

ENEMIES OF THE PEOPLE

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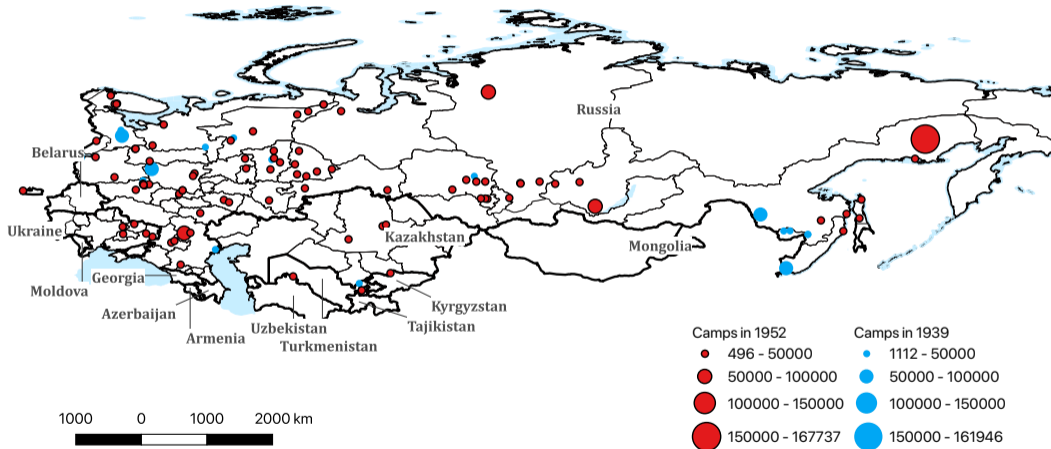


Whoever tries to break the unity of the socialist state... is a sworn enemy of the state, of the peoples of the USSR. And we will destroy any such enemy...

Stalin, 1937

ENEMIES OF THE PEOPLE

- ▶ A specific group: The educated elite
- ▶ Engineers, lawyers, doctors, academics, journalists, artists, affluent farmers...
- ▶ \simeq **3 million *enemies*** were sent to forced-labor camps scattered across the Soviet Union: The GULAG (along with \simeq 9 million other non-political prisoners)



THIS PAPER

- ▶ We look at the long-run effects of the forced resettlements of **enemies** on development outcomes across Russia
- ▶ Our setting is akin to a natural experiment that allows us to examine the effect of education on prosperity

HISTORICAL BACKGROUND

The Gulag: Stalin combined *terror* with industrialisation from 1920s to 1950s



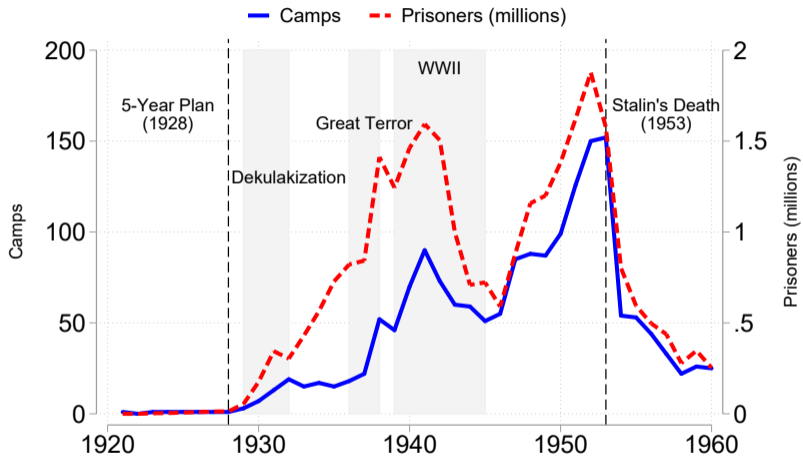
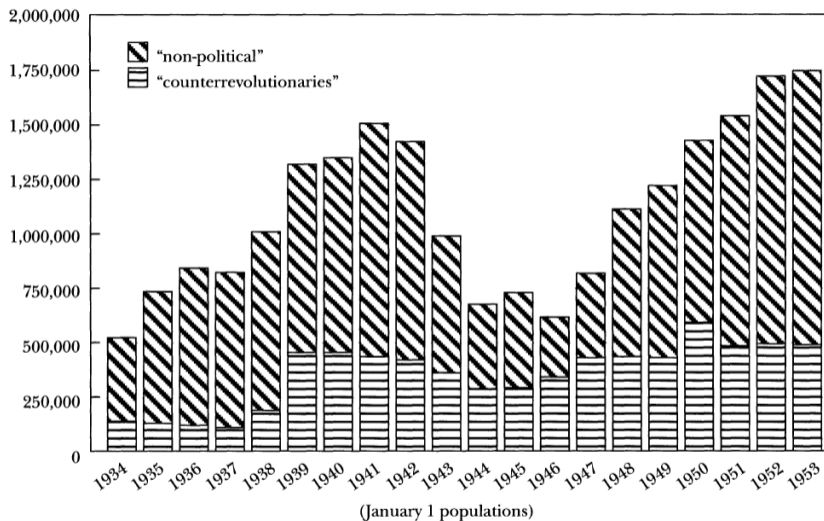
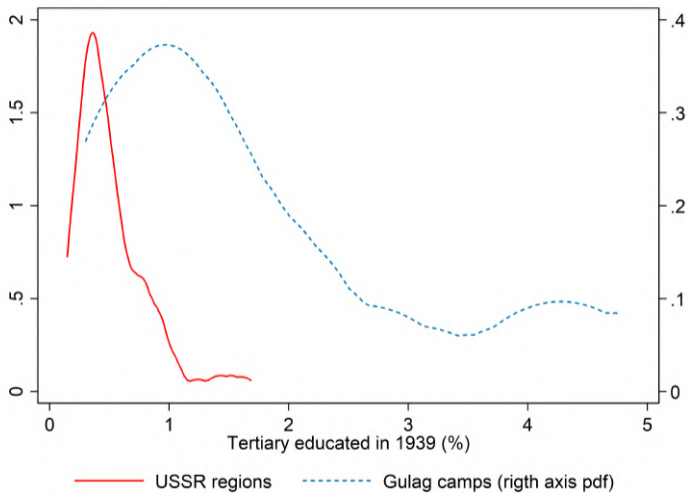


FIGURE B: “Political” Crimes as Proportion of GULAG Population, 1934–1953



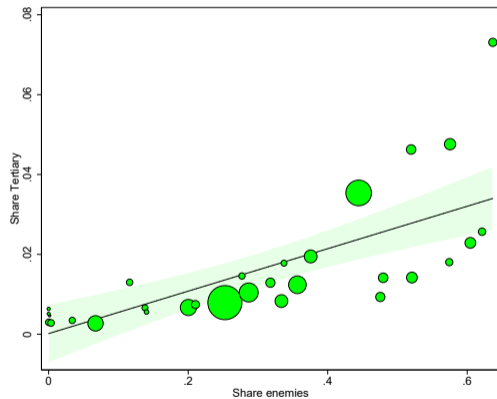
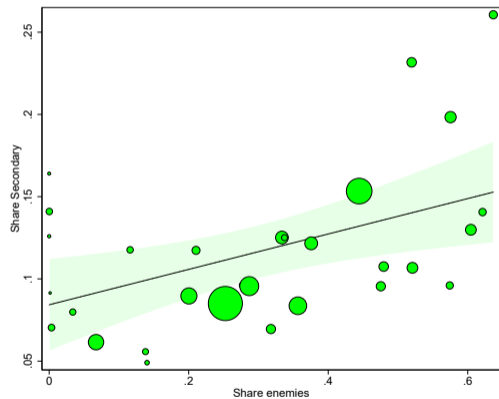
Source: Getty et al. (1993). [▶ Offenses](#) [▶ Ethnicities](#)

Enemies AS THE EDUCATED ELITE



Enemies AS THE EDUCATED ELITE

Across 1939 camps



GULAG: THE LEGACY

- ▶ *Millions of other survivors simply **had nowhere to return**. Years of imprisonment had destroyed everything associated with "home" - family, career, possessions, and their mental and physical health... Some exiles had already started new families with other exiles and "free" spouses... **Millions of survivors thus chose to remain**, now as free citizens and paid employees, in the vast region of the dismantled Gulag empire... Indeed, so many did so that **their liberated presence dramatically changed the demographic, social, and political character of several former administrative centers of the Gulag...** (Cohen 1983)*



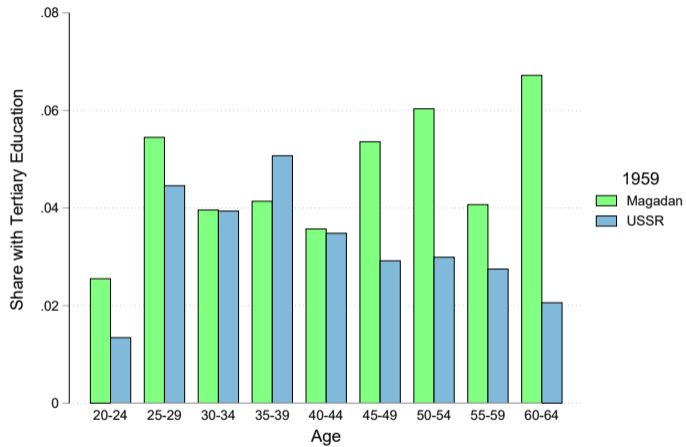
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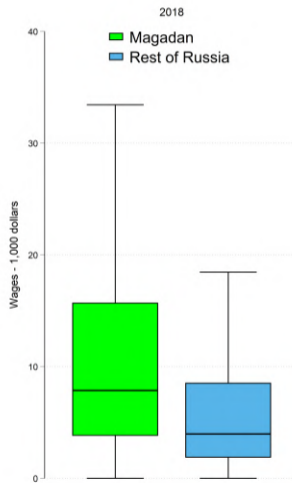
A painting in a Magadan museum depicting ships arriving with a cargo of prisoners.

New York Times: "Along Russia's 'Road of Bones,' Relics of Suffering and Despair"





WAGES NEAR MAGADAN - 2018

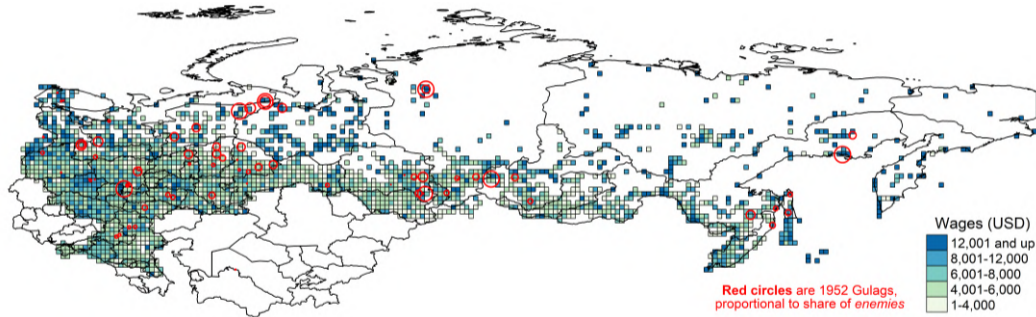


DATA AND IDENTIFICATION

DATA ON GULAGS

	Восток	Кавказ	Волга	Урал	Чувашия	Алтай	Дальний
Спис. число в/к на 1 ЯНВАРЯ 1952 года.	32576	42296	16035	25816	23079	17125	33612
а) мужчины	18097	28580	13465	14243	12151	26576	24177
б) женщины	13579	13716	2670	8373	10528	10549	9435
ПО ВОЗРАСТУ:							
Недостигшие 17 лет	-	12	55	44	-	-	-
" 18 "	92	28	101	151	-	-	-
От 18 до 25 лет.	5966	7008	2443	5233	6071	6309	2207
От 25 " 35 "	8319	11371	6514	5832	8529	10739	14354
От 35 " 45 "	6246	9395	1638	5042	6225	5889	7652
От 45 " 50 "	4065	5150	1607	2536	1444	6679	4126
От 50 " 60 "	5226	5871	2529	4526	627	4701	1221
Старше 60 "	2403	2321	855	2022	163	2261	1722
ПО ХАРАКТЕРУ ПРЕСТУП.							
Викиме родине	6502	7201	4128	18220	16320	2721	20613
Иностран	3	3	1	1022	1172	6720	2021
Террор	5	12	3	222	572	202	22
Сек. экономика	3	-	35	262	302	22	22
Сек. культура	3	4	5	22	22	22	22
Сек. образование	3	22	3	22	22	22	22

DATA ON WAGES AND PROFITS (FIRM CENSUS: SPARK)



ENEMIES AS A NATURAL EXPERIMENT

- ▶ Are places with more *enemies* among prisoners in 1952 richer today?

ENEMIES AS A NATURAL EXPERIMENT

Enemies might have been allocated (non-randomly) to

- ▶ More productive regions
- ▶ Skill-intensive or capital-intensive activities
- ▶ Larger camps with agglomeration economies

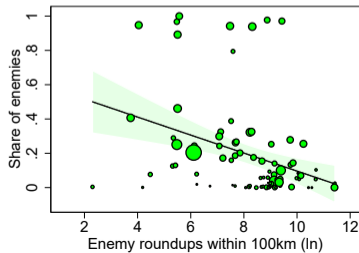
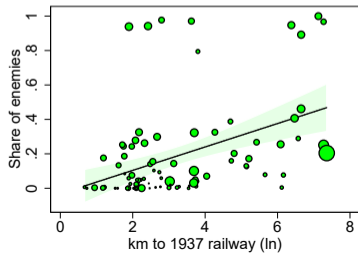
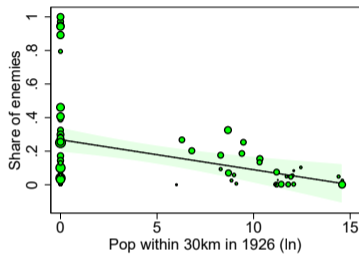
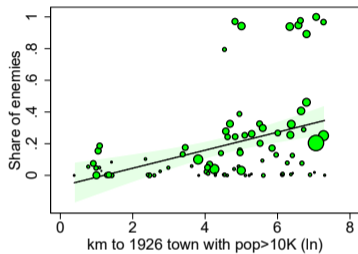
ENEMIES AS A NATURAL EXPERIMENT

- ▶ *The main purpose of the Great Terror was declared at the very outset to be the physical annihilation of enemies rather than their use as cheap labor*
- ▶ *The political motives for the Terror took absolute priority over economic ones*

Khlevnyuk (2003)

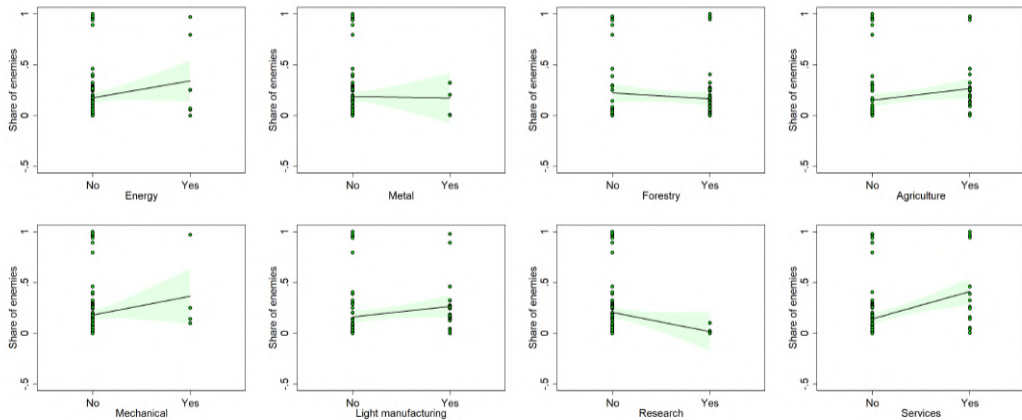
ENEMIES AS A NATURAL EXPERIMENT

Remoteness



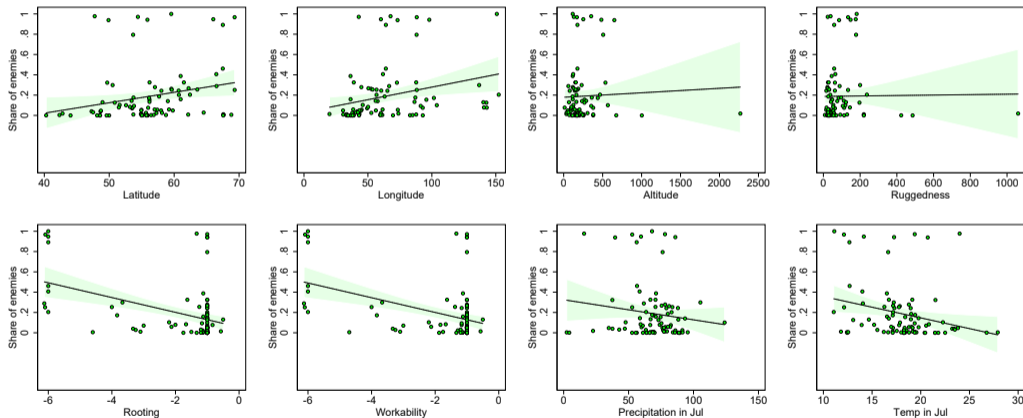
ENEMIES AS A NATURAL EXPERIMENT

Gulag industries



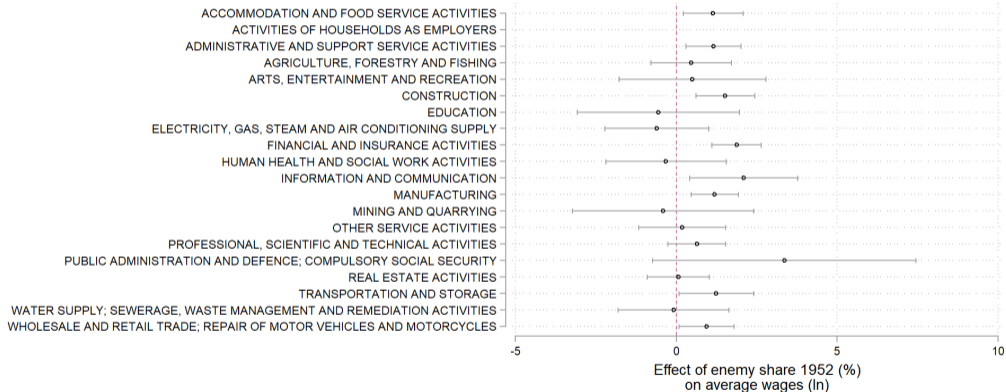
ENEMIES AS A NATURAL EXPERIMENT

Geography



RESULTS

ACROSS FIRMS WITHIN 30KM OF GULAGS, THOSE AROUND CAMPS WITH MORE *enemies* AMONG PRISONERS IN 1952, PAY HIGHER WAGES TODAY



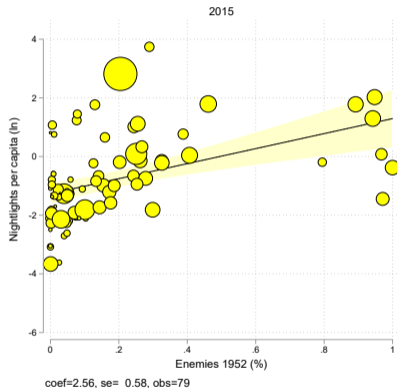
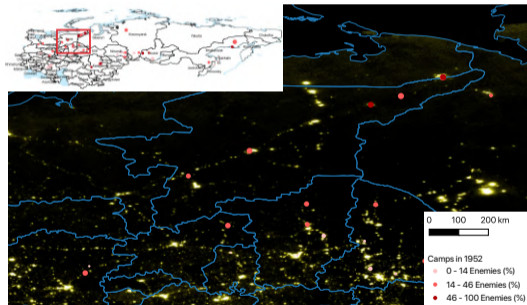
THE EFFECT OF *enemies* ON LOCAL WAGES

Robustness

- ▶ Using *Enemies* (ln) instead of *Enemies* (%)
- ▶ Using 1939 camps
- ▶ Excluding mining firms
- ▶ Excluding special camps (>90% *enemies*)
- ▶ Including sector fixed effects
- ▶ Removing weights
- ▶ Shuffling enemies around as placebos
- ▶ Using a Gulag dummy

▶ Skip

THE EFFECT OF *enemies* ON NIGHT LIGHTS PER CAPITA



THE MAGNITUDE OF THE *enemies* EFFECT

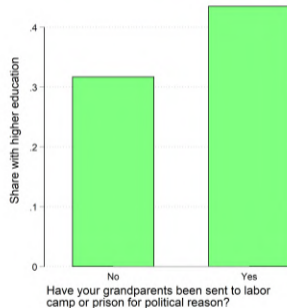
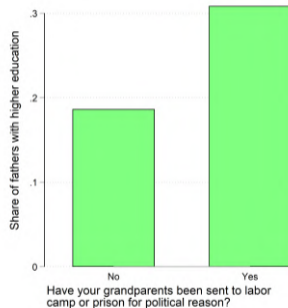
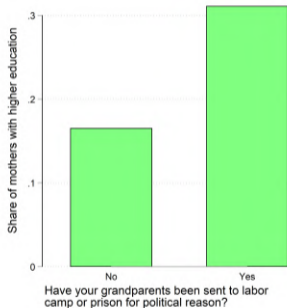
A one std. dev. (28 percentage point) increase in the share of *enemies* increases

- ▶ Night lights per capita by 58%
- ▶ Profits per employee by 65%
- ▶ Average wages by 22%

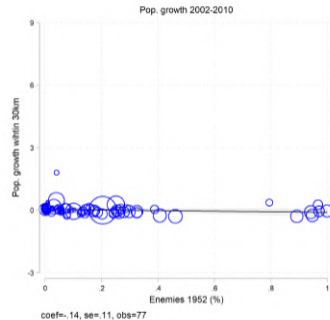
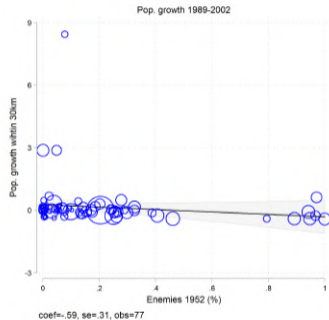
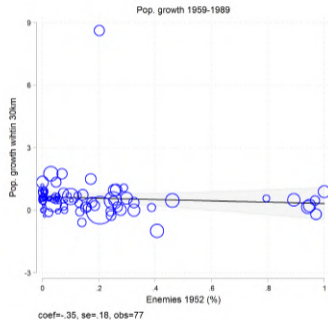
MECHANISMS

THE EDUCATION OF *enemies* DID PERSIST

LiTS: Descendants of *enemies* are more educated, and so are their parents



Enemies REALLY DID STICK AROUND



THE SOVIETS DID *not* INVEST MORE WHERE *enemies* LIVED

- ▶ Locations around Gulags with a higher share of *enemies* were less likely to attract Soviet investment in:
 - ▶ New railways
 - ▶ Science cities
 - ▶ Defense factories
 - ▶ Universities

CONCLUSION

CONCLUSION

- ▶ We highlight the prevalence of *enemies of the people* as Gulag prisoners in one of the darkest episodes of recent history
- ▶ The forced resettlement of *enemies* is a strong predictor of prosperity today, captured by wages, profits, night lights, and education
- ▶ Our paper can be seen as a natural experiment that identifies the long-run persistence of education and its effect on prosperity

APPENDIX

TYPE OF OFFENSES

**Table 7. Offenses of GULAG Population
(by Percent as of January 1 of each year)***

	1934	1936	1940
<i>Sentenced for:</i>			
“Counterrevolutionary offenses”	26.5	12.6	33.1
Dangerous crimes against the administrative order, including Banditry	15.2	17.7	3.6
Other crimes against the administrative order, including Speculation and “Hooliganism”	3.9	3.2	2.4
	1.3	—	13.9
	1.3	1.1	2.4
	—	—	7.3
Misconduct in office, Economic crimes	7.5	10.6	7.3
Crimes against persons	4.7	5.5	5.2
Crimes against property	15.9	22.3	12.1
Theft of public property	18.3	14.2	1.9
“Socially harmful and dangerous elements”	8.0	11.5	18.9
Violation of the law on internal passports	—	2.3	1.3
Military offenses	0.6	0.8	0.7
Other delicts	2.0	2.6	3.3

NOTE: *The percentages do not add up to 100 because of rounding.

SOURCE: GARF (TsGAOR), fond 9414, opis' 1, delo 1155, listy 3–6.

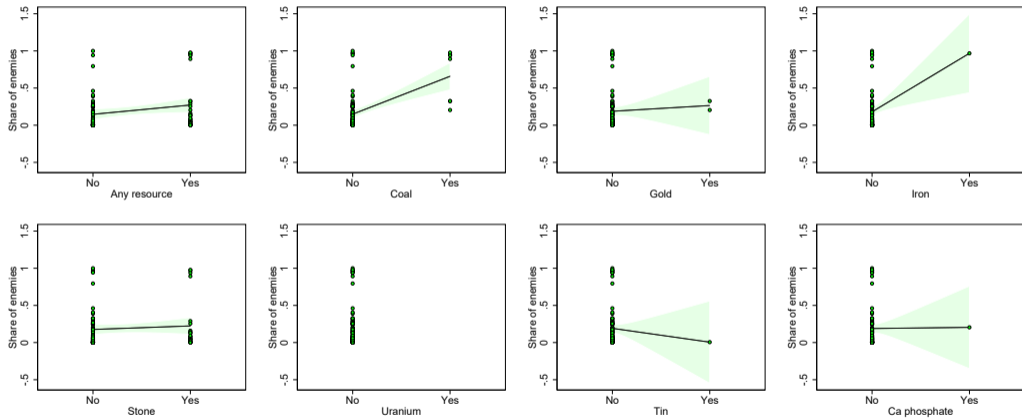
ETHNIC GROUPS IN GULAG CAMPS

Table 4. Ethnic Groups in GULAG Camps, January 1, 1937–1940

<i>Ethnic Group</i>	1937	1938	1939	1940	1937 <i>camps</i> %	1937 <i>census</i> %	1939 <i>camps</i> %	1939 <i>census</i> %	<i>over (+)/under (-)</i> <i>representation</i> <i>(camps and census)</i>	
									1937	1939
Russians	494,827	621,733	830,491	820,089	60.28	58.07	63.05	58.09	+2.21	+4.96
Ukrainians	138,318	141,447	181,905	196,283	16.85	16.33	13.81	16.47	+0.52	-2.66
Belorussians	39,238	49,818	44,785	49,743	4.78	3.01	3.40	3.09	+1.57	+0.31
Tatars	—	22,916	24,894	28,232	—	1.35	1.89	2.52	—	-0.63
Uzbeks	29,141	19,927	24,499	26,888	3.55	2.81	1.86	2.84	+0.74	-0.98
Jews	11,903	12,953	19,758	21,510	1.45	1.65	1.50	1.77	-0.20	-0.27
Germans	—	998	18,572	18,822	—	0.71	1.41	0.84	—	+0.57
Kazakhs	—	11,956	17,123	20,166	—	1.77	1.30	1.82	—	-0.52
Poles	—	6,975	16,860	16,133	—	0.39	1.28	0.37	—	+0.91
Georgians	4,351	6,974	11,723	12,099	0.53	1.24	0.89	1.32	-0.71	-0.43
Armenians	5,089	6,975	11,064	10,755	0.62	1.22	0.84	1.26	-0.60	-0.42
Turkmen	—	4,982	9,352	9,411	—	0.46	0.71	0.46	—	+0.23
Latvians	—	1,191	4,742	5,400	—	0.04	0.58	0.07*	—	+0.51
Finns	—	997	2,371	2,750	—	0.09	0.29	0.08*	—	+0.21

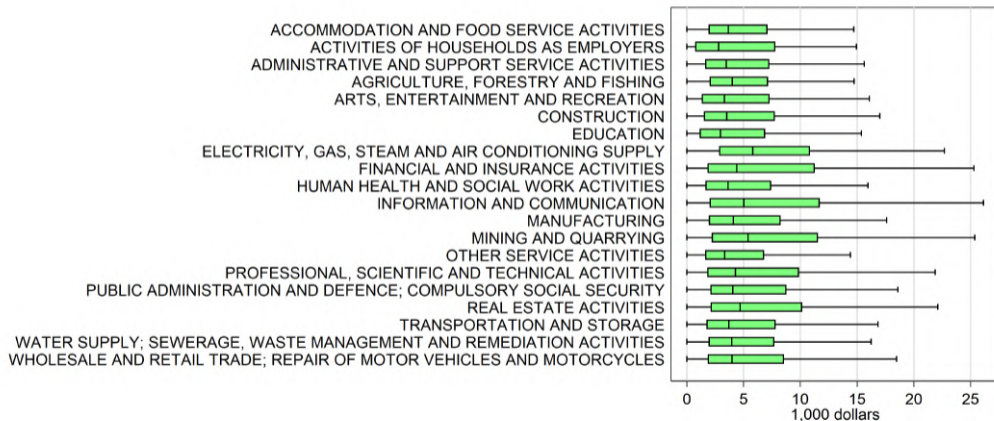
ENEMIES AS A NATURAL EXPERIMENT

Natural Resources

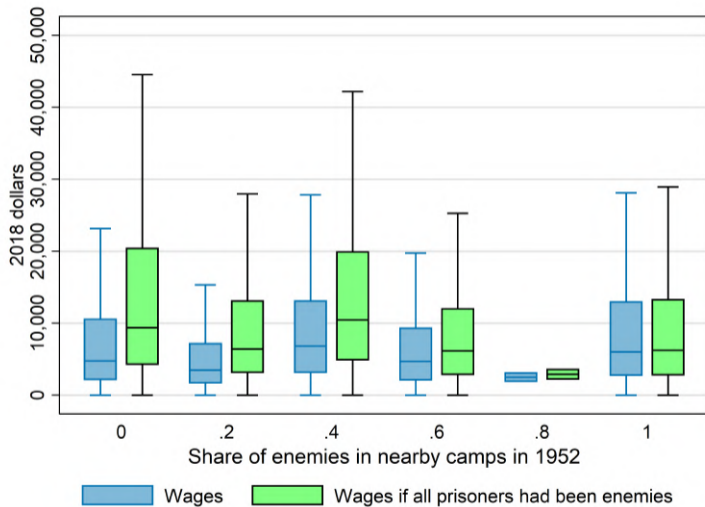


THE EFFECT OF *enemies* ON LOCAL WAGES

Wages in Russia - 2018 USD



THE EFFECT OF *enemies* ON LOCAL WAGES



THE EFFECT OF *enemies* ON LOCAL WAGES

Enemies in 1952 (ln)

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (ln)	0.059*** (0.016)	0.067*** (0.018)	0.068*** (0.019)	0.066*** (0.016)	0.067*** (0.022)	0.059*** (0.019)
Prisoners 1952 (ln)	-0.046 (0.049)	-0.082* (0.047)	-0.095** (0.044)	-0.117** (0.052)	-0.169*** (0.045)	-0.177*** (0.046)
Latitude		0.062*** (0.014)	0.068*** (0.017)		0.071*** (0.014)	0.068*** (0.015)
Longitude		-0.012* (0.006)	-0.012* (0.007)		-0.008 (0.007)	-0.004 (0.007)
Pop within 30km - 1926 (ln)			0.013 (0.008)			-0.016** (0.007)
KM to 1937 railway (ln)			0.003 (0.019)			-0.005 (0.023)
N	566583	566583	566454	308800	308800	308671
R-sq	0.04	0.04	0.04	0.03	0.04	0.04
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

1939

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1939 (%)	1.318*** (0.496)	2.969*** (0.850)	2.597*** (0.697)	1.386*** (0.489)	1.636** (0.643)	1.879*** (0.301)
Prisoners 1939 (ln)	-0.096 (0.067)	-0.024 (0.074)	-0.086 (0.066)	-0.110* (0.063)	-0.112 (0.074)	-0.167*** (0.042)
Latitude		-0.257** (0.108)	-0.162 (0.103)		-0.035 (0.087)	-0.007 (0.050)
Longitude		0.003 (0.010)	0.004 (0.013)		-0.007 (0.010)	0.011 (0.010)
Pop within 30km - 1926 (ln)			0.035* (0.020)			0.085*** (0.016)
KM to 1937 railway (ln)			0.030 (0.035)			0.081 (0.068)
N	251558	251558	251556	36293	36293	36291
R-sq	0.02	0.02	0.02	0.02	0.02	0.03
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

Excluding Mining firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (%)	1.099*** (0.294)	0.693*** (0.213)	0.995*** (0.257)	1.228*** (0.296)	0.699*** (0.227)	0.614*** (0.229)
Prisoners 1952 (ln)	0.037 (0.037)	0.022 (0.038)	0.005 (0.030)	-0.041 (0.038)	-0.075** (0.030)	-0.082*** (0.031)
Latitude		0.053*** (0.014)	0.057*** (0.016)		0.064*** (0.015)	0.066*** (0.015)
Longitude		-0.005 (0.006)	-0.008 (0.006)		-0.001 (0.006)	0.001 (0.006)
Pop within 30km - 1926 (ln)			0.020** (0.008)			-0.010 (0.008)
KM to 1937 railway (ln)			-0.001 (0.019)			-0.011 (0.022)
N	565192	565192	565065	307932	307932	307805
R-sq	0.04	0.04	0.04	0.03	0.04	0.04
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

Excluding special camps(>90%)

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (%)	1.338*** (0.424)	1.093*** (0.353)	1.665*** (0.414)	1.569*** (0.437)	1.193*** (0.377)	1.156*** (0.386)
Prisoners 1952 (ln)	0.033 (0.040)	0.022 (0.041)	-0.002 (0.032)	-0.056 (0.040)	-0.085** (0.034)	-0.084** (0.034)
Latitude		0.042*** (0.016)	0.047*** (0.017)		0.055*** (0.017)	0.057*** (0.018)
Longitude		-0.008 (0.006)	-0.012* (0.007)		-0.003 (0.006)	-0.002 (0.007)
Pop within 30km - 1926 (ln)			0.025*** (0.009)			-0.005 (0.008)
KM to 1937 railway (ln)			-0.003 (0.019)			-0.012 (0.024)
N	565453	565453	565324	307670	307670	307541
R-sq	0.04	0.04	0.04	0.03	0.04	0.04
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

Controlling for ethnic groups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (%)	1.233*** (0.314)	0.871*** (0.317)	1.989*** (0.339)	0.685** (0.287)	1.537*** (0.348)	0.851*** (0.295)	0.728** (0.288)	1.440*** (0.355)	-0.069 (0.213)	1.063*** (0.401)
Germans (%)	-6.744 (5.403)					-6.704 (5.321)				
Latvians (%)		6.183* (3.241)					-0.089 (2.668)			
Lithuanians (%)			-16.716*** (3.646)					-11.509*** (3.602)		
Poles (%)				12.035*** (3.172)					22.476*** (3.278)	
Ethnic diversity					-0.139** (0.063)					-0.094 (0.122)
Prisoners 1952 (ln)	0.011 (0.028)	0.025 (0.024)	0.032 (0.021)	0.027 (0.030)	0.018 (0.025)	-0.087** (0.035)	-0.088** (0.037)	-0.035 (0.034)	-0.108*** (0.032)	-0.057 (0.054)
Pop within 30km - 1926 (ln)	0.019** (0.009)	0.013 (0.009)	0.017** (0.008)	0.019** (0.009)	0.015 (0.010)	-0.012 (0.008)	-0.012 (0.008)	-0.003 (0.008)	-0.015** (0.008)	-0.011 (0.008)
KM to 1937 railway (ln)	-0.000 (0.019)	0.000 (0.019)	0.008 (0.019)	-0.000 (0.020)	0.003 (0.019)	-0.008 (0.023)	-0.010 (0.024)	-0.003 (0.024)	-0.004 (0.023)	-0.011 (0.024)
Latitude	0.046** (0.019)	0.045*** (0.017)	0.068*** (0.016)	0.054*** (0.017)	0.042** (0.017)	0.055*** (0.019)	0.061*** (0.018)	0.070*** (0.017)	0.074*** (0.014)	0.053*** (0.017)
Longitude	-0.001 (0.008)	-0.008 (0.006)	-0.008 (0.006)	-0.009 (0.006)	-0.013** (0.006)	0.009 (0.008)	0.002 (0.007)	-0.001 (0.007)	0.002 (0.006)	-0.003 (0.009)
N	566454	566454	566454	566454	566454	308671	308671	308671	308671	308671
R-sq	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Moscow in	yes	yes	yes	yes	yes	no	no	no	no	no
Region FE	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

THE EFFECT OF *enemies* ON LOCAL WAGES

Including sector fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (%)	1.158*** (0.305)	0.797*** (0.242)	1.096*** (0.288)	1.249*** (0.300)	0.760*** (0.249)	0.673*** (0.234)
Prisoners 1952 (ln)	0.038 (0.040)	0.024 (0.040)	0.006 (0.033)	-0.048 (0.039)	-0.081*** (0.031)	-0.086*** (0.030)
Latitude		0.052*** (0.015)	0.054*** (0.017)		0.063*** (0.015)	0.066*** (0.015)
Longitude		-0.007 (0.005)	-0.010* (0.006)		-0.002 (0.005)	0.001 (0.006)
Pop within 30km - 1926 (ln)			0.021** (0.009)			-0.011 (0.007)
KM to 1937 railway (ln)			0.003 (0.019)			-0.017 (0.020)
N	566583	566583	566454	308800	308800	308671
R-sq	0.10	0.10	0.10	0.09	0.09	0.09
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	yes	yes	yes	yes	yes	yes
Weights	emp	emp	emp	emp	emp	emp

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

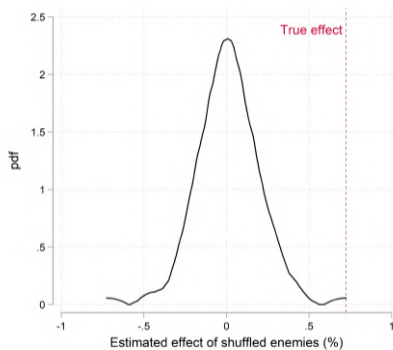
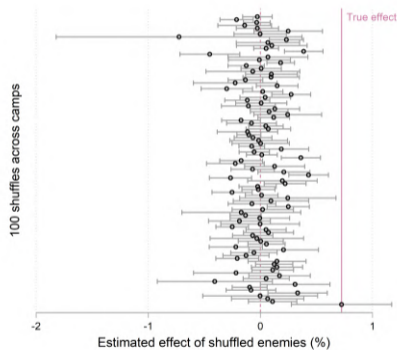
Without employee weights

	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Enemies 1952 (%)	0.450** (0.205)	0.498*** (0.163)	0.792*** (0.191)	0.603*** (0.203)	0.494*** (0.167)	0.411** (0.186)
Prisoners 1952 (ln)	0.023 (0.033)	0.019 (0.035)	0.013 (0.019)	-0.069*** (0.015)	-0.083*** (0.012)	-0.081*** (0.015)
Latitude		0.018 (0.015)	0.025 (0.019)		0.034*** (0.013)	0.040*** (0.014)
Longitude		-0.010*** (0.004)	-0.011*** (0.004)		-0.006* (0.003)	-0.003 (0.004)
Pop within 30km - 1926 (ln)			0.023*** (0.005)			-0.010 (0.007)
KM to 1937 railway (ln)			-0.020* (0.011)			-0.025* (0.014)
N	566583	566583	566454	308800	308800	308671
R-sq	0.06	0.06	0.06	0.03	0.03	0.03
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	yes	yes	yes	yes	yes	yes
Weights	no	no	no	no	no	no

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES

100 random shuffles of enemies across 1952 camps



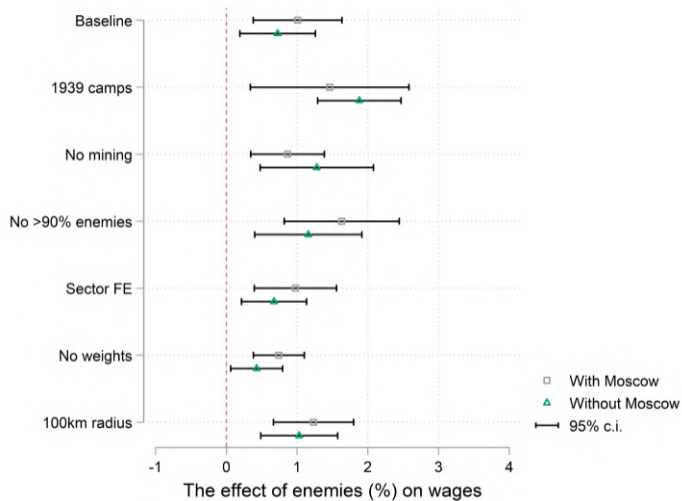
WHAT IF IT'S NOT *enemies* THAT ARE GOOD, BUT *criminals* THAT ARE BAD FOR GROWTH?

The effect of *Gulag* locations on local wages

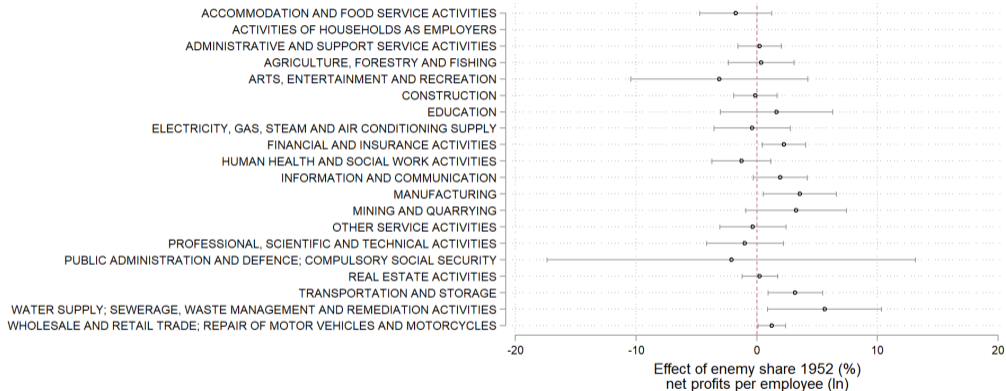
	(1)	(2)	(3)	(4)	(5)	(6)
	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)	Average wage (ln)
Gulag 1952	0.233*** (0.048)	0.165*** (0.047)	0.114** (0.046)	0.199*** (0.058)	0.083* (0.049)	0.074 (0.054)
Latitude		0.064*** (0.013)	0.078*** (0.018)		0.065*** (0.013)	0.077*** (0.019)
Longitude		0.003 (0.006)	0.006 (0.007)		0.003 (0.006)	0.007 (0.006)
Pop within 30km - 1926 (ln)			0.016** (0.007)			0.001 (0.007)
KM to 1937 railway (ln)			-0.011 (0.023)			-0.033 (0.029)
N	618720	618720	618589	354530	354530	354399
R-sq	0.04	0.05	0.05	0.03	0.03	0.04
Moscow in	yes	yes	yes	no	no	no
Region FE	yes	yes	yes	yes	yes	yes
Sector FE	no	no	no	no	no	no
Weights	emp	emp	emp	emp	emp	emp

Notes: Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE EFFECT OF *enemies* ON LOCAL WAGES



THE EFFECT OF *enemies* ON NET PROFITS PER EMPLOYEE



Enemies REALLY DID STICK AROUND

The relatives of *enemies* are not more likely to be migrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Migrant	Migrant	Migrant	Migrant	Migrant after 1990	Migrant after 1990	Migrant after 1990	Migrant after 1990
Enemy grandparents	0.024 (0.020)	0.007 (0.021)			0.031 (0.021)	0.009 (0.022)		
Enemy relatives			0.015 (0.018)	0.018 (0.020)			-0.005 (0.018)	-0.018 (0.020)
Female	0.060*** (0.007)	0.064*** (0.008)	0.060*** (0.007)	0.064*** (0.008)	0.038*** (0.007)	0.039*** (0.008)	0.037*** (0.007)	0.039*** (0.008)
Age	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	-0.006*** (0.000)	-0.006*** (0.000)	-0.006*** (0.000)	-0.006*** (0.000)
Income		0.002 (0.005)		0.002 (0.005)		0.007 (0.005)		0.007 (0.005)
N	19341	15933	19341	15933	19341	15933	19341	15933
R-sq	0.42	0.43	0.42	0.43	0.26	0.28	0.26	0.28

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

THE SOVIETS DID *not* INVEST MORE WHERE *enemies* LIVED

Investments 1953-1989

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Railway	Railway	Science city	Science city	Defense factory	Defense factory	University	University
Enemies 1952 (%)	-0.040 (0.118)	-0.299 (0.250)	-0.324** (0.130)	-0.291 (0.204)	-0.207 (0.234)	-0.341 (0.275)	-0.122 (0.212)	-0.346 (0.227)
Total prisoners 1952	-0.013 (0.050)	-0.069 (0.047)	0.062* (0.037)	0.070 (0.049)	-0.005 (0.052)	0.021 (0.056)	0.003 (0.052)	-0.026 (0.058)
Latitude	0.009 (0.006)	0.026 (0.020)	0.004 (0.008)	-0.029 (0.029)	0.007 (0.010)	0.027 (0.031)	-0.007 (0.007)	0.039 (0.029)
Longitude	0.003** (0.001)	-0.002 (0.009)	0.001 (0.002)	-0.005 (0.011)	0.005*** (0.002)	0.025* (0.014)	0.002 (0.002)	-0.005 (0.011)
Pop within 30km - 1926 (ln)	-0.008 (0.008)	-0.013 (0.017)	0.017 (0.011)	0.022 (0.017)	0.025** (0.010)	0.009 (0.017)	0.057*** (0.009)	0.039** (0.019)
KM to 1937 railway (ln)	-0.060* (0.032)	-0.084 (0.066)	-0.026 (0.029)	0.035 (0.065)	-0.027 (0.038)	-0.045 (0.076)	0.078** (0.035)	0.074 (0.060)
Constant	-0.233 (0.372)	-0.196 (1.214)	-0.637 (0.487)	1.408 (1.693)	-0.004 (0.715)	-2.378 (1.962)	0.146 (0.613)	-1.701 (1.645)
N	75	61	75	61	75	61	75	61
R-sq	0.11	0.42	0.16	0.37	0.21	0.50	0.37	0.55
Region FE	no	yes	no	yes	no	yes	no	yes
Moscow in	yes	yes	yes	yes	yes	yes	yes	yes

Notes: Weighted least squares. Standard errors clustered by treatment gulags in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The data is from Zhukov and Talibova (2018), Dexter and Rodionov (2017), Schweiger et al. (2018), Wikipedia