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Did Sanctions Help Putin?

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Do sanctions strengthen the targeted regime? I analyze the 2014 imposition of Western sanctions on Russia and its impact on voting. The US and the EU introduced targeted measures against Russian entities and individuals related to Putin's regime. Using polling station-level data I investigate whether Putin gained relatively more support among those local constituencies which were geographically close to a sanctioned firm. I find a significant effect of targeted sanction imposition on the vote share in presidential elections between 2012 and 2018. Putin gained 1.54 percentage points at those polling stations that had a sanctioned firm in immediate vicinity. Targeted sanctions imposition also affected voter turnout. The effect on voting can be explained as rally-around-the-flag in the face of sanctions, as long as voters did not endure economic losses through a decline in some sanctioned firms' economic performance.

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1. Introduction

Do sanctions have an unaccounted for effect of strengthening the sanctioned regime? According to the public choice literature, sanctions can reduce the political resources of the ruling elites in the target country, thereby changing the domestic political equilibrium and bringing about a change in policy in the direction aimed by the sanction senders (Kaempfer and Lowenberg, 1988). Specifically, the regime's opposition may be encouraged by foreign sanctions and their ability to mobilize people to collective actions against the government may increase, or regime supporters may turn away from the target country rulers in anticipation of a regime change (Kaempfer et. al., 2004). Alternatively, sanction imposition may induce the target country's citizens to reject foreign inference by increasing their support for the rulers and thereby reinforcing the sanctioned policy or behavior, a phenomenon termed "rally-around-the-flag" (Kaempfer and Lowenberg, 1992). Aware of these potential unintended consequences, sanction policymakers in the last two decades have started applying so-called "smart" or "targeted" sanctions, i.e., sanction programs which meticulously target only a country's ruler and her closest supporters (Tostensen, 2002; Drezner, 2011).

Understanding the impact of this new type of sanctions is of interest not only for sanctions policymakers and the sanctions literature but also for models of political support and state legitimacy. And for those taking the decisions on sanctions, if smart sanctions increase the popular support of a targeted government, then sanctions in general may turn out to be an obsolete, ineffective foreign policy tool.

In this paper, I empirically examine the effect of smart sanctions on the targeted country. In 2014, the EU and the US introduced sanctions against several hundreds of Russian entities and individuals. I investigate the political consequences of these

sanctions on elections in Russia, between 2012 and 2018. The targeted manner of sanctioning created substantial geographical variation in direct exposure to sanctions. Russians living close to and potentially working at sanctioned firms may have experienced sanctions in a different way than the average Russian citizen. Direct exposure to local sanctioned entities may have given rise to an identity- or economic-based reaction. The local presence of sanctioned firms may have induced defiant attitudes against foreign influence and awakened or strengthened ideas of nationalism or identity from which Putin's support benefits (Pape, 1997). At the same time, sanctioned entities may have contributed to worsening local economic conditions, for which Western interference could be blamed.

This paper analyzes whether exposure to smart sanctions affects political support for the targeted regime. To do so, I assemble a panel of newly-collected polling station-level data on presidential elections and match it with geographical and financial data on sanctioned Russian firms. I then compare the change in Putin's vote share between 2012 and 2018 for the polling stations that had a sanctioned firm in close vicinity after 2014's sanctions imposition to those polling stations that did not. I find that local presence of a sanctioned firm significantly increased Putin's vote share in the 2018 presidential elections by 1.54 percentage points. Since more than 11,000 polling stations (out of over 90,000) were close to at least one sanctioned firm in the 2018 elections, the estimated effect implies over 280,000 influenced voters.

In a second part of the analysis, I show that the effect of a nearby sanctioned firm varies with local support for Putin. The effect is particularly strong at those polling stations that are the most and the least supportive of Putin. Additionally, the presence of a sanctioned firm increased voter turnout at those polling stations where Putin enjoyed highest support. The impact of sanctions on voters seems to work, at least in part, through mobilization of nonvoters in pro-Putin areas.

Pinpointing the precise mechanism that drives up Putin's support at polling stations close to sanctioned firms is challenging due to the lack of disaggregated data on voter attitudes. To confront this challenge, this paper uses firm-level data on employment at sanctioned firms between 2013 and 2017. I show that the sanctioned firm effect on voting is only present for those firms that gain additional employees over the sanctions period. The effect for sanctioned firms losing employees over the same period is negative, albeit statistically insignificant. This may be taken as an indication that an identity- or nationalism-based explanation for Putin's support is subordinate to a rational economic explanation. When sanctions affect one's livelihood and economic prosperity, Russians may be less eager to see the blame in foreign interference and to rally-around-the-flag.

My paper contributes to the literature on the domestic political impact of sanctions. One strand of this literature has found that sanctions lead to popular mobilization against the regime in the target country and policy reversal or step-down of the regime (Kirshner, 1997; Mack and Khan, 2000; Bolks and Al-Sowayel, 2000; Marinov, 2005). These findings have been questioned by contributions that demonstrate that the impact of sanctions, especially on autocratic regimes, is probably weak (Galtung, 1967; Lektzian and Souva, 2007, Allen, 2008; Escriba-Folch and Wright, 2010). Nondemocratic regimes are able to mitigate the domestic political costs of sanctions by increasing government spending or taking repressive measures. These empirical studies typically use a cross-country or a case-study approach and are plagued by endogeneity problems, particularly in isolating the effect of sanctions on domestic politics from other concurrent dynamics or factors. I improve on these existing contributions by providing causal identification of the impact of sanctions on the target country's electoral outcomes.

My paper is also related to the small but growing literature on targeted sanctions. Dreger et al. (2015) and Tuzova and Qayub (2016) use VAR models in an attempt to estimate the impact of Western sanctions on the Russian economy. Moret et al.

(2016) and Ahn and Ludema (2016) examine the change in trade flows between Russia and the rest of the world following sanction imposition. Whereas these studies give a fundamental macroeconomic perspective on how sanctions may play out across the economies involved in sanctions, they may be less well-suited to measure the impact of targeted sanctions, which are mostly affecting only specific entities or at most specific sectors of an economy. In this regard, Crozet and Hinz (2016), Haidar (2017), Ahn and Ludema (2017) and Draca et. al. (2017) take up a micro-level approach in determining the impact of sanctions on trade flows or economic performance of the sanctioned firms or sectors. Some of the findings support that smart sanctions have been able to negatively impact the performance of the entities connected to the business and political elites in Russia and Iran (Ahn and Ludema 2017; Draca et. al., 2017). Yet, Crozet and Hinz (2016) and Haidar (2017) use customs data to demonstrate that recent targeted sanctions have also had unintended consequences of deflecting trade flows, particularly in the cases of Russia and Iran. I build upon this micro-data-based research agenda on exploration of the impact of sanctions in the following ways. First, I compile firm-level data on sanctioned firms and polling-station-level data across presidential elections in order to explore the precise working-out of Western sanctions in Russia. Second, I complement the existing contributions, which focus on real economic performance of the sanctioned entities, whereas my paper draws implications for the sanction effectiveness in terms of their political consequences. This is important because, ultimately, whether sanctions work comes down to whether or not the targeted regime changes its behavior. In this regard, the economic losses endured by the target may prove a mixed blessing – it is both possible that the regime is split or that its support is reinforced (Kaempfer et. al., 2004).

Finally, my findings may provide more insight in non-Western-centric concepts of statehood and legitimacy. If sanctions do not fracture the target government but instead increase its popular support, then it is questionable that even modern-day

targeted sanctions may be able to divide the masses from the elite who is to be punished and achieve their intended goal (Freedman, 1998).

The remainder of the paper is structured as follows. Section 2 gives a brief background on Western sanctions imposition against Russia starting 2014. In section 3 I describe the data whereas section 4 presents the empirical specification, the results and robustness checks. Section 5 expands the analysis to heterogeneity effects and potential mechanisms. Section 6 concludes.

2. Sanctions background

In 2013 Ukrainian President Viktor Yanukovich refused to sign an Association Agreement with the EU, which aimed at integrating Ukraine more closely with the EU. The President supported a pro-Russian orientation. His position instigated mass protests in Ukraine and the formation of an anti-Russian and pro-European movement. An Ukrainian government-led intervention against the protesters led to several deadly incidents. The conflict culminated with President Yanukovich fleeing the country and Russia invading the Crimean peninsula in March 2014. A referendum held at Crimea shortly thereafter affirmed the peninsula's decision to join the Russian Federation. As these proceedings were not abiding by international law, the EU and the US imposed sanctions on Russian politicians and against specific economic entities in Crimea. These actions were accompanied by pro-Russian and pro-Ukranian protests across Ukraine and a rising polarization of the country. The conflict continued escalating in the eastern parts of Ukraine – Donetsk and Lugansk – and Russia was accused of supporting pro-Russian militant activists in those regions. This led to further sanctions adoption by the US and the EU against Russia. Russia answered with countersanctions against the sanctioning countries.

Sanction specifics – The US issued four Executive Orders[1] between March and December 2014, which authorize US government institutions to impose and regulate sanctions against Russia. US sanctions consist of two non-exclusive categories. The first category, SSI (Sectoral Sanctions Identification) sanctions, are sanctions aimed at entities in the Russian financial, energy and defense sectors. The following restrictions apply for these entities: US citizens are prohibited from transacting or issuing debt of a maturity of more than 30 days or acquiring new assets of the sanctioned entities. Additionally, the transaction of certain technologies and services related to deep-water, offshore or shale oil activity is also prohibited. The second sanctions category, SDN (Specially Designated Nationals and Blocked Persons) sanctions, deals with individuals and entities which are to be fully blocked from any economic activity with the US.

The EU sanctions policy is quite similar to the US one and is set out in several EU Council Regulations.[2] The EU also maintains two broad sanction categories. The first one, Sectoral Sanctions List, prohibits EU citizens to transact in debt or equity of a maturity exceeding 30 days with entities on the list. It also bans EU exports of deep-water, offshore or shale oil related technologies and services. The other category, Restricted Measures List, prohibit the issuance of visas and freezes the assets for all individuals featured on the list as well as prohibits any economic activities with entities and individuals on the list.

3. Data and descriptive statistics

3.1 Data and construction of the dataset

3.1.1 Elections data

[1] Execute Order 13660 (March 6, 2014), Execute Order 13661 (March 16, 2014), Execute Order 13662 (March 20, 2014), and Execute Order 13685 (December 19, 2014).
[2] EU Council Regulations 269/2014, 284/2014, 433/2014, 833/2014 and 960/2014.

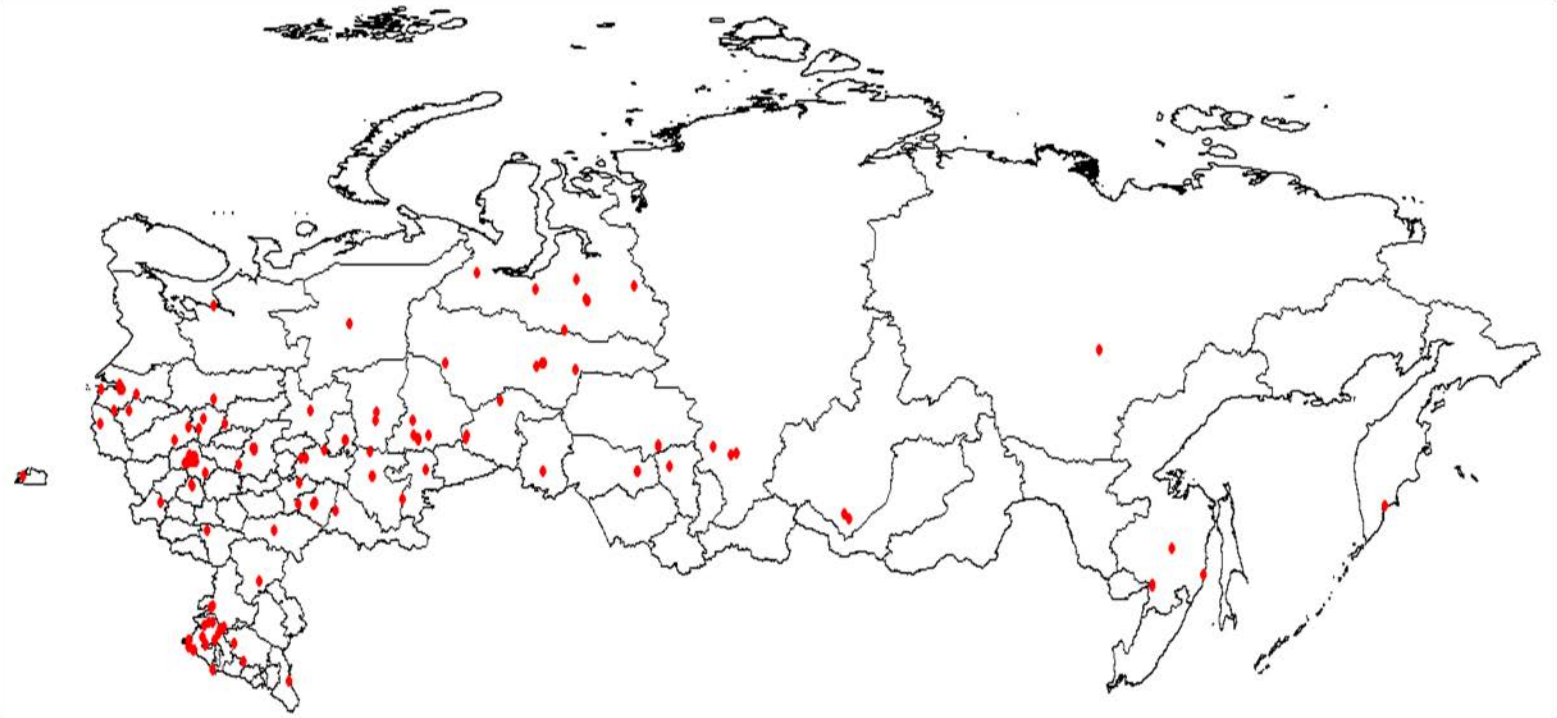
Elections data comes from the Central Election Commission of the Russian Federation and was webscraped from the website of the Commission[3], where it is made available at the polling station level. Address data of the polling stations for the 2018 presidential elections was also available from the Election Commission. Polling stations are formed for a period of five years. While most of them retain their identification number and localization across elections, some do not. In order to account for potential changes in polling stations between the 2012 and 2018 elections, I use data on the addresses of the polling stations in 2012 collected by GIS-Lab Russia. This non-governmental organization is a society of specialists in geographic information systems, which runs specific geographic and remote sensing projects and makes their data available online.[4] I then geocode the polling station addresses for the 2012 and 2018 presidential elections using Yandex Maps and Google Maps APIs. To match polling stations across elections, I use Stata's *geodist* routine (Picard, 2010), which calculates straight-line distance between two geographical coordinates. Roughly 5,000 polling stations from the 2018 elections remain unmatched (out of 90,000). Additionally, of those matched, 3,671 of the polling stations matched feature a matching distance of more than 10 km. I drop these as unlikely or erroneous matches. I am then left with 79,922 matched polling stations, with an average (median) matched distance between 2012 and 2018 polling stations equal to 0.8 km (0.3 km) and the 95th percentile corresponding to 3.6 km distance between matched polling stations. The election data, consisting of votes for the different candidates, number of eligible voters registered and the total ballots cast is kept at the polling station level.

3.1.2 Sanctions data

[3] www.cikrf.ru
[4] gis-lab.info

I identify 361 distinct firms located in Russia from the US and EU sanctions lists. Firms are listed with their addresses which I cross-check with firm-level data provided by Bureau van Dijk's AMADEUS database. This database provider collects and standardizes financial and ownership data on firms located in Europe. The firms' locations are geocoded using Yandex Maps and Google Maps API so that I can match them to polling stations across Russia. The firms are located all across Russia (Figure 1), however with a high prevalence in Moscow and St. Petersburg – 218 firms are located there, i.e. 60% of all sanctioned firms. Overall, sanctioned firms are located in cities of sizable population – another 29 sanctioned firms are located in cities with population of at least 1,000,000; 69 firms are located in mid-sized cities of population between 100,000 and 1,000,000 and the remaining 45 sanctioned firms operate from locations with population under 100,000 (Table 1).

FIGURE 1: SPATIAL DISTRIBUTION OF SANCTIONED FIRMS



Note: This map shows the distribution of sanctioned firms across Russia. The size of the marker is not proportionate to the number of firms at a given location.

TABLE 1: POPULATION SIZE BY SANCTIONED FIRM LOCALITY

Population at sanctioned firm location	Frequency	%	Cum. %
Population > 2,000,000	218	60.39	60.39
1,000,000 < Population <= 2,000,000	29	8.03	68.42
100,000 < Population <= 1,000,000	69	19.11	87.53
Population < 100,000	45	12.47	100.00
Total	361	100.00	

Most of the sanctioned firms are small to mid-sized firms, with three-quarters of the firms with less than 1,000 employees in 2013 (Table 2).

TABLE 2: SIZE OF SANCTIONED FIRMS

Number of employees at sanctioned firm in 2013	Frequency	%	Cum %
Employees < 50	53	26.11	26.11
50 < Employees <= 1,000	102	50.25	76.35
1,000 < Employees <= 10,000	46	22.66	99.01
Employees > 10,000	2	0.99	100.00
Total	203	100.00	

The distribution of sanctioned firm size across the largest (Moscow and St. Petersburg) and the smallest cities is similar, with a prevalence of small and mid-sized sanctioned companies, whereas most of the largest sanctioned firms are located in cities of population between 100,000 and 2,000,000 (Table 3).

TABLE 3: SANCTIONED FIRM SIZE AND FIRM LOCATION POPULATION

	Employees < 50	50 < Employees <= 1,000	1,000 < Employees <= 10,000	Employees > 10,000	Total
Population > 2,000,000	30.83	54.14	15.04	0.00	100.00
1,000,000 < Population <= 2,000,000	6.25	37.50	50.00	6.25	100.00
100,000 < Population <= 1,000,000	13.79	31.03	51.72	3.45	100.00
Population < 100,000	28.00	60.00	12.00	0.00	100.00
Total	26.11	50.25	22.66	0.99	100.00

To assess the effect of a sanctioned firm on local voters' support for Putin, I would ideally interview local voters on their political attitudes, prior and after the sanctioning of local firms. Unfortunately, this kind of information at such level of geographic detail is not available. I therefore use spatial vicinity of a local constituency to a sanctioned firm as a proxy for exposure. From the data described above, I construct several treatment variables. The main one identifies all polling stations which have one (or more) sanctioned firm within a radius of 10 km. There are 11,068 polling stations that were treated with at least one nearby sanctioned firm. In robustness checks I vary this distance to include only very close (within 3 km) or also more faraway-located (within 60 km) sanctioned firms. In addition, I construct a treatment variable which accounts for the potential economic intensity of treatment. In particular, I draw a radius of 10 km around each polling station and sum the number of employees at sanctioned firms within this distance. I then relate this number to the total population in the subregion in which the particular polling station is located. I thus have a measure giving me the ratio of local population employed at sanctioned firms.

3.1.3 Control variables

The polling stations are organized in electoral districts, which match Russian subregions. The subregion is the lowest administrative level at which data is collected by Rosstat, the Russian Federal State Statistics Service. I collect demographic data from Rosstat's website[5] for all 2,351 subregions, which in most cases is available for the period 2009-2017. The variables that provide enough coverage are total population, as well as population shares according to age, gender, social benefits recipients and urbanization. To account for potential economic confounders that may influence both the location of a sanctioned firm and political support for Putin, I also collect several economic performance controls. These include goods and services produced, state investment in fixed assets, and average wage, all at the subregional level, provided by Rosstat.

3.2 Summary statistics

Table 4 presents summary statistics of the election, demographic and economic data. I compare polling stations that featured a sanctioned firm within 10 km distance (column(2)) to polling stations that did not (column (1)). Those polling stations with a sanctioned firm are located in economically stronger subregions: average wages are higher, as is state investment per capita and the value of goods and services produced. The subregions in which the sanctioned polling stations are located are more than six times larger and almost exclusively urban (96.18% urban population).

[5] www.gks.ru

TABLE 4: SUMMARY STATISTICS

	(1) No sanctioned firm within 10km	(2) Sanctioned firm within 10km	(3) Total
Election variables (polling station level)			
Putin's vote share (%) in 2012	67.42	55.49	65.17
	(11.78)	(9.55)	(12.31)
Putin's vote share (%) in 2018	77.82	73.68	77.04
	(8.84)	(5.42)	(8.46)
Turnout (%) in 2012	69.18	62.19	67.86
	(13.42)	(9.16)	(13.02)
Turnout (%) in 2018	72.34	63.27	70.63
	(14.21)	(9.30)	(13.88)
Demographic variables in 2017 (subregion level)			
Population, 2017	97,788	623,332	196,774
	(187,189)	(484,454)	(338,918)
Male (%), 2017	47.49	45.20	47.06
	(2.03)	(1.08)	(2.09)
Elderly (%), 2017	26.38	24.16	25.96
	(4.45)	(2.61)	(4.26)
Social benefit recipients (%), 2017	25.91	22.99	25.36
	(9.30)	(5.67)	(8.81)
Rural population (%), 2017	53.65	3.82	44.27
	(38.31)	(15.61)	(40.21)
Economic variables in 2017 (subregion level)			
Average wage (in RUB), 2017	26,825	48,470	30,901
	(9,362)	(18,949)	(14,505)
State investment in fixed assets (RUB per capita), 2017	1,105.08	24,157.39	5,446.98
	(3,433.80)	(135,826.18)	(59,710.75)
Goods and services produced (in logs), 2017	22.35	25.46	22.93
	(2.13)	(1.70)	(2.39)
Demographic variables, change from 2011 to 2017 (subregion level)			
Population, change, 2017-2011	806	29,530	6,216
	(9,458)	(34,369)	(20,523)

Male, % points change, 2017-2011	0.54 (0.99)	0.04 (0.70)	0.44 (0.96)
Elderly, % points change, 2017-2011	2.69 (1.18)	1.17 (1.28)	2.41 (1.34)
Social benefit recipients, % points change, 2017-2011	-1.68 (7.94)	-1.39 (4.47)	-1.62 (7.41)
Rural population, % points change, 2017-2011	-0.04 (4.65)	-0.13 (0.66)	-0.06 (4.20)
Economic variables, change from 2011 to 2017 (subregion level)			
Average wage (in RUB), change, 2017-2011	4,895 (2,573)	8,765 (6,910)	5,624 (4,081)
State investment in fixed assets (RUB per capita), change, 2017-2011	-83.66 (4,171.94)	9,379.55 (67,604.71)	1,698.74 (29,809.18)
Goods and services produced (in logs), change, 2017-2011	0.19 (0.43)	0.27 (0.54)	0.21 (0.45)
Observations (number of polling stations)	47,695	11,068	58,763

Notes: Standard deviations in parentheses. The subset "No sanctioned firm within 10km" is formed by the polling stations which have at least one sanctioned firm within a 10 km distance. The subset "Sanctioned firm within 10km" consists of those polling stations which do not have any sanctioned firms within a 10 km distance. Observations are unweighted.

The polling stations that have a nearby sanctioned firm increased their support for Putin by 18.19 percentage points (from 55.49% to 73.68%). At those polling stations where there are no neighboring sanctioned firms, Putin's vote share rose by 10.40 percentage points (from 67.42% to 77.82%). These numbers are already suggestive of the vote-increasing effect a sanctioned firm may have had on local constituencies in the presidential elections in 2018. Yet, this implication does not consider the difference in the number of eligible voters by polling station, nor does it account for

the differing voting trends across demographic and economic characteristics. In my subsequent estimation I account for all these factors.

The sample consists of 58,863 polling stations, out of approximately 90,000. These polling stations are spread across 1709 Russian subregions, out of a total of 2351 subregions.

4. Empirical specification and results

I estimate the effect of having a sanctioned firm in close vicinity on voting behavior using a difference-in-difference approach. The treatment received by voters at a given polling station is the availability of a sanctioned firm within 10 km distance from the polling station. Measuring the effect of sanctioned firms involves comparing the changes in voting behavior of the electorate at polling stations where a firm is sanctioned after 2014 relative to the differences in voting behavior at those polling stations where no firm is sanctioned after 2014.

The difference-in-difference approach guards against certain threats to identification of the treatment effect. Looking at the differences in vote share across time assures that time-invariant characteristics of the polling station or the voters cannot be the reason for the change in voting behavior. Moreover, any time-varying effects are also controlled for by comparing the change in vote share between treated and untreated polling stations. Hence, the comparison of the change in the treatment group relative to the control group allows me to distill the effect of the treatment. In order to be able to attribute the difference in changes between the two groups as the effect of sanctioned firms, the treatment has to be unconditionally or conditionally (based on controls) exogenous. Specifically, the US and the EU should not have sanctioned firms that are close to polling stations where voters are more likely to increase their support for Putin, even if there are no sanctioned firms nearby. Since the assignment

of polling stations in treated and unterated has not been made randomly, I explore the determinants of selection and pinpoint the variables predicting the occurrence of a sanctioned firm in 2018.

The firms that have been sanctioned by the US and EU starting 2014 may be located in areas that feature strong support for Putin. Indeed, the proclaimed aim of the US and the EU has been to use sanctions to hurt Russian political and business elites, who support the Russian annexation of Crimea and the Russian regime. If the sanctioned firms are situated next to polling stations that were becoming more pro-Putin between 2012 and 2018, then the estimated effect of sanctioned firms in vicinity would be probably capturing that political trend.

The treatment variable, $T10_{ij,2018}$ is a dummy variables, measured at the polling stations level and equal to one if there is at least one sanctioned firm within 10 km of the polling station; and equal to zero otherwise. To examine the determinants of the assignment to treatment, I estimate the following linear probability model:

$$T10_{ij,2018} = \alpha + \beta_1 share_{ij,2012}^{Putin} + \beta_2 turnout_{ij,2012}^{Pres.elec.} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017} + \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij} \quad (1)$$

Of particular interest are the two political variables at the polling station level – Putin's vote share in 2012, $share_{ij,2012}^{Putin}$, and voter turnout, equal to the ratio of votes cast to eligible voters at polling station *i* in subregion *j* (in percentage), $turnout_{ij,2012}^{Pres.elec.}$. Further determinants of the treatment are demographic and economic variables measured at the subregion level. These are the set of controls for 2017 - $\boldsymbol{X}_{j,2017}$ and the set of changes in controls between 2011 and 2017, $\boldsymbol{X}_{2017-2011}$. To account for the different number of eligible voters across polling

stations I weigh the observations by number of eligible voters at a polling station in 2012.[6] I cluster the standard errors at the subregion level.

The results of this estimation are presented in Table 5. In column (1), I first estimate the linear probability model without controls and fixed effects. The presence of a sanctioned firm is positively and statistically significantly related to turnout and negatively and statistically significantly related to Putin's vote share in 2012. Adding demographic characteristics to the estimation (column (2)) reduces the magnitude of those relationships as does the addition of economic controls (column (3)). Next, I include subregion fixed effects (column (4)). This specification accounts for the determinants of within-subregion location of sanctioned firms, controlling at the same time for demographic and economic characteristics. Although the coefficients on the political variables are still statistically significant, the addition of the geographic fixed effects further lowers both political variables coefficients to magnitudes which are close to zero. Moreover, polling stations with higher pro-Putin vote share are less likely to feature a nearby sanctioned firm – the estimated coefficient is -.001. Running an F-test for statistical significance of all demographic or all economic controls shows that I cannot reject the hypothesis that these control variables are zero (F-test = 0.95 / 0.94). The presence of a sanctioned firm is therefore uncorrelated with demographic and economic variables once geographic heterogeneity is accounted for and negatively related to voters' support for Putin. While sanctioned firms tend to be present in more urban and economically vibrant areas (see Table 1), the assignment to polling stations within a subregion is plausibly random. In the last column (5) I examine the impact of voting trends prior treatment on the predictability of sanctioned firm occurrence. The vote share change for United Russia[7] between the two presidential elections in 2008 and 2012 is not statistically significant.

[6] The results remain qualitatively similar when I weigh the observations by the number of eligible voters in 2018 or by the number of total votes cast at a polling station in 2012 or 2018.
[7] Dmitry Medvedev and not Vladimir Putin was the party's candidate in 2008

Table 5: DETERMINANTS OF SANCTIONED FIRMS LOCATION

Dependent variable: Occurrence of a sanctioned firm in 2018					
	(1)	(2)	(3)	(4)	(5)
Putin's vote share (%) in 2012	-0.0173***	-0.0087***	-0.0019**	-0.0010***	-0.0010***
	(0.0010)	(0.0010)	(0.0009)	(0.0002)	(0.0002)
Turnout (%) in 2012	0.0027***	0.0020***	0.0018***	0.0004***	0.0004***
	(0.0009)	(0.0007)	(0.0006)	(0.0002)	(0.0002)
United Russia's vote share change (%), 2008-2012					0.0000
					(0.0001)
F-test: Demographic controls = 0		71.33	45.60	0.95	0.95
F-test: Economic controls = 0			40.57	0.94	0.94
Demographic controls	no	yes	yes	yes	yes
Economic controls	no	no	yes	yes	yes
Subregion FE	no	no	no	yes	yes
R-squared	0.15	0.44	0.60	0.93	0.93
N	58763	58763	58763	58763	58763

Notes: Linear probability model with unit of observation polling station. The dependent variable is a binary variable that equals one if a sanctioned firm was within 10 km distance of the polling station in 2018. The turnout measure is the ratio of total votes cast in 2012 to number of eligible voters at the polling station in 2012. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. The F-test is a joint test of the hypothesis that the demographic and/or economic controls are jointly equal to zero. Robust standard errors clustered by subregion in parentheses. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.1 Main result

I compare polling stations featuring at least one sanctioned firm within 10 km distance ($T10_{ij,2018}$=1) to polling stations with no sanctioned firms within 10 km distance ($T10_{ij,2018}$=0). I am interested in examining the impact of sanctioning a nearby firm on the change in Putin's vote share at the polling station level between 2012 and 2018. Sanctions were adopted starting 2014. My specification is as follows:

$$share_{ij,2018}^{Putin} - share_{ij,2012}^{Putin} = \alpha + \beta_1 T10_{ij,2018} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017} + \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij} \quad (2)$$

Similar to the specification examining the determinants of sanctioned firm availability, I again control for subregion-level demographic and economic characteristics in levels ($\boldsymbol{X}_{j,2017}$) and in changes ($\boldsymbol{X}_{j,2017-2011}$). I weight the observations by the number of eligible voters at the polling station level in 2012 and cluster the standard errors at the subregion level.

Table 6 exhibits the estimation results. Absent of controls or fixed effects, the difference-in-difference estimation shows that on average, the overall support for Putin in my sample increased by over 12% ($\hat{\alpha} = 12.006$). Relative to this overall shift, polling stations with a nearby sanctioned firm increased their vote share for Putin by 6.72% relative to polling stations without a nearby sanctioned firm, a statistically significant result. Including demographic controls in column (2) almost halves the magnitude of the estimate of the sanctioned firm presence to 3.99%, but it remains statistically significant. In column (3), I add economic controls which further lowers the magnitude of the sanctioned firm effect, leaving it statistically significant. Finally, in the benchmark specification in column (4), I include subregion

fixed effects, in addition to all control variables. This specification accounts for unobservable trends in voting behavior common to a subregion that may be correlated with the presence of a sanctioned firm. The effect of a sanctioned firm on voting is identified by comparing neighboring polling stations with and without sanctioned firms, within the same subregion. The estimated effect is more precise than in the other specifications (columns (1)-(3)) and is positive, statistically significant and sizable, at 1.54%.

Table 6: THE EFFECT OF SANCTIONED FIRMS ON 2012-2018 PUTIN'S VOTE SHARE CHANGE

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections				
	(1)	(2)	(3)	(4)
Sanctioned firm within 10 km	6.717***	3.993***	1.499**	1.543***
	(0.428)	(0.549)	(0.587)	(0.383)
Constant	12.006***	54.683***	36.744***	-9.820
	(0.264)	(7.003)	(8.086)	(53.048)
Demographic controls	no	yes	yes	yes
Economic controls	no	no	yes	yes
Subregion FE	no	no	no	yes
R-squared	0.107	0.197	0.225	0.568
N	58763	58763	58763	58763

Notes: The unit of observation is polling station. The dependent variable is (Putin's vote share for the 2018 presidential election) - (Putin's vote share for the 2012 presidential election). The variable "Sanctioned firm within 10 km" is a binary variable that equals one if there is a sanctioned firm within 10 km distance from the polling station. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.2 Robustness

In the following, I test the robustness of the above results to alternative definitions of the treatment variable as well as to placebo treatments.

Up to now, the definition of the treatment variable - exposure to a sanctioned firm – was fixed to a radius of ten kilometers around the polling station. This choice has been guided by the average commuting distance from one's home to work. Yet, my sample features firms in very heterogeneous settings – from the multimillion inhabitant cities of Moscow and St. Petersburg to rural settlements in the Northeast of Russia. The median distance travelled to work in the Moscow region was 30 kilometers (with an average of 50 km, Shitov & Shitova, 2017) and this distance declines with smaller localities (SuperJob, 2015) to around 6 km in rural settlements (Yandex, 2016).

In order to check if my results hold against different specifications of the exposure, I now vary the definition of treatment down to 3 km and up to 60 km distance from a polling station. The results are presented in Table 7, columns (1) and (2). The positive effect of vicinity to a sanctioned firm on Putin's vote share remains about the same for a distance of 60 km ($\widehat{\beta_1} = 1.586$) while it decreases for the smaller distance of 3 km ($\widehat{\beta_1} = 0.467$). One explanation for the strong effect at even higher distances follows from the structure of the sample of sanctioned firms. About 60 % of the firms that have been sanctioned in 2014 are located in Moscow or St. Petersburg. These are cities that attract commuters from afar while also featuring denser presence of sanctioned firms than any other locations in the sample. The effect of the existence of a sanctioned firm might have thus spilled over to more distant neighboring areas. Finally, it is reassuring to see that the main result remains valid and statistically significant with the very tight definition of exposure to treatment of 3 km (column (2)).

TABLE 7: ROBUSTNESS

Dependent variable: Putin's vote chare change between 2018 and 2012 presidential elections				
	(1)	(2)	(3)	(4)
Sanctioned firm within 60 km	1.586***			
	(0.520)			
Sanctioned firm within 3 km		0.467*		
		(0.284)		
Share of subregion population (%), working at sanctioned firm(s) within 10 km in 2012			0.080*	
			(0.047)	
Sanctioned firm within 10 km				1.640***
				(0.380)
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Subregion FE	yes	yes	yes	yes
Unweighted	no	no	no	yes
R-squared	0.568	0.567	0.567	0.509
N	58763	58763	58763	58763

Notes: The unit of observation is polling station. The dependent variable is (Putin's vote share for the 2018 presidential election) - (Putin's vote share for the 2012 presidential election). The variables "Sanctioned firm within 60 km" and "Sanctioned firm within 3 km" are binary variables that equal one if a sanctioned firm is within 60 km or 3 km distance from a polling station, respectively. The variable "Share of subregion population (%), working at sanctioned firm(s) within 10 km in 2012" measures the percentage share of the population of the subregion, to which the polling station belongs to, that works at sanctioned firms located in 10 km vicinity of the specific polling station in 2012. Data on employment at sanctioned firms was put together from Bureau van Dijk's AMADEUS database. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Second, I also consider the number of workers employed at all sanctioned firms within 10 km of a given polling station, relative to the total population at the subregion level. Because the sanctioned firms vary in size, the number of employees directly affected by a sanction also varies substantially (mean employment at a sanctioned firm in 2012 = 159; median = 939). This variation in direct exposure suggests variation in treatment effects. Larger firms may imply stronger effects because they reach a wider part of the constituency through their employees and their families. Larger firms may also attract more public attention and media coverage, through which the awareness about the sanctioning of a specific firm may have been carried to a wider audience. The results from a specification with the percentage of subregion population employed at a sanctioned firm is shown in column (3) of Table 4. The effect of the treatment is positive, albeit less precisely estimated than the effect from my benchmark regression, which uses a simple dummy.

Finally, in column (4) I show that differences in the number of eligible voters across polling stations are not driving the results. The estimated effect of the occurrence of a sanctioned firm within 10 km of a polling station on Putin's vote share remains about the same ($\widehat{\beta_1} = 1.640$) when running an unweighted regression.

Next, I explore the possibility that unobservable confounding variables are determining both the location of sanctioned firms and the voting behavior of the electorate. Specifically, I design a placebo test and test whether the availability of a sanctioned firm within 10 km of a polling station in 2018 predicts changes in voting behavior between 2008 and 2012. There should be no effect as there were no sanctioned firms in Russia prior to 2014. Table 8 reveals that while the occurrence of a sanctioned firm in 2018 has a predictive power for voting behavior change between the 2008 and 2012 presidential elections, the effect is negative. This implies that there might be some unobservable features that are related both to the location of a sanctioned firm and the tendency of voters to support Putin; however, these

omitted characteristics seem to be working against finding a positive effect between 2012 and 2018, as the sign of the estimated relationship is negative ($\widehat{\beta_1} = -1.579$).

TABLE 8: PLACEBO REGRESSION

Dependent variable: United Russia's vote share change between 2012 and 2008 presidential elections	
Sanctioned firm within 10 km	-1.579***
	(0.510)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.538
N	58762

Notes: The unit of observation is polling station. The dependent variable is (United Russia's vote share for the 2012 presidential election) - (United Russia's vote share for the 2008 presidential election). The variable "Sanctioned firm within 10 km" is a binary variable that equals one if a sanctioned firm is within 10 km distance from the polling station. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The negative effect can also be explained by the unavailability of address information on the location of the 2008 polling stations. While many of the polling stations' locations and numbering are kept across elections, some polling stations do change their location, some are closed down and others are opened at new places. Thus, the 2008 polling stations have been matched to the rest of the elections data only based on their subregion information and polling station number. This method is prone to errors and may account for the negative effect that I find. To address this challenge, I aggregate the data to the next administrative level – subregion – and redo the

placebo analysis. The results in Table A.1 demonstrate that the presence of a sanctioned firm within the boundaries of a subregion in 2018 does not influence voting behavior between 2008 and 2012.

4.3 Magnitude of the effect

My benchmark specification indicates that the presence of a sanctioned firm within 10 km distance of a polling station had a significant impact on Putin's vote share in the 2018 presidential elections. The benchmark estimate from Table 5, column (4) implies a confidence interval of (0.790; 2.294). In what follows, I offer an interpretation of the magnitude of the estimated effects.

The average shift in favor of Putin in my sample is equal to 12.006 percentage points, with a standard deviation of 9.706. The impact of a sanctioned firm is equal to about one-sixth of the standard deviation, a reasonably sizable effect.

Additionally, I estimate the likely number of voters that shifted their votes to support Putin. By 2018, there were 11,068 polling stations which featured at least one sanctioned firm within a 10 km distance. A total of 18,615,116 votes were cast at those particular polling stations. Abstracting from voter turnout changes, these numbers imply that 0.01543*18,615,116 ≈ 287,231 voters shifted their votes from other candidates to Putin.

5. Heterogeneous effects and potential mechanisms

I have established that the presence of a sanctioned firm close to a polling station increases the electoral support for Putin. In this section, I analyze the potential mechanisms driving this effect. I start with an exploration of the heterogeneous effects of the treatment depending on support for Putin in the 2018 elections and

across different geographic areas. I then look at the impact of sanctioned firms on mobilization of voters. Lastly, I exploit the rich firm-level information on the sanctioned firms to examine the most likely case for the treatment effect.

5.1 Heterogeneous effects

I examine how the sanctioned firm effect interacts with the political positions of local constituencies. In order to do so, I split the polling stations into thirds, depending on their support for Putin in the 2018 presidential elections. I then interact the treatment dummy for sanctioned firm within 10 km with the bottom and the top third of pro-Putin-voting polling stations. Table 9 reports the results from this estimation. Both interaction terms are positive and statistically significant - the impact of a sanctioned firm is higher not only in those communities that are most supportive of Putin but also across those polling stations where Putin enjoys the least support. These results imply that the imposition of a sanction on a local firm not only increases the support for the regime among supporters but also convinces previous opponents to vote pro-Putin.

Table 9: INTERACTIONS

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections	
Sanctioned firm within 10km	1.072***
	(0.374)
Most supportive of Putin polling station	4.659***
	(0.217)
Sanctioned firm within 10km # Most supportive of Putin polling station	1.173**
	(0.497)
Least supportive of Putin polling station	-3.622***
	(0.161)
Sanctioned firm within 10km # Least supportive of Putin polling station	1.173***
	(0.277)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.614
N	58763

Notes: The unit of observation is polling station. The dependent variable is (Putin's vote share for the 2018 presidential election) - (Putin's vote share for the 2012 presidential election). The variable "Sanctioned firm within 10 km" is a binary variable that equals one if a sanctioned firm is within 10 km distance from the polling station. The dummy variables "Most supportive of Putin polling station" and "Least supportive of Putin polling station" are constructed by dividing the 58763 polling station observations into thirds based on Putin's vote share in the 2018 presidential elections. The variable "Most supportive of Putin polling station" indicates a polling station in the top third. The variable "Least supportive of Putin polling station" indicates a polling station in the bottom third. The omitted category indicates the middle third.

The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Next, I test how locality characteristics influence the effect of a sanctioned firm on voting behavior. Most of the sanctioned firms are situated in Moscow and St. Petersburg (60% of all sanctioned firms) and these two cities are quite distinct in

terms of political trends from the rest of Russia. For example, the two megacities show the highest levels of support for oppositional parties (Dmitriev and Treisman, 2012; Lankina and Voznaya, 2015). To check whether there are any differences in the impact of the availability of a nearby sanctioned firm on voting behavior between Moscow and St. Petersburg and the rest of Russia, I subset the sample along these two geographic groups. The results, which are reported in Table 10, show that the main result of this paper is indeed driven by voting behavior shift outside the two largest Russian cities. While the direction, strength and significance of the sanctioned firm presence coefficient remains about the same for the sample subset without Moscow and St. Petersburg, it becomes insignificant when I run the regression on the two cities only. The political divide between the urban and progressive Moscow and St. Petersburg is upheld also in the ability of a sanction imposition to sway voters' behavior.

Table 10: GEOGRAPHICAL HETEROGENEITY

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections		
	No Moscow and St. Petersburg	Moscow and St. Petersburg only
	(1)	(2)
Sanctioned firm within 10 km	1.637***	0.540
	(0.416)	(0.468)
Demographic controls	yes	yes
Economic controls	yes	yes
Subregion FE	yes	yes
R-squared	0.536	0.306
N	54537	4226

Notes: The unit of observation is polling station. The subset "No Moscow and St. Petersburg" is formed by the polling stations in all regions but Moscow and St. Petersburg. The subset "Moscow and St. Petersburg only" is the complementary subset. The dependent variable is (Putin's vote share for the 2018 presidential election) - (Putin's vote share for the 2012 presidential election). The variable "Sanctioned firm within 10 km" is a binary variable that equals one if a sanctioned firm is within 10 km distance from the polling station. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.2 Voter mobilization or vote swings?

Up until now, I have shown that sanctioned firms led to rise in support for Putin. However, this observation alone does not explain how Putin's increased success came about. In what follows, I examine whether the approval came from other parties' voters switching to United Russia (the party Putin is affiliated with), or from new voters that were attracted to cast their vote following the sanction imposition. It is possible that business and political elites who backed the regime and who were

among the owners or managers of the sanctioned firms tried to mobilize local nonvoters to vote in favor of Putin. Indeed, there were several reports of "corporate mobilization" attempts across Russian state-owned enterprises, which were supposedly charged with the task to get out the votes.[8] To test whether the significant impact of sanctioned firms comes from voter mobilization or voter switches, I employ the following voter turnout specification:

$$turnout_{ij,2018}^{Pres.elec.} - turnout_{ij,2012}^{Pres.elec.} = \alpha + \beta_1 T10_{ij,2018} + \beta_2 (elig.voters_{ij,2018}^{Pres.elec.} - elig.voters_{ij,2012}^{Pres.elec.}) + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017} + \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij} \quad (3)$$

where $turnout_{ij,t}^{Pres.elec.}$ is the percentage total votes at polling station *i*, in subregion *j*, in year $t \in \{2012, 2018\}$. I control for the change in the number of eligible voters $(elig.voters_{ij,2018}^{Pres.elec.} - elig.voters_{ij,2012}^{Pres.elec.})$, as well as for the usual economic and demographic characteristics of subregions.

Comparing polling stations with and without a sanctioned firm within 10 km distance suggests that these voter mobilization groups may have been successful in attracting new voters. Table 11 shows that at polling stations with a sanctioned firm, voter turnout increased, but the estimated effect is not statistically significant. When I disaggregate the effect of a sanctioned firm according to the level of support for

[8] See newspaper reports from Kommersant (На выборах задействуют корпоративный ресурс, February, 26, 2017, https://www.kommersant.ru/doc/3227902), Vedomosti (Кремль начал мониторинг экономических событий, влияющих на региональные настроения, February 27, 2017, https://www.vedomosti.ru/politics/articles/2017/02/27/679036-kreml-monitoring) and Washington Post (Yes, the Kremlin is worried — about Russia's own presidential elections, December 6, 2017, https://www.washingtonpost.com/news/monkey-cage/wp/2017/12/06/yes-the-kremlin-is-worried-about-russias-own-presidential-elections/?noredirect=on&utm_term=.baa567e429b2)

Putin at the polling station, I find evidence that the turnout effect is quite strong and statistically significant at those polling stations that are most in favor of Putin. Combining this finding with the evidence from Table 9 implies that sanction imposition urged nonvoters at pro-Putin polling stations to vote for Putin.

Table 11: TURNOUT

Dependent variable: Voter turnout		
	(1)	(2)
Sanctioned firm within 10 km	1.054	
	(1.032)	
Change in eligible voters (%), 2012-2018	0.929***	0.930***
	(0.012)	(0.012)
Sanctioned firm within 10km		0.705
		(1.070)
Most supportive of Putin polling station		7.703***
		(0.487)
Sanctioned firm within 10km # Most supportive of Putin polling station		2.685**
		(1.163)
Least supportive of Putin polling station		-1.825***
		(0.333)
Sanctioned firm within 10km # Least supportive of Putin polling station		0.012
		(0.472)
Demographic controls	yes	yes
Economic controls	yes	yes
Subregion FE	yes	yes
R-squared	0.877	0.880
N	58763	58763

Notes: The unit of observation is polling station. The dependent variable is the percentage change in total votes cast between 2012 and 2018 presidential elections. The variable "Change in eligible voters (%), 2012-2018" indicates the percentage change in eligible voters registered at a given polling station between 2012 and 2018. The variable "Sanctioned firm within 10 km" is a binary variable that equals one if a sanctioned firm is within 10 km distance from the polling station. The dummy variables "Most supportive of Putin polling station" and "Least supportive of Putin polling station" are constructed by dividing the 58763 polling station observations into thirds based on Putin's vote share in the 2018 presidential elections. The variable "Most supportive of Putin polling station" indicates a polling station in the top third. The variable "Least supportive of Putin polling station" indicates a polling station in the bottom third. The omitted category indicates the middle third. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at polling station level in the 2012 presidential election.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.3 Potential mechanism

The literature examining voters' support for Putin puts forward several explanations. One strand of research maintains the economic performance hypothesis, i.e., the Russian public assesses the performance of the political elite based on objective economic performance measures (Rose, Mishler and Munro, 2011; Treisman, 2011). Others underline the importance of control over media in Russia as well as the active hindrance of political challengers eager to join the political system (Enikolopov et. al., 2011, 2016; Robertson, 2017). In exploring the attitudinal changes of the electorate under extraordinary conditions one could distill the most likely foundations of a regime support. Sanctions imposition provide a useful opportunity to test whether in moments of international crisis Russians are prone to "rally-around-the-flag".

In order to discern between competing explanations for the increased support of Putin at polling stations featuring a sanctioned firm, I devise the following test. I collect employment data for the sanctioned firms, before and after the imposition of sanctions.[9] For every polling station, featuring more than one sanctioned firm within 10 km distance, I aggregate the number of employees of all the nearby sanctioned firms. I then split the treated polling stations in two groups – those where in sum, sanctioned firms within 10 km have gained additional employees between 2013 and 2017, and those where the sanctioned firms (in sum) have lost employees over the same period.

$$share_{ij,2018}^{Putin} - share_{ij,2012}^{Putin} = \alpha + \beta_1 T10_{ij,2018}^{empl.increase} + \beta_2 T10_{ij,2018}^{empl.loss} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017} + \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij} \quad (4)$$

[9] Employment data for Russian firms is provided by Bureau van Dijk, AMADEUS database.

Equation (4) is identical to the baseline specification with exception of the treatment variable, which is now split into treated polling stations where employment at sanctioned firms rose between 2013 and 2017, $T10_{ij,2018}^{empl.increase}$, and those polling stations where employment at sanctioned firms declined during the same period, $T10_{ij,2018}^{empl.loss}$. By separately estimating the effects of winning and losing sanctioned firms, I can check whether the electorate blindly rallies around the flag or if it responds rationally to economic forces. Table 12 shows that only those sanctioned firms that continued to perform well after sanction imposition increase the vote share for Putin. The estimated coefficient for the sanctioned firms that lost employees between 2013 and 2017 is negative, albeit insignificant.

Table 12: ECONOMIC EXPLANATION

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections	
Employment gain at sanctioned firms, 2017-2013	0.868*
	(0.485)
Employment loss at sanctioned firms, 2017-2013	-0.203
	(0.548)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.567
N	58763

Notes: The unit of observation is polling station. The dependent variable is (Putin's vote share for the 2018 presidential election) - (Putin's vote share for the 2012 presidential election). The variable "Employment gain at sanctioned firms, 2017-2013" measures the log gain in employment at sanctioned firms within 10 km distance from the polling station, between 2013 and 2017. The variable "Employment loss at sanctioned firms, 2017-2013" measures the log loss in employment at sanctioned firms within 10 km distance from the polling station, between 2013 and 2017. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by subregion. The observations are weighted by the number of eligible voters at the polling station level in the 2012 presidential election.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

These outcomes are meaningful in discerning the reasons for the longevity of Putin's leadership in Russia. The results imply that support for the government is subject to positive economic performance. Russians do not blindly "rally-around-the-flag". Even in hybrid regimes politicians are held accountable for the economic performance of the country. Exposure to a sanctioned firm is associated with higher levels of support for Putin, but only when those firms continue to perform well under the sanctions regime.

My empirical analysis provides several principal findings. First, I find evidence that exposure to a sanctioned firm is associated with increased levels of support for Putin. Moreover, I established that there has been a mobilization of nonvoters as well as switch of voters from the anti-Putin polling stations voting in favor of Putin in the 2018 elections, when there was a nearby sanctioned firm. This evidence is supportive of the "rally-around-the-flag" hypothesis, but as this section shows, it is an insufficient explanation. Specifically, sanctioned firms' performance measured by the percentage change in total employees between 2013 and 2017 is a strong and statistically significant predictor of higher support for Putin at the treated polling stations. The loyalty and increased support of the constituency is not irrational but involves sustained economic performance. I interpret these effects as supportive of the economic performance hypothesis (Rose, Mishler and Munro, 2011; Treisman, 2011).

6. Conclusion

This paper studies the political consequences of targeted sanction imposition on elections in Russia. In particular, I examine the impact of sanction imposition in 2014 on the change in Putin's vote share between 2012 and 2018. I find evidence that sanction imposition increased Putin's electoral approval by 1.54 percentage points. This shift is sizable compared to the 13.1 percentage point overall shift in

support for Putin between 2012 and 2018. Heterogeneity results suggest that these electoral responses are stronger at those polling stations that show either relatively high but or particularly low support for Putin. Combined with the impact on turnout, I interpret the effect of sanctioned firms as mobilizing nonvoters in pro-Putin localities and persuading voters to switch in favor of Putin in anti-Putin areas.

Based on firm-level employment data on the sanctioned firms, I deepen the analysis by testing a possible explanation for the increased vote share in favor of Putin. I explore if voters react to the loss of local jobs induced by sanctions. I find that the upward shift in vote share for Putin is only statistically significant at those polling stations for which the nearby sanctioned firms experienced employment gains over the sanctions period. The lack of punitive reaction from voters in vicinity of sanctioned firms experiencing economic losses may indicate the acceptance of the narrative of Western responsibility and "rallying around the flag".

The findings have implications for understanding the impact of modern-day "smart" sanctions that were introduced precisely with the goal to affect only specific groups related to the ruling elite and prevent unintended consequences.

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APPENDIX A

TABLE A.1: PLACEBO REGRESSION AT THE SUBREGION LEVEL

Dependent variable: United Russia's vote share change between 2012 and 2008 presidential elections	
Sanctioned firm within subregion	0.688
	(0.470)
Demographic controls	yes
Economic controls	yes
Region FE	yes
R-squared	0.706
N	1816

Notes: The unit of observation is the subregion. The dependent variable is (United Russia's vote share for the 2012 presidential election) - (United Russia's vote share for the 2008 presidential election). The variable "Sanctioned firm within subregion" is a binary variable that equals one if a sanctioned firm is located within the boundaries of the subregion. The demographic controls are population, shares of males, elderly and social benefits recipients in the total population and rural population share, all measured at the subregion level and made available by Rosstat, present both in the 2017 values and in differences between 2017 and 2011. The economic controls are average wage, state investment in fixed assets per capita and goods and services produced, all measured at the subregion level and provided by Rosstat, used in the estimation both in 2017 values and in differences between 2017 and 2011. Robust standard errors are clustered by region. The observations are weighted by the number of eligible voters at the subregion level in the 2012 presidential election.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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