Local Governance and Natural Recourses

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Abstract

In this essay I explore the relation between the regional models of governance and local economic characteristics, specifically I focus on natural resources extraction. The regions that earn more from natural resources extraction are tend to have larger share of municipalities with elected mayors. At the same time the regions that are more involved in aggricultural and manufacturing activities tend to have smaller share of elected local governments.

1 Background

In the 1990s, the government of Russian Federation aimed to increase the independence of local governments from regional and federal authorities in order to comply with the European Charter of Local Self-Government, which it signed in 1998. However, since the 2000, there has been a shift in trends. Russian parlament has enacted the Federal Law No. 131-FZ[1] and one of the purposes of it was to end the conflicts between governors and mayors of large cities (often regional capital cities) within the same region. To address the problem of governor-mayor conflicts, 131-FZ introduced a new model of municipal governance called city manager model and later (as a result of amendments to it by Federal Law No. 165-FZ21 in 2014) the appointed mayor model was added. This changes has significantly increased the regional governors' ability to influence local government. Previously, local leaders were elected by the population, but after 2003 the local government head can be chosen from candidates presented by a selection committee formed with the participation of regional authorities.

As can be Figure 2.1 on the following page from 2006 to 2011 and 2014 to 2017 there has been a series of declines in the number of municipalities with mayoral elections, the first was the expansion of the city managers and the second was the introduction of appointed mayor

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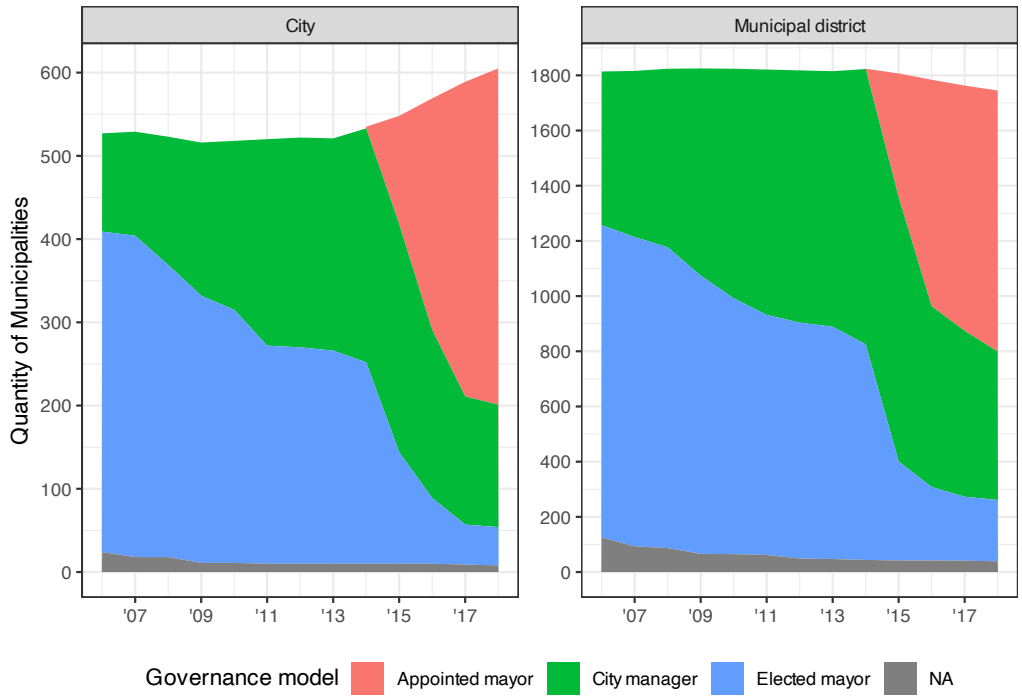
[1]Can be found (in Russian) via `https://base.garant.ru/186367/#ixzz6GzDhtjMJ`.

governance model. From fig. 3.1a on the next page one can see that the number of regions with local governments that are fully non-elected grows dramatically after 2014.

2 Data

In this work I'm using the data on the gross regional product by Rosstat (2021) and the data on the models of local governance by SCLI (2020). You can see detailed summary statistics in table A.2 on page 8 in appendix. The resulting panel is the unbalanced dataset due to missing time-observations for some region, for example the data for Crimea is available only from 2015.

Figure 2.1. Municipalities by Governance Model



3 Empirical Methodology

I estimate the simple two-way fixed effect model of the form

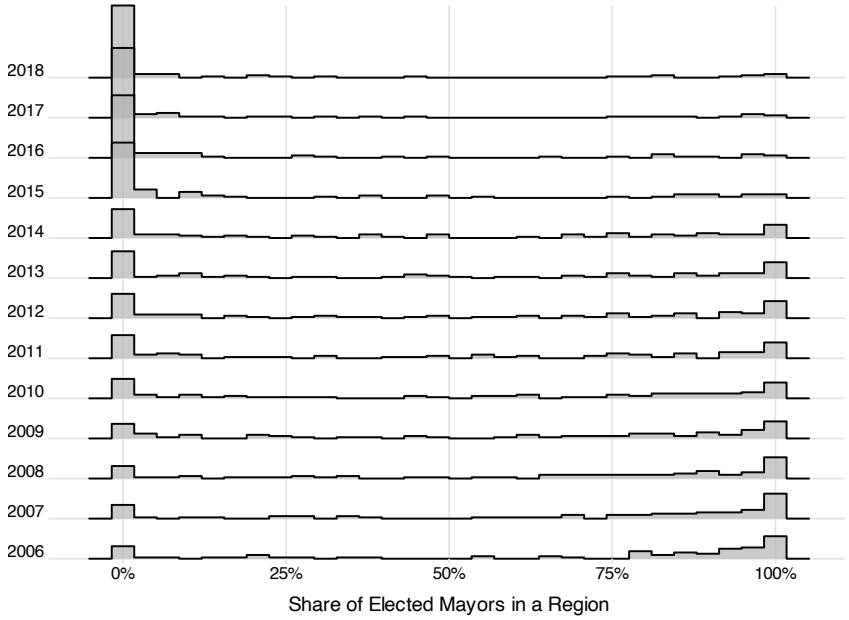
$$Y_{it} = \beta X'_{it} + \alpha_i + \gamma_t + \varepsilon \tag{3.1}$$

where Y_{it} are the shares of municipalities with different models of local governance, i.e. the share of municipalities with the elected mayor/city manager/appointed mayor and X_{it} are the regional gross domestic products by different type of activity. Note that some of the activities differentiated in Rosstat (2021) are omitted since they turn out to be not defined for the most of the desired period. The final list of activities can be seen in the regression table table 4.1 on page 5 and their exact definitions can be seen in table A.1 on page 7. Additionally X_{it} include the (logs of) gdp and population of each region. The main regressor of interest is the *NR Extraction GRDP*. You can see its histogram by years (ridgeplot) at fig. 3.1b.

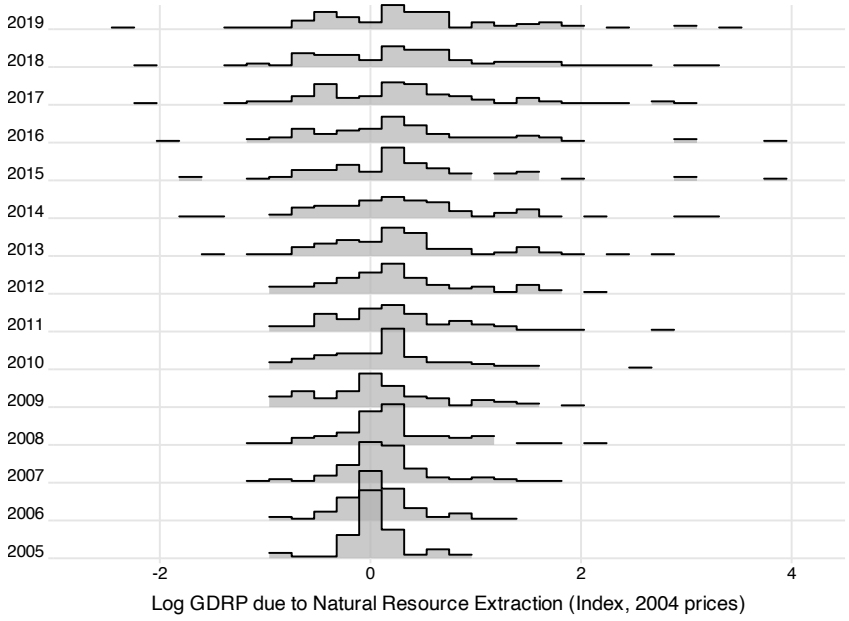
Note that this methodology can be augmented with IV constructed in a fashion similar to Asher and Novosad (2023).

Figure 3.1. Distributions of Main Regressor and Regressand by Year

(a) Distributions of Regions by a Share of Municipalities with Elected Mayors by Year



(b) Distribution of Regions by a Log of GDP due to the Natural Resources



4 Results

You can see the results in table 4.1 on the following page. We see from (1) that the regions with larger resource extraction and energy production tend to have larger share of elected local government officials. Also note that regions with the larger hospitality sector tend to have

more elected local government heads. At the same time the larger manufacturing, education, agriculture and transport (and construction) sectors predict that the region will have lower share of elected mayors. Note that we cannot make a causal statement because the direction of causation (even assuming no OVB) remains unclear. The IV in style of Asher and Novosad (2023) can help to resolve that issue.

Table 4.1. Regional Economy Characteristic

	Dependent variable: (%) Share of municipalities with		
	Elected Mayors	City Managers	Appointed Mayors
log of	(1)	(2)	(3)
NR Extraction GRDP	4.129**	−0.827	−3.302
	(2.030)	(2.255)	(2.077)
Energy GDRP	10.986**	12.675**	−23.661***
	(4.736)	(5.264)	(4.847)
Military GDRP	16.178	−26.434**	10.256
	(10.917)	(12.132)	(11.172)
Manufacturing GDRP	−14.219***	6.358	7.861**
	(3.873)	(4.304)	(3.963)
Healthcare GDRP	22.616	−23.343	0.726
	(14.965)	(16.631)	(15.316)
Education GDRP	−31.483**	−16.380	47.863***
	(13.381)	(14.871)	(13.695)
Construction GDRP	−4.229	10.379***	−6.150**
	(2.778)	(3.087)	(2.843)
Aggriculture GDRP	−2.059**	2.463**	−0.404
	(1.005)	(1.117)	(1.028)
Retail GDRP	1.778	−5.690	3.912
	(6.703)	(7.449)	(6.860)
Transport GDRP	−19.925***	13.362**	6.563
	(5.801)	(6.447)	(5.937)
Hospitality GDRP	13.735***	−3.600	−10.135**
	(4.168)	(4.632)	(4.266)
GRDP	8.941	−4.574	−4.368
	(9.540)	(10.601)	(9.763)
population	103.047**	−33.273	−69.774*
	(41.190)	(45.774)	(42.156)
Time-Region Fixed Effects	Yes	Yes	Yes
N	976	976	976
n	77	77	77
T	4–13	4–13	4–13
F Statistic	5.703***	3.449***	4.690***

Notes: Dependent variables are logs of GDRPs by Double-clustering robust standard errors with HC3 influencial observations correction are in parenthesis (Thompson, 2011; Cameron et al., 2011). *p < 0.1; **p < 0.05; ***p < 0.01. Panel is unbalanced, $T = 4$ for Crimea for which data is available only from 2015 to 2018.

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A Appendix

Table A.1. Exact definitions of GRDP by activities

Short Name	Full Name in English	Full Name in Russian
NR Extraction GRDP	Mineral extraction	Добыча полезных ископаемых
Energy GDRP	Providing electricity, gas and steam	Обеспечение электрической энергией, газом и паром
Military GDRP	Public administration and military security	Государственное управление и обеспечение военной безопасности
Manufacturing GDRP	Manufacturing industries	Обрабатывающие производства
Healthcare GDRP	Activities in the field of health and social services	Деятельность в области здравоохранения и социальных услуг
Education GDRP	Education	Образование
Construction GDRP	Construction	Строительство
Aggriculture GDRP	Agriculture, forestry, hunting, fishing and fish farming	Сельское, лесное хозяйство, охота, рыболовство и рыбоводство
Retail GDRP	Wholesale and retail trade; repair	Оптовая и розничная торговля; ремонт
Transport GDRP	Transportation and storage; information and communication activities	Транспортировка и хранение; деятельность в области информации и связи
Hospitality GDRP	Activities of hotels and catering establishments	Деятельность гостиниц и предприятий общественного питания

Table A.2. Summary Statistics

Statistic	N	Min	Pctl(25)	Median	Mean	St. Dev.	Pctl(75)	Max
share_city_manager	986	0.000	3.846	23.205	42.656	41.046	91.667	100.000
share_elected	986	0.000	0.000	35.165	44.291	41.793	89.040	100.000
share_appointed	986	0.000	0.000	0.000	13.053	31.381	0.000	100.000
gdp	986	11,609.400	141,947.900	275,438.900	489,149.000	725,529.300	570,277.200	8,875,004.000
log_gdp	986	9.360	11.863	12.526	12.514	1.088	13.254	15.999
resourse_gdp	986	0.112	0.792	1.147	1.810	3.045	1.717	50.653
log_resourse_gdp	986	−2.193	−0.233	0.137	0.230	0.730	0.541	3.925
gdp_pc	976	43,797.200	146,519.100	227,995.200	355,664.500	591,670.100	350,496.800	7,296,374.000
log_gdp_pc	976	10.687	11.895	12.337	12.388	0.751	12.767	15.803
log_military_gdp	986	−0.454	0.071	0.193	0.193	0.176	0.308	0.737
log_manufacturing_gdp	986	−2.925	0.061	0.228	0.224	0.461	0.450	1.945
log_healthcare_gdp	986	−0.429	−0.050	0.024	0.047	0.157	0.133	0.742
log_energy_gdp	986	−1.348	−0.049	0.113	0.142	0.399	0.295	2.046
log_education_gdp	986	−0.508	−0.130	−0.034	−0.022	0.183	0.054	1.104
log_construction_gdp	986	−2.334	0.192	0.483	0.448	0.476	0.738	1.725
log_aggriculture_gdp	986	−0.240	3.566	6.095	5.904	2.988	8.305	20.234
log_retail_gdp	986	−0.421	0.300	0.492	0.636	0.523	0.783	2.882
log_transport_gdp	986	−0.245	0.182	0.346	0.533	0.547	0.667	3.075
log_hospitality_gdp	986	−1.684	0.168	0.424	0.435	0.455	0.663	2.684
population	976	0.042	0.772	1.170	1.585	1.285	2.331	7.552