

# THE ECONOMIC LEGACY OF EXPULSION: LESSONS FROM POSTWAR CZECHOSLOVAKIA

## *Supplemental Material*

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### For Online Publication

#### Abstract

This supplement reports (i) summary statistics, (ii) robustness checks and other supplemental exercises, (iii) additional figures, and (iv) a detailed data appendix. See the Replication Files .zip file for (i) a full dataset, (ii) replication files for Stata, (iii) detailed instructions for replication, and (iv) a full description of data files.

**Table A.1: Summary Statistics**

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Pre-war data (1923-33)					
% German	325	35.666	41.132	.024	98.845
% Roma	325	.002	.012	0	.129
% Jewish (ethnic group)	325	.145	.316	0	2.825
% Jewish (religion)	325	.522	.645	0	6.981
% Literate	325	98.516	.709	94.94	99.65
Convictions per capita	318	7.274	2.057	2.484	16.318
% Taxpayers	147	5.698	1.786	2.33	11.65
Income per capita (100 Kčs)	145	9.469	4.105	3.669	30.775
ln Population density	325	4.724	.623	3.336	9.002
ln Labor force density	325	3.951	.698	2.413	8.476
Labor force participation	325	46.468	5.318	33.339	61.908
Unemployment	146	13.125	10.186	1.417	58.796
% Agricultural sector	325	28.077	13.991	.769	60.529
% Secondary sector	325	40.602	13.672	16.967	76.309
% Industry	325	33.557	14.183	10.753	72.145
% Mining and other extraction	325	3.59	5.199	.26	36.218
% Metallurgy and metalwork	325	4.411	3.499	1.429	24.611
% Manufacturing	325	2.283	2.21	.311	16.322
% Glasswork	325	1.133	3.687	0	33.643
% Textiles	325	7.13	10.822	.029	54.741
% Other industry	325	15.01	6.149	6.809	62.857
% Construction	325	7.045	2.364	2.806	17.536
% Transport sector	325	3.473	2.012	1.131	13.615
% Business sector	325	5.999	2.497	2.592	20.841
% Finance and insurance	325	.401	.279	0	3.084
% Trade	325	5.597	2.301	2.512	19.469
% Other service	325	6.694	3.779	3.071	29.368

**Table A.1: Summary Statistics (II)**

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Post-expulsion/resettlement data (mid-1947)					
ln Population density	325	4.396	.742	2.1	8.913
% Agricultural sector	325	29.417	15.433	1.096	68.175
% Secondary sector	325	47.046	14.501	14.138	81.535
% Transport sector	325	5.136	2.776	1.373	17.252
% Business sector	325	6.372	1.877	2.262	15.599
General enrollment per 100, 5-14	160	56.201	5.287	47.15	73.243
Civic enrollment per 100, 10-14	160	52.363	8.596	27.805	75.51
Agricultural enroll. per 100, 15-19	160	6.528	4.976	0	22.097
Vocational enroll. per 100, 15-19	160	15.212	10.74	0	57.857
College enrollment per 100, 15-24	160	2.14	1.506	.093	10.552
Contemporary data (2011)					
Unemployment	6206	11.511	5.686	0	52.222
ln Population density	6206	3.987	.946	-3.965	7.894
ln Labor force density	6206	3.251	.967	-5.064	7.214
% Agricultural sector	6206	7.111	6.195	0	100
% Industry	6206	25.769	8.119	0	58.974
% Construction	6206	7.135	3.148	0	30.769
% Transport sector	6206	5.301	2.75	0	27.273
% Finance and insurance	6206	1.381	1.262	0	10
% Hospitality	6206	2.435	2.341	0	41.213
% Auto trade and repair	6206	7.861	3.322	0	29.167
% Public	6206	4.54	2.664	0	64.029
% Communications	6206	1.33	1.399	0	14.085
% Education	6206	4.012	2.199	0	22.222
% Healthcare	6206	4.525	2.864	0	54.412
% Other service	6206	4.599	2.806	0	33.333
% Primary education or less	6206	21.797	5.698	0	68.908
% Secondary education	6206	65.919	5.317	25.21	86.111
% Tertiary education	6206	8.364	4.214	0	33.741
Panel data (1921-2011)					
% Agricultural sector	657	18.399	13.032	.426	56.506
% Industry	657	36.892	10.585	11.95	70.679
% Service sector	657	28.909	11.846	7.479	63.622
ln Population density	730	4.727	.647	3.4	7.431
ln Labor force density	657	3.979	.684	2.347	6.786
Education index	584	-.024	.929	-4.183	3.882
% Secondary education	438	46.962	18.93	6.498	66.538
% Tertiary education	438	7.079	4.441	1.407	28.584
Net migrants per capita	511	-.032	.537	-2.383	2.634
In migrants per capita	511	1.945	1.326	.568	9.378
Out migrants per capita	511	1.977	1.301	.682	10.16
Geographic data					
Elevation (m)	6206	410.505	144.345	121.833	1144.601
Ruggedness (°)	6206	6.422	3.001	1.053	20.725
Precipitation (mm)	6206	53.047	6.98	40.494	100.068
Temperature (°C)	6206	7.581	.82	3.262	9.534
Rivers/km <sup>2</sup> (km)	6206	1.183	.52	0	5.1
% Arable land, 1945	159	45.39	14.569	7.938	77.664

For variable descriptions, see the end of these supplementary materials. This table omits Prague and Polish Zaolzie since they are excluded from all analyses. Sample is otherwise not limited, including by bandwidth or by the extent of overlap with the Munich Agreement line, except: 1933 income per capita data are missing for a handful of political districts in the Prague area (Praha-venkov, Ricany, and Jilove). Unemployment data for 1933 political districts are missing for Praha-venkov, while labor force data are combined for Olomouc and Olomouc-venkov. 1923-7 convictions data merge several districts into larger criminal jurisdictions in the Brno, Zlin, and Prague urban areas. In 1945, political districts Lanskrout and Usti nad Orlici were merged, so I manually merge them for the 1945 arable land variable.

**Table A.2: Geographic Balance Tests**

	Borderlands	Interior	Mean difference	S.E.	Borderlands	Interior	Mean difference	S.E.
Elevation	407.243	401.409	(12.065)		434.071	398.881	(5.147)***	
Ruggedness	6.554	6.455	(.253)		7.373	6.093	(.106)***	
Precipitation	53.471	53.920	(.612)		54.610	53.104	(.259)***	
Temperature	7.517	7.590	(.076)		7.244	7.650	(.028)***	
Rivers/km <sup>2</sup>	1.045	1.115	(.046)		1.163	1.141	(.019)	
Observations	224	322	546		1102	2947	4049	
Bandwidth	2 km	2 km	2 km		25 km	25 km	25 km	
Arable land	46.974	50.279	(6.374)		39.600	50.547	(3.462)***	
Observations	11	14	25		30	38	68	
Bandwidth	10 km	10 km	10 km		25 km	25 km	25 km	
Year	1945	1945	1945		1945	1945	1945	

Mean difference standard errors reported in parentheses, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All t-tests exclude Prague and Polish Zaolzie.

**Table A.3: WWII Deaths by Group**

Group	Cause of wartime death	Casualties	Source	Notes
Sudeten Germans	Military deaths	~180,000; <206,000	Die Deutschen Vertreibungsverluste: Bevölkerungsbilanzen für die Deutschen Vertreibungsgebiete, 1939-50 (1958); Overmans (2004)	Includes Sudeten German servicemen who died during the liberation of Czechoslovakia in May of 1945, which also marked the start of the expulsions. Though impossible to know the exact number killed during the liberation, it was a violent event that left hundreds of thousands dead. Overmans estimates 206,000 Germans dead from all territories annexed by Germany in WWII.
	Civilian casualties	?		Uncertain how many Sudeten Germans died in the bombings that hit Czechoslovakia during the war. However, few bombs struck the country, and most were in the interior (see Figure A.3). An estimated 30,000 Sudeten German civilian deaths, including about 7000 murders at Czech hands, occurred during the expulsion itself (Gerlach, 2017).
Jews	Executed by Nazis or died from forced labor	270,000	Erlikhman (2004)	Previously lived smoothly through MAL.
Roma	Executed by Nazis or died from forced labor	8000	Erlikhman (2004)	Previously lived smoothly through MAL.
Other Czechs	Military deaths	35,000	Erlikhman (2004)	
	Civilian casualties	10,000	Erlikhman (2004)	
	Executed by Nazis or died from forced labor	32,000	Erlikhman (2004)	

Overmans (2004) refers to *Deutsche Militärische Verluste im Zweiten Weltkrieg*, Munich: Oldenbourg. Erlikhman (2004) refers to *Poteri Narodonaseleniia v XX Veke: Spravochnik*, Moscow: Russkaia Panorama.

**Table A.4: RD Robustness, Balance Tests**

	% German	Literacy	ln Pop. density	Unemploy.	Income <sub>pc</sub>	% Taxpayer	Agricultural sector
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)	(1g)
Local conditional mean comparison, 10km bandwidth							
In borderlands	74.186 (5.605) <sup>***</sup>	.084 (.173)	-.162 (.153)	.676 (2.148)	-1.249 (2.630)	.422 (.832)	-1.149 (2.731)
$R^2$	.924	.288	.355	.769	.361	.513	.404
Observations	70	70	70	20	21	21	70
Clusters	53	53	53	–	–	–	53
Border segments	4	4	4	4	4	4	4
Local linear in longitude and latitude							
In borderlands	73.575 (3.853) <sup>***</sup>	.264 (.152) <sup>*</sup>	-.108 (.116)	1.781 (2.449)	-.392 (1.490)	.391 (.484)	-1.264 (2.577)
$R^2$	.933	.515	.482	.645	.387	.541	.535
Observations	165	165	165	104	104	105	165
Clusters	98	98	98	–	–	–	98
Border segments	24	24	24	16	16	16	16
Bandwidth	25 km	25 km	25 km	50 km	50 km	50 km	25 km
Cubic in distance from Munich Agreement line, no bandwidth							
In borderlands	68.325 (7.478) <sup>***</sup>	-.309 (.269)	-.433 (.330)	-3.091 (6.404)	-6.904 (4.694)	-1.109 (1.508)	.266 (6.385)
$R^2$	.951	.495	.389	.692	.447	.591	.485
Observations	272	272	272	110	109	111	272
Clusters	138	138	138	–	–	–	138
Border segments	24	24	24	16	16	16	24
Year	1930	1930	1930	1933	1933	1933	1930
	Mining and extraction	Metals	Manu- facturing	Glass	Textiles	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)	(2g)
Local conditional mean comparison, 10km bandwidth							
In borderlands	-.789 (1.181)	.920 (1.355)	-.438 (.309)	1.248 (1.333)	-1.591 (2.581)	-.046 (.496)	.360 (.571)
$R^2$	.224	.32	.329	.284	.464	.287	.189
Observations	70	70	70	70	70	70	70
Clusters	53	53	53	53	53	53	53
Border segments	4	4	4	4	4	4	4
Local linear in longitude and latitude							
In borderlands	-.982 (.970)	-.414 (.911)	-.697 (.324) <sup>**</sup>	.230 (.479)	.758 (1.552)	-.114 (.420)	.483 (.464)
$R^2$	.395	.339	.311	.467	.64	.321	.341
Observations	165	165	165	165	165	165	165
Clusters	98	98	98	98	98	98	98
Border segments	24	24	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km	25 km
Cubic in distance from Munich Agreement line, no bandwidth							
In borderlands	-1.751 (2.505)	2.432 (2.450)	.801 (.999)	.898 (2.365)	-6.562 (4.682)	.040 (.891)	-1.262 (1.225)
$R^2$	.251	.251	.263	.287	.554	.289	.339
Observations	272	272	272	272	272	272	272
Clusters	138	138	138	138	138	138	138
Border segments	24	24	24	24	24	24	24
Year	1930	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and control for elevation, ruggedness, precipitation, temperature, and river density.

**Table A.5: Pre-expulsion RD Pre-trends, 1921-30**

	Literacy	ln Population density	ln Labor force density	Agricultural sector
	(1a)	(1b)	(1c)	(1d)
$\Delta_{:30-:21}$ In borderlands	.576 (.163) <sup>***</sup>	.019 (.021)	.00005 (.037)	-1.640 (1.591)
$R^2$	.95	.519	.495	.895
	Industry	Construction	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)
$\Delta_{:30-:21}$ In borderlands	.597 (1.418)	-.049 (.307)	-.226 (.215)	-.283 (.257)
$R^2$	.435	.876	.683	.862
Observations	330	330	330	330
Clusters	98	98	98	98
Border segments×1930	24	24	24	24
Geographic controls	Yes	Yes	Yes	Yes
District and year fixed effects	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km
Year	1921-30	1921-30	1921-30	1921-30

Robust standard errors are clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density interacted with year, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment and year. Since there were some splits and mergers of judicial districts between 1921 and 1930, I perform areal interpolation in ArcGIS to reshape a few 1921 districts into 1930 ones (see Table A.17 for details on procedure).

**Table A.6: Balance Tests (Extended Sample)**

	% German	Literacy	ln Pop. density	Unemploy.	Income <sub>pc</sub>	% Taxpayer	Agricultural sector
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)	(1g)
In borderlands	66.681 (5.102) <sup>***</sup>	-.097 (.186)	-.301 (.189)	-2.048 (2.377)	-.053 (1.477)	.612 (.532)	4.666 (3.390)
$R^2$	.934	.541	.456	.68	.343	.507	.495
Observations	191	191	191	119	120	121	191
Clusters	104	104	104	–	–	–	104
Border segments	24	24	24	16	16	16	24
Bandwidth	25 km	25 km	25 km	50 km	50 km	50 km	25 km
Year	1930	1930	1930	1933	1933	1933	1930
	Mining and extraction	Metals	Manu- facturing	Glass	Textiles	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)	(2g)
In borderlands	-.927 (1.180)	.679 (1.233)	-.414 (.583)	.922 (1.692)	-4.471 (2.355) <sup>*</sup>	-.775 (.615)	-.512 (.808)
$R^2$	.377	.319	.291	.35	.636	.294	.332
Observations	191	191	191	191	191	191	191
Clusters	104	104	104	104	104	104	104
Border segments	24	24	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km	25 km
Year	1930	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by political district, with <sup>\*\*\*</sup> and <sup>\*</sup> denoting significance at the 1% and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line (MAL) interacted with the treatment. Relative to the main sample, this also includes districts lying mostly but not entirely in the borderlands that nonetheless had >80% Germans in 1930 (i.e. treated in spite of overlap) as well as those lying mostly but not entirely in the interior that nonetheless had <20% Germans.

**Table A.7: Extent of Ethnic Diversity by Region, 1930**

	Ethnic fractionalization			
	(1a)	(1b)	(1c)	(1d)
In borderlands	.240 (.023) <sup>***</sup>	.265 (.040) <sup>***</sup>	.199 (.026) <sup>***</sup>	.204 (.031) <sup>***</sup>
$R^2$	.605	.629	.403	.564
Observations	70	165	123	218
Clusters	53	98	68	107
Border segments	4	24	4	24
Include overlapping districts?	No	No	Yes	Yes
Including distance polynomial?	No	Yes	No	Yes
Geographic controls	Yes	Yes	Yes	Yes
Bandwidth	10 km	25 km	10 km	25 km
Year	1930	1930	1930	1930

Robust standard errors are clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density. (1b) and (1d) utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment. (1c) and (1d) include districts that overlap the Munich Agreement line, on the basis that they are relevant as they are likely to be ethnically mixed. The ethnic fractionalization measure used here only takes into account the share of the population that was German ( $g$ ) or Czechoslovak ( $c$ ) on the 1930 census. Other ethnic groups in the Czech lands were of trivial size statistically. Hence, this measure is given by  $1 - g^2 - c^2$ .

**Table A.8: What Kinds of Places Tended to be Mixed?**

	Literacy	ln Pop. density	Unemployment	Income <sub>pc</sub>	Agricultural sector	Mining and extraction
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)
Ethnic fractionalization	-.175 (.299)	.739 (.324) <sup>**</sup>	1.491 (4.174)	6.415 (2.779) <sup>**</sup>	-15.918 (4.976) <sup>***</sup>	1.099 (2.456)
$R^2$	.462	.464	.596	.368	.481	.326
Observations	218	218	97	98	218	218
Clusters	107	107	–	–	107	107
Border segments	24	24	16	16	24	24
Year	1930	1930	1933	1933	1930	1930
	Metals	Manu- facturing	Glass	Textiles	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)
Ethnic fractionalization	-.421 (1.272)	-.313 (.617)	2.252 (1.886)	.452 (2.971)	.519 (.726)	3.055 (1.107) <sup>***</sup>
$R^2$	.302	.252	.354	.611	.295	.312
Observations	218	218	218	218	218	218
Clusters	107	107	107	107	107	107
Border segments	24	24	24	24	24	24
Year	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km

Robust standard errors are clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and control for elevation, ruggedness, precipitation, temperature, and river density. Regressions include all districts with centroids within 25 km of the Munich Agreement line, on the basis that those are the places most likely to be mixed in the Czech lands. The ethnic fractionalization measure used here only takes into account the share of the population that was German ( $g$ ) or Czechoslovak ( $c$ ) on the 1930 census. Other ethnic groups in the Czech lands were of trivial size. Hence, this measure is given by  $1 - g^2 - c^2$ .

**Table A.9: Balance Tests (Concrete Sample)**

	% German	Literacy	ln Pop. density	Unemploy.	Income <sub>pc</sub>	% Taxpayer	Agricultural sector
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)	(1g)
In borderlands	86.052 (1.398) <sup>***</sup>	-.253 (.314)	-.179 (.183)	-5.253 (5.421)	2.778 (1.846)	1.624 (.762) <sup>**</sup>	2.939 (3.359)
$R^2$	.996	.376	.474	.683	.557	.648	.498
Observations	105	105	105	60	60	60	105
Clusters	65	65	65	–	–	–	65
Border segments	4	4	4	4	4	4	4
Bandwidth	25 km	25 km	25 km	50 km	50 km	50 km	25 km
Year	1930	1930	1930	1933	1933	1933	1930
	Mining and extraction	Metals	Manu- facturing	Glass	Textiles	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)	(2g)
In borderlands	-1.278 (.778)	.026 (1.326)	-.270 (.515)	.472 (1.785)	-6.266 (4.077)	-.461 (.588)	-.079 (1.178)
$R^2$	.071	.173	.142	.188	.477	.173	.323
Observations	105	105	105	105	105	105	105
Clusters	65	65	65	65	65	65	65
Border segments	4	4	4	4	4	4	4
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km	25 km
Year	1930	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line (MAL) interacted with the treatment. Due to the loss of various stretches of the MAL, I aggregate border segments into four, associated with North and South Bohemia and Moravia. The concrete sample was generated as follows:

1. First, I drop from the sample all districts that lie entirely in the borderlands or the interior which are not “homogeneous.” I call these “mixed” districts. For the borderlands, I define “homogeneous” as being >80% German; for the interior, <20% German (or >80% Czechoslovak). However, stopping here would be problematic. Recall that the goal of this exercise is to check that places with many Germans (i.e. exposed to expulsion) and places with few were indeed otherwise *ex ante* similar around the MAL, while at the same time minimizing the likelihood that borderland Czechs and pre-treatment sorting around the MAL may have been biasing local district-level differences toward zero. Yet given what we know from history and Tables A.7-8 – that the borderlands was more mixed than the interior, and that borderland Czechs selected into urban areas – dropping only these mixed districts will bias the remaining borderlands sample toward being poorer and more rural on average relative to that of the interior.
2. Hence, we must also drop the other areas around the MAL in the neighborhood of these mixed districts – namely, the interior districts which correspond to them on the other side of the MAL that are not mixed yet are likely to be fundamentally similar, given the estimates in Tables 2 and 3. To do this, I first discretize the MAL in ArcGIS into just over 100,000 unique points.
3. I then perform a proximity analysis, wherein if a point on the MAL is nearer to the centroid of a homogeneous judicial district in the borderlands than that of a mixed district, I consider it to be part of a “concrete stretch” of the MAL (note: since judicial districts are less likely to be mixed in the interior and those which were “language islands” were not close to the MAL, I need not perform this for both regions). I then generate two files: one of concrete stretches of points and another of non-concrete.
4. But being on a concrete stretch need not mean the district which is closest will necessarily be concrete, even if that district is homogeneous; the district which is closest to that point may itself be closer to a different point. To determine whether a given *district* is concrete or not, I perform another proximity analysis among districts (note: for political districts, I use the same set of concrete and non-concrete points as generated by the less aggregated judicial district data). If a district is closer to a concrete point of the MAL, then I say that that district lies on a concrete stretch.
5. Finally, I drop all remaining districts that do not lie on a concrete stretch of the MAL. See Figures A.11-12 for the final concrete sample alongside a map showing the spatial distribution of Germans at the village level in the Czech lands prior to 1938. **We are now comparing only homogeneous parts of the borderlands with nearby homogeneous parts of the interior.**

One can see that excluding non-concrete stretches of the MAL, around which borderland Czechs (and pre-treatment sorting associated with them) were likely to have been relatively common, increases the size of the discontinuity in ethnic composition while changing other estimates only subtly from those in Tables 2 and 3 (although there is now a statistically significant increase of about 1.6 eligible taxpayers per 100 persons from crossing the MAL into the borderlands).

**Table A.10: Balance Tests (No Geography Controls)**

	% German	Literacy	ln Pop. density	Unemploy.	Income <sub>pc</sub>	% Taxpayer	Agricultural sector
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)	(1g)
In borderlands	70.763 (5.918) <sup>***</sup>	-.240 (.221)	-.421 (.202) <sup>**</sup>	-4.757 (3.121)	-1.785 (1.973)	-.184 (.741)	3.765 (3.697)
<i>R</i> <sup>2</sup>	.922	.414	.395	.489	.254	.359	.487
Observations	165	165	165	104	104	105	165
Clusters	98	98	98	–	–	–	98
Border segments	24	24	24	16	16	16	24
Bandwidth	25 km	25 km	25 km	50 km	50 km	50 km	25 km
Year	1930	1930	1930	1933	1933	1933	1930
	Mining and extraction	Metals	Manu- facturing	Glass	Textiles	Transport sector	Business sector
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)	(2g)
In borderlands	-1.255 (1.604)	.283 (1.417)	-.654 (.541)	.839 (1.880)	-1.910 (2.997)	-.795 (.669)	-.843 (.911)
<i>R</i> <sup>2</sup>	.335	.287	.245	.322	.552	.262	.332
Observations	165	165	165	165	165	165	165
Clusters	98	98	98	98	98	98	98
Border segments	24	24	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km	25 km
Year	1930	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered by political district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and utilize a local linear running variable of distance from the Munich Agreement line (MAL) interacted with the treatment.

**Table A.11: RD Robustness, Long-run Effects**

	Unemployment	ln Population density	Agricultural sector	Finance and insurance	Auto repair and trade
	(1a)	(1b)	(1c)	(1d)	(1e)
Local conditional mean comparison, 5km bandwidth					
In borderlands	3.042 (.462) <sup>***</sup>	-.224 (.086) <sup>***</sup>	-.565 (.364)	-.271 (.082) <sup>***</sup>	-.649 (.270) <sup>**</sup>
$R^2$	.481	.457	.385	.174	.22
Observations	1201	1201	1201	1201	1201
Clusters	46	46	46	46	46
Local linear in longitude and latitude, 25km bandwidth					
In borderlands	3.623 (.520) <sup>***</sup>	-.251 (.084) <sup>***</sup>	-.752 (.457)	-.386 (.073) <sup>***</sup>	-.933 (.252) <sup>***</sup>
$R^2$	.398	.4	.304	.134	.201
Observations	4049	4049	4049	4049	4049
Clusters	71	71	71	71	71
Cubic in distance from Munich Agreement line, no bandwidth					
In borderlands	1.827 (.589) <sup>***</sup>	-.264 (.110) <sup>**</sup>	-.788 (.432) <sup>*</sup>	-.250 (.097) <sup>**</sup>	-.320 (.296)
$R^2$	.41	.378	.312	.205	.225
Observations	6112	6112	6112	6112	6112
Clusters	76	76	76	76	76
	Communications	Education	Healthcare	% Primary education or less	% Tertiary education
	(2a)	(2b)	(2c)	(2d)	(2e)
Local conditional mean comparison, 5km bandwidth					
In borderlands	-.272 (.078) <sup>***</sup>	-.648 (.197) <sup>***</sup>	-.685 (.258) <sup>**</sup>	4.403 (.572) <sup>***</sup>	-1.743 (.343) <sup>***</sup>
$R^2$	.201	.156	.236	.387	.281
Observations	1201	1201	1201	1201	1201
Clusters	46	46	46	46	46
Local linear in longitude and latitude, 25km bandwidth					
In borderlands	-.381 (.082) <sup>***</sup>	-.791 (.145) <sup>***</sup>	-.780 (.233) <sup>***</sup>	4.965 (.543) <sup>***</sup>	-2.270 (.375) <sup>***</sup>
$R^2$	.202	.085	.139	.298	.269
Observations	4049	4049	4049	4049	4049
Clusters	71	71	71	71	71
Cubic in distance from Munich Agreement line, no bandwidth					
In borderlands	-.217 (.101) <sup>**</sup>	-.735 (.209) <sup>***</sup>	-.655 (.237) <sup>***</sup>	3.836 (.657) <sup>***</sup>	-1.334 (.412) <sup>***</sup>
$R^2$	.337	.07	.095	.276	.326
Observations	6112	6112	6112	6112	6112
Clusters	76	76	76	76	76
Border segments	50	50	50	50	50
Geographic controls	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes
Year	2011	2011	2011	2011	2011

Robust standard errors clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density.

**Table A.12: Long-run Effects (No Geography Controls)**

	Unemployment	ln Pop. density	ln Labor force density	% Primary edu. or less	% Secondary education	% Tertiary education
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)
In borderlands	2.801 (.526) <sup>***</sup>	-.434 (.091) <sup>***</sup>	-.440 (.092) <sup>***</sup>	4.998 (.652) <sup>***</sup>	-4.111 (.512) <sup>***</sup>	-1.884 (.423) <sup>***</sup>
$R^2$	.403	.325	.325	.291	.193	.263
	Agricultural sector	Auto repair and trade	Communi-cations	Finance and insurance	Education	Healthcare
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)
In borderlands	-.212 (.473)	-.982 (.287) <sup>***</sup>	-.305 (.088) <sup>***</sup>	-.402 (.082) <sup>***</sup>	-.860 (.187) <sup>***</sup>	-1.017 (.230) <sup>***</sup>
$R^2$	.281	.192	.201	.13	.081	.13
Observations	4049	4049	4049	4049	4049	4049
Clusters	71	71	71	71	71	71
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Border fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km				
Year	2011	2011	2011	2011	2011	2011

Robust standard errors are clustered by district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment.

**Table A.13: Geographic Balance Tests (No Mountainous Stretches)**

	Borderlands	Interior	Mean difference S.E.	Borderlands	Interior	Mean difference S.E.
Elevation	347.153	355.892	(9.160)	353.893	384.911	(5.772) <sup>***</sup>
Ruggedness	5.905	6.012	(.209)	6.541	6.211	(.132) <sup>**</sup>
Precipitation	50.654	50.598	(.385)	51.006	51.150	(.257)
Temperature	7.865	7.849	(.058)	7.673	7.727	(.034)
Rivers/km <sup>2</sup>	.927	.977	(.039)	1.042	1.056	(.024)
Observations	284	424	708	728	1778	2506
Bandwidth	5 km	5 km	5 km	25 km	25 km	25 km
Arable land	55.782	51.672	(7.843)	42.572	49.172	(4.948)
Observations	8	7	15	19	22	41
Bandwidth	10 km	10 km	10 km	25 km	25 km	25 km
Year	1945	1945	1945	1945	1945	1945

Mean difference standard errors reported in parentheses, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All t-tests exclude Prague and Polish Zaolzie. Mountainous areas excluded include stretches of the Munich Agreement line that visibly closely follow the Sudete and Sumava ranges, as well as low-lying parts of the Ore range (see Figure A.10).

**Table A.14: Long-run Effects (No Mountainous Stretches)**

	Unemployment	ln Pop. density	ln Labor force density	% Primary edu. or less	% Secondary education	% Tertiary education
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)
In borderlands	2.973 (.732) <sup>***</sup>	-.338 (.127) <sup>***</sup>	-.352 (.129) <sup>***</sup>	4.608 (.890) <sup>***</sup>	-3.632 (.694) <sup>***</sup>	-1.772 (.526) <sup>***</sup>
$R^2$	.446	.396	.4	.353	.223	.331
	Agricultural sector	Auto repair and trade	Communi-cations	Finance and insurance	Education	Healthcare
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)
In borderlands	-.921 (.585)	-.589 (.349) <sup>*</sup>	-.312 (.104) <sup>***</sup>	-.441 (.099) <sup>***</sup>	-.782 (.210) <sup>***</sup>	-1.017 (.319) <sup>***</sup>
$R^2$	.308	.217	.271	.144	.1	.145
Observations	2506	2506	2506	2506	2506	2506
Clusters	57	57	57	57	57	57
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Border fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km				
Year	2011	2011	2011	2011	2011	2011

Robust standard errors are clustered by district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment. A municipality is omitted if it lies closer to one of the mountainous stretches highlighted in Figure A.10 than to any other part of the Munich Agreement line. 50 border segment dummies are included, though 19 are dropped by removing mountainous stretches.

**Table A.15: Long-run Effects (Conley Standard Errors)**

	Unemployment			ln Pop. density		
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
In borderlands	2.729 (.268) <sup>***</sup>	2.729 (.300) <sup>***</sup>	2.729 (.127) <sup>***</sup>	-.312 (.063) <sup>***</sup>	-.312 (.066) <sup>***</sup>	-.312 (.052) <sup>***</sup>
$R^2$	.404	.404	.404	.398	.398	.398
	% Primary edu. or less			Finance and insurance		
	(3a)	(3b)	(3c)	(4a)	(4b)	(4c)
In borderlands	4.883 (.774) <sup>***</sup>	4.883 (.950) <sup>***</sup>	4.883 (.951) <sup>***</sup>	-.369 (.071) <sup>***</sup>	-.369 (.063) <sup>***</sup>	-.369 (.097) <sup>***</sup>
$R^2$	.297	.297	.297	.134	.134	.134
	Education			Healthcare		
	(5a)	(5b)	(5c)	(6a)	(6b)	(6c)
In borderlands	-.864 (.124) <sup>***</sup>	-.864 (.151) <sup>***</sup>	-.864 (.124) <sup>***</sup>	-.993 (.170) <sup>***</sup>	-.993 (.188) <sup>***</sup>	-.993 (.153) <sup>***</sup>
$R^2$	.085	.085	.085	.139	.139	.139
Observations	4049	4049	4049	4049	4049	4049
Cutoff radius	50 km	100 km	150 km	50 km	100 km	150 km
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Border fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km					
Year	2011	2011	2011	2011	2011	2011

Standard errors are Conley-adjusted for spatial autocorrelation using a uniform kernel in distance, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment.

**Table A.16: Relative Net Population Decline, 1930 to mid-1947**

	Labor force % change	Agricultural % change	Secondary sector % change	Transport sector % change	Business sector % change
	(1a)	(1b)	(1c)	(1d)	(1e)
In borderlands	-12.408 (3.175) <sup>***</sup>	-9.290 (3.313) <sup>***</sup>	-13.220 (5.314) <sup>**</sup>	-27.023 (7.180) <sup>***</sup>	-32.913 (4.455) <sup>***</sup>
$R^2$	.732	.549	.727	.572	.844
Observations	165	165	165	165	165
Clusters	98	98	98	98	98
Border segments	24	24	24	24	24
Geographic controls	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km
Year	1930-47	1930-47	1930-47	1930-47	1930-47

Robust standard errors are clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment.

**Table A.17: Relative Density Change, 1921-2011**

	ln Population density (1a)	ln Labor force density (1b)	ln Pop. density (2a)	ln Labor force density (2b)
	Assignment by no overlap	MAL, 50km	Assignment by majority overlap	
In borderlands×1921	-.004 (.034)	-.030 (.045)	-.011 (.015)	-.014 (.020)
In borderlands×1930	0	0	0	0
In borderlands×1947	-.443 (.054) <sup>***</sup>	-.367 (.065) <sup>***</sup>	-.310 (.036) <sup>***</sup>	-.281 (.036) <sup>***</sup>
In borderlands×1950	-.415 (.060) <sup>***</sup>	-.388 (.074) <sup>***</sup>	-.298 (.036) <sup>***</sup>	-.301 (.035) <sup>***</sup>
In borderlands×1961	-.391 (.076) <sup>***</sup>	–	-.299 (.054) <sup>***</sup>	–
In borderlands×1970	-.312 (.070) <sup>***</sup>	-.299 (.069) <sup>***</sup>	-.272 (.056) <sup>***</sup>	-.260 (.055) <sup>***</sup>
In borderlands×1980	-.252 (.070) <sup>***</sup>	-.262 (.073) <sup>***</sup>	-.238 (.058) <sup>***</sup>	-.243 (.059) <sup>***</sup>
In borderlands×1991	-.214 (.075) <sup>***</sup>	-.222 (.079) <sup>**</sup>	-.214 (.060) <sup>***</sup>	-.216 (.061) <sup>***</sup>
In borderlands×2001	-.214 (.073) <sup>***</sup>	-.231 (.076) <sup>***</sup>	-.203 (.059) <sup>***</sup>	-.208 (.061) <sup>***</sup>
In borderlands×2011	-.315 (.084) <sup>***</sup>	-.353 (.094) <sup>***</sup>	-.245 (.056) <sup>***</sup>	-.267 (.062) <sup>***</sup>
$R^2$	.607	.809	.423	.701
Observations	410	369	730	657
Clusters	41	41	73	73
District fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Robust standard errors are clustered by district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and include controls for longitude, latitude, and each interacted with census. To construct common district boundaries used for this panel analysis and others, I use the “intercept” tool in ArcGIS software to interpolate population and subpopulations. I use 1991 boundaries as the standard, since districts were arguably at their highest level of aggregation that year, minimizing error. The “intercept” tool creates subsets of districts based on where a given census year’s district boundaries overlapped with those from 1991. For example, if a 1921 judicial district lied completely within a 1991 district, that judicial district would only have one subset: itself. If it straddled the line of two 1991 districts, it would have two subsets. Adopting the assumption that a given census’ district’s subpopulations were uniformly distributed within its boundaries, I estimate the number of individuals in various subpopulations (e.g. number of farmers) within each district subset. I then add up these estimates within the boundaries of each 1991 district.

**Table A.18: Relative Sectoral Change, 1921-2011**

	Agricultural sector	Industry	Service sector	Agricultural sector	Industry	Service sector
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
	Assignment by no overlap MAL, 50km			Assignment by majority overlap		
In borderlands×'21	-2.550 (1.607)	.374 (1.386)	1.709 (.572)***	-.954 (.739)	.115 (.691)	.835 (.323)**
In borderlands×'30	0	0	0	0	0	0
In borderlands×'47	4.521 (2.038)**	–	-2.933 (1.227)**	3.277 (.847)***	–	-1.466 (.662)**
In borderlands×'50	5.916 (1.914)***	-3.518 (2.047)*	-2.831 (1.667)*	3.725 (.889)***	-2.676 (1.026)**	-1.272 (.844)
In borderlands×'61	–	-7.883 (2.437)***	–	–	-4.639 (1.238)***	–
In borderlands×'70	5.141 (1.355)***	-7.347 (2.068)***	-1.566 (1.295)	3.025 (.982)***	-4.297 (1.201)***	-.284 (.904)
In borderlands×'80	6.341 (1.258)***	-6.849 (2.422)***	-1.831 (1.415)	3.186 (1.125)***	-3.539 (1.339)***	-.862 (.862)
In borderlands×'91	6.470 (1.407)***	-7.484 (2.617)***	-1.556 (1.485)	3.148 (1.200)**	-3.975 (1.450)***	-.523 (.842)
In borderlands×'01	7.429 (2.202)***	-4.862 (4.644)	-5.100 (1.857)***	2.839 (1.600)*	-1.840 (1.998)	-2.282 (.952)**
In borderlands×'11	7.750 (2.495)***	-6.292 (4.657)	-8.830 (2.080)***	2.845 (1.748)	-2.621 (2.057)	-5.050 (1.070)***
Constant	36.156 (.998)***	32.361 (.903)***	14.310 (.486)***	35.754 (.829)***	32.413 (.715)***	14.686 (.340)***
1930	-12.308 (.779)***	2.593 (.721)***	4.329 (.277)***	-11.329 (.589)***	2.160 (.559)***	4.155 (.202)***
1947	-14.627 (1.118)***	–	12.003 (.521)***	-12.899 (.820)***	–	11.478 (.355)***
1950	-16.406 (1.131)***	13.175 (.923)***	14.054 (.759)***	-14.429 (.894)***	11.878 (.692)***	13.563 (.479)***
1961	–	13.317 (1.064)***	–	–	11.080 (.819)***	–
1970	-20.384 (1.303)***	13.535 (1.022)***	.756 (.761)	-17.627 (1.125)***	11.450 (.950)***	.281 (.627)
1980	-24.049 (1.326)***	13.259 (1.247)***	19.767 (.739)***	-21.167 (1.233)***	11.111 (1.092)***	18.937 (.555)***
1991	-24.829 (1.398)***	9.773 (1.355)***	23.021 (.840)***	-21.920 (1.278)***	7.650 (1.176)***	22.021 (.606)***
2001	-33.732 (1.721)***	1.616 (2.315)	33.655 (1.101)***	-31.000 (1.572)***	.108 (1.593)	32.314 (.716)***
2011	-36.176 (1.813)***	-4.684 (2.262)**	30.026 (1.287)***	-33.580 (1.653)***	-6.402 (1.549)***	28.674 (.806)***
$R^2$	.891	.738	.957	.872	.719	.958
Observations	369	369	369	657	657	657
Clusters	41	41	41	73	73	73
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors are clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and include controls for longitude, latitude, and each interacted with census. To construct common district boundaries used for this panel analysis and others, I perform areal interpolation as described in Table A.17.

**Table A.19: Short-run Supply of Education, mid-1947**

	General schools per 100 pupils	General teachers per 100 pupils	Civic schools per 100 pupils	Civic teachers per 100 pupils
	(1a)	(1b)	(2a)	(2b)
In borderlands	.056 (.221)	-.162 (.147)	.069 (.062)	-.234 (.235)
$R^2$	.46	.529	.296	.243
Observations	115	115	115	115
	Agricultural schools per 100 pupils	Agricultural teachers per 100 pupils	Vocational schools per 100 pupils	Vocational teachers per 100 pupils
	(3a)	(3b)	(4a)	(4b)
In borderlands	-1.228 (.359)***	-1.933 (1.854)	.257 (.173)	2.537 (1.343)*
$R^2$	.397	.287	.195	.241
Observations	104	99	97	97
Border segments	16	16	16	16
Geographic controls	Yes	Yes	Yes	Yes
Bandwidth	50 km	50 km	50 km	50 km
Year	1947	1947	1947	1947

Robust standard errors reported in brackets, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment. Note that some districts have no vocational or agricultural schools. Also note that some agricultural teacher data is missing for a few larger cities with few (e.g. 1) agricultural folk schools. If I assign a value of 1 for teachers in these cities, the coefficient remains negative and insignificant.

**Table A.20: Regional Differences in Education, 1921-2011**

	Education index	% Second. education	% Tert. education	Edu. index	% Second. education	% Tert. education
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
	Assignment by no overlap MAL, 50km			Assignment by majority overlap		
In borderlands×'21	-1.090 (.104)***	-	-	-.755 (.103)***	-	-
In borderlands×'30	0	-	-	0	-	-
In borderlands×'61	-1.759 (.255)***	-2.087 (.486)***	-1.312 (.508)**	-1.204 (.228)***	-1.611 (.294)***	-1.180 (.314)***
In borderlands×'70	-1.562 (.314)***	-2.735 (1.118)**	-.272 (.258)	-1.156 (.257)***	-2.618 (.676)***	-.374 (.176)**
In borderlands×'80	-1.968 (.280)***	-3.930 (.871)***	-.487 (.355)	-1.324 (.272)***	-2.884 (.611)***	-.529 (.231)**
In borderlands×'91	-2.527 (.253)***	-4.745 (.497)***	-.968 (.495)*	-1.686 (.277)***	-3.242 (.438)***	-.926 (.301)***
In borderlands×'01	-3.002 (.266)***	-3.859 (.522)***	-2.603 (.736)***	-1.891 (.283)***	-2.403 (.362)***	-1.876 (.415)***
In borderlands×'11	-3.093 (.286)***	-2.233 (.8205)**	-4.603 (1.263)***	-1.926 (.271)***	-1.318 (.461)***	-3.131 (.587)***
$R^2$	.627	.989	.802	.433	.988	.826
Observations	328	246	246	584	438	438
Clusters	41	41	41	73	73	73
District fixed effects	Yes	No	No	Yes	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors are clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and include controls for longitude, latitude, and each interacted with census. The education index uses prewar literacy and postwar post-primary education data transformed into standard deviations from census year district means. To construct common district boundaries used for this panel analysis and others, I perform areal interpolation as described in Table A.17.

**Table A.21: RD Robustness, Short-run Effects**

	In Population density	Agricultural sector	Secondary sector	Transport sector	Business sector
	(1a)	(1b)	(1c)	(1d)	(1e)
Local conditional mean comparison, 10km bandwidth					
$\Delta_{\cdot 47-\cdot 30}$ In borderlands	-.270 (.033) <sup>***</sup>	5.088 (1.222) <sup>***</sup>	-2.308 (1.366) <sup>*</sup>	-.276 (.306)	-1.889 (.340) <sup>***</sup>
$R^2$	.898	.421	.612	.58	.497
Observations	140	140	140	140	140
Clusters	53	53	53	53	53
Border segments $\times$ 1947	4	4	4	4	4
Local linear in longitude and latitude, 25km bandwidth					
$\Delta_{\cdot 47-\cdot 30}$ In borderlands	-.296 (.028) <sup>***</sup>	6.390 (1.129) <sup>***</sup>	-3.389 (1.064) <sup>***</sup>	-.003 (.294)	-1.959 (.244) <sup>***</sup>
$R^2$	.914	.584	.748	.685	.625
Observations	330	330	330	330	330
Clusters	98	98	98	98	98
Border segments $\times$ 1947	24	24	24	24	24
Cubic in distance from Munich Agreement line, no bandwidth					
$\Delta_{\cdot 47-\cdot 30}$ In borderlands	-.188 (.078) <sup>**</sup>	2.407 (2.648)	2.707 (2.559)	-.145 (.573)	-1.214 (.768)
$R^2$	.908	.518	.721	.651	.651
Observations	544	544	544	544	544
Clusters	138	138	138	138	138
Border segments $\times$ 1947	24	24	24	24	24
District fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
	Enrollment, general <sub>5-14</sub>	Enrollment, civic <sub>10-14</sub>	Enrollment, agricultural <sub>15-19</sub>	Enrollment, vocational <sub>15-19</sub>	Enrollment, college <sub>15-24</sub>
	(2a)	(2b)	(2c)	(2d)	(2e)
Local conditional mean comparison, 10km bandwidth					
In borderlands	7.805 (1.236) <sup>***</sup>	-11.840 (3.239) <sup>***</sup>	4.386 (1.672) <sup>**</sup>	-11.910 (5.706) <sup>*</sup>	-2.540 (.349) <sup>***</sup>
$R^2$	.779	.611	.63	.33	.746
Observations	25	25	25	25	25
Border segments	4	4	4	4	4
Local linear in longitude and latitude, 50km bandwidth					
In borderlands	6.959 (.728) <sup>***</sup>	-7.669 (2.395) <sup>***</sup>	5.562 (1.374) <sup>***</sup>	-6.293 (4.398)	-2.574 (.374) <sup>***</sup>
$R^2$	.86	.591	.517	.214	.724
Observations	115	115	115	115	115
Border segments	16	16	16	16	16
Cubic in distance from Munich Agreement line, no bandwidth					
In borderlands	4.899 (2.180) <sup>**</sup>	-7.067 (5.545)	7.725 (4.009) <sup>*</sup>	-26.282 (12.246) <sup>**</sup>	-3.405 (.901) <sup>***</sup>
$R^2$	.87	.597	.5	.28	.73
Observations	122	122	122	122	122
Border segments	16	16	16	16	16
Geographic controls	Yes	Yes	Yes	Yes	Yes
Year	1947	1947	1947	1947	1947

Robust standard errors clustered by political district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and control for elevation, ruggedness, precipitation, temperature, and river density.

**Table A.22: Short-run Effects (Extended Sample)**

	In Population density	Agricultural sector	Secondary sector	Transport sector	Business sector
	(1a)	(1b)	(1c)	(1d)	(1e)
$\Delta_{47-30}$ In borderlands	-.192 (.045) <sup>***</sup>	3.689 (1.816) <sup>**</sup>	-.650 (1.801)	-.382 (.345)	-1.138 (.440) <sup>**</sup>
$R^2$	.914	.563	.745	.697	.644
Observations	382	382	382	382	382
Clusters	104	104	104	104	104
Border segments $\times$ 1947	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km
	Enrollment, general <sub>5-14</sub>	Enrollment, civic <sub>10-14</sub>	Enrollment, agricultural <sub>15-19</sub>	Enrollment, vocational <sub>15-19</sub>	Enrollment, college <sub>15-24</sub>
	(2a)	(2b)	(2c)	(2d)	(2e)
In borderlands	5.492 (.874) <sup>***</sup>	-8.011 (2.422) <sup>***</sup>	5.372 (1.726) <sup>***</sup>	-10.818 (4.366) <sup>**</sup>	-2.558 (.366) <sup>***</sup>
$R^2$	.868	.562	.496	.214	.661
Observations	131	131	131	131	131
Border segments	16	16	16	16	16
Bandwidth	50 km	50 km	50 km	50 km	50 km
Geographic controls	Yes	Yes	Yes	Yes	Yes
Year	1947	1947	1947	1947	1947

Robust standard errors clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line (MAL) interacted with the treatment. Relative to the main sample, this also includes districts lying mostly but not entirely in the borderlands that nonetheless had >80% Germans in 1930 (i.e. treated in spite of overlap) as well as those lying mostly but not entirely in the interior that nonetheless had <20% Germans.

**Table A.23: Short-run Effects (No Geography Controls)**

	In Population density	Agricultural sector	Secondary sector	Transport sector	Business sector
	(1a)	(1b)	(1c)	(1d)	(1e)
$\Delta_{47-30}$ In borderlands	-.221 (.054) <sup>***</sup>	3.676 (1.834) <sup>**</sup>	-1.082 (1.738)	-.390 (.394)	-1.239 (.555) <sup>**</sup>
$R^2$	.892	.557	.744	.654	.619
Observations	330	330	330	330	330
Clusters	98	98	98	98	98
Border segments $\times$ 1947	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km
	Enrollment, general <sub>5-14</sub>	Enrollment, civic <sub>10-14</sub>	Enrollment, agricultural <sub>15-19</sub>	Enrollment, vocational <sub>15-19</sub>	Enrollment, college <sub>15-24</sub>
	(2a)	(2b)	(2c)	(2d)	(2e)
In borderlands	5.698 (1.036) <sup>***</sup>	-9.323 (2.717) <sup>***</sup>	6.822 (1.742) <sup>***</sup>	-13.045 (4.993) <sup>***</sup>	-3.038 (.402) <sup>***</sup>
$R^2$	.853	.548	.477	.159	.68
Observations	115	115	115	115	115
Border segments	16	16	16	16	16
Bandwidth	50 km	50 km	50 km	50 km	50 km
Geographic controls	Yes	Yes	Yes	Yes	Yes
Year	1947	1947	1947	1947	1947

Robust standard errors clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and utilize a local linear running variable of distance from the Munich Agreement line (MAL) interacted with the treatment.

**Table A.24: Pre-expulsion Agglomeration Economies**

	Income <sub>pc</sub>		Agricultural sector		Industry	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
In Pop density	5.036 (.586) <sup>***</sup>	5.247 (.630) <sup>***</sup>	-13.729 (2.311) <sup>***</sup>	-13.607 (2.293) <sup>***</sup>	8.004 (2.947) <sup>***</sup>	7.905 (3.004) <sup>***</sup>
In borderlands	–	1.973 (1.335)	–	-1.417 (2.368)	–	-.745 (3.022)
<i>R</i> <sup>2</sup>	.757	.767	.767	.781	.65	.653
Observations	104	104	165	165	165	165
Clusters	–	–	98	98	98	98
Border segments	16	16	24	24	24	24
Bandwidth	50 km	50 km	25 km	25 km	25 km	25 km
Year	1933	1933	1930	1930	1930	1930
	Construction		Transport sector		Business sector	
	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)
In Pop density	-.987 (.279) <sup>***</sup>	-.996 (.276) <sup>***</sup>	1.135 (.374) <sup>***</sup>	1.125 (.375) <sup>***</sup>	3.034 (.316) <sup>***</sup>	3.018 (.302) <sup>***</sup>
In borderlands	–	-.183 (.709)	–	-.099 (.629)	–	.317 (.564)
<i>R</i> <sup>2</sup>	.378	.383	.403	.404	.669	.692
Observations	165	165	165	165	165	165
Clusters	98	98	98	98	98	98
Border segments	24	24	24	24	24	24
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km
Year	1930	1930	1930	1930	1930	1930
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors are clustered by political district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and control for elevation, ruggedness, precipitation, temperature, and river density. Regressions (b) utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment.

**Table A.25: Net Migration**

	Net migration (1a)	In-migration (1b)	Outmigration (1c)	Net migrat. (2a)	In-migrat. (2b)	Outmigrat. (2c)
	Assignment by no overlap, 50km			Assignment by majority overlap		
In borderlands×1950	-.434 (.349)	3.067 (.471)***	3.501 (.512)***	-.470 (.221)**	1.760 (.348)***	2.230 (.312)***
In borderlands×1961	-.507 (.284)*	.928 (.288)***	1.435 (.226)***	-.492 (.161)***	.477 (.180)***	.969 (.138)***
In borderlands×1970	-.488 (.145)***	.667 (.305)**	1.155 (.264)***	-.329 (.097)***	.385 (.156)**	.713 (.137)***
In borderlands×1980	-.616 (.121)***	-.142 (.146)	.475 (.149)***	-.316 (.090)***	-.056 (.100)	.260 (.087)***
In borderlands×1991	.006 (.067)	.005 (.141)	-.001 (.131)	.023 (.041)	.003 (.072)	-.019 (.060)
In borderlands×2001	-.549 (.232)**	-.604 (.289)**	-.055 (.111)	-.269 (.096)***	-.280 (.122)**	-.011 (.062)
In borderlands×2011	-.907 (.263)***	-.958 (.336)***	-.051 (.109)	-.417 (.124)***	-.485 (.149)***	-.068 (.071)
$R^2$	.232	.846	.904	.182	.781	.859
Observations	287	287	287	511	511	511
Clusters	41	41	41	73	73	73
District fixed effects	No	No	No	No	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors are clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie and include controls for longitude, latitude, and each interacted with census. To construct common district boundaries used for this panel analysis and others, I perform areal interpolation as described in Table A.17.

**Table A.26: Heterogeneous Effects, Natural Geography**

	Unemployment (1a)	ln Population density (1b)	% Primary education or less (1c)
In borderlands	2.260 (.536)***	-.272 (.089)***	4.623 (.644)***
In borderlands×River density	-.956 (.630)	.230 (.077)***	-1.474 (.415)***
$R^2$	.405	.401	.3
	(2a)	(2b)	(2c)
In borderlands	2.728 (.546)***	-.315 (.094)***	4.893 (.639)***
In borderlands×Ruggedness	.004 (.081)	.034 (.019)*	-.129 (.100)
$R^2$	.404	.4	.298
Observations	4049	4049	4049
Clusters	71	71	71
Border segments	50	50	50
Geographic controls	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km
Year	2011	2011	2011

Robust standard errors are clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment. For these regressions, river density and ruggedness are mean-normalized.

**Table A.27: Post-transition Trends, 2001-11**

	Unemployment	ln Population density	Agricultural sector	Industry	Construction
	(1a)	(1b)	(1c)	(1d)	(1e)
$\Delta_{\cdot 11-\cdot 01}$ In borderlands	-.205 (.368)	.005 (.012)	-.307 (.665)	-.501 (.602)	-.904 (.276)***
$R^2$	.392	.318	.632	.522	.369
	Auto repair and trade	Transport+ communications	Public	Education+ healthcare	% Primary edu. or less
	(2a)	(2b)	(2c)	(2d)	(2e)
$\Delta_{\cdot 11-\cdot 01}$ In borderlands	-.021 (.242)	.147 (.292)	-.125 (.190)	-.266 (.219)	-.483 (.321)
$R^2$	.094	.133	.076	.162	.757
Observations	8088	8088	8088	8088	8088
Clusters	71	71	71	71	71
Border segments $\times$ 2011	50	50	50	50	50
Geographic controls	Yes	Yes	Yes	Yes	Yes
District fixed effects $\times$ 2011	Yes	Yes	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km
Year	2001-11	2001-11	2001-11	2001-11	2001-11

Robust standard errors are clustered by district, with \*\*\* denoting significance at the 1% level. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density interacted with year, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment and year. Since a few municipalities split or merged between 2001 and 2011, I manually aggregate these and their data into municipality clusters.

**Table A.28: Heterogeneous Effects, Eastern Bloc**

	Unemploy.	ln Pop. density	ln L.F. density	% Primary edu. or less	% Second. education	% Tertiary education
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)
In borderlands	2.224 (.576)***	-.296 (.110)***	-.287 (.116)**	3.860 (1.064)***	-3.268 (.763)***	-1.516 (.600)**
In borderlands $\times$ Eastern Bloc	.780 (.983)	.009 (.165)	-.013 (.168)	1.669 (1.234)	-.959 (.983)	-.669 (.740)
$R^2$	.406	.402	.403	.301	.201	.272
	Agricultural sector	Auto repair and trade	Communications	Finance and insurance	Education	Healthcare
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)
In borderlands	-.727 (.579)	-1.044 (.380)***	-.283 (.136)**	-.368 (.134)***	-.967 (.204)***	-1.286 (.280)***
In borderlands $\times$ Eastern Bloc	.123 (.824)	.429 (.521)	-.007 (.169)	.047 (.164)	.221 (.332)	.539 (.379)
$R^2$	.305	.204	.206	.137	.086	.143
Observations	4049	4049	4049	4049	4049	4049
Clusters	71	71	71	71	71	71
Border segments	50	50	50	50	50	50
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km
Year	2011	2011	2011	2011	2011	2011

Robust standard errors clustered by district, with \*\*\*, \*\*, and \* denoting significance at the 1%, 5%, and 10% levels, respectively. A municipality is dummied 1 if it lied closer to East Germany/Poland pre-1989 than West Germany/Austria. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment, both interacted with Eastern Bloc.

**Table A.29: Heterogeneous Effects, U.S. versus Soviet Liberation**

	Unemploy.	ln Pop. density	ln L.F. density	% Primary edu. or less	% Second. education	% Tertiary education
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)
In borderlands	2.839 (.616) <sup>***</sup>	-.304 (.109) <sup>***</sup>	-.308 (.111) <sup>***</sup>	4.593 (.655) <sup>***</sup>	-3.526 (.517) <sup>***</sup>	-1.909 (.451) <sup>***</sup>
In borderlands×U.S. Zone	-.338 (1.188)	-.071 (.167)	-.078 (.175)	1.751 (1.502)	-2.176 (1.137) <sup>*</sup>	-.477 (.941)
$R^2$	.405	.405	.406	.3	.204	.275
	Agricultural sector	Auto repair and trade	Communica- tions	Finance and insurance	Education	Healthcare
	(2a)	(2b)	(2c)	(2d)	(2e)	(2f)
In borderlands	-.619 (.511)	-.644 (.310) <sup>**</sup>	-.313 (.102) <sup>***</sup>	-.314 (.089) <sup>***</sup>	-.781 (.202) <sup>***</sup>	-.974 (.256) <sup>***</sup>
In borderlands×U.S. Zone	.683 (1.000)	-1.491 (.522) <sup>***</sup>	.024 (.203)	-.383 (.189) <sup>**</sup>	-.464 (.302)	-.273 (.505)
$R^2$	.309	.208	.205	.137	.085	.143
Observations	4049	4049	4049	4049	4049	4049
Clusters	71	71	71	71	71	71
Border segments	50	50	50	50	50	50
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km
Year	2011	2011	2011	2011	2011	2011

Robust standard errors clustered by district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. A municipality is dummied 1 if its municipality with extended powers lied in the Western parts of the Czech lands liberated by U.S. forces in 1945. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density, and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment, both interacted with the U.S. Zone dummy.

**Table A.30: Diversity of Ethnic Identity and Social Participation, 2001-14**

	% Slovak	% German	Ethnic frac.	Turnout, local elections	Turnout, regional elec.	Turnout, national elec.
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
In borderlands	.726 (.156) <sup>***</sup>	.328 (.122) <sup>***</sup>	.020 (.008) <sup>**</sup>	-2.116 (1.010) <sup>**</sup>	-5.410 (.863) <sup>***</sup>	-6.159 (.863) <sup>***</sup>
$R^2$	.387	.355	.748	.143	.25	.29
Observations	4044	4044	4044	4037	4049	4049
Clusters	71	71	71	71	71	71
Border segments	50	50	50	50	50	50
Geographic controls	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	25 km	25 km	25 km	25 km	25 km	25 km
Year	2001	2001	2001	2014	2012	2013

Robust standard errors are clustered by district, with <sup>\*\*\*</sup>, <sup>\*\*</sup>, and <sup>\*</sup> denoting significance at the 1%, 5%, and 10% levels, respectively. All regressions exclude Prague and Polish Zaolzie, include exogenous controls for elevation, ruggedness, precipitation, temperature, and river density (km per km<sup>2</sup>), and utilize a local linear running variable of distance from the Munich Agreement line interacted with the treatment. The ethnic fractionalization measure used here takes into account the share of the population that was German ( $g$ ), Czech ( $z$ ), Slovak ( $s$ ) or other ( $o$ ) on the 2001 census. Hence, this measure is given by  $1 - g^2 - z^2 - s^2 - o^2$ . Note that a handful of municipalities, such as very small ones, do not have councils and therefore do not report local turnout.

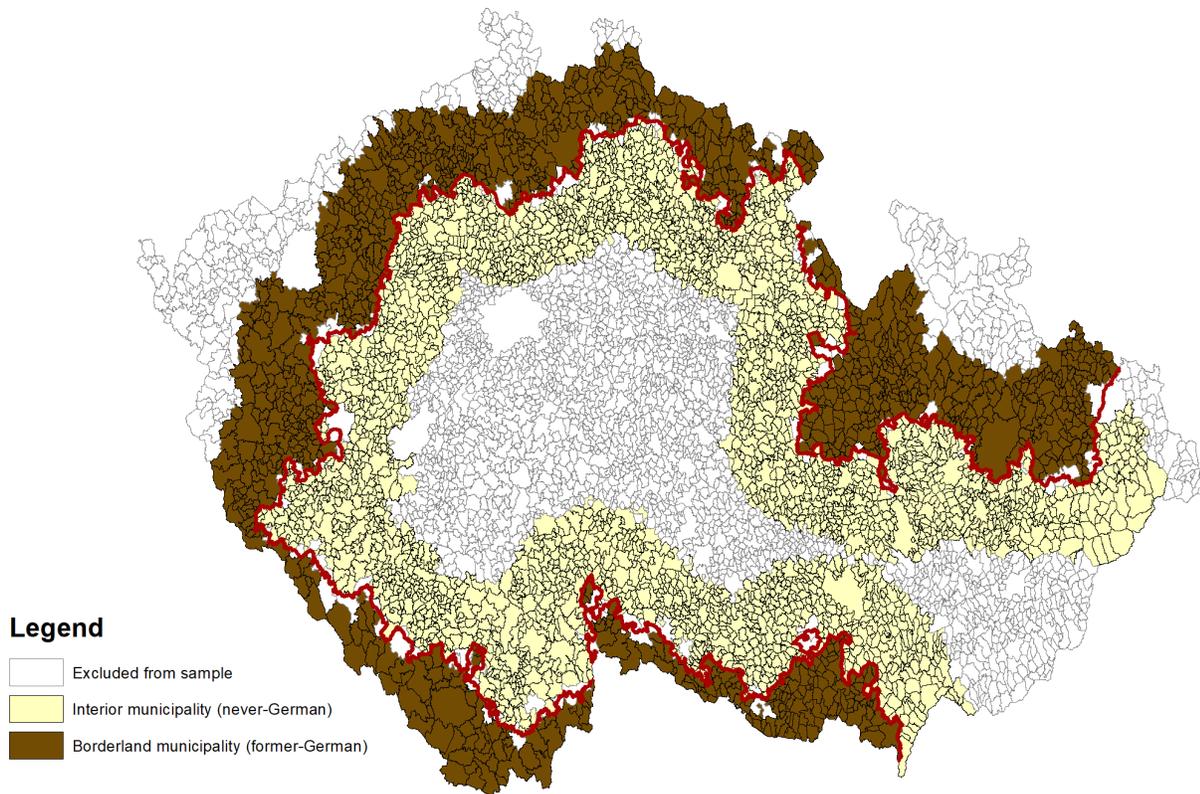
## Figures

Figure A.1: The Occupied Czech Lands, 1939



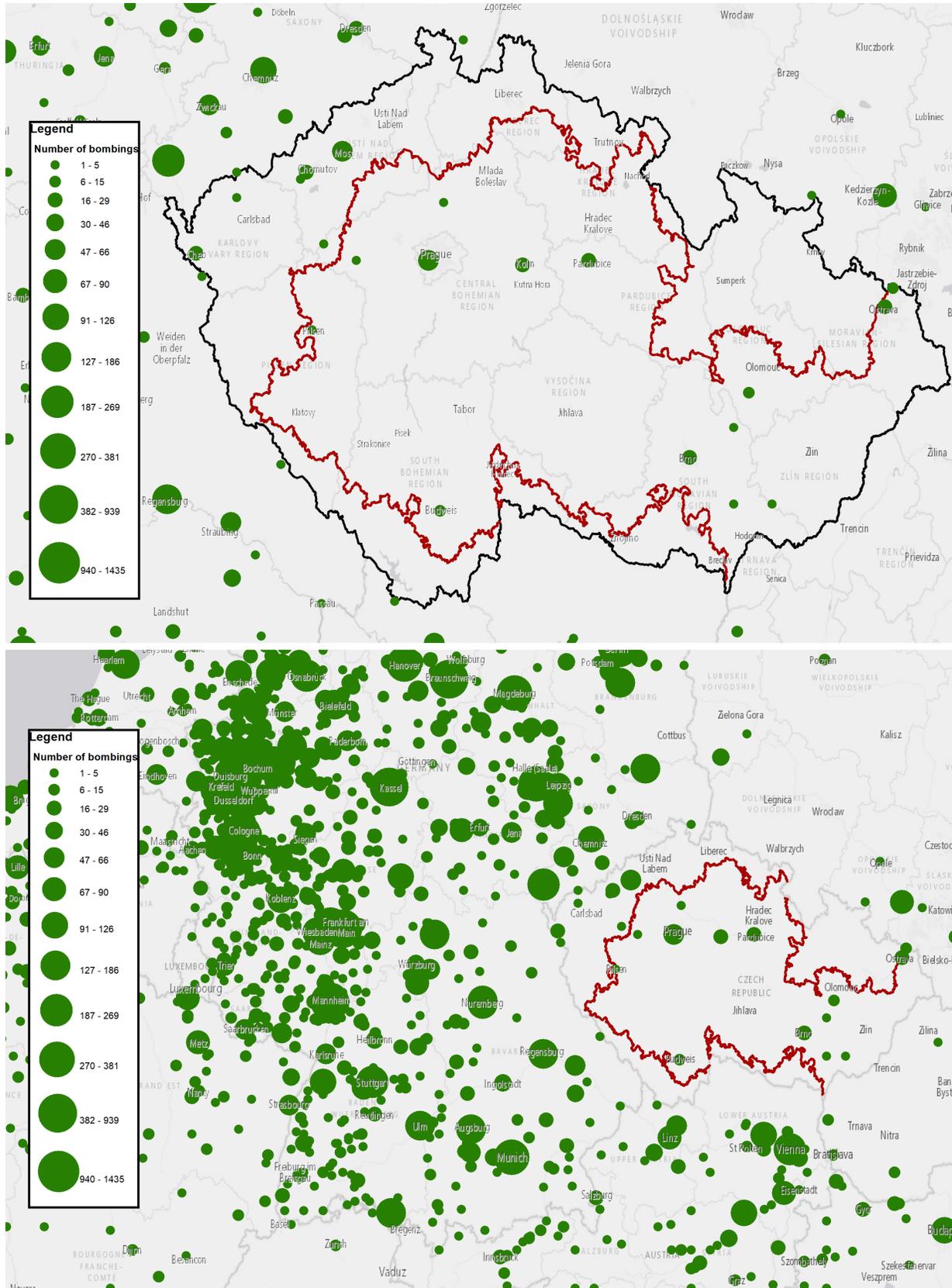
This map shows the occupied Czech lands within Central Europe (borderlands in light orange), 1939

Figure A.2: Municipalities in Main Sample



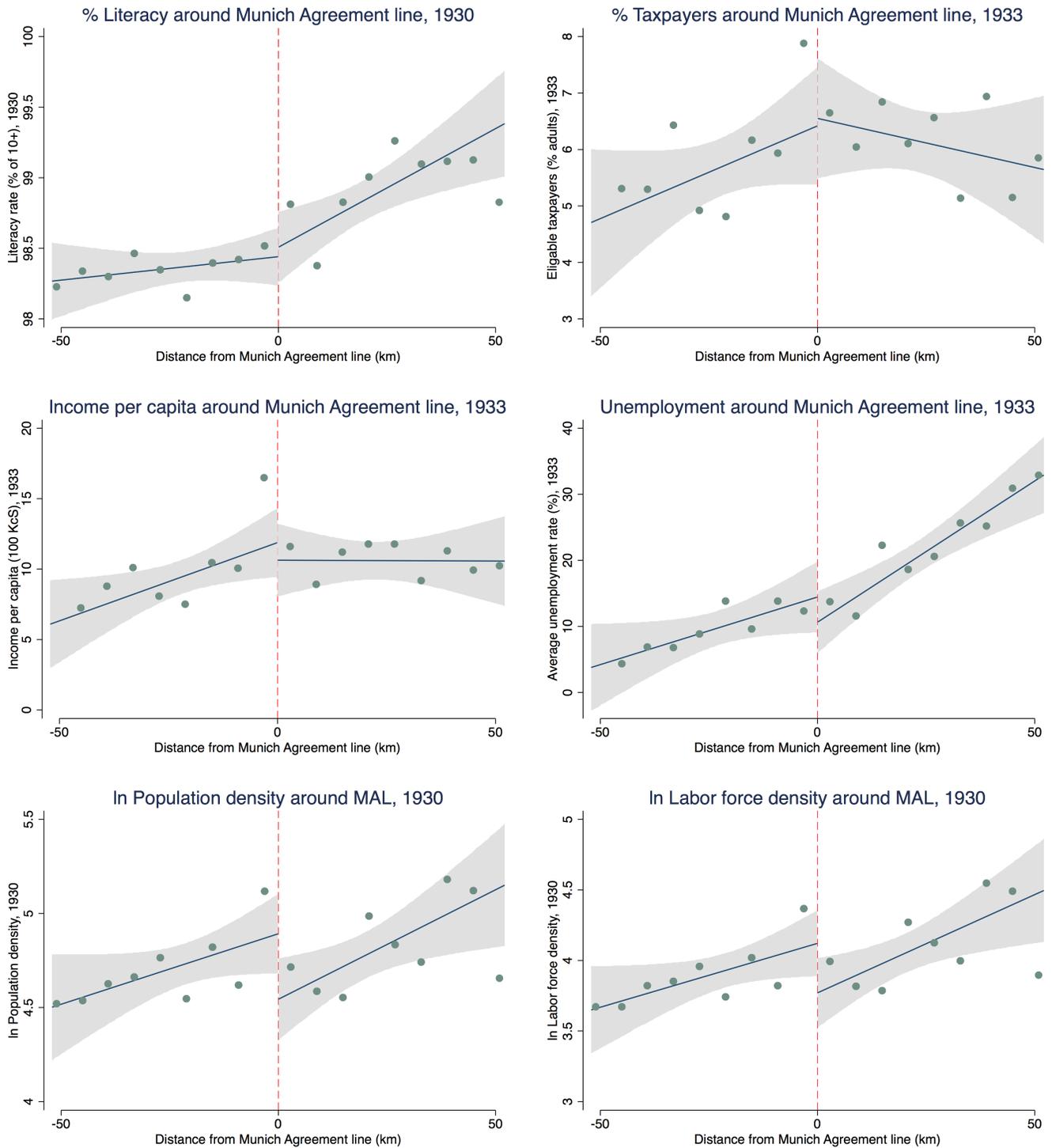
Note: 94 municipalities for which only some parts were annexed are dropped. Municipalities in Polish Zaolzie (i.e. the strip of white municipalities to the right of the Munich Agreement line on the far right of the map) are also excluded from all analyses.

Figure A.3: Allied Bombings During World War II



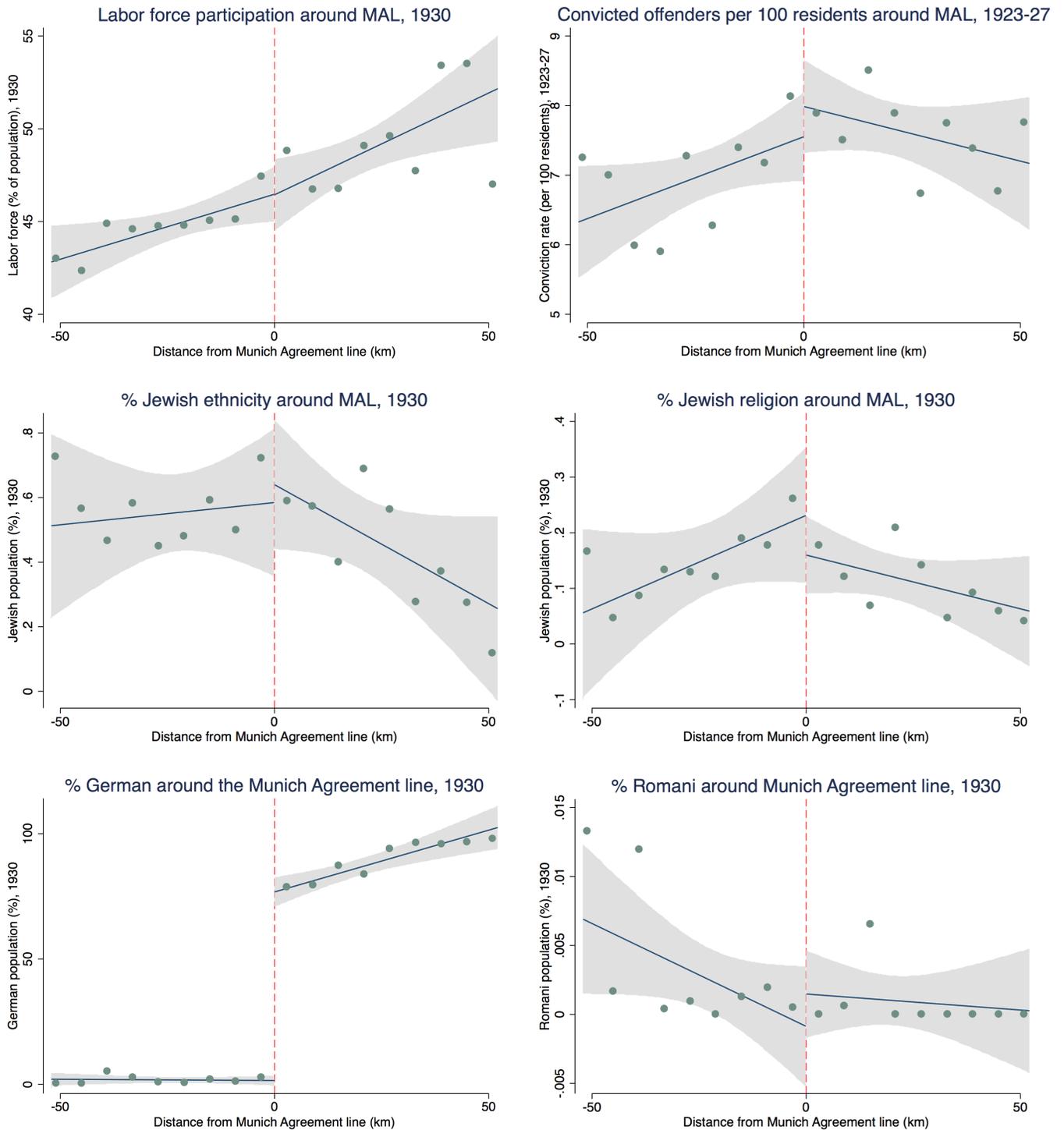
This map shows confirmed Allied bombing sites during World War II, first relative to the Munich Agreement line and then relative to relevant nearby territories (source: Theatre History of Operations Reports (THOR), 2019). Nearly all took place in late 1944 or 1945. Note: this drops observations for which coordinates were not specified.

Figure A.4: Balance Tests, RD Plots



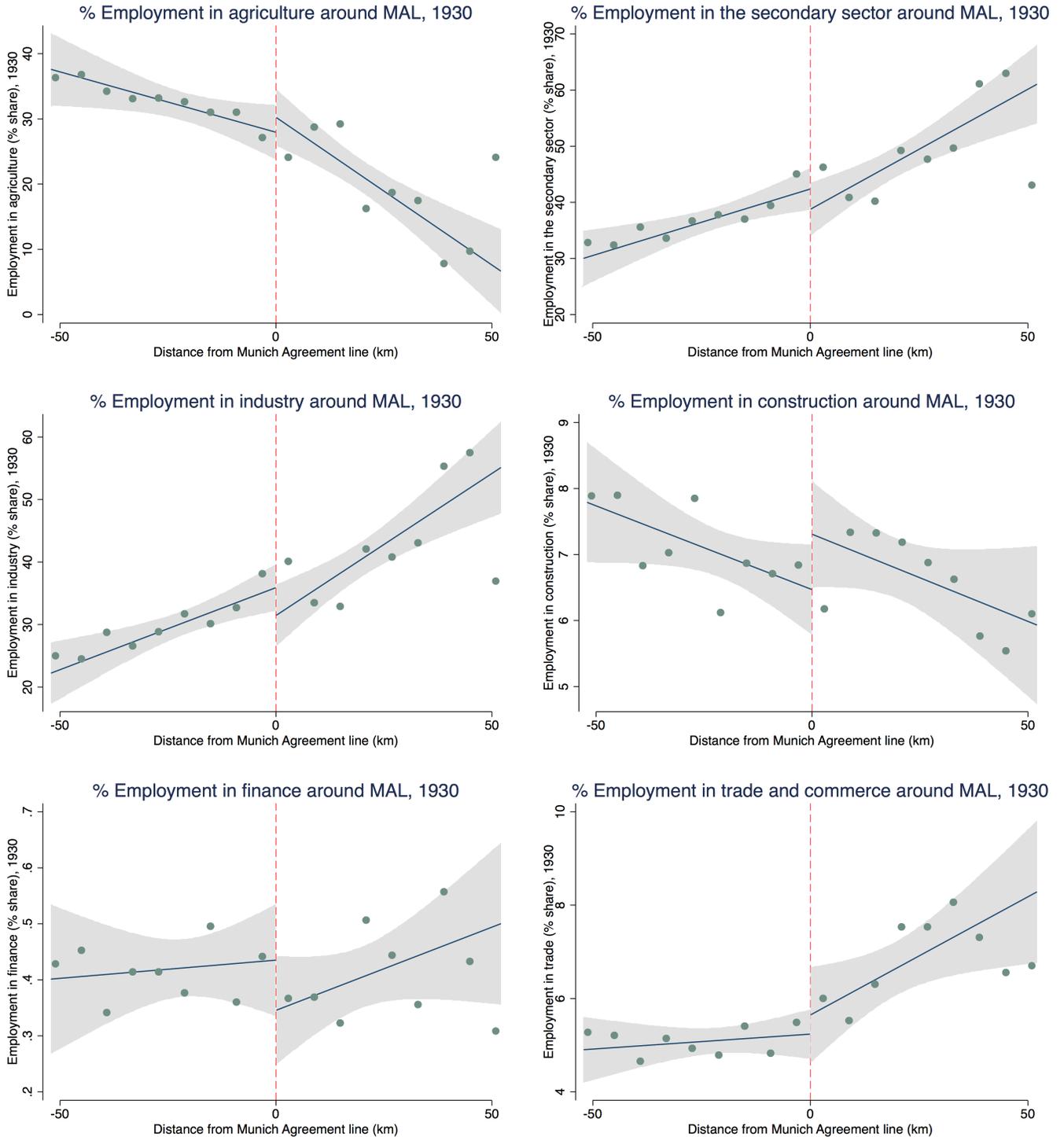
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.4: Balance Tests, RD Plots (II)



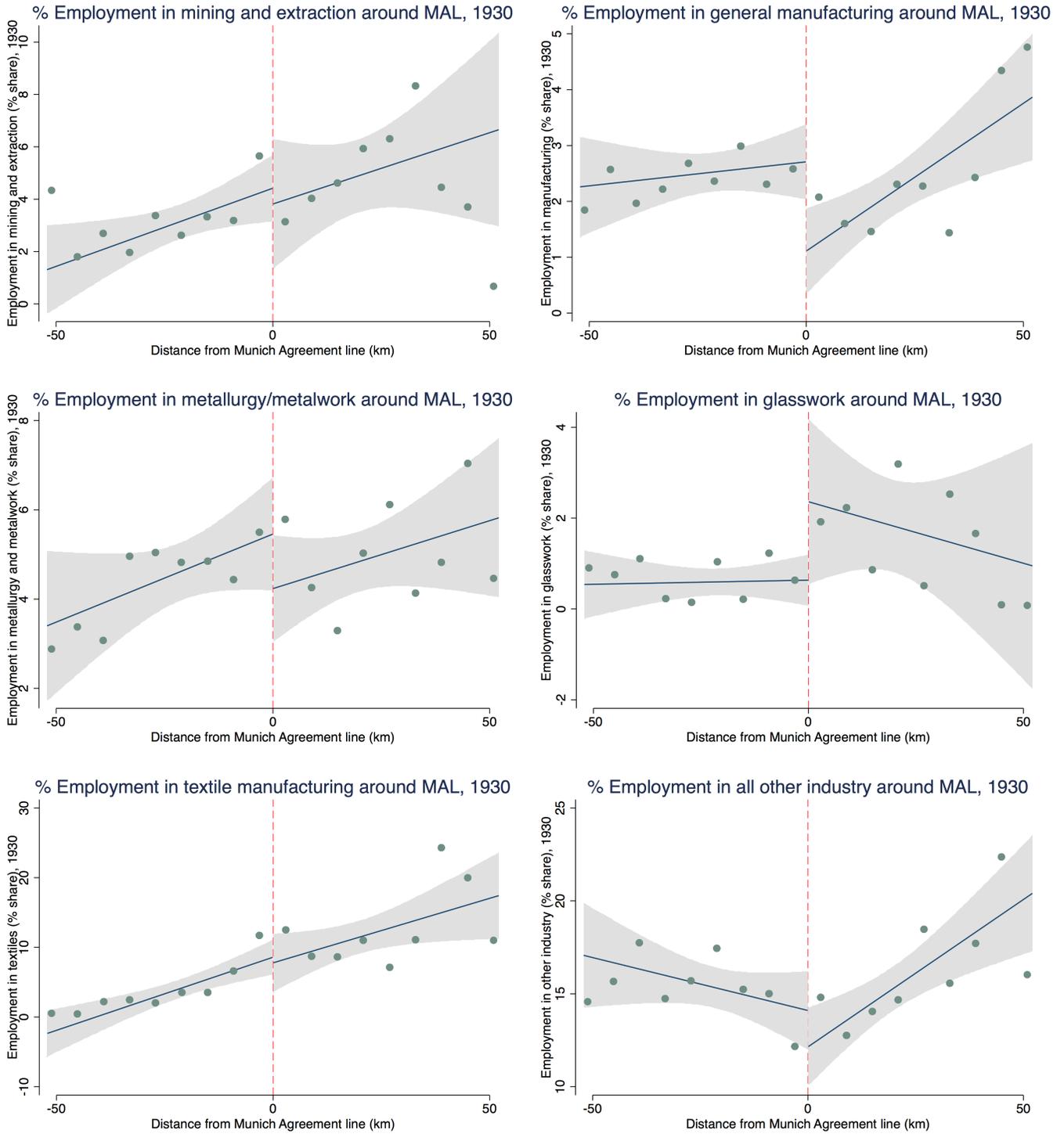
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.4: Balance Tests, RD Plots (III)



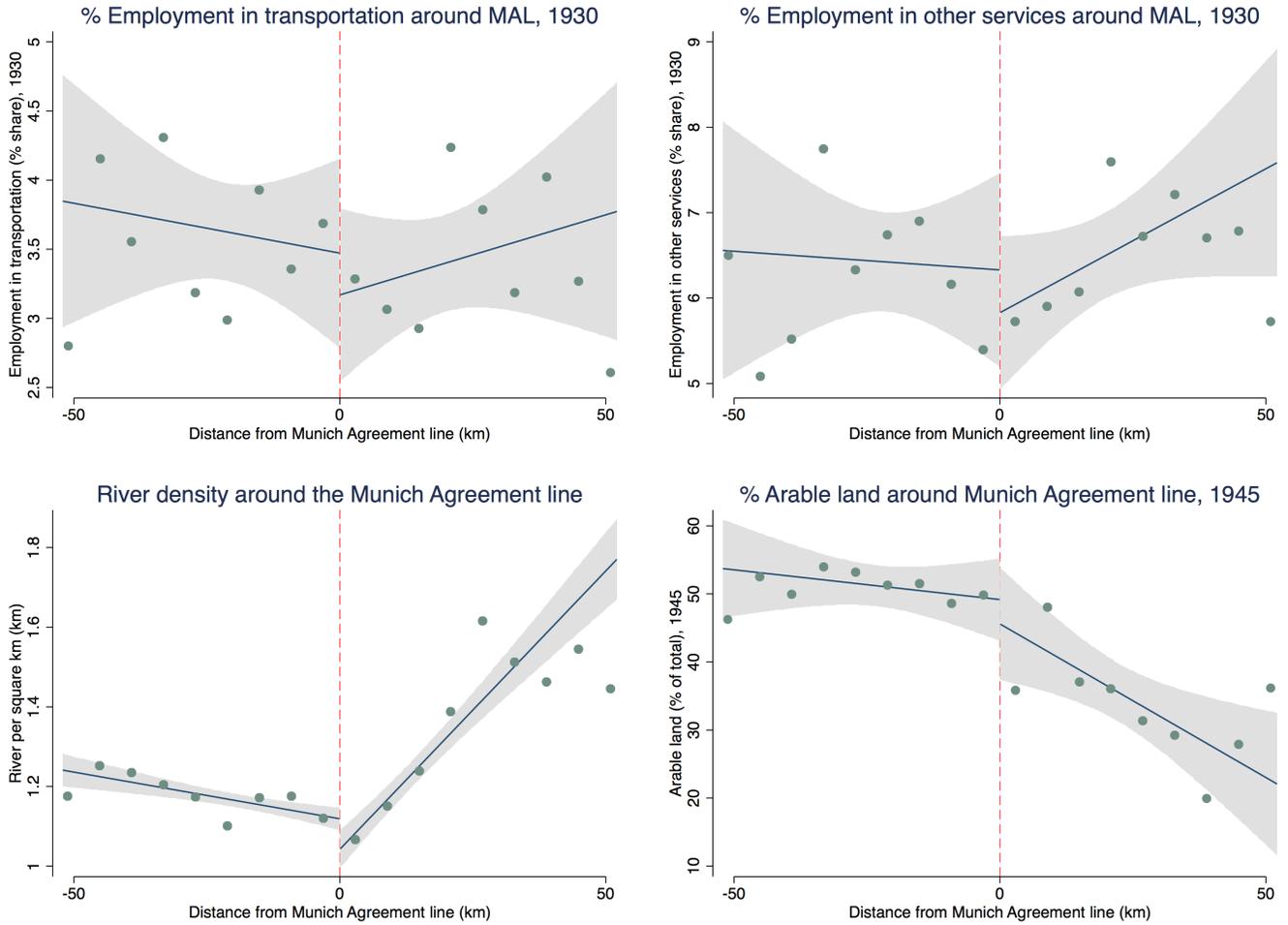
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.4: Balance Tests, RD Plots (IV)



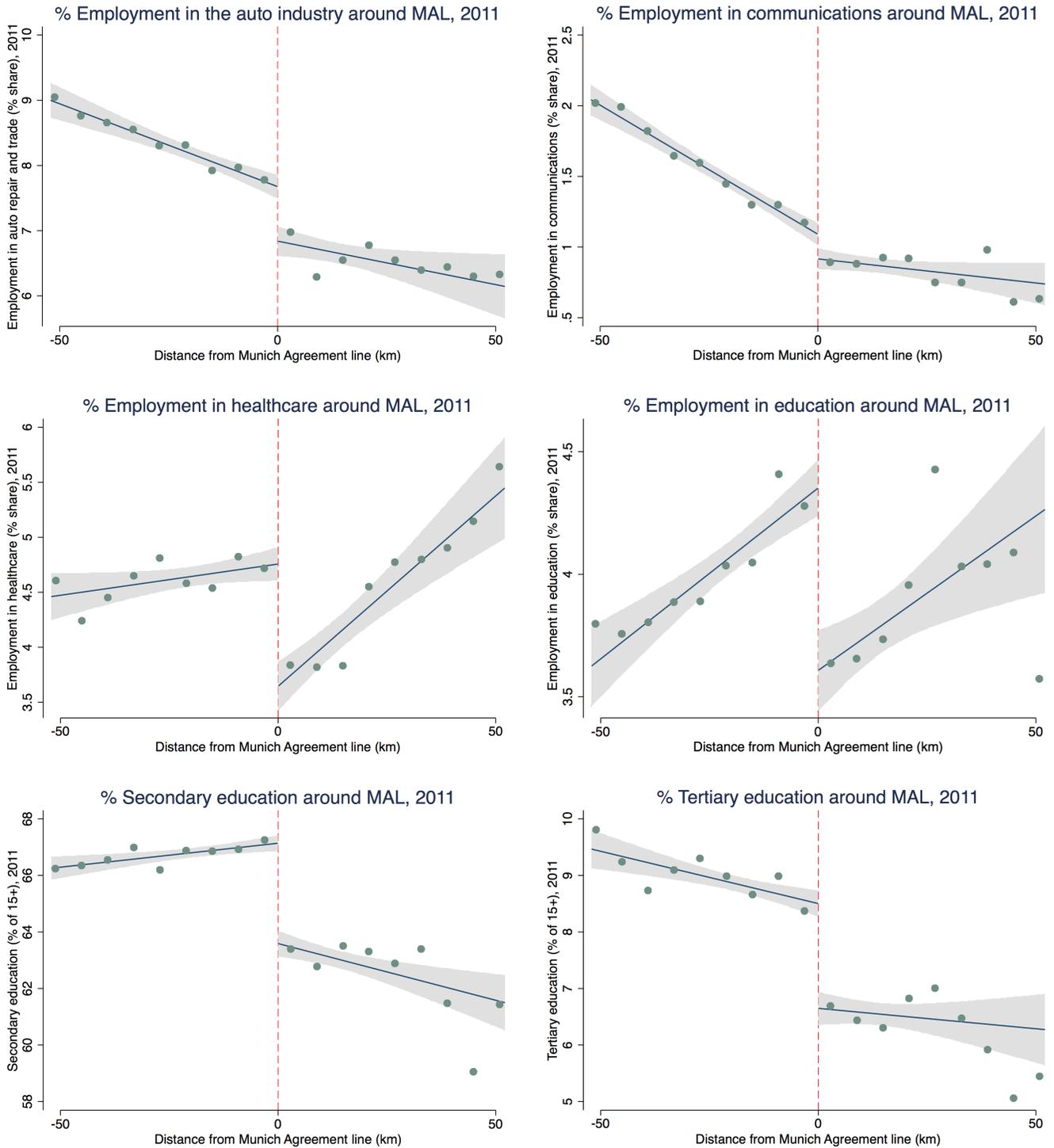
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.4: Balance Tests, RD Plots (V)



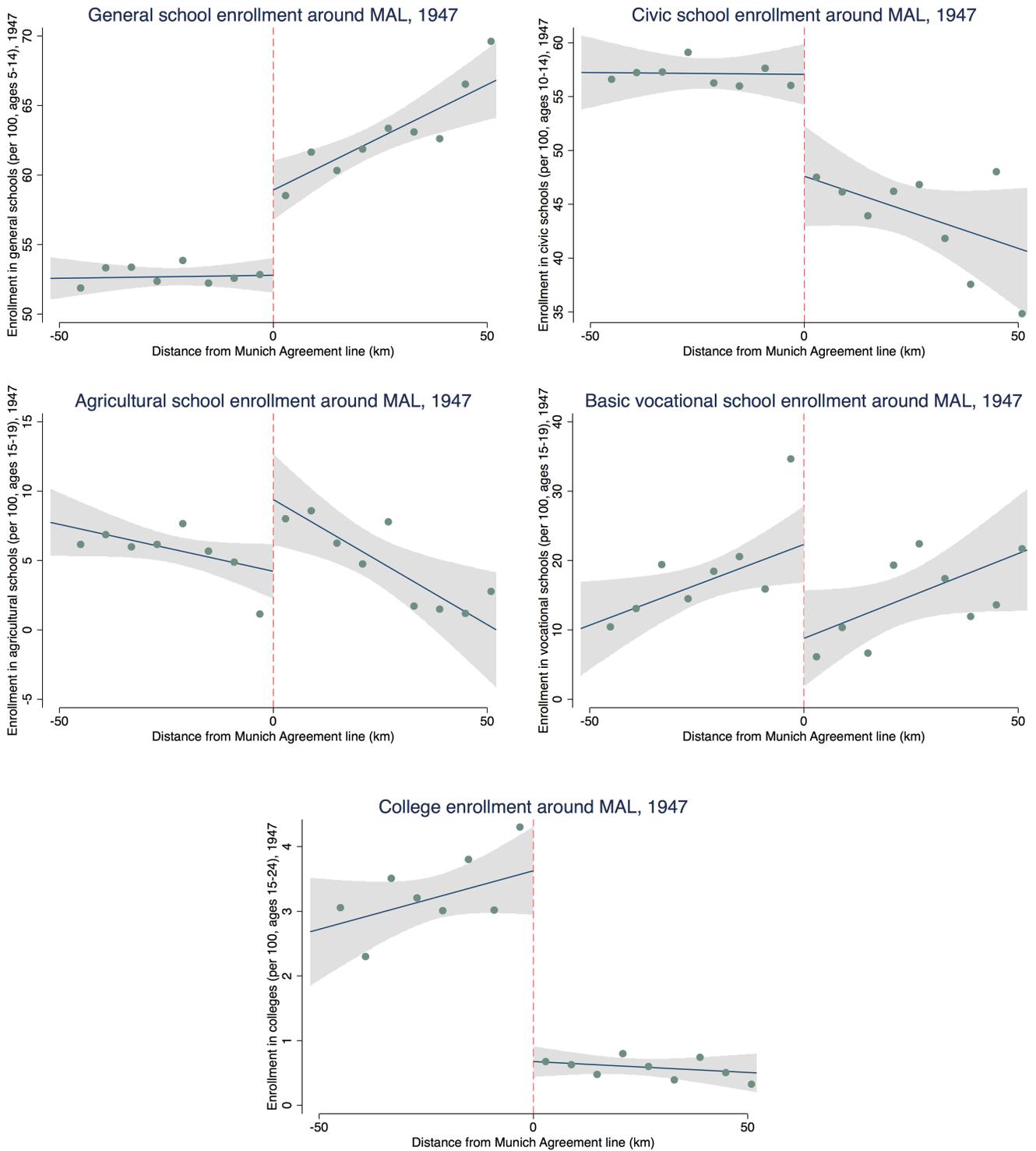
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.5: Other Long-run Effects, RD Plots



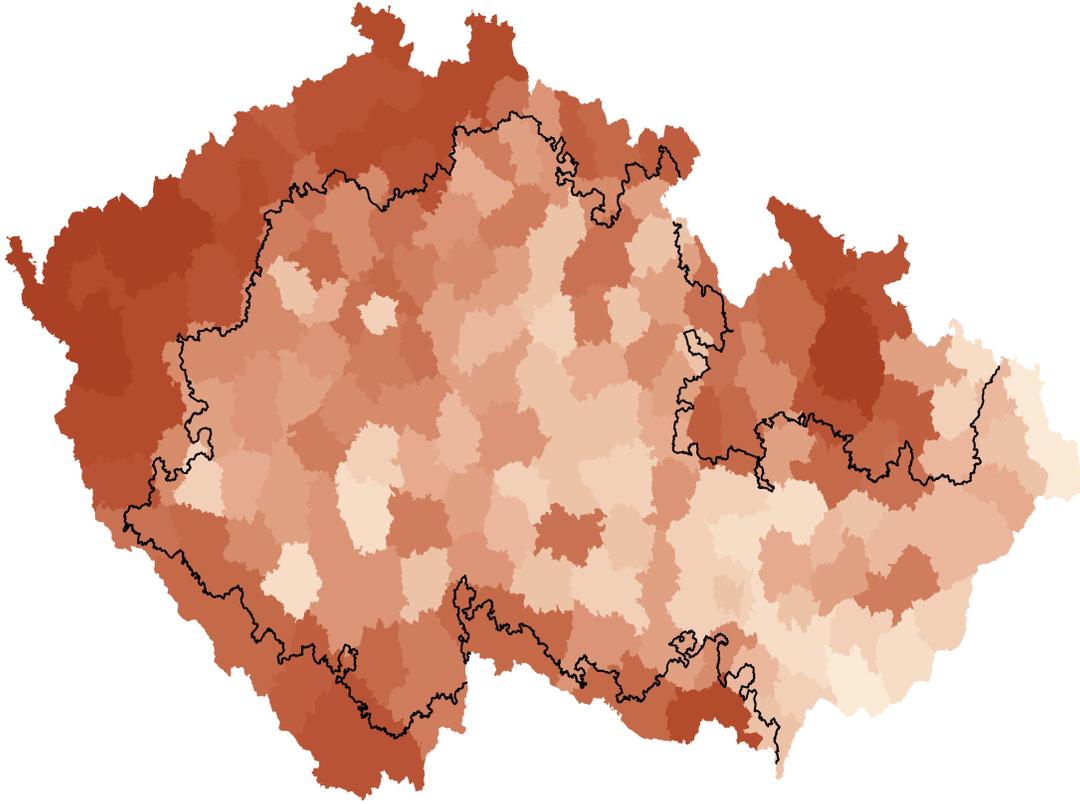
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.6: Other Short-run Effects, RD Plots



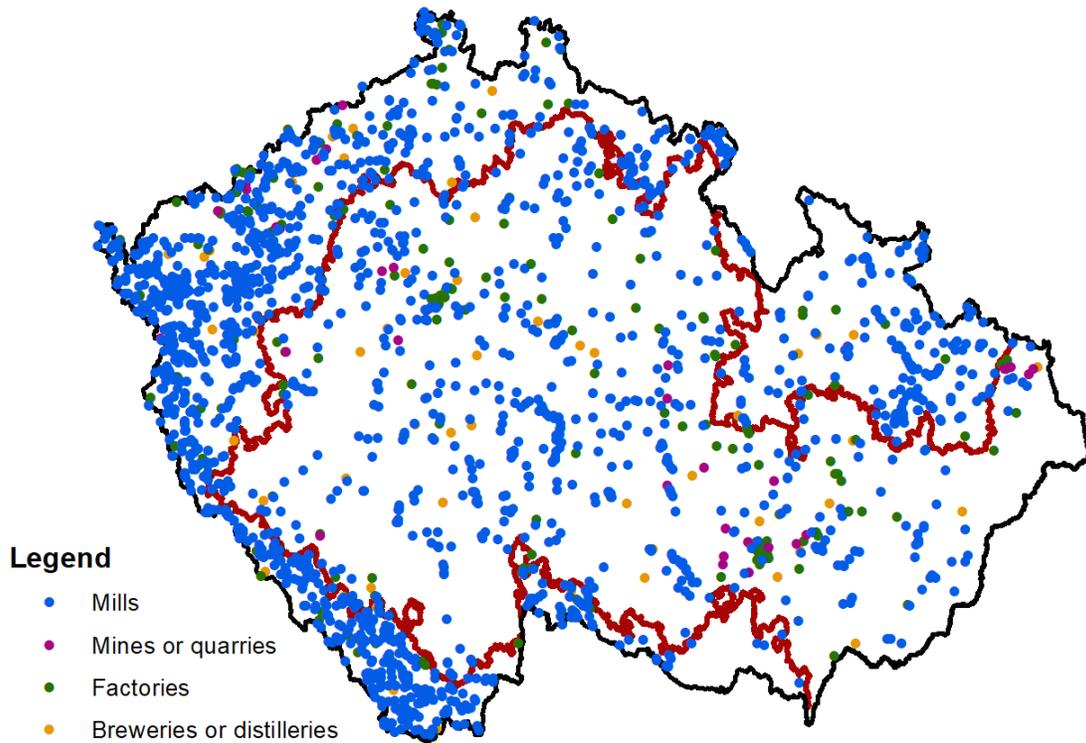
Trend lines are linear over the domain on each side of the Munich Agreement line. Data binned by 6 km intervals to produce 18 mean data points. All plots exclude Prague, Polish Zaolzie, and administrative units that overlap the Munich Agreement line. Shaded areas represent 95% confidence intervals.

Figure A.7: Migration Out of the Borderlands, 1950



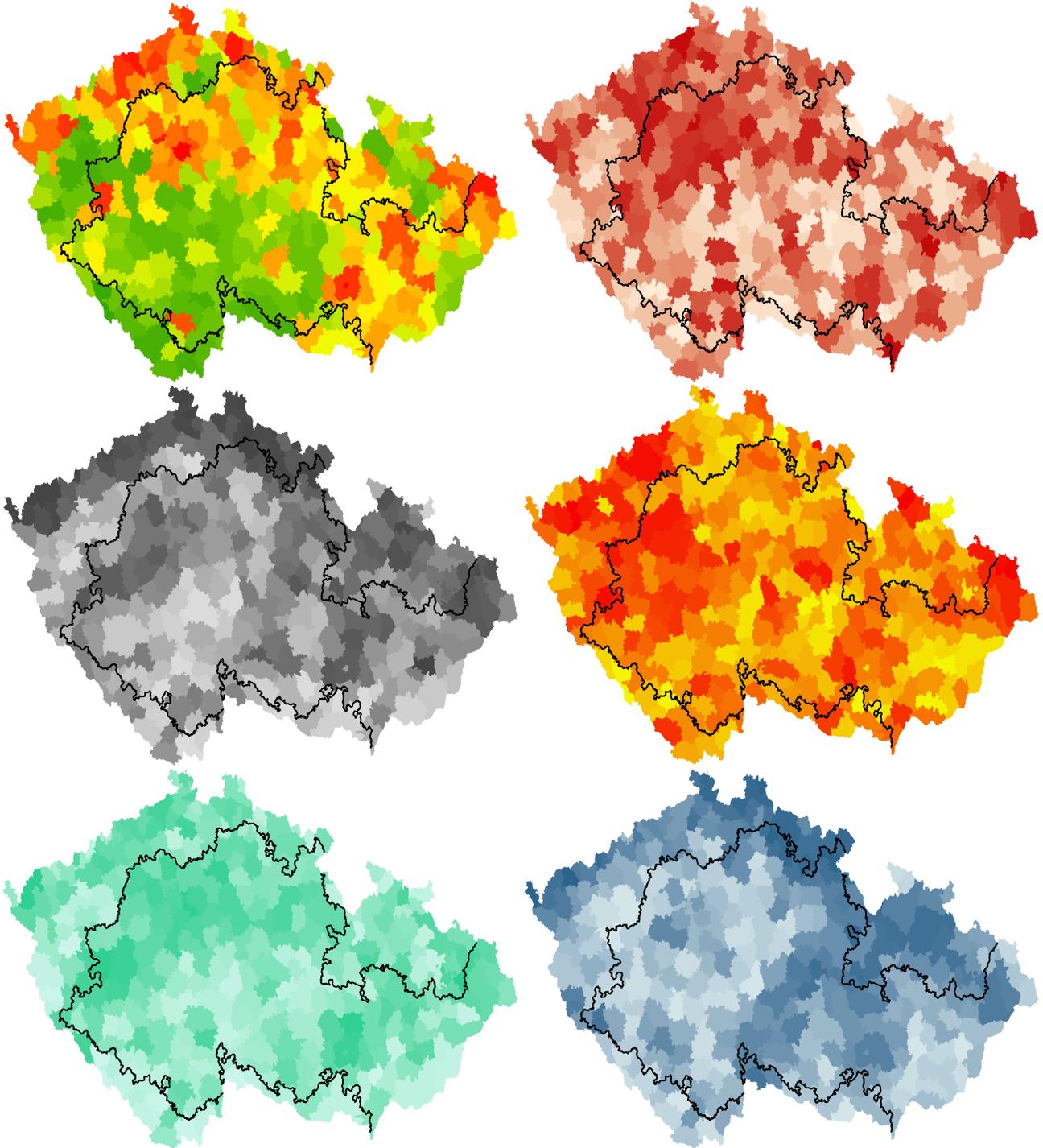
Outmigration heat map for 1950-districts (earliest outmigration data in the post-expulsion period) relative to the Munich Agreement line. Darker implies higher per capita outmigration.

Figure A.8: An “Industrial Graveyard”



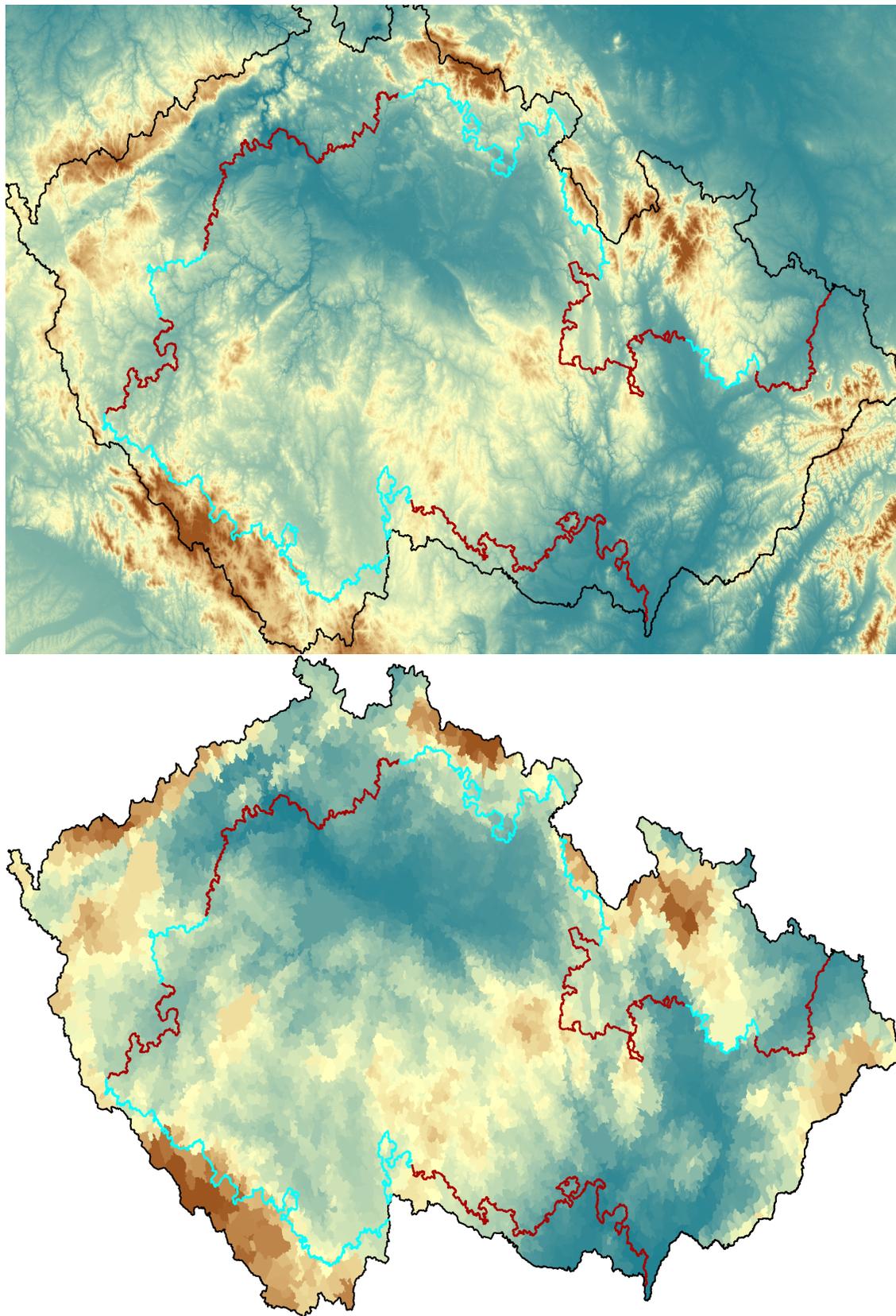
Sites destroyed or abandoned in the 20th century (source: zanikleobce.cz).

Figure A.9: Other Localization Patterns, 1930



Heatmaps of 1930 population density, share of employment in transportation, mining and other extraction, textiles, general manufacturing, and overall industry (clockwise from top left). Darker shades indicate larger shares. Note that transportation and general manufacturing tend to be located wherever population is denser; mining, stone, and soil extraction are more common in Northwest Bohemia as well as Eastern Moravia, which are both mineral rich and not necessarily densely populated; and textile manufacturing is more common in Northern Moravia, in a mixture of densely and not-so-densely populated areas. None appear to be discontinuous through the eventual Munich Agreement line.

Figure A.10: Elevation (Raster and Zonal Statistics)



Mountainous stretches along the Munich Agreement line are highlighted in blue. The second map also shows the elevation zonal statistics upon which the elevation control in the analysis is based.

Figure A.11: German Language Frontiers, post-1918

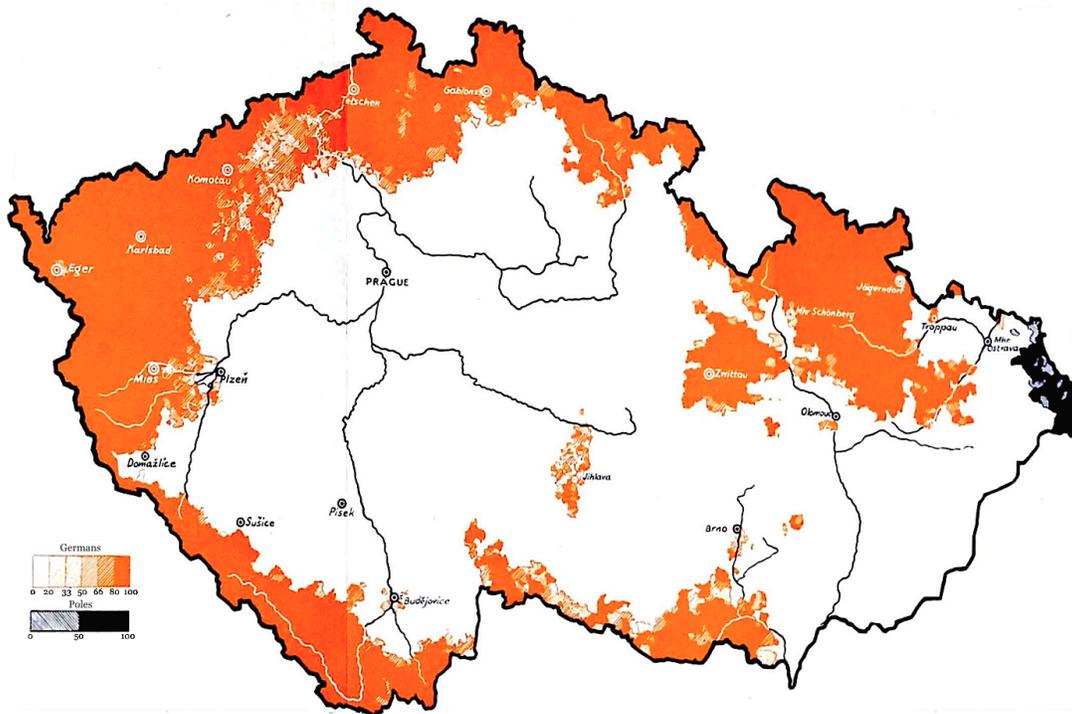
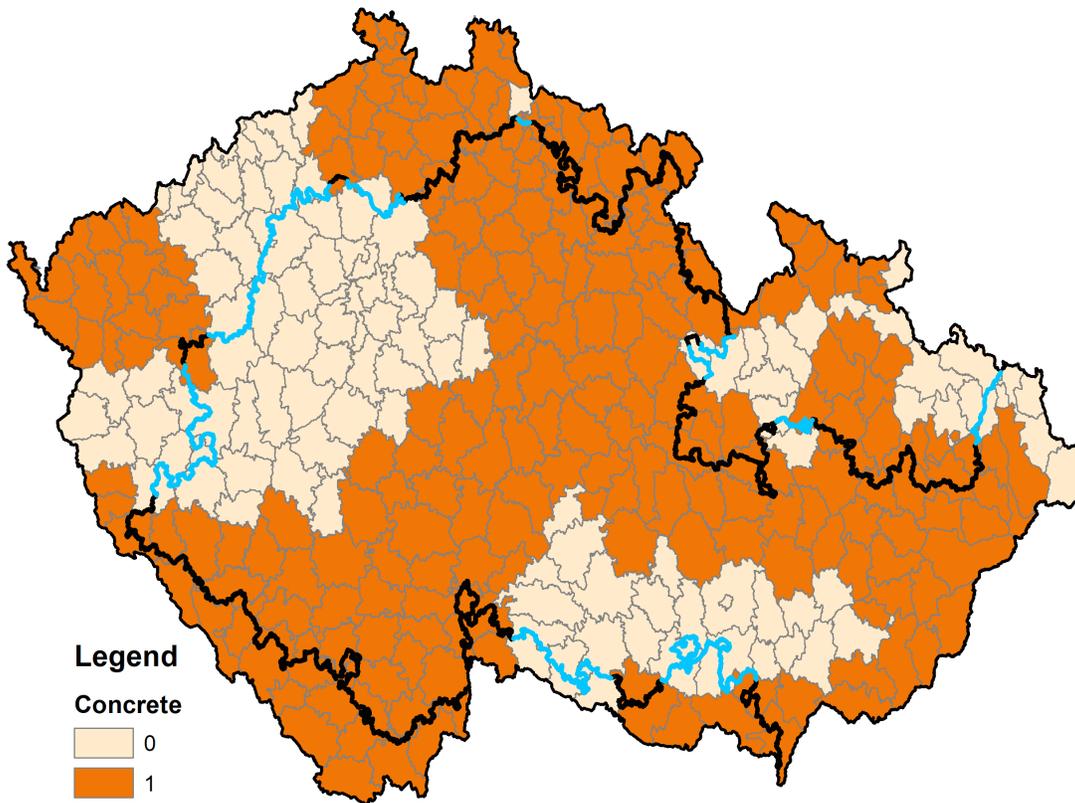
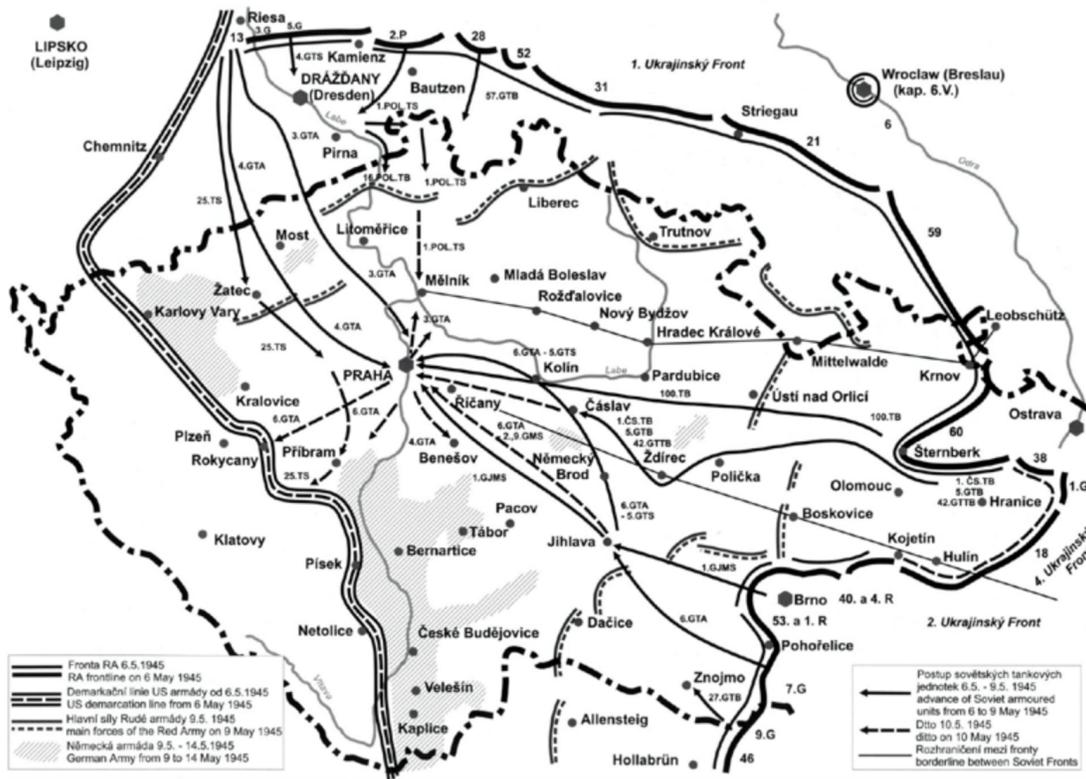


Figure A.12: “Concrete” Sections of the Language Border, 1930



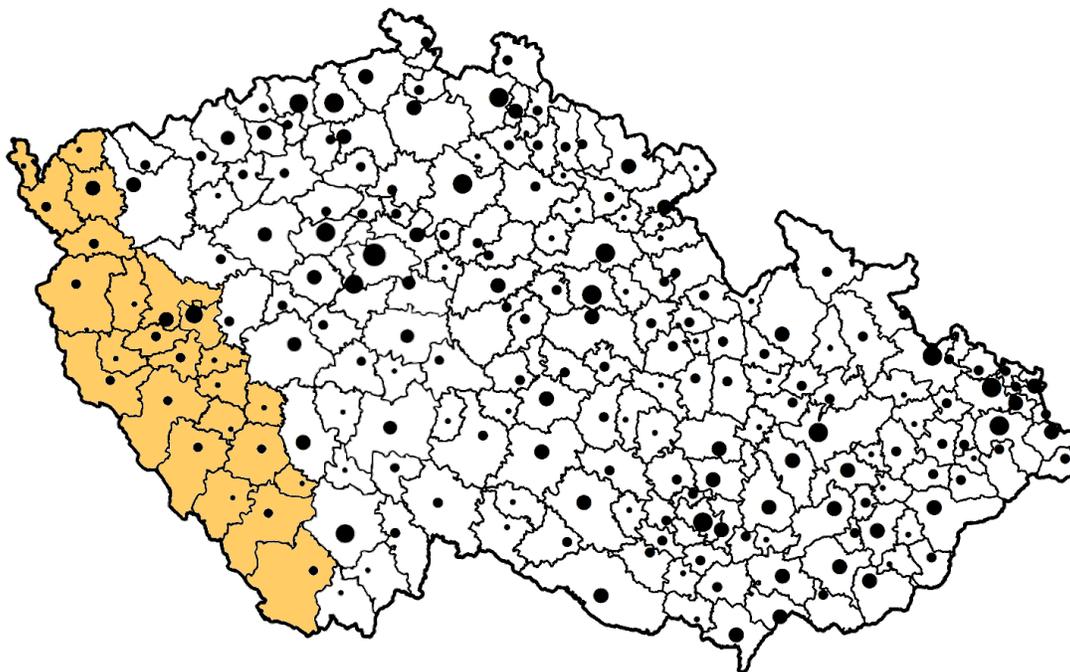
Non-concrete (i.e. mixed) stretches of the Munich Agreement line (MAL) are highlighted in blue. Based on their proximity to these stretches, beige districts are henceforth dropped for the analysis in Table A.9, which seeks to compare the parts of the sample for which the borderlands was more homogeneous (i.e. > 80% German) near the MAL, using the algorithm described below Table A.9. Compare to Figure A.11, which shows village-level ethnic composition prior to the expulsion, from Wiskemann (1938).

Figure A.13: U.S.-Soviet Demarcation Line, 1945



Bordered dashed line through Chemnitz, Karlovy Vary, Plzeň, Rokycany, Písek, České Budějovice, and Netolice represents the U.S. demarcation line from May 6, 1945 as determined by Antonov and Eisenhower. Remaining areas of the Czech lands were liberated by the Soviet Red Army.

Figure A.14: Municipal “Clusters” Included in U.S. Zone, 2011



Orange areas represent contemporary municipal clusters centered around the aforementioned and other administrative centers (*obce s rozšířenou působností*), approximating the demarcation line in Figure A.13.

## Variable descriptions

- **In borderlands:** if the majority of a district or municipality's area lies in the parts of the Czech lands (i.e. the modern day Czech Republic) that were annexed by Germany in 1938, then it is said to be in the borderlands (i.e. the Sudetenland), as opposed to the interior (i.e. the Protectorate of Bohemia and Moravia). The main specifications include any district or municipality in which  $> 95\%$  of its area lie in either the borderlands or the interior. Additional specifications relax this if that district was nonetheless ethnically homogeneous in 1930. Calculated in ArcGIS.
- **Distance from Munich Agreement line:** a district or municipality's centroid's minimum distance to the Munich Agreement line. Calculated in ArcGIS.
- **% German, 1930/1950/2001:** the percentage of the population identified as being German on the census.
- **% Slovak, 2001:** the percentage of the population identified as being Slovak on the census.
- **% Roma, 1930:** the percentage of the population identified as being Romani on the census.
- **% Jewish (ethnic group), 1930:** the percentage of the population identified as being Jewish in nationality on the census.
- **% Jewish (religion), 1930:** the percentage of the population identified as being Jewish in religion on the census.
- **Ethnic fractionalization, 1930/2001:** takes into account the share of the population that was German ( $g$ ) or Czechoslovak ( $c$ ) in judicial districts on the 1930 census, or the share of the population that was German ( $g$ ), Czech ( $z$ ), Slovak ( $s$ ), or other ( $o$ ) in municipalities on the 2001 census. Hence, this measure is given by either  $1 - g^2 - c^2$  or  $1 - g^2 - z^2 - s^2 - o^2$ .
- **Convictions per 100, 1923-27:** the number of convicted offenders in Czech criminal districts between 1923 and 1927 as a proportion of the total population in 1930. These data merge several judicial districts into larger jurisdictions in the Brno, Zlin, and Prague urban areas.
- **% Taxpayers, 1933:** the number of eligible taxpayers per 100 individuals in 1933 political districts, as reported in *Statistika daně důchodové placené přímo, daně z vyššího služného, daně rentové placené přímo, všeobecné a zvláštní daně výdělkové podle předpisu za rok 1933*, a Czechoslovak taxation report published by the State Bureau of Statistics in 1938. Not reported on its own for Praha-venkov (i.e. a suburban political district near Prague).
- **Income per capita (100 Kčs), 1933:** average income per capita in 1933 political districts in 100 Czechoslovak koruna, as reported in the same taxation report. Not reported on its own for Praha-venkov, Ricany, and Jilove (i.e. all Prague suburban political districts).
- **In Population density, 1921-2011:** the log of population counts per square kilometer in a district or municipality as reported in each census. Note that for 2011, three municipalities (Brezina, Brdy, and Modrava) designated for military purposes have low population counts and therefore have negative values, though removing these does not affect estimates.
- **Labor force, 1921-2011:** the total number of employed and unemployed. For 2011, the census reports the number of employed only. I use the number of unemployed from the same month as reported by the Czech Ministry of Labor and Social Affairs to derive the full labor force count.
- **In Labor force density, 1921-2011:** the log of the above value divided by the square kilometer size of a district or municipality as reported in each census. Note the same three negative values here as in ln population density.

- **Labor force participation rate**, 1930/2011: the total labor force count divided by the total population of a district or municipality, as reported in the census.
- **Unemployment**, 1933/2011: the number of registered unemployed as a share of the total labor force. For 1933, the number of unemployed in a political district is taken from the social insurance report, *Nezaměstnanost a podpůrná péče v Československu*, written by Minister of Social Welfare Jaromír Nečas and published by the Social Institute of the Czechoslovak Republic in 1938. The 1930 labor force count from the census is used as the denominator. For 2011, the number of unemployed in a municipality for the month of March is scraped from the Czech Ministry of Labor and Social Affairs website. The 2011 labor force count described above is used as the denominator.
- **% Agricultural sector**, 1921-2011: the total number of workers in a district or municipality employed in agricultural work, fishing, hunting, or forestry as a share of the total labor force, as reported in the census.
- **% Secondary sector**, 1921-2011: the total number of workers in a district or municipality employed in the secondary sector (i.e. industry and construction) as a share of the total labor force, as reported in the census.
- **% Industry**, 1921-2011: the total number of workers in a district or municipality employed in the six industrial sectors below as a share of the total labor force, as reported in the census. Note that in the 1961 census, this was reported as a percentage instead of as the number of workers.
- **% Mining and other extraction**, 1930: the total number of workers in a district or municipality employed in mineral, stone, and soil extraction as a share of the total labor force, as reported in the census.
- **% Metallurgy and metalwork**, 1930: the total number of workers in a district or municipality employed in metallurgy and metalworking as a share of the total labor force, as reported in the census.
- **% Manufacturing**, 1930: the total number of workers in a district or municipality employed in manufacturing of machinery, equipment, and transportation devices as a share of the total labor force, as reported in the census.
- **% Glasswork**, 1930: the total number of workers in a district or municipality employed in the production of glass and glass products as a share of the total labor force, as reported in the census.
- **% Textiles**, 1930: the total number of workers in a district or municipality employed in textile manufacturing as a share of the total labor force, as reported in the census.
- **% Other industry**, 1930: the total number of workers in a district or municipality employed in other industrial sectors (i.e. chemical, gas, water, and electric industries; leather, clothing, and footwear manufacturing, lumber, paper, and printing industries; and food and beverage production) as a share of the total labor force, as reported in the census.
- **% Construction**, 1921-2011: the total number of workers in a district or municipality employed in construction as a share of the total labor force, as reported in the census.
- **% Service sector**, 1921-2011: the total number of workers in a district or municipality employed in the service sector (i.e. transport, business, and other service sectors below) as a share of the total labor force, as reported in the census.
- **% Transport sector**, 1921-2011: the total number of workers in a district or municipality employed in the transport sector (i.e. post, storage and shipping, rail, and bus) as a share of the total labor force, as reported in the census.

- % **Business sector**, 1921-2011: the total number of workers in a district or municipality employed in the business sector (i.e. finance and insurance as well as work in trade and commerce) as a share of the total labor force, as reported in the census.
- % **Finance and insurance**, 1930/2011: the total number of workers in a district or municipality employed in finance, accounting, and insurance as a share of the total labor force, as reported in the census.
- % **Trade**, 1930: the total number of workers in a district or municipality employed in trade and commerce (i.e. hospitality and food, auto trade and repair, and other commerce) as a share of the total labor force, as reported in the census.
- % **Hospitality and food services**, 2011: the total number of workers in a district or municipality employed in hotel and hospitality as well as food and catering services as a share of the total labor force, as reported in the census.
- % **Auto trade and repair**, 2011: the total number of workers in a district or municipality employed in auto retail trade and repair as a share of the total labor force, as reported in the census.
- % **Public**, 2011: the total number of workers in a district or municipality employed in public administration and defense as a share of the total labor force, as reported in the census.
- % **Communications**, 2011: the total number of workers in a district or municipality employed in communications and other information industries as a share of the total labor force, as reported in the census.
- % **Education**, 2011: the total number of workers in a district or municipality employed in education as a share of the total labor force, as reported in the census.
- % **Healthcare**, 2011: the total number of workers in a district or municipality employed in social and healthcare as a share of the total labor force, as reported in the census.
- % **Other service**, 1930/2011: the total number of workers in a district or municipality employed in all other service industries as a share of the total labor force, as reported in the census. For 1930, this includes public administrative and defense, education, healthcare, and domestic services. For 2011, this includes real estate, administrative and support fields, and scientific and technical activities.
- % **Literate**, 1921/30: the percentage of the population over the age of 10 that can read and write, as reported in the census.
- % **Primary education or less**, 1961-2011: the percentage of the population over the age of 15 that has at most primary education or less, as reported in the census.
- % **Secondary education**, 1961-2011: the percentage of the population over the age of 15 that has a secondary education (i.e. vocational, lower professional, or gymnasium, with or without exams) but no more, as reported in the census.
- % **Tertiary education**, 1961-2011: the percentage of the population over the age of 15 that has a tertiary education (i.e. higher professional education, some college, a bachelor degree, or more), as reported in the census.
- **Education index**, 1921-2011: uses prewar literacy and postwar post-primary education data transformed into standard deviations from census year district means.

- **General enrollment per 100, 5-14, 1947:** the number of individuals in a political district enrolled in general schools (i.e. schools which offer both primary schooling as well as terminal lower secondary education) as a share of the total population between the age of 5 and 14, as reported in the report, *Zprávy státního úřadu statistického republiky Československé*, published by the State Bureau of Statistics in 1948.
- **General schools per 100 pupils, 1947:** the number of general schools in a political district per 100 pupils that live there who are enrolled in a general school, as reported in the same statistical report.
- **General teachers per 100 pupils, 1947:** the number of general school teachers in a political district per 100 pupils that live there who are enrolled in a general school, as reported in the same statistical report.
- **Civic enrollment per 100, 10-14, 1947:** the number of individuals in a political district enrolled in civic schools (i.e. a form of lower secondary education that leads into higher forms) as a share of the total population between the age of 10 and 14, as reported in the same statistical report.
- **Civic schools per 100 pupils, 1947:** the number of civic schools in a political district per 100 pupils are enrolled in a civic school there, as reported in the same statistical report.
- **Civic teachers per 100 pupils, 1947:** the number of civic school teachers in a political district per 100 pupils are enrolled in a civic school there, as reported in the same statistical report.
- **Agricultural enrollment per 100, 15-19, 1947:** the number of individuals in a political district enrolled in agricultural folk schools (i.e. a common form of higher secondary education that focuses on agricultural and related skills) as a share of the total population between the age of 15 and 19, as reported in the same statistical report.
- **Agricultural folk schools per 100 pupils, 1947:** the number of agricultural folk schools in a political district per 100 pupils enrolled in an agricultural folk school there, as reported in the same statistical report.
- **Agricultural teachers per 100 pupils, 1947:** the number of agricultural folk school teachers in a political district per 100 pupils enrolled in an agricultural folk school there, as reported in the same statistical report.
- **Basic vocational enrollment per 100, 15-19, 1947:** the number of individuals in a political district enrolled in basic vocational schools (i.e. a common form of higher secondary education that focuses on more technical applied skills) as a share of the total population between the age of 15 and 19, as reported in the same statistical report.
- **Basic vocational schools per 100 pupils, 1947:** the number of basic vocational schools in a political district per 100 pupils enrolled in a basic vocational school there, as reported in the same statistical report.
- **Basic vocational teachers per 100 pupils, 1947:** the number of basic vocational school teachers in a political district per 100 pupils enrolled in a basic vocational school there, as reported in the same statistical report.
- **College enrollment per 100, 15-24, 1947:** the number of individuals in a political district enrolled in colleges as a share of the total population between the age of 15 and 24, as reported in the same statistical report.
- **Voter turnout, 2012-14:** the percentage of voters in the electoral roll that were issued envelopes in a local, regional, or chamber (i.e. national) election. Data scraped from Volby.cz of the Czech Statistical Office (2017).

- **Migrants per capita**, 1950-2011: the number of individuals who are immigrants in a given year into a district (in-migration), emigrants in a given year from a district (outmigration), or the net of those two, divided by the total population size of that district in that year, as reported in official annual population journals, *Pohyb obyvatelstva v republice Československé*, available online from the Czech Statistical Office.
- **Border segments**: a variable whose value corresponds to the “segment” of the Munich Agreement line to which a district or municipality is closest. For 2001/11 municipalities, each of the three unique continuous stretches of the Munich Agreement line – in Bohemia, Northern Moravia, and Southern Moravia – is divided into 25, 13, and 12 segments, respectively, in ArcGIS, each about 50 km in length. For 1930/47 judicial districts, each is divided into 12, 6, and 6 segments, respectively, each about 100 km in length. For 1930/47 political districts, each is divided into 8, 4, and 4 segments, respectively, each about 150 km in length. For some small sample sensitivity tests, I use 4 segments, corresponding to the three regions with Bohemia divided into Northern and Southern sections.
- **Prague**: a dummy that equals 1 if a district or municipality corresponds to the city of Prague.
- **Polish Zaolzie**: a dummy that equals 1 if a district or municipality lies in the strip of land in the easternmost part of the Czech lands, which was annexed by Poland in 1938 and has historically been predominantly Polish-speaking.
- **Eastern Bloc**: a dummy that equals 1 if a municipality lies closer to Poland or the former East Germany than to Austria or the former West Germany, as calculated in ArcGIS.
- **U.S. Zone**: a dummy that equals 1 if a municipality approximately lied in the areas of the Czech lands liberated by U.S. forces in 1945 instead of Soviet forces.
- **Longitude and latitude**: measures of longitude and latitude for district and municipality centroids, calculated in ArcGIS using a WGS 1984 projection, each normalized around the sample mean.
- **Elevation** (m): 1 arc sec elevation data are derived from Japan Aerospace Exploration Agency’s Advanced Land Observing Satellite (2017) maps, with district- and municipality-specific mean values estimated in ArcGIS using zonal statistics.
- **Ruggedness** (°): 1 arc sec ruggedness data are derived from Japan Aerospace Exploration Agency’s Advanced Land Observing Satellite (2017) maps, with district- and municipality-specific mean values estimated in ArcGIS using zonal statistics.
- **Temperature** (°C): 30 arc sec temperature data (1970-2000) are derived from Worldclim (2016) maps, with district- and municipality-specific mean values estimated in ArcGIS using zonal statistics.
- **Precipitation** (mm): 30 arc sec precipitation data (1970-2000) are derived from Worldclim (2016) maps, with district- and municipality-specific mean values estimated in ArcGIS using zonal statistics.
- **River density** (rivers (km)/km<sup>2</sup>): detailed GIS shapefiles of river networks provided by Geofabrik (2017) are converted to a equidistant cylindrical projection in ArcGIS. The “intercept” tool is used to determine in what districts and municipalities a given river segment lies. I then sum the total length for all river segments within each municipality. Using the district or municipality area calculated in ArcGIS from files with a cylindrical equal area projection, I then calculate river density values.
- **% Arable land**, 1945: the number of square kilometers of arable land in 1945 political districts divided by the total number of square kilometers, as reported in the report, *Zprávy státního úřadu statistického republiky Československé*, published by the State Bureau of Statistics in 1947.