Did sanctions help Putin?

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In a Nutshell

Motivation

- Do sanctions destabilize or strengthen the sanctioned regime?
  - ➢ Recent sanctions against Iran, Iraq, Libya, Yugoslavia did not bring the regime to a fall
  - ➢ Modern-day "smart sanctions" aim to divide elite from the populace and change political balance in target country
- Ongoing debate about the domestic political effects of sanctions imposition ("rally-around-the-flag")

What I do

- Use the geographical spread of sanctioned Russian firms across the country
- Employ variation in exposure to sanctions: polling stations close to a sanctioned firm vs. those that are not, to estimate effect of sanctions on voting

What I find

- Local presence of a sanctioned firm significantly increased Putin's vote share in the 2018 presidential elections by 1.54 percentage points
  - ➢ Effect present for those firms that gain additional employees over the sanctions period

Lit. Review

Agenda

1.) **Russian sanctions background**

2.) **Data and Identification**

3.) **Results and robustness checks**

4.) **Heterogeneous effects and potential explanation**

5.) **Conclusion**

Russian Sanctions Background

Background on sanctions I

Events leading to sanctions against Russia

- Ukrainian President Viktor Yanukovich refused to sign an Association Agreement with the EU in 2013
  - ➢ Protests and polarization in Ukraine
  - ➢ Russia invades Crimean peninsula in 2014

US sanctions

- Sectoral Sanctions (SSI list): Russian energy, financial and defense sectors
  - ➢ No debt of maturity > 30 days, no assets acquisition and no technology transfer
- Specially Designated Nationals (SDN list): no economic transactions at all

EU sanctions

- Almost identical to US sanctions
  - ➢ Sectoral Sanctions List and Restricted Measures List

Background on sanctions II

Spatial Distribution Of Sanctioned Firms

Data and Identification

Data

Presidential elections

- Polling station-level elections outcomes: 2008, 2012, 2018
  - ➢ Addresses and geolocations
  - ➢ Matching polling stations across elections

Sanctions

- 361 sanctioned firms (from US and EU lists) which are geolocated
  - ➢ 218 in Moscow and St. Petersburg, 45 in small cities (< 100,000 population)
- Firm-level data from AMADEUS

Socio-economic data

- Census and regional economic data at the subregion level: 2009-2017 (Rosstat)
  - ➢ 2300 subregions (1816 in sample)
  - ➢ Population, shares of male / elderly / social benefits recipients / rural, average wage, state investment in fixed assets, goods and services produced

Descriptives

Identification

Difference-in-differences

$$share_{ij,2018}^{Putin} - share_{ij,2012}^{Putin} = \alpha + \beta_1 T10_{ij,2018} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017}$$

$$+ \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij}$$

$share_{ij,t}^{Putin}$	Putin's vote share in *t*, at polling station *i* in subregion *j*
α	Constant term
$T10_{ij,2018}$	Dummy: at least one sanctioned firm within 10 km of the polling station
$\boldsymbol{X}_{j,2017}$	Socio-economic controls for 2017
$\boldsymbol{X}_{j,2017-2011}$	Changes in controls between 2011 and 2017
ε_{ij}	Error term: robust and clustered at subregion level

Results and Robustness Checks

Results

2012-2018 Putin's vote share change

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections					
	(1)	(2)	(3)	(4)	(5)
Sanctioned firm within 10 km	6.717***	3.993***	1.499**	1.543***	1.246***
	(0.428)	(0.549)	(0.587)	(0.383)	(0.426)
Constant	12.006***	54.683***	36.744***	-9.820	147.089***
	(0.264)	(7.003)	(8.086)	(53.048)	(46.398)
Demographic controls	no	yes	yes	yes	yes
Economic controls	no	no	yes	yes	yes
Subregion FE	no	no	no	yes	yes
Matched sample	no	no	no	no	yes
R-squared	0.107	0.197	0.225	0.568	0.560
N	58,763	58,763	58,763	58,763	11,193

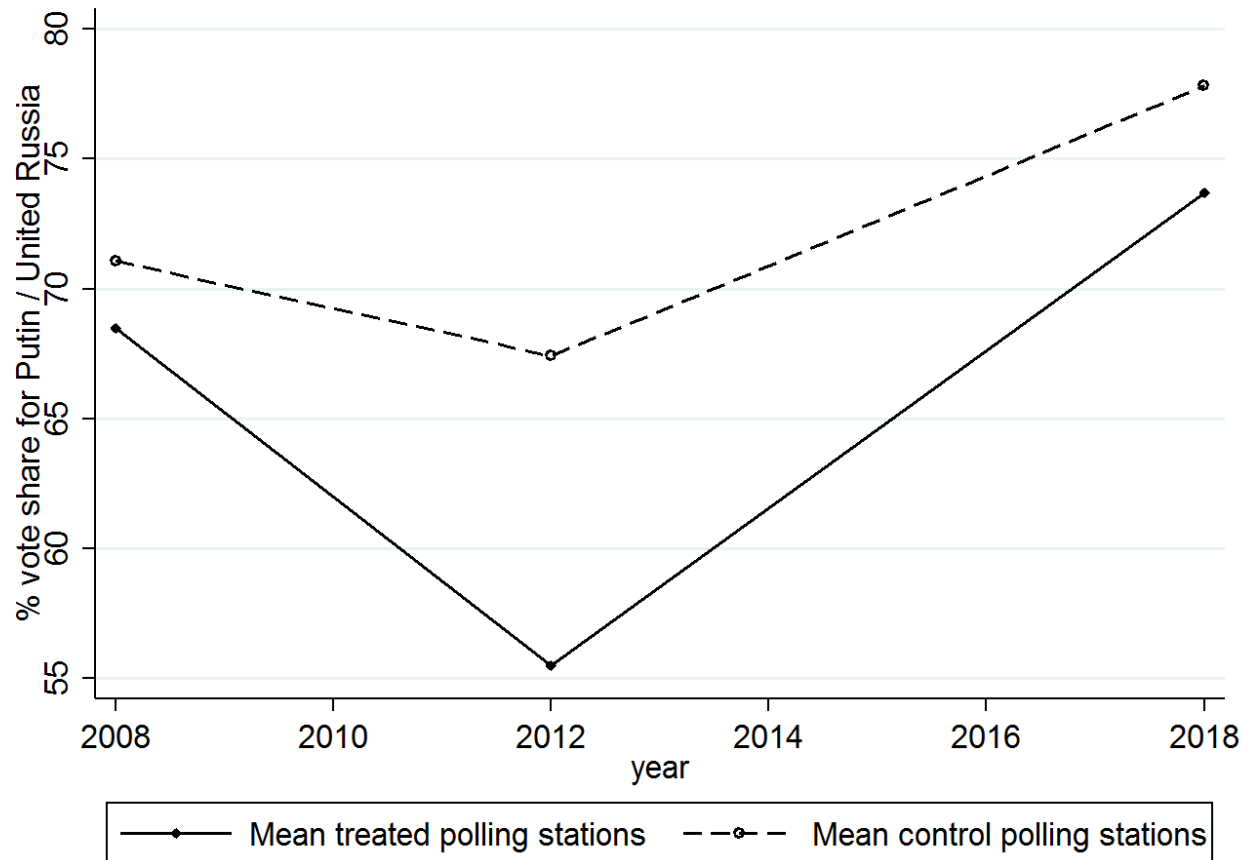## Magnitude of the effect
- Average shift in favor of Putin: 12.006 p.p, SD=9.706
- 11,068 treated polling stations with 18,615,116 voters → 0.01543*18,615,116 ≈ 287,231 votes shifted

Pr. Score Matching

Diff-in-diff assumptions check

Pre-trends

Diff-in-diff assumptions check

Placebo regression I

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

Placebo regression II (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

Pre-trends

Selection bias

Other Treatment Var.

Electoral fraud

Indirect statistical check

	Extreme Turnout	Extreme Vote Share
	(1)	(2)
Sanctioned firm within 10 km	-0.011	0.005
	(0.009)	(0.009)
Constant	2.096	0.178
	(1.320)	(0.384)
Demographic controls	yes	yes
Economic controls	yes	yes
Subregion FE	yes	yes
R-squared	0.489	0.461
N	58,763	58,763

Use of data on electoral fraud

- Citizen-provided reports of electoral fraud to a Russian NGO (*Golos*)

Heterogeneous effects and potential explanation

Heterogeneous effects

Geographic characteristics

- Sanctioned firm effect is driven by "rest of Russia"

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

No Moscow & St.Petersburg

Potential mechanism

Rational or irrational voter support?

- Economic *vs.* national identity-based explanation of treatment effect

$$share_{ij,2018}^{Putin} - share_{ij,2012}^{Putin} = \alpha + \beta_1 T10_{ij,2017-2013}^{empl.increase} + \beta_2 T10_{ij,2017-2013}^{empl.loss}$$

$$+\boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017} + \boldsymbol{B}_{2017-2011}\,\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij}$$

Dependent variable: Putin's vote share change between 2018 and 2012 presidential elections	
Sanctioned firm(s) within 10km, with employment increase, 2013-2017	0.868*
	(0.485)
Sanctioned firm(s) within 10km, with employment loss, 2013-2017	-0.203
	(0.548)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.567
N	58,763

Conclusion

Summary

- Targeted sanctions imposition against the elite does not destabilize regime

- Putin's electoral approval increased by 1.54 p.p. between 2012 and 2018 elections at polling stations that are close to a sanctioned firm

- Sanctioned firm effect is driven by "rest of Russia"
- Sanctioned firm effect only for well-performing firms
- Targeted sanctions may have unaccounted for (by sanctions-makers) effects on the electorate

Did sanctions help Putin? Supplementary material

Appendix: Contribution

Domestic political impact of sanctions

- Popular mobilization against regime (Kirshner, 1997; Mack and Khan, 2000; Bolks and Al-Sowayel, 2000; Marinov, 2005) *vs.*
- Mitigation of sanctions impact by increasing government spending or repression (Galtung, 1967; Lektzian and Souva, 2007, Allen, 2008; Escriba-Folch and Wright, 2010)
  - ➢ Isolating the effect of sanctions on domestic politics from other concurrent dynamics or factors is hard

Smart sanctions

- Studies show smart sanctions affect sanctioned firms and sectors
  - ➢ Decline of sanctioned firms and sectors (Ahn and Ludema 2017; Draca et. al., 2017), trade flows (Crozet and Hinz, 2016), trade deflection (Haidar, 2017), macro effects (Dreger et al. (2015) and Tuzova and Qayub (2016), …

Non-Western-centric concepts of statehood and its legitimacy

- Understanding of the state and its legitimacy may be regime-specific
  - ➢ Questionable if Western measures are able divide the masses from the elite in the target country (Freedman, 1998)

Return

Appendix: Robustness checks

Different treatment variable

- Change distance from polling station (3km, 60km)
    - Treatment effect similar (smaller with smaller distance)
- Share of subregion population working at sanctioned firms within 10 km of polling station in 2012
    - Treatment effect positive and significant
- Unweighted regression
    - Treatment effect similar

Return

Appendix: Robustness checks

Different treatment variable

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

Return

Appendix: Descriptives

	(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 (11.78)	55.49 (9.55)	65.17 (12.31)
Putin's vote share (%) in 2018	77.82 (8.84)	73.68 (5.42)	77.04 (8.46)
Turnout (%) in 2012	69.18 (13.42)	62.19 (9.16)	67.86 (13.02)
Turnout (%) in 2018	72.34 (14.21)	63.27 (9.30)	70.63 (13.88)
Observations (number of polling stations)	47,695	11,068	58,763

Return

Appendix: Descriptives

	(1) No sanctioned firm within 10km	(2) Sanctioned firm within 10km	(3) Total
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)

Return

Appendix: Descriptives

	(1) No sanctioned firm within 10km	(2) Sanctioned firm within 10km	(3) Total
Demographic variables, change from 2011 to 2017 (subregion level)			
Population, change, 2017-2011	806 (9,458)	29,530 (34,369)	6,216 (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

Return

Appendix: Descriptives

Size of population at sanctioned firm's location

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	

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	

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

Return

Appendix: Different treatment variable

	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

Return

Appendix: Propensity score matching

Variable	Full sample			Matched sample		
	Treated	Control	p-value (Treated=Control)	Treated	Control	p-value (Treated=Control)
Population (in 10 000s), 2011	54.15	8.87	0.00	21.00	23.48	0.49
Population change (in 10 000s), 2017-2011	2.56	0.01	0.00	0.60	0.43	0.34
Male (%), 2011	45.54	47.54	0.00	46.41	46.60	0.39
Elderly (%), 2011	24.24	26.50	0.00	25.11	24.07	0.02
Rural population (%), 2011	15.10	53.41	0.00	31.18	31.08	0.98
Elderly, % points change, 2017-2011	1.34	2.74	0.00	1.97	2.17	0.10
Rural population, % points change, 2017-2011	-0.11	-0.04	0.00	-0.02	0.23	0.55
Male, % points change, 2017-2011	0.03	0.57	0.00	0.30	0.13	0.11
Social benefits recipients (%), 2011	22.72	26.19	0.00	24.22	24.62	0.73
State investment in fixed assets (RUB, per capita), 2011	19316.80	1098.90	0.00	3043.67	2333.58	0.36
Goods and services produced, (in logs), 2011	25.13	22.25	0.00	23.82	24.12	0.21
Social benefits recipients % points change, 2017-2011	-1.78	-1.58	0.00	-1.86	-1.26	0.53
State investment in fixed assets (RUB, per capita), change, 2017-2011	7308.01	-59.73	0.00	-8.55	484.10	0.57
Goods and services produced, (in logs), change, 2017-2011	0.26	0.19	0.00	0.25	0.25	0.98
Average wage (in 10 000s RUB), 2011	4.46	2.66	0.00	4.06	4.04	0.95
Average wage (in 10 000s RUB), change, 2017-2011	0.80	0.49	0.00	0.72	0.83	0.21

Return

Appendix: Propensity score matching
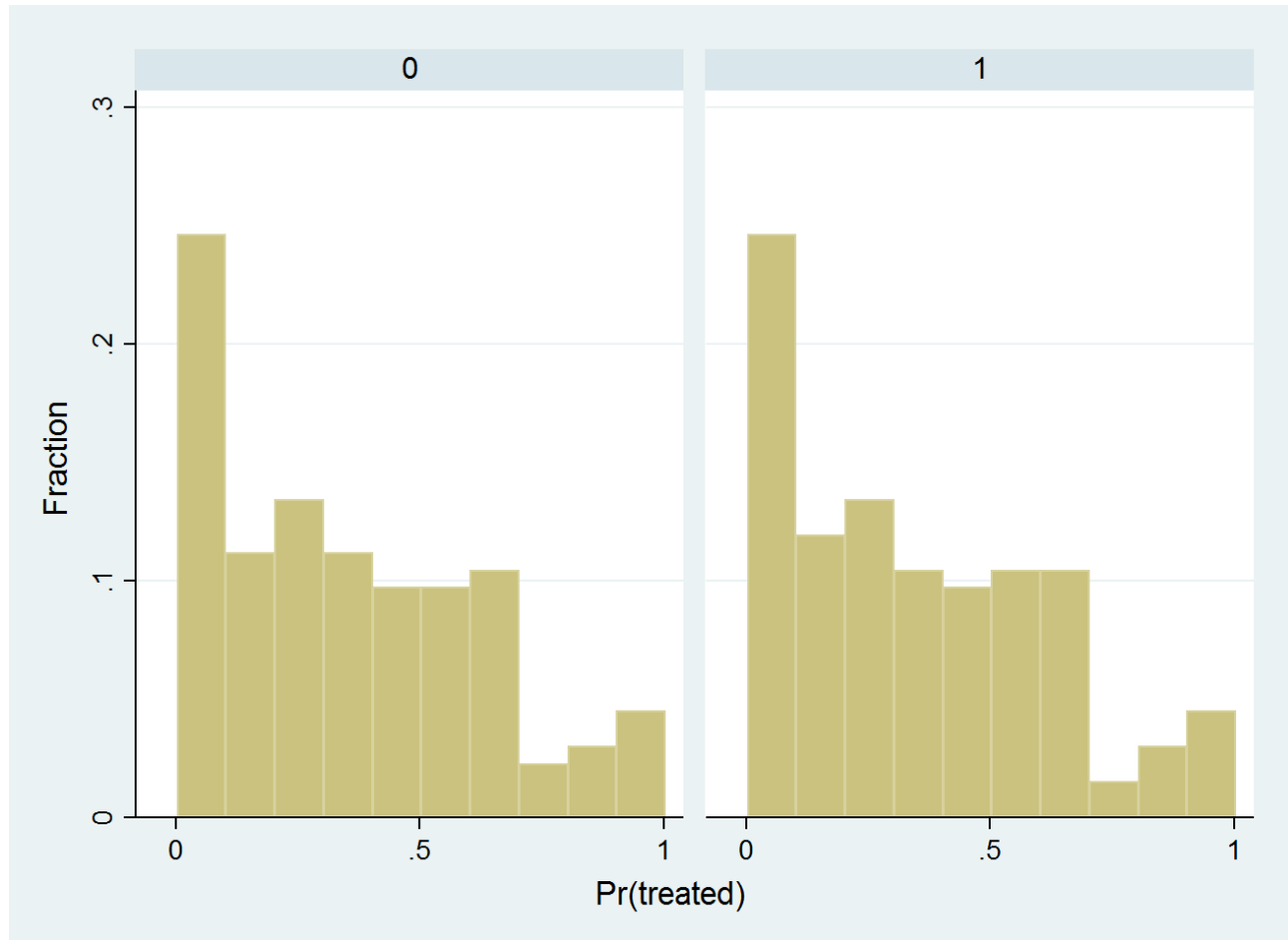
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Appendix: Control variables

|	
Sanctioned firm within 10 km	1.499**
	(0.587)
Population (in 10 000s), change, 2017-2011	0.169
	(0.127)
Average wage (in 10 000s RUB), change, 2017-2011	-0.622
	(0.475)
Social benefit recipients, % points change, 2017-2011	0.034
	(0.030)
Population (in 10 000s), 2017	-0.004
	(0.009)
Average wage (in 10 000s RUB), 2017	1.349***
	(0.171)
Social benefit recipients (%), 2017	0.058**
	(0.024)
Male, % points change, 2017-2011	0.925***
	(0.284)
Male (%), 2017	-1.073***
	(0.139)
Elderly, % points change, 2017-2011	-0.949***
	(0.206)
Elderly (%), 2017	0.553***
	(0.054)
Rural population, % points change, 2017-2011	0.057**
	(0.023)
Rural population (%), 2017	0.004
	(0.007)
Goods and services produced (in logs), change, 2017-2011	0.007
	(0.377)
Goods and services produced (in logs), 2017	0.352**
	(0.141)
State investment in fixed assets (RUB, per capita), change, 2017-2011	-0.000
	(0.000)
State investment in fixed assets (RUB, per capita), 2017	-0.000
	(0.000)
Constant	36.744***
	(8.086)
R-squared	0.22
N	58,763

Return

Appendix: Pre-trends
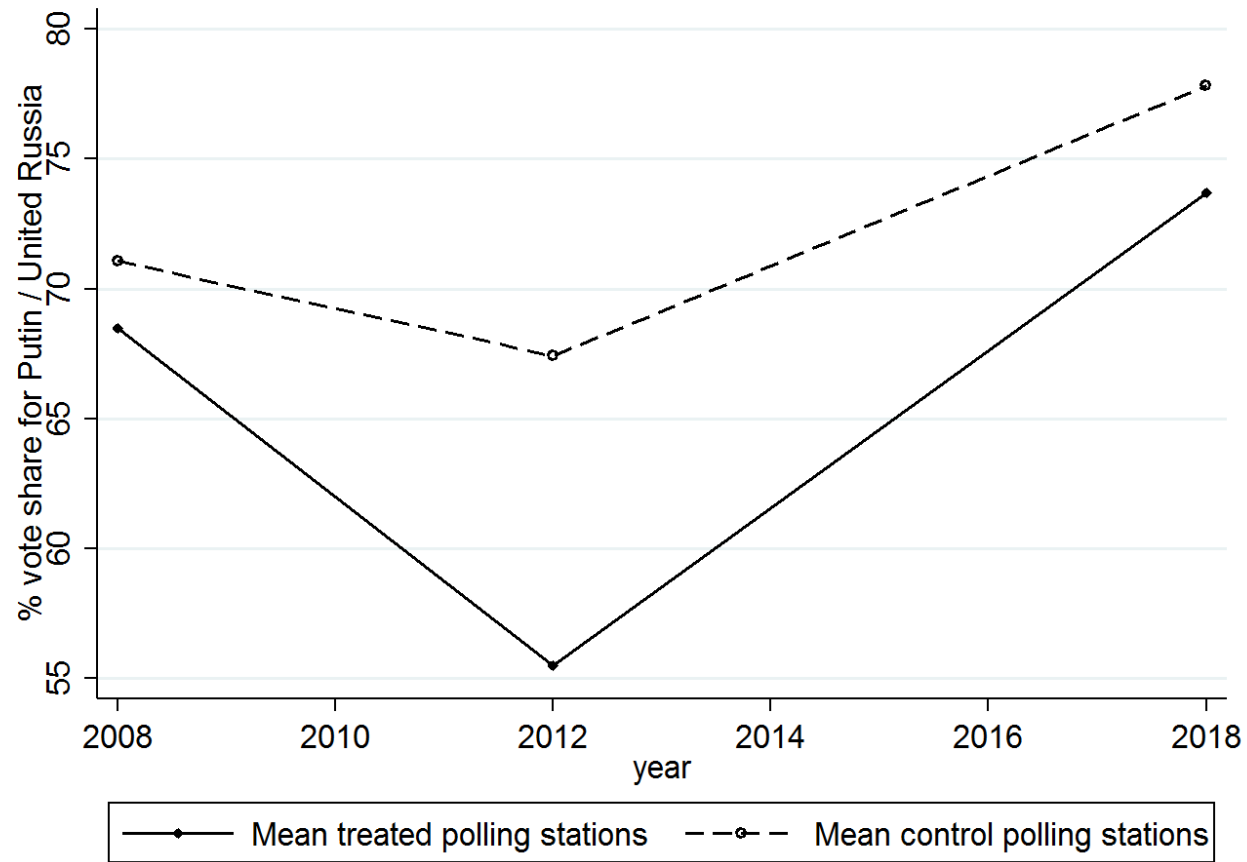
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Appendix: Pre-trends: matched sample
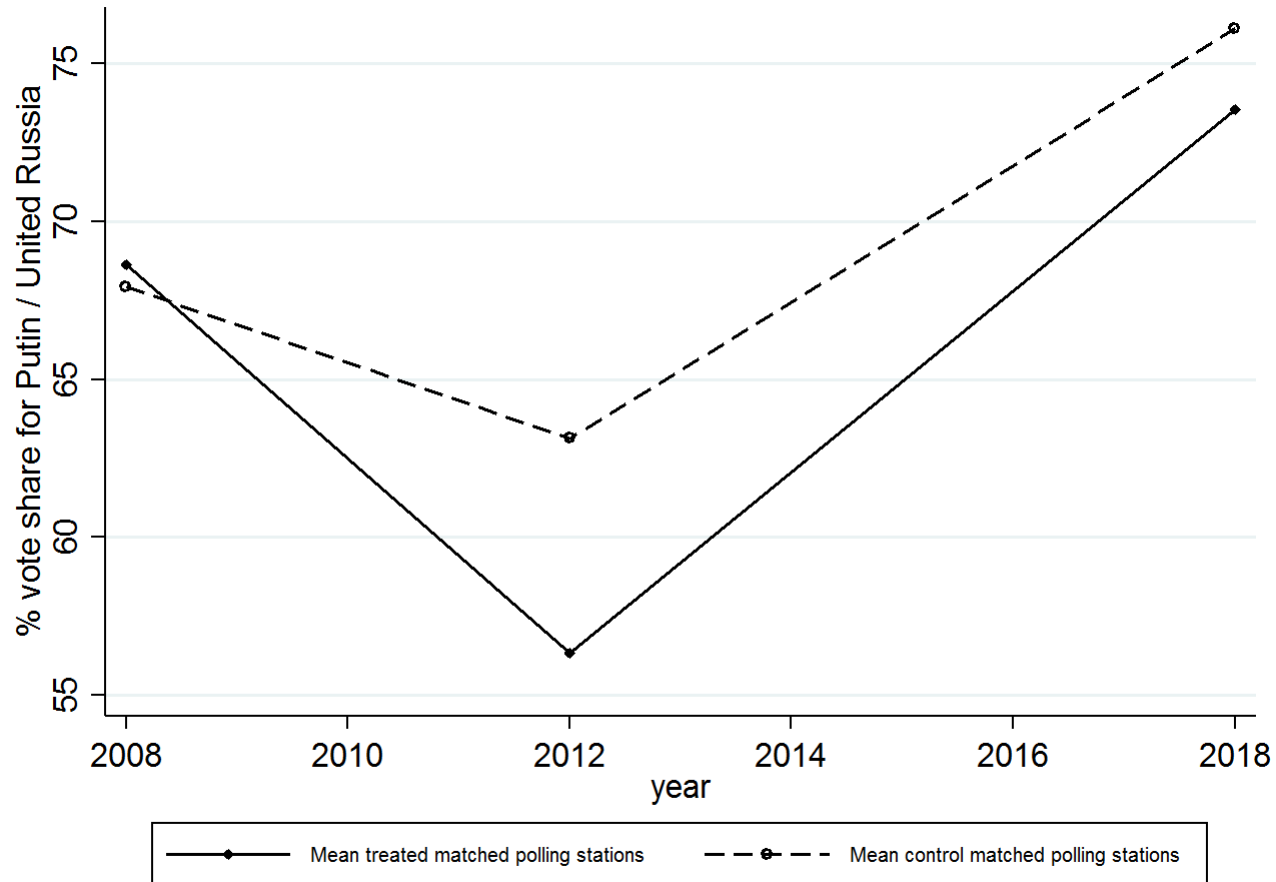
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Appendix: Pre-trends: subregion level
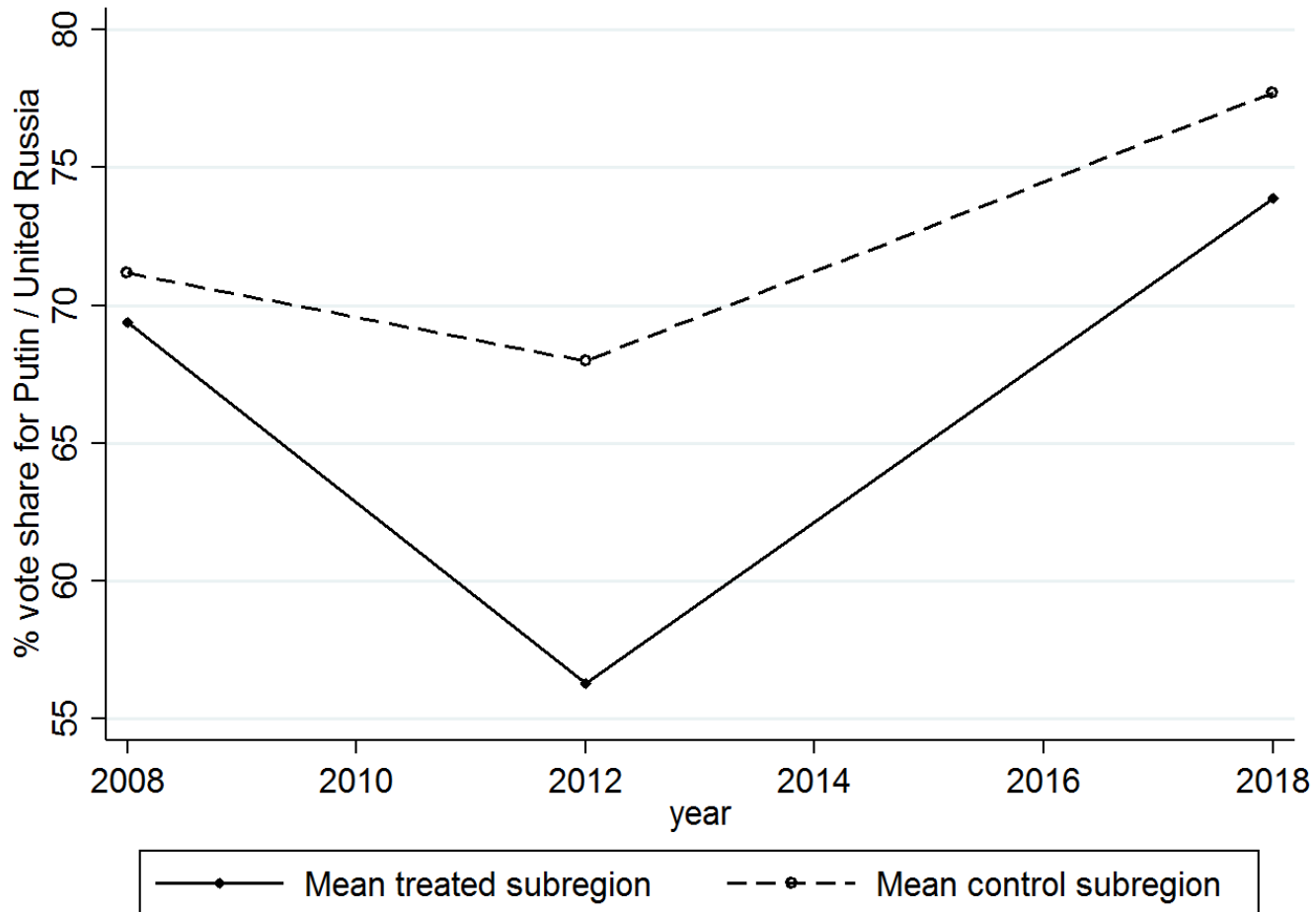
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Appendix: Diff-in-diff assumptions check

Selection bias

$$T10_{ij,2018} = \alpha + \beta_1 share_{ij,2012}^{Putin} + \beta_2 turnout_{ij,2012}^{Pres.elec.} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017}$$

$$+ \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij}$$

	(1)	(2)	(3)	(4)	(5)
Dependent variable: Occurrence of a sanctioned firm in 2018					
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

Return

Appendix: No Moscow & St. Petersburg

Descriptive statistics

	No sanctioned firm within 10km	Sanctioned firm within 10km	Total
Putin's vote share (%) in 2012	67.47	58.57	66.32
	(11.76)	(8.55)	(11.78)
Putin's vote share (%) in 2018	77.83	74.65	77.42
	(8.85)	(5.79)	(8.58)
Turnout (%) in 2012	69.21	63.98	68.54
	(13.43)	(10.01)	(13.15)
Turnout (%) in 2018, %	72.37	64.63	71.38
	(14.22)	(10.60)	(14.05)
Population, 2017	97517.64	855881.56	194981.25
	(187290.65)	(456873.18)	(349008.82)
Male (%), 2017	47.50	45.12	47.20
	(2.02)	(1.26)	(2.10)
Elderly (%), 2017	26.38	23.09	25.95
	(4.46)	(2.76)	(4.42)
Social benefit recipients (%), 2017	25.91	21.27	25.31
	(9.32)	(5.98)	(9.09)
Rural population (%), 2017	53.84	6.04	47.70
	(38.24)	(19.28)	(39.73)
Average wage, 2017	26736.16	38268.96	28218.33
	(9250.03)	(6945.29)	(9780.70)
State investment in fixed assets (RUB, per capita), 2017	1089.31	1898.49	1193.31
	(3368.58)	(1749.32)	(3218.00)
Observations	47,528	7,009	54,537

	No sanctioned firm within 10km	Sanctioned firm within 10km	Total
Goods and services produced (in logs), 2017	22.34	26.38	22.86
	(2.13)	(1.15)	(2.44)
Population, change, 2017-2011	751.07	40241.61	5826.33
	(9377.38)	(37684.29)	(20827.63)
Male, % points change, 2017-2011	0.54	-0.26	0.44
	(0.99)	(0.46)	(0.97)
Elderly, % points change, 2017-2011	2.70	0.83	2.46
	(1.17)	(1.33)	(1.35)
Social benefit recipients, % points change, 2017-2011	-1.66	-1.73	-1.67
	(7.93)	(5.35)	(7.65)
Rural population, % points change, 2017-2011	-0.04	-0.21	-0.06
	(4.66)	(0.82)	(4.36)
Average wage (in RUB), change, 2017-2011	4877.67	6211.26	5049.06
	(2555.41)	(1897.01)	(2520.42)
State investment in fixed assets (RUB, per capita), change, 2017-2011	-67.43	-377.01	-107.22
	(4021.46)	(1755.21)	(3807.93)
Goods and services produced (in logs), change, 2017-2011	0.19	0.09	0.18
	(0.41)	(0.16)	(0.39)
Observations	47,528	7,009	54,537

Return

Appendix: No Moscow & St. Petersburg

Main result

	(1)	(2)	(3)	(4)
Sanctioned firm within 10 km	4.577***	0.015	-0.274	1.637***
	(0.493)	(0.691)	(0.704)	(0.416)
Constant	11.932***	41.178***	16.823**	-25.638
	(0.265)	(6.692)	(8.031)	(54.652)
Demographic controls	no	yes	yes	yes
Economic controls	no	no	yes	yes
Subregion FE	no	no	no	yes
R-squared	0.042	0.154	0.166	0.536
N	54537	54537	54537	54537

Return

Appendix: No Moscow & St. Petersburg

Placebo regression

Dependent variable: United Russia's vote share change between 2012 and 2008 presidential elections	
Sanctioned firm within 10 km	-1.278**
	(0.524)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.434
N	54,537

Return

Appendix: No Moscow & St. Petersburg

Selection bias

$$T10_{ij,2018} = \alpha + \beta_1 share_{ij,2012}^{Putin} + \beta_2 turnout_{ij,2012}^{Pres.elec.} + \boldsymbol{B}_{2017}\boldsymbol{X}_{j,2017}$$

$$+ \boldsymbol{B}_{2017-2011}\boldsymbol{X}_{j,2017-2011} + \varepsilon_{ij}$$

	Dependent variable: Occurrence of a sanctioned firm in 2018				
	(1)	(2)	(3)	(4)	(5)
Putin's vote share (%) in 2012	-0.0108***	-0.0001	0.0005	-0.0011***	-0.0012***
	(0.0012)	(0.0010)	(0.0009)	(0.0002)	(0.0003)
Turnout (%) in 2012	0.0027***	0.0011*	0.0013**	0.0004***	0.0004**
	(0.0009)	(0.0006)	(0.0006)	(0.0002)	(0.0002)
United Russia's vote share change (%), 2008-2012					0.0002
					(0.0001)
F-test: Demographic controls = 0		74.39	28.95	0.96	0.96
F-test: Economic controls = 0			4.84	0.95	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	0.06	0.53	0.54	0.91	0.91
N	54,537	54,537	54,537	54,537	54,537

Return

Appendix: No Moscow & St. Petersburg

Robustness checks: different treatment variable

	(1)	(2)	(3)	(4)
Sanctioned firm within 60 km	1.586***			
	(0.520)			
Sanctioned firm within 3 km		0.792***		
		(0.205)		
Share of subregion population (%), working at sanctioned firm(s) within 10 km			0.332	
			(0.215)	
Sanctioned firm within 10 km				1.698***
				(0.406)
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Subregion FE	yes	yes	yes	yes
Unweighted				yes
R-squared	0.536	0.536	0.536	0.478
N	54,537	54,537	54,537	54,537

Return

Appendix: No Moscow & St. Petersburg

Heterogeneous effects

Dependent variable: Putin's vote share change between 2018 and 2012 elections	
Sanctioned firm within 10km	1.001**
	(0.404)
Most supportive of Putin polling station	4.673***
	(0.218)
Sanctioned firm within 10km # Most supportive of Putin polling station	1.716***
	(0.494)
Least supportive of Putin polling station	-3.628***
	(0.162)
Sanctioned firm within 10km # Least supportive of Putin polling station	1.130***
	(0.296)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.591
N	54,537

Return

Appendix: No Moscow & St. Petersburg

Voter mobilization

Dependent variable: Voter turnout		
	(1)	(2)
Sanctioned firm within 10 km	1.360	
	(1.098)	
Change in eligible voters (%), 2012-2018	0.929***	0.930***
	(0.012)	(0.012)
Sanctioned firm within 10km		0.740
		(1.204)
Most supportive of Putin polling station		7.740***
		(0.490)
Sanctioned firm within 10km # Most supportive of Putin polling station		3.406***
		(1.305)
Least supportive of Putin polling station		-1.837***
		(0.335)
Sanctioned firm within 10km # Least supportive of Putin polling station		0.136
		(0.585)
Demographic controls	yes	yes
Economic controls	yes	yes
Subregion FE	yes	yes
R-squared	0.878	0.881
N	54,537	54,537

Return

Appendix: No Moscow & St. Petersburg

Economic explanation

Dependent variable: Putin's vote share change between 2018 and 2012 elections	
Employment gain at sanctioned firms, 2017-2011	0.690
	(1.457)
Employment loss at sanctioned firms, 2017-2011	-0.020
	(1.489)
Demographic controls	yes
Economic controls	yes
Subregion FE	yes
R-squared	0.536
N	54537

Return