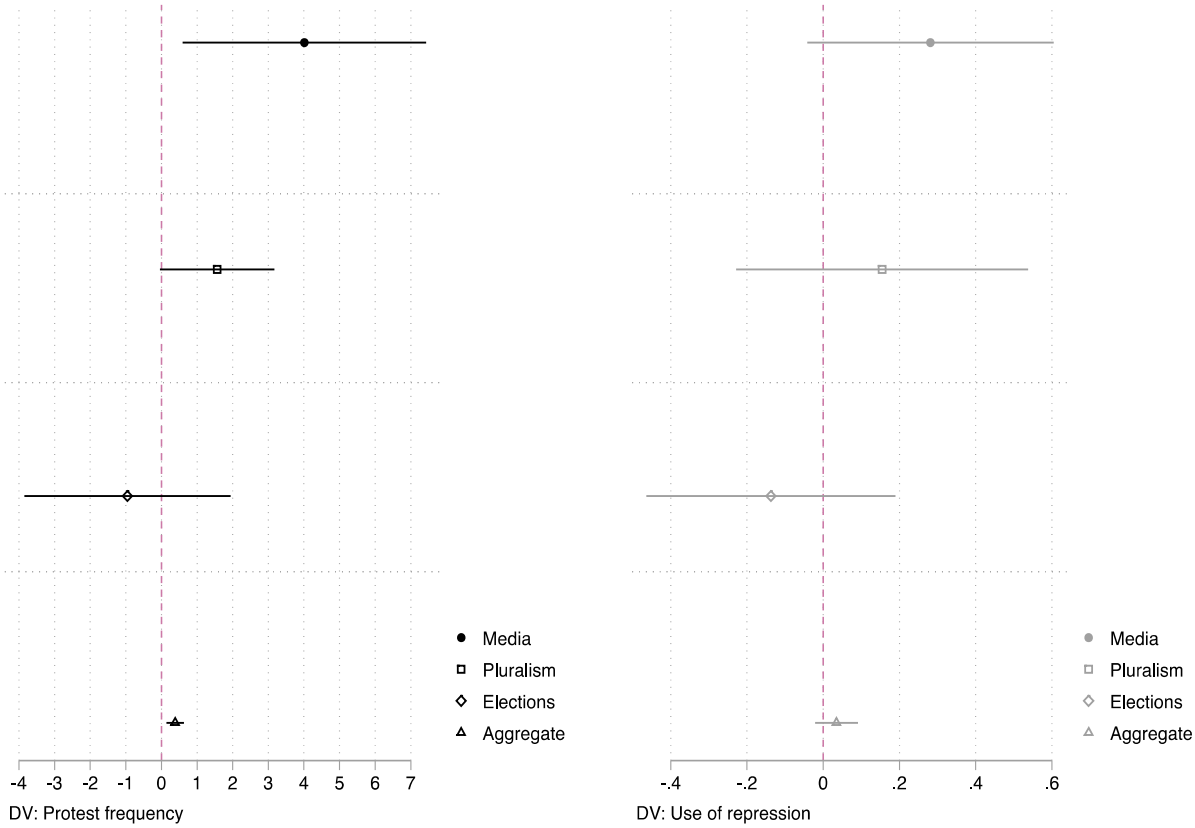

Figure 3B1: **Regional democracy indicators, protests events and repression**

Notes: The dependent variable in the left-hand panel of Figure 3B1 is a continuous indicator of protest-event frequency. It captures the number of relevant political protests taking place in Russia's 83 regions between December 2011 and May 2012. The dependent variable in the right-hand panel of Figure 3B1 is a binary indicator coded as 1 if repression was used against protesters in any given region during any of the protest events and zero if otherwise. The unit of analysis are Russia's 83 regions. Horizontal bars are 95% confidence intervals. Data come from the Petrov and Titkov index, and our protest-event dataset.

C: Protest effects conditional on reported vote in the 2011 Duma election.

We are conscious of the fact that the effect of protests on public opinion may also depend on bystanders' political affiliations, or partisanship. In analysing perceptions of election fraud during the 2012 elections in Russia, for example, Graeme Robertson (2017) finds a significant effect of partisanship and prior association with support for the opposition in influencing the extent to which voters perceive electoral fraud as a problem. Studies of media effects on public opinion likewise highlight the significance of attitudinal priors in mediating information effects on public opinion. While some studies have found that exposure to politically-polarized messages has a greater effect on those with political priors different from those conveyed through a media information channel, others indicate that greater receptivity to political messaging is found among citizens already ideologically predisposed towards a particular message (discussed in Peisakhin and Rosenas 2018). In a recent analysis of Russian media's biased news broadcasting in Ukraine during the 2014 electoral cycle, for example, Peisakhin and Rosenas find that Russia's propaganda in support of pro-Russian political parties and candidates was most effective among those with already strong pro-Russian priors, while its effects on those with strong pro-Western priors were ineffective or even counter-productive.

As existing research highlights, however, "unexpected circumstances" and "anxiety" may well generate a learning effect, influencing the receptivity of those even with with pro-regime political orientations to messages critical of the regime (see for example: Robertson 2017, p.606). The 2012 electoral protests we examine here, unprecedented in scale as they had been, may well have generated an effect of updating of extant distribution of political preferences, with both anti, and pro-regime supporters updating their support for the demands of the opposition.

As an extension of our baseline hypothesis that protests influence public opinion, therefore, the analysis we present below also helps establish whether the effects of protests are conditional on political orientation, or support for the ruling regime. We need, however, to acknowledge upfront that reported vote does not fully, or necessarily operationalize the concept of regime support, as a stable identity. Stated vote as a proxy for partisanship also conflates party, or in this case support for the ruling regime, and actual voting.

Empirical Analysis

To examine the hypothesis that partisanship moderates the effect of protests with the data we have available, we interact the protest indicator with the reported indicator of vote cast in the December 2011 Parliamentary election. This election occurred prior to the onset of the 2011-12 electoral protest wave. The analysis presented below draws on evidence from the protest wave, i.e. the combination of the two surveys that were in the field in January 2012, as well as later in the spring. Models presented in Table 3C1 below introduce region and survey fixed effects. The protest indicators consider the full sample of respondents, that is, those interviewed before and after any protest events took place in their region. In Models 1.1 and 1.2 the protest indicator is logarithmically transformed. Models 1.2 and 2.2 drop respondents in Moscow and St Petersburg from the sample. This results in the loss of approximately 270 observations, roughly 15 percent of the entire sample. As noted in the manuscript, the vote indicator is a binary variable which takes the value of one if the respondent indicates that she voted for the United Russia party in December 2011 and zero otherwise.

In all four sets of models, the protest indicators are negatively signed. This is consistent with evidence already presented in Table 3 of the manuscript. The interaction terms between vote cast and protest events are also negatively signed. Yet, the interaction terms are only significant at the 5 % level in Models 1.1 and 2.1, which consider the full sample of respondents. While the interaction terms are also negatively signed in Models 2.1 and 2.2, we are now working with a smaller sample, and the confidence intervals are inevitably larger.

Model 2.1, for example, suggests that holding all other covariates at their empirical mean, as protest events increase from zero to the regional average of 7 events, support for the demands of the protesters drops by approximately .07 points among UR supporters (95% CI: -.10, -.04). By contrast, a similar increase in protest activity does not shift support for the protest movement among respondents who either did not vote for United Russia, or who abstained in the December 2011 election. As protests increase from 0 to the regional average of 7 events, support for the protesters among this group of respondents, which already is very high at around 2.7, shifts by -.03 (95% CI: -.07, .00). This change in support for the protesters fails to reach statistical levels of significance.

Table 3C1: **Protest effects conditional on partisanship: Evidence from the protest wave**

	(1.1) Full sample (OLS)	(1.2) Drops M& StP (OLS)	(2.1) Full sample (OLS)	(2.2) Drops M& StP (OLS)
Protest log (0-max)	-0.13	-0.05		
	(0.09)	(0.10)		
Protest non-log (0-max)			-0.00*	-0.00
			(0.00)	(0.02)
UR voter	-0.58***	-0.62***	-0.65***	-0.64***
	(0.08)	(0.09)	(0.05)	(0.07)
Protest X UR voter	-0.07*	-0.03	-0.01***	-0.01
	(0.04)	(0.06)	(0.00)	(0.02)
Watches news	0.02	0.15	0.03	0.15
	(0.09)	(0.10)	(0.09)	(0.10)
Protested past	0.33***	0.24***	0.33***	0.24***
	(0.08)	(0.09)	(0.08)	(0.09)
Education	0.02	0.02	0.01	0.02
	(0.03)	(0.03)	(0.03)	(0.03)
Male	0.01	0.03	0.01	0.03
	(0.04)	(0.04)	(0.04)	(0.04)
Age	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Russian	0.04	0.05	0.05	0.05
	(0.07)	(0.08)	(0.07)	(0.08)
Urban	0.01	0.01	0.01	0.01
	(0.05)	(0.05)	(0.05)	(0.05)
Pocketbook worse	0.10***	0.14***	0.11***	0.14***
	(0.03)	(0.03)	(0.03)	(0.03)
Employed	0.04	0.02	0.04	0.02
	(0.04)	(0.05)	(0.04)	(0.05)
Survey fixed effects	✓	✓	✓	✓
Region fixed effects	✓	✓	✓	✓
Constant	3.30***	2.83***	3.08***	2.78***
	(0.31)	(0.22)	(0.19)	(0.20)
Observations	1,980	1,711	1,980	1,711
R-squared	0.28	0.27	0.28	0.27

Notes: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. *Source*: January 2012 Stephen White survey and April-May 2012 Russian Election Study.

We are finally conscious of the possibility that after the protests erupted, respondents could have misreported how they voted in the Parliamentary election, even if voting occurred prior

to protests. To deal with this issue, we perform the following checks. *First*, we examine whether in our sample, electoral protests predict reported vote choice in the 2011 Duma election. We present results from probit models in Models 1-4 in Table 3C2. The protest items in Models 1 and 3 consider respondents in regions with and without protests, while the protest items in Models 2 and 4 consider whether in regions with protests, support for the ruling party increases as a function of local unrest. The protest coefficients fail to reach statistical levels of significance in all four models. Findings echo research by Frye and Borisova (2016, p.29) who show that respondents interviewed after the 2011 Duma election and after the onset of the 2011 electoral protests were just as likely to report supporting United Russia and other parties as before the election and before the protests. In other words, we have no evidence that in response to the 2011-12 protests Russians over, or under-reported their opposition to the regime.

Second, we leverage evidence from the panel component of the 2008 and 2012 Russian Election Surveys to show that political orientations moderate responses to protests, even when we consider items from the 2008 RES survey. Items of reported partisanship in the 2008 RES survey are unlikely to suffer from any social desirability bias related to the outbreak of protests *after* the 2011 Duma election. We report these results below.

Table 3C2: **Protests do not predict reported vote in the 2011 election.**

	Full sample		Without M&SP	
	(1)	(2)	(3)	(4)
	0-max	1-max	0-max	1-max
Protest item	0.01	-0.06	0.07	-0.04
	(0.11)	(0.10)	(0.12)	(0.11)
Protested before	-0.05	0.02	-0.01	0.07
	(0.11)	(0.12)	(0.12)	(0.13)
Controls	✓	✓	✓	✓
Region fixed effects	✓	✓	✓	✓
Survey fixed effects	✓	✓	✓	✓
Constant	-0.22	0.14	-0.12	0.12
	(0.41)	(0.38)	(0.33)	(0.33)
Observations	3,047	2,518	2,712	2,183

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Models control for respondents' education, gender, age, ethnicity, settlement status, news watching and pocketbook concerns.

Evidence from the panel component of the Russian Election Study (RES) surveys of 2008 and 2012 respectively

Results presented in Table 3C3 below rely on the panel component of the Russian Election Study surveys. The sample consists of those respondents who were first interviewed

as part of the 2008 Russian Election Study survey, and then successfully re-interviewed during the 2012 Russian Election Study survey. A total of 666 respondents were successfully interviewed in the two surveys. Just like in the manuscript, the dependent variable is a 4-point indicator, with higher values denoting greater support for the demands of the protesters. 'UR voters' are respondents who in the 2008 survey reported to vote for the ruling regime party, United Russia, in the December 2007 Parliamentary election. The analysis controls for the full set of controls introduced in the main part of the manuscript and drops Moscow and St Petersburg from the sample. Models 1-4 consider four different iterations of the protest item: in Model 1, the protest item is a continuous indicator of protest events, ranging from 0 to the maximum number of regional protests. We logarithmically transform this indicator in Model 2. In Model 3, the protest variable is a continuous indicator that only considers respondents in areas with protest events alone, that is one that ranges from 1 to the maximum number of events. We logarithmically transform this indicator in Model 4. The interaction term between the protest and the vote cast items is negatively signed in all models.

Consistent with the analysis of the cross-sectional data, we see that for respondents who supported the ruling regime party in the past, protests do not increase support for the demands of the protesters. Consider Model 1 for example. Results suggests that as the number of protests increases from 0 to the regional average of 4, support for the protesters among non-UR supporters increases by .20 points (90% CI: .04, .33), moving from 2.1 to approximately 2.3 respectively. This is well above the mean of the protest support variable, which is measured on a 4-point scale. Among UR supporters, support for the protesters drops by .02 instead (90%CI: -.16, .12), and this change fails to reach statistical levels of significance. Similar results are obtained in Model 3, which restricts the sample to respondents in places *with* protests alone. Evidence suggests that as the number of protests increases from the minimum of 1 to the average of 5, support for the protesters among non-UR supporters increases by .28 (90% CI: .11, .45), moving from 2 to 2.3 points respectively. This change in support for the protesters is statistically significant at the 10 percent level. Once more, changes in the frequency of protests fail to increase support for the demands of the protesters among UR voters.

Table 3C3: Heterogeneous effects of protests based on political orientations (OLS models) - Evidence from the panel component of the 2008-2012 surveys

	(1) Protest (0-max)	(2) Log item	(3) Protest (1-max)	(4) Log item
Protest item	0.05**	0.11	0.07**	0.30**
	(0.02)	(0.09)	(0.03)	(0.12)
UR voter (2008)	-0.10	-0.11	0.03	0.08
	(0.15)	(0.19)	(0.21)	(0.26)
UR voter X Protest	-0.05*	-0.14	-0.06	-0.24
	(0.03)	(0.12)	(0.04)	(0.17)
Pocketbook worse	0.08	0.07	0.15**	0.15**
	(0.06)	(0.06)	(0.07)	(0.07)
Watches news	0.19	0.16	0.04	0.02
	(0.21)	(0.22)	(0.27)	(0.27)
Protested past	0.01	0.01	-0.03	-0.04
	(0.16)	(0.16)	(0.17)	(0.17)
Urban	0.15*	0.16*	0.26**	0.27***
	(0.09)	(0.09)	(0.10)	(0.10)
Russian	-0.31**	-0.32**	-0.04	-0.04
	(0.14)	(0.14)	(0.16)	(0.16)
Education	-0.03	-0.03	-0.04	-0.04
	(0.03)	(0.03)	(0.04)	(0.04)
Age	-0.00	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Employed	-0.20*	-0.21*	-0.32**	-0.32**
	(0.11)	(0.11)	(0.13)	(0.13)
Male	-0.02	-0.02	0.00	0.01
	(0.09)	(0.09)	(0.10)	(0.10)
Media independence	0.02	0.04	0.07	0.06
	(0.06)	(0.06)	(0.07)	(0.07)
Constant	2.06***	2.11***	1.39***	1.33**
	(0.44)	(0.46)	(0.53)	(0.54)
Respondents	407	407	325	325

Notes: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. *Source*: 2008-2012 panel sample of the 2008-2012 Russian Election Study survey. The models drop Moscow and St Petersburg from the sample.

Bibliography

Collins, William J, and Robert Margo. 2007. "The Economic Aftermath of the 1960s Riots in American Cities: Evidence from Property Values." *Journal of Economic History* 67: 849–83.

Frye, Timothy, and Ekaterina Borisova. 2016. "Elections, Protest and Trust in Government:A Natural Experiment from Russia." *SSRN*. doi:https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2827551.

Hainmueller, Jens, Jonathan Mummolo, and Yiqing Xu. 2018. "How Much Should We Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Practice." *Political Analysis* (Forthcoming). Print.

Iacus. S. M., King. G. and Porro, Giuseppe. 2012. "Causal Inference without Balance Checking: Coarsened Exact Matching." *Political Analysis.* 20 (1). pp. 1-24.

Lankina, T., Watanabe. K. and Nevesova. Y. 2016. "Framing Protest in Autocracies: How State Media Control, Manipulate and Leverage Public Discontent." Working paper.

Madestam, Andreas, David Yanagizawa-drott, Daniel Shoag, and Stan Veuger. 2013. "Do Political Protests Matter? Evidence from the Tea Party Movement." *The Quarterly Journal of Economics*: 1633–85.

Peisakhin, L. and Rozenas, A. 2018. "Electoral Effects of Biased Media: Russian Television in Ukraine." *American Journal of Political Science. Doi:* https://doi.org/10.1111/ajps.12355

Reuter, Ora John, and David Szakonyi. 2015. "Online Social Media and Political Awareness in Authoritarian Regimes." *British Journal of Political Science* 45(1): 29–51.

Robertson, G. 2017. "Political Orientation, Information and Perceptions of Election Fraud: Evidence from Russia." *British Journal of Political Science.* pp.589-608.

Smyth, R. and Oates, S. 2015. "Mind the Gaps: Media Use and Mass Action in Russia." *Europe-Asia Studies.* pp. 285-305.

Sobolev, Anton. 2013. "Geography, Technology and Politics: Factors of Mass Protests in Russia 2011-2012." *Sociologia Vlasti* 4: 1–35