“Anti-Corruption Protests and University Students: Evidence from Russian Cities”

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Table A1. List of Cities

City	Federal District	Population, in thousands (01.01.2017)
Abakan	Siberia	181.709
Angarsk	Siberia	226.374
Arkhangelsk	Northwest	351.488
Armavir	South	190.871
Astrakhan	South	532.504
Balakovo	Volga	191.26
Balashikha	Central	450.771
Barnaul	Siberia	633.301
Belgorod	Central	391.135
Biisk	Siberia	203.108
Blagoveshchensk	Far East	224.419
Bratsk	Siberia	231.602
Briansk	Central	406.553
Cheboksary	Volga	489.498
Cheliabinsk	Ural	1198.858
Cherepovets	Northwest	318.856
Chita	Siberia	347.088
Dzerzhinsk	Volga	231.797
Ekaterinburg	Ural	1455.514
Engels	Volga	225.752
Grozny	North Caucasus	291.687
Ioshkar-Ola	Volga	266.675
Irkutsk	Siberia	623.736
Ivanovo	Central	406.933
Izhevsk	Volga	646.277
Kaliningrad	Northwest	467.289
Kaluga	Central	341.892
Kazan	Volga	1231.878
Kemerovo	Siberia	556.92
Khabarovsk	Far East	616.242
Khimki	Central	244.668
Kirov	Volga	501.468
Komsomolsk-na-Amure	Far East	249.81
Korolev	Central	221.797
Kostroma	Central	277.648

Krasnodar	South	881.476
Krasnoiarsk	Siberia	1082.933
Kurgan	Ural	322.042
Kursk	Central	449.063
Lipetsk	Central	510.439
Liubertsy	Central	197.705
Magnitogorsk	Ural	418.241
Makhachkala	North Caucasus	592.976
Murmansk	Northwest	298.096
Mytishchi	Central	205.397
Naberezhnye Chelny	Volga	529.797
Nalchik	North Caucasus	239.2
Nizhnekamsk	Volga	237.25
Nizhnevartovsk	Ural	274.575
Nizhnii Novgorod	Volga	1261.666
Nizhnii Tagil	Ural	355.693
Novokuznetsk	Siberia	552.445
Novorossiisk	South	270.774
Novosibirsk	Siberia	1602.915
Omsk	Siberia	1178.391
Orel	Central	318.633
Orenburg	Volga	564.443
Orsk	Volga	230.414
Penza	Volga	523.726
Perm	Volga	1048.005
Petrozavodsk	Northwest	278.551
Podolsk	Central	299.66
Prokopievsk	Siberia	196.406
Pskov	Northwest	209.84
Riazan	Central	537.622
Rostov-on-Don	South	1125.299
Rybinsk	Central	190.429
Samara	Volga	1169.719
Saransk	Volga	314.789
Saratov	Volga	845.3
Severodvinsk	Northwest	183.996
Shakhty	South	235.492
Smolensk	Central	329.853
Sochi	South	411.524
Staryi Oskol	Central	223.36
Stavropol	North Caucasus	433.577

Sterlitamak	Volga	280.233
Surgut	Ural	360.59
Syktyvkar	Northwest	244.646
Taganrog	South	250.287
Tambov	Central	290.365
Tiumen	Ural	744.554
Toliati	Volga	710.567
Tomsk	Siberia	572.74
Tula	Central	485.221
Tver	Central	419.363
Ufa	Volga	1115.56
Ulan-Ude	Siberia	431.922
Ulianovsk	Volga	624.518
Velikii Novgorod	Northwest	222.594
Vladikavkaz	North Caucasus	306.978
Vladimir	Central	356.168
Vladivostok	Far East	606.589
Volgograd	South	1015.586
Vologda	Northwest	313.012
Volzhskii	South	326.055
Voronezh	Central	1039.801
Yakutsk	Far East	307.911
Yaroslavl	Central	608.079
Yuzhno-Sakhalinsk	Far East	194.882

Source: Rosstat, *Chislennost' naseleniia Rossiiskoi Federatsii po munitsipalnym obrazovaniiam na 1 ianvaria 2017 goda*, Table 31 "Chislennost' naseleniia gorodov i poselkov gorodskogo tipa po feralnym okrugam i subjektam Rossiiskoi Federatsii na 1 ianvaria 2017 goda" (Population statistics by city across federal districts and lower-level administrative units of the Russian Federation, effective January 1, 2017).

Table A2. Measurement of Variables

Variable Name	Description	Data Source
Incidence of protest	1 if a protest event was held on 26 March 2017; 0 – if a protest event was not held in a city	*Meduza* and over 100 local media sources
Protest size	The number of participants in an anti-corruption protest held on 26 March 2017 The value 1 is added to the numerical value of the dependent variable to exclude the presence of zeros prior to the log-transformation of the dependent variable.	*Meduza* and over 100 local media sources
Sanctioned	1 if the municipal government granted the permission for the protest event. For a list of cities, see *RBK-Russia* (2017) Vlasti 24 gorodov soglasovali ploshchadki dlia mitingov Navalnogo. 24 March. https://www.rbc.ru/politics/24/03/2017/58d4e3f89a7947bd0d8fc4b8 Local courts in Nizhnii Tagil and Novosibirsk overturned a ban on the conduct of protest events. On this point, see https://navalny.com/p/5301/	News media sources; Kira Yarmysh
Navalny's office	1 if Alexei Navalny's election campaign office was set up by 26 March 2017 Volkov L (2017) A k nam kogda? March 8. https://www.leonidvolkov.ru/p/195/	Leonid Volkov, Navalny's election campaign manager
Clean public sector	The INDEM Index is computed based upon the measures of the supply and demand of bribes, the average size of a bribe, and the overall estimated amount of paid bribes. The higher the score, the less corruption in the public sector. The data come from a public opinion poll in 70 out of 83 Russian administrative units in October 2010 (N=17,500), with 250 respondents per administrative unit. For details, see https://www.indem.ru/corrupt/doklad_cor_INDEM_FOM_2010.pdf	The Fund Informatika dlia Demokratii [Information technology for democracy] (INDEM)
Budget transparency	The index is constructed based upon budget transparency monitoring of Russian subjects in February–December 2016. On the methodology, see http://www.nifi.ru/ru/rating	National Research Finance Institute, Russia
Intra-elite conflict	Elite conflict, measured on a five-point scale, is a component of the Index of Socioeconomic and Political Strain in Russia's Regions computed by Alexander Kynev, Nikolay Petrov, and Alexey Titkov (2017). A higher score indicates a higher level of intra-elite conflict	Committee of Civic Initiatives, Moscow, Russia

	in an oblast. For details, see https://komitetgi.ru/projects/2901/	
Free elections	The Institute estimated the level of administrative pressures on electoral processes prior to the 2016 parliamentary elections. The higher the score, the less administrative pressures on electoral processes.	Institute for the Development of the Electoral System of the Russian Federation
United Russia	percentage of seats held by the ruling party in a city council in spring 2017	Manually collected data from the web sites of city councils
2011 Protest	number of participants in a post-election protest held in a city in December 2011	Enikolopov, Makarin, and Petrova (2020)
2016 Protest	The level of protest activity is estimated as a component of the Index of Socioeconomic and Political Strain in Russia's Regions. A higher score indicates a higher level of protest activity in an oblast over the course of the year.	Committee of Civic Initiatives
Population	total population in a city	Rosstat
Youth	percentage of 18-29 year old people as a share of the city's total population	Rosstat
Students	percentage of students enrolled in tertiary education as a share of the city's total population	Ministry of Science and Higher Education of the Russian Federation
Unemployment	percentage of unemployed as a share of working-age population	Rosstat
Socioeconomic inequality	The Gini Index, measured at oblast level, ranges from 0, denoting perfect equality, to 100, denoting perfect inequality.	Rosstat
Internet use	percentage of adult population who reported the daily use of the Internet in October – November 2016, measured at the oblast level Rosstat (2017) *Itogi federalnogo statisticheskogo nabliudeniia po voprosam ispolzovaniia naseleniem informatsionnykh tekhnologii i informatisionno-telekommunikatsionnykh setei*.	Rosstat
Friendly neighbors	ten-point scale, gauging perceived friendliness of neighbors in a city based upon a survey of 258,400 people in 250 Russian cities Survey respondents were prompted to evaluate on a ten-point scale whether the following statement describes well their neighborhood, 'My neighbors are mostly friendly and polite.' For details, see https://www.domofond.ru/statya/naibolee_druzhelyubny_k_sosedyam_po_domu_zhiteli_groznogo_i_mahachkaly/6495	Domofond.ru
Men	percentage of men in a city's population	Rosstat
Ethnic Russian	percentage of ethnic Russians in a city	2010 Census (Rosstat)

Distance to Moscow	road distance (in kilometers)	Avtodispetcher.ru

Table A3. Descriptive Statistics

Variable	Number of Observations	Mean	Standard Deviation	Minimum	Maximum
Incidence of protest	100	.77	.423 9526	0	1
Protest size	100	555.295	848.6369	0	4500
Sanctioned	100	.25	.4351941	0	1
Navalny's office	100	.12	.3265986	0	1
Clean public sector	96	.4736042	.1615362	.154	.805
Budget transparency	100	88.8275	37.67771	14.5	157
Intra-elite conflict	100	2.4	.7521014	1	4
Free elections	100	.6891	.1874825	0	.95
United Russia	100	76.22	12.02655	46	96
Population	100	483873.1	321245.4	181709	1602915
Youth	100	17.384	2.686018	12.8	25.3
Students	100	5.9233	3.014081	.05	13.26
Unemployment	100	1.0148	.776694	0	5.69
Socioeconomic inequality	100	12.63	1.791873	9.4	16
Internet use	100	55.932	6.305936	42.7	75
Friendly neighbors	100	3.733	.1092259	3.5	4.4
Men	100	45.355	1.102104	43.39	49.39
Ethnic Russian	100	79.8793	19.17072	3.3	98.11
Distance to Moscow	100	1932.8	2209.593	21	9929

Table A4. University Students and the Incidence of Protest

	Model 1	Model 2	Model 3
Log of Population	3348.5***	3607.1***	4028.8***
	(7600.5)	(7544.0)	(8587.8)
Log of Students	7.327***	5.506**	5.321**
	(4.734)	(3.787)	(4.017)
Log of Youth	23.30	6.006	7.493
	(76.91)	(28.38)	(39.59)
Clean public sector	0.0113		
	(0.0359)		
Budget transparency	1.008		
	(0.0127)		
Socioeconomic inequality		0.867	0.871
		(0.197)	(0.209)
United Russia			0.998
			(0.0327)
Intra-Elite conflict			1.176
			(0.624)
Unemployed	2.262**	1.677	1.697
	(0.922)	(0.765)	(0.817)
Men	0.530	0.582	0.584
	(0.297)	(0.334)	(0.351)
Ethnic Russian	1.072**	1.080***	1.081***
	(0.0300)	(0.0289)	(0.0290)
Distance to Moscow	1.000	1.000	1.000
	(0.000270)	(0.000248)	(0.000255)
Observations	96	100	100
-2 Log Likelihood	-18.175	-19.948	-19.905
Pseudo-R Square	0.639	0.6301	0.631

Note: The results of binary logistic regression analysis are displayed in the table. Odds ratios are reported in the table, with robust standard errors in parenthesis. The number of observations is 96 in Model 1 due to a few missing observations for the variable *Clean public sector*.
***p ≤0.05; ** p ≤0.01; *p ≤0.10.

Table A5. The Impact of Universities

	(1)	(2)	(3)	(4)
Log of Population	5.467***	7.269***	7.088***	6.202***
	(1.92)	(2.54)	(2.53)	(2.18)
University	1.057**	1.044*	1.045*	1.050**
	(0.03)	(0.03)	(0.02)	(0.03)
Youth	0.412	0.583	0.463	0.377
	(0.32)	(0.46)	(0.39)	(0.30)
Socioeconomic inequality	0.830***	0.844**	0.846***	0.862**
	(0.06)	(0.06)	(0.05)	(0.05)
Unemployment	1.018	0.980		
	(0.21)	(0.18)		
Sanctioned	1.631**			
	(0.31)			
United Russia	1.003			
	(0.01)			
Intra-elite conflict	0.828			
	(0.12)			
Free elections		2.719		
		(1.84)		
Navalny's office			0.860	
			(0.23)	
Friendly neighbors			0.125	
			(0.20)	
Internet use			1.015	
			(0.02)	
Protest 2011				7.521**
				(5.99)
Ethnic Russian	1.013*	1.010	1.012*	1.011*
	(0.01)	(0.01)	(0.01)	(0.01)
Men	0.880	0.892	0.871	0.910
	(0.12)	(0.11)	(0.11)	(0.11)
Distance to Moscow	1.000***	1.000**	1.000**	1.000***
	(0.00)	(0.00)	(0.00)	(0.00)
Observations	100	100	100	100
-2 Log Likelihood	-629.531	-630.167	-629.894	-629.686
Pseudo-R Square	0.047	0.046	0.046	0.046

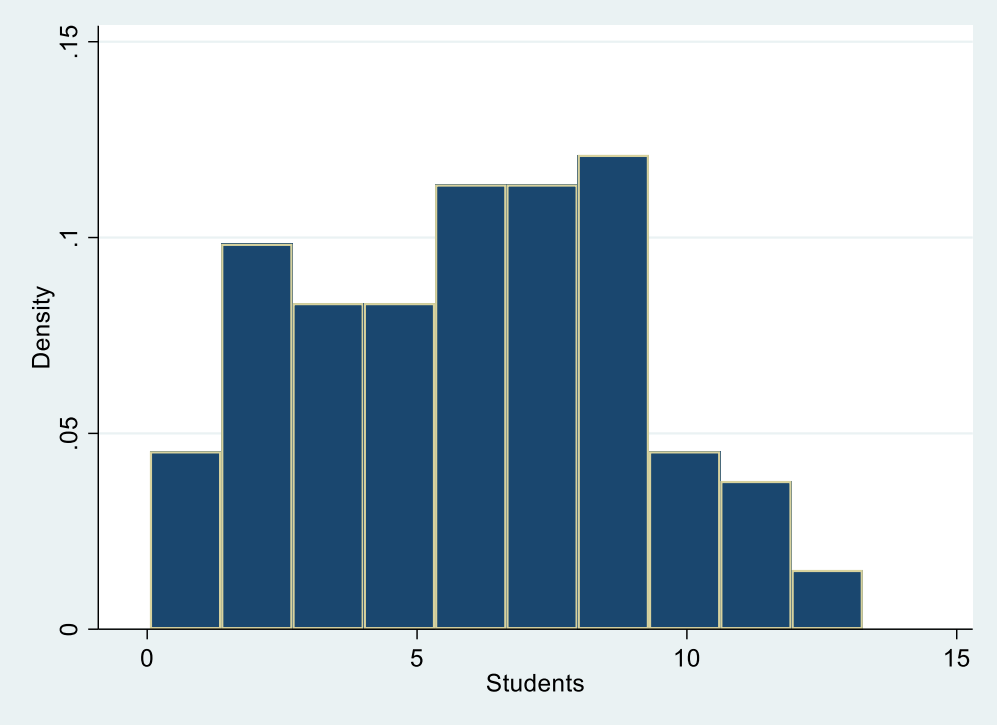
Note: The results of negative binomial regression analysis are displayed in the table. Incidence rate ratios are reported in the table, with robust standard errors in parenthesis.
***p ≤0.05; ** p ≤0.01; *p ≤0.10.

Table A6. The Role of University Students, OLS Regression Results

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Log of Population	2.789***	3.037***	2.830***	3.016***	3.102***	2.902***
	(0.33)	(0.36)	(0.35)	(0.36)	(0.40)	(0.33)
Students	0.962***	0.877***	0.884***	0.885***	0.900***	0.836***
	(0.24)	(0.22)	(0.23)	(0.22)	(0.24)	(0.21)
Youth	0.024	-0.774	-1.001	-0.624	-0.909	-0.870
	(1.38)	(1.31)	(1.30)	(1.29)	(1.32)	(1.27)
Clean public sector	-1.876					
	(1.24)					
Budget transparency	0.001					
	(0.01)					
Unemployment	0.149	-0.003	0.010	0.034		
	(0.21)	(0.21)	(0.21)	(0.20)		
Socioeconomic inequality		-0.174	-0.186	-0.180	-0.188	-0.152
		(0.10)	(0.10)	(0.10)	(0.11)	(0.11)
Sanctioned			0.800**			
			(0.29)			
United Russia			-0.005			
			(0.01)			
Intra-Elite conflict			-0.186			
			(0.23)			
Free elections				1.708		
				(1.14)		
Navalny's office					-0.427	
					(0.43)	
Friendly neighbors					-1.538	
					(1.93)	
Internet use					0.017	
					(0.03)	
Protest 2011						2.357*
						(0.95)
Ethnic Russian	0.019	0.026*	0.024*	0.016	0.022	0.023
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Men	-0.194	-0.167	-0.142	-0.155	-0.170	-0.153
	(0.21)	(0.20)	(0.19)	(0.20)	(0.20)	(0.20)
Distance to Moscow	0.000	0.000	0.000	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-25.072*	-26.254*	-23.251*	-27.280*	-21.291	-25.071*
	(11.28)	(11.11)	(10.91)	(10.99)	(12.38)	(11.24)
Observations	96	100	100	100	100	100
R-Square	0.667	0.673	0.687	0.681	0.679	0.681

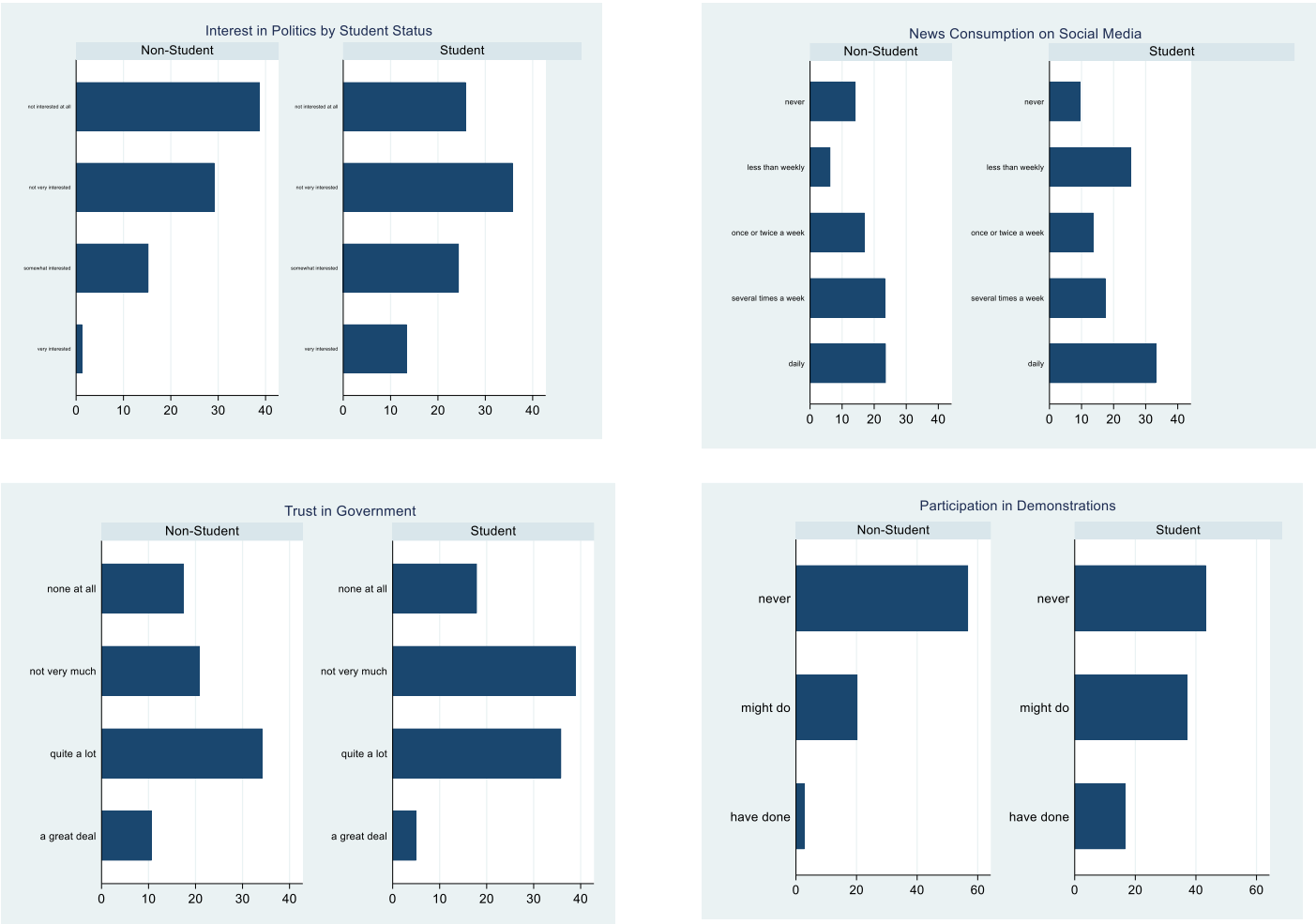
Note: Regression coefficients, with robust standard errors in parenthesis, are reported in the table. ***p ≤0.05; ** p ≤0.01; *p ≤0.10.

Figure A1. University Students: A Histogram



Note: The histogram plots the percentage of students as a share of the city's population.

Figure A2. Political Engagement of 18-24 Year Old Urban Youth



Note: Percentages are reported in the figures.
Source: EVS (2019) *European Values Study 2017: Integrated Dataset (EVS 2017)*. GESIS Data Archive, Cologne. ZA7500 Data file Version 2.0.0. https://doi.org/10.4232/1.13314.