# The Developmental Legacies of Border Buffer Zones: the Case of Military Colonialism - Online Appendix

# Contents

1	List of Primary Sources	<b>A</b> 1
2	Summary Statistics	A6
3	Codebook	A8
4	RD Assumptions Tests 4.1 Covariate Balance	A13 .A13
5	Evidence: International Discrimination	A16
6	Evidence: Inflexibility of Labor Evidence	A18
7	Robustness	A19
8	Additional Results: Historical Access to Public Goods	<b>A</b> 24
9	Falsification Tests	A26
10	10.1 Temporal intermediary factors: Historical Events	.A28 .A31 .A33
11	Placement of the Border	<b>A4</b> 3
12	The Evolution of the Border	<b>A4</b> 4
13	BLITS Data and Analysis	A46
14	External Validity	<b>A</b> 48

15 References for Online Appendix												A57
14.2 French Algeria		•	•	•			•	•	•		•	.A51
14.1 The Russian Military Colony												.A49

# 1 List of Primary Sources

- Austrian Ministry of Internal Affairs. 1859. Statistische Übersichten über die Bevölkerung und den Viehstand von Österreich. Nach der Zählung vom 31. October 1857. Vienna: Herausgegeben Vom K. K. Ministerium Des Innern.
- Azan, Paul. 1936. L'armée d'Afrique de 1830 à 1852, par le général Paul Azan. Paris: Plon.
- Bussière, Auguste. 1853. Le maréchal Bugeaud et la colonisation de l'Algérie. Souvenirs et récits de la vie coloniale en Afrique. Revue des Deux Mondes (1829-1971), 4(3), 449–506.
- Croatian Bureau of Statistics. 2017. Popis stanovništva, kućanstva i stanova 2011. Stanovi prema načinu korištenja. [Census of Population, Households and Dwellings 2011, Dwellings by Occupancy Status]. Zagreb: Croatian Bureau of Statistics. Available at: https://www.dzs.hr/Hrv Eng/publication/2016/SI-1586.pdf. Last checked on April 1, 2018.
- De Monglave, Eugène. 1857. De L'Influence des Smala de Spahis sur l'avenir de l'Algerie. Revue de l'Orient et de L'Algérie et de colonies, 5, 144–150.
- de Rumigny, Marie-Théodore. 1850. De l'Éstablissement des colonies militaires kabailes en Algerie. Le spectateur militaire, XLIX, 31–53.
- Desprez, Hippolyte Félix. 1847. Des colonies militaires de l'Autriche et de la Russie. Revue des Deux Mondes, période initiale, 19, 722–735.
- Draganović, Krunoslav. 1939. Opći šematizam Katoličke crkve u Jugoslaviji. [General schematism of the Catholic Church in Yugoslavia]. Sarajevo: Izd.Akademije Regina Apostolorum.
- Émerit, Marcel. 1959. L'influence russe et croate sur la colonisation militaire à l'époque de Bugeaud. La Revue Française d'Histoire d'Outre-Mer, 46(163-165), 85–96.
- Federal People's Republic of Yugoslavia Federal Statistical Office. 1952a. Agricultural Co-Operatives in 1952. Statistical Bulletin, 10–40. Year IV, October 1953, Series B-III.

- Federal People's Republic of Yugoslavia Federal Statistical Office. 1952b. Agricultural Machines and Implements 1951. *Statistical Bulletin*. Year IV, September 1952, Series B-III.
- Generalstab des Heeres, Abt. für Kriegskarten und Vermessungswesen. 1940. *Jusgoslawien / Strassennetz*. MAP. Scale: 1:100,000 km. Eigenthum und Verlag von Artaria & Co., Unknown.
- Hungarian Statistical Office. 1915. Površina i Katastrálny Čisti Prihod Poreznih Općina Po Težatbenim Vrstima i Razredima. Nakon Katastralnog Izpravka, Provedenog na Temelju Zak. Član. V: 1909. [Area and Cadastral Net Revenue of Tax Municipalities by Claims and Classes. After the Cadastral Correction, Carried out on the basis of the Law from 1909]. Budapest: Royal Hungarian State Printing House. Magyar Királyi Állami Nyomda.
- International Court of Justice. 2001 (Mar.). Case Concerning the Application of the Convention of the Prevention and Punishment of the Crime of Genocide. Croatia v. Yugoslavia. Memorial of Croatia. Volume 5. Available at: http://www.icj-cij.org/files/case-related/118/18184.pdf. Last checked on May 19, 2018.
- K.K. Statistischen Central-Commission. 1849-1851. Tafeln zur Statistik der Österreichischen Monarchie. II. Theil. Wien: Österreich / Direction der Administrativen Statistik.
- Kraljevina Jugoslavija Opsta Državna Statistika. 1940. Definitvni Rezultati Popisa Stanovništva od 31 Marta 1931 Godine Knjiga IV Prisutno Stanovnistvo Po Glavnom Zanimanju. [Definitive Results of the Census of March 31, 1931 Book IV Present Population by Main Occupation]. Sarajevo: Državna Štamparija.
- Kriegs Archiv Memoirs. 1779. KA Mémoires XXIII. Joseph II to FM Hadik, Vienna, Dec. 9, 1779.
- Lyall, Robert. 1824. An Account of the Organization, Administration, and Present State of the Military Colonies in Russia. London: A. & R. Spottiswoode.

- Magas, Damir. 2015. *The Geography of Croatia*. Zadar: University of Zadar and Meridijani Publishing House.
- Magocsi, P.R. 2002. *Historical Atlas of East Central Europe*. Seattle, WA: University of Washington Press.
- Marmont, Auguste F. L. W. 1837. Voyage de Monsieur le Marechal de Raguse, en Hongrie, en Transylvanie, dans la Russie meridionale, en Crimee, et sur les bards de la mer d'Azoff. Paris: Ladvocat.
- Military Encyclopedia. 1912. Military Settlements. **6. Vereshchagin. Military Conscription**, 312–640. Available at: http://elib.shpl.ru/ru/nodes/1672-t-6-vereschagin-v-v-voinskaya-povinnost-1912. Last checked on July 31, 2021.
- Ministère de la Guerre. 1845. Tableau de la situation des établissements Français dans l'Algérie.

  Paris: Imprimerie Royale.
- Ott, Katarina, Bronić, Mihaela, & Stanić, Branko. 2018. Budget outturns of Croatian municipalities, cities and counties for 2016. *Institute for Public Finance Newsletter*, 1–15.
- Pipes, Richard E. 1950. The Russian Military Colonies, 1810-1831. The Journal of Modern History, 22(3), 205–219.
- Pálffy, Géza. 2009. Közép-Európa védőbástyája és éléskamrája (1526–1711). [The Bulwark and Larder of Central Europe (1526–1711)]. Pages 92–115 of: Ernő, Marosi (ed), Európa színpadán. Magyarország ezeréves hozzájárulása az európai közösség eszméjéhez. [On the European stage. Hungary's millennial contribution to the idea of the European community]. Budapest: MTA Művészettörténeti Kutató Intézete–Balassi Kiadó.
- Republika Hrvatska, Republički zavod za statistiku. 1992. Popis stanovništva, domaćinstava, stanova i poljoprivrednih gospodarstva, 31. ožujak 1991: stanovništvo prema narodnosti po naseljima. [Census of Population, Households, Flats and Agricultural Holdings, March 31,

- 1991: Population by ethnicity and by settlements]. Zagreb: Republika Hrvatska, Republički zavod za statistiku.
- Rouire, M. 1901. Les colons et l'Algérie: I: la phase héroique de la colonisation. Revue des Deux Mondes (1829-1971), 5(2), 339-374.
- Royal Statistical Central Office in Budapest. 1902a. A Magyar Korona Országainak 1900. Évi Népszámlálása 1. A Népesség Általános Leírása Községenkint. [Census of the Hungarian Crown Countries in 1900. General description of the population by municipality]. Vol. 1. Pest Book Printing Company. Pesti Könyvnyomda-részvénytársaság.
- Royal Statistical Central Office in Budapest. 1902b. A Magyar Korona Országainak 1900. Évi Népszámlálása 1. A Népesség Általános Leírása Községenkint. [Census of the Hungarian Crown Countries in 1900. General description of the population by municipality]. Vol. 2. Pest Book Printing Company. Pesti Könyvnyomda-részvénytársaság.
- Royal Statistical Central Office in Budapest. 1913. A Magyar Szent Korona Országainak 1910. Évi Népszámlálása. Második rész. A Nepesseg Foglalkozása és a Nagypari Vallalatok Kozsegenkint. [Census of the Hungarian Crown Countries in 1910. Second Part. Population Occupation and Large Industrial Enterprises.]. Vol. 2. Printing Press of the Anonymous Society Athenaeum. Az Athenaeum Irodalmi és Nyomdai R.-Tarsulat Nyomasa.
- Royal Statistical Office in Zagreb. 1898. Popis gospodarstva i stoke od 31. prosinca 1895. Ergebnisse der Zählung der Landwirthschaftlichen Betreibe und der Viehzählung vom 31 Dezember 1895. [Results of the farm census and livestock census of December 31, 1895.]. Vol. 2. Royal Statistical Office in Zagreb.
- Sundberg, Ralph, & Melander, Erik. 2013. Introducing the UCDP Georeferenced Event Dataset. *Journal of Peace Research*, **50**(4), 523–532.
- Unknown Author. 1869. Die Oesterr: u. Ungar: Eisenbahnen der Gegenwart u. der Zukunft.
  MAP. Scale: Unknown. Eigenthum und Verlag von Artaria & Co., Vienna. University of Chicago Map Collection. G6481.P3 1869 .A7.

- Unknown Author. 1884. Die Oesterr: u. Ungar: Eisenbahnen der Gegenwart u. der Zukunft.
  MAP. Scale: Unknown. Eigenthum und Verlag von Artaria & Co., Vienna. University of Chicago Map Collection. G6481.P3 1884 .A7.
- V. Bohinec and Fr. Planina. 1957. FLR Jusgoslavia Motoring Map. MAP. Scale: 1:800,000 km, Ljubljana, Slovenia.
- Vaníček, Fr. 1875. Specialgeschichte der Militärgrenze. Vol. 2. Vienna: Kaiserlich-Königliche Hof- und Staatsdruckerei.
- von Hietzinger, Carl Bernh. Edlen. 1817. Statistik der Militärgränze des österreichischen Kaiserthums. Vol. 1. Wien: Verlage bei Carl Gerold.
- Yugoslavia Opšta Državna Statistika. 1932. Definitivni rezultati popisa stanovništva od 31 januara 1921 god. [Final results of the Census from 31 January 1921]. Sarajevo: Državna štamparija.

# 2 Summary Statistics

Table A.1: Summary Statistics

Variable	N	Mean	Min	Max	SD
Prop. Doctors, 1857	402	40.502	2.602	115.383	34.345
Railroad Density, 1869	402	0.007	0.000	0.306	0.030
Thoroughfare Density, 1940	402	0.047	0.000	0.830	0.084
Asphalt Road Density, 1957	402	0.026	0.000	0.830	0.075
Pct. Dwellings No Water, 2011	393	9.181	0.045	43.610	8.548
Pct. People at Risk of Poverty, 2011	395	24.759	4.650	74.280	12.625
Pct. Less Educated People, 2011	395	43.948	12.130	80.390	13.391
Log Area Covered by Zadrugas, 1895	2170	4.364	0.000	9.085	2.388
Pct. Area Covered by Zadrugas/Total Area, 1895	2170	14.745	0.000	92.112	18.040
Log Pop. in Zadrugas, 1895	2170	3.352	0.000	8.124	1.984
Trust People, 2006-16	2698	2.828	1.000	5.000	1.045
Trust Family, 2016	1081	4.713	1.000	5.000	0.564
Trust Foreign Investors, 2006-16	2607	2.578	1.000	5.000	1.058
Trust Presidency, 2006-16	2745	3.105	1.000	5.000	1.176
Bribery Road Police, 2006-16	2669	1.667	1.000	5.000	1.001
Bribery Unemployment, 2006-16	2623	1.270	1.000	5.000	0.702
Part. Demonstration, 2006-16	2000	0.068	0.000	1.000	0.252
Sign Petition, 2016-16	2000	0.365	0.000	1.000	0.482
Elevation	402	211.316	0.000	1019.127	176.607
Slope	402	1.477	0.000	10.101	1.626
Avg. Temperature	399	11.277	7.917	13.675	1.074
Avg. Precipitation	399	112.664	74.942	184.008	27.975
Maize Suitability	402	24569.884	0.000	28908.000	5781.174
Total river in km	402	36.719	0.000	496.185	51.800
River Density	402	338.383	0.000	823.833	164.846
Trade Route Dens., 1450	402	0.015	0.000	0.365	0.041
Trade Centers, 1450	402	0.005	0.000	1.000	0.070
Pct. Out-Migration, 1857	77	2.935	0.298	14.186	2.672
Pct. Out-Migration, 1944	286	3.538	0.000	79.851	9.082
Net Migration Rate, 2011	364	-1.211	-9.542	1.403	0.953
Pct. Serbs, 1921	514	19.540	0.000	99.974	29.782
Pct. Serbs, 1931	563	19.112	0.000	99.876	29.135
Pct. Serbs, 1991	397	9.923	0.000	96.655	18.612
Pct. Serbs, 2001	390	5.529	0.000	96.589	13.182
Change, '91-'01	386	-4.747	-72.036	20.084	10.183
Pct. Serbs, 2011	395	5.504	0.000	96.856	13.657
Pct. Croats, 1921	514	76.721	0.026	100.000	31.058
Pct. Croats, 1931	563	77.518	0.124	100.000	30.249
Pct. Croats, 1991	397	79.816	1.039	100.000	23.180
Pct. Croats, 2001	390	87.860	1.978	99.776	16.804
Change, '91-'01	386	8.389	-21.669	72.514	11.540
Pct. Croats, 2011	395	87.854	1.777	99.888	17.276
Pct. Priests, 1857	77	0.178	0.028	1.047	0.192
Pct. Civil Servants, 1857	77	0.431	0.047	3.200	0.558

Table A.1: Summary Statistics (Continued)

Variable	N	Mean	Min	Max	SD
Pct. Writers and Artists, 1857	77	0.078	0.000	0.655	0.127
Pct. Lawyers, 1857	77	0.022	0.000	0.222	0.046
Pct. Doctors, 1857	77	0.067	0.000	0.547	0.097
Pct. Manufacturers, 1857	77	1.395	0.027	11.010	2.069
Pct. Merchants, 1857	77	0.227	0.000	2.383	0.402
Pct. Fishermen, 1857	77	1.029	0.000	18.594	3.073
Pct. Agriculture, 1857	77	14.785	0.000	29.504	6.987
Pct. Workers Crafts, 1857	77	1.127	0.019	10.014	1.702
Pct. Workers Trade, 1857	77	0.129	0.000	1.939	0.273
Pct. Day Workers, 1857	77	1.124	0.010	6.901	1.375
Railroad Density, 1869	402	0.007	0.000	0.306	0.030
No. Marketplaces, 1857	402	8.129	0.000	17.000	5.592
Planned Railroad Density, 1869	402	0.022	0.000	0.475	0.049
Planned Railroad Density, 1884	402	0.023	0.000	0.401	0.055
Thoroughfare Density, 1940	402	0.047	0.000	0.830	0.084
Asphalt Road Density, 1957	402	0.026	0.000	0.830	0.075
Residential Road Density, 2017	402	0.439	0.000	10.770	0.726
Road Track Density, 2017	402	0.685	0.000	3.361	0.665
Log No. WW2 Bombs, 1939-45	402	0.116	0.000	4.174	0.510
Log Tons TNT WW2, 1939-45	402	0.186	0.000	7.804	0.960
Log Concentr. Camp Count, 1944	402	0.026	0.000	1.099	0.140
Log Concentr. Camp prisoners, 1944	402	0.173	0.000	11.242	1.227
Log Massacre Death Count, 1944	402	0.305	0.000	7.091	1.221
Total Cooperatives, 1950	95	19.221	0.000	76.000	11.987
Households with No Cooperative Members, 1950	95	745.158	0.000	10392.000	1198.733
Cooperative Plows, 1950	112	294.920	0.000	2963.000	514.160
Torture Oneself	1182	0.003	0.000	1.000	0.058
Torture against Family	1182	0.019	0.000	1.000	0.138
Torture against Grandparents	1182	0.059	0.000	1.000	0.236
No. of Deaths	402	8.532	0.000	1310.000	80.383
Light Damage 1	402	0.562	0.000	75.000	4.698
Light Damage 2	402	1.087	0.000	188.000	10.104
Light Damage 3	402	0.617	0.000	67.000	4.478
Serious Damage 4	402	0.299	0.000	28.000	1.960
Partial Destr. 5	402	0.358	0.000	50.000	2.822
Complete Destr. 6	402	0.194	0.000	21.000	1.475
Buildings	402	2.279	0.000	307.000	18.417
Churches	402	0.602	0.000	28.000	2.365
Schools, Hotels	402	0.072	0.000	7.000	0.507
Monuments	402	0.107	0.000	13.000	0.761
Injury WW2	1032	0.203	0.000	1.000	0.402
Had to Move during Move WW2	1041	0.094	0.000	1.000	0.292
Injury during Yug. Confl.	1103	0.104	0.000	1.000	0.306
Distance from Bosnia and Serbia	402	76.702	3.586	175.381	41.869
Road Density, 2022	402	290.220	65.652	1966.257	207.272
Ethnic Fractionalization, 1921	503	0.171	0.000	0.726	0.200
Ethnic Fractionalization, 1931	561	0.175	0.000	0.669	0.183
Ethnic Fractionalization, 1991	397	0.260	0.000	0.893	0.230
Ethnic Fractionalization, 2001	390	0.175	0.004	0.829	0.180
Ethnic Fractionalization, 2011	395	0.172	0.002	0.756	0.183
Local Gvt. Budget Transparency, 2016	395	3.233	0.000	5.000	1.418
Pct. Armed Forces, 1857	77	0.973	0.000	10.457	2.184
Pct. Armed Forces, 1900	6120	0.133	0.000	23.949	0.805
Pct. Armed Forces, 1910	5615	0.144	0.000	27.362	0.754
Pct. Armed Forces, 1931	100	81.586	35.322	98.649	15.460
Pct. Armed Forces, 1991	397	1.711	0.000	7.639	1.040

# 3 Codebook

## Table A.2: Variable Description

### Occupations and Market places in 1857

This is relevant for the proportion of doctors, writers and artists, manufacturers, merchants, fishermen, farmers (agriculture), craft workers, trade workers, day workers, lawyers, and market places. These were all calculated after digitizing the census from the Austrian Ministry of Internal Affairs (1859). The percentage is calculated after dividing the number of people in the relevant profession by the population size. The unit of analysis is kreis, comitat or regiment. For the proportion of doctors, lawyers, and markets in 1857, the units of analysis are the modern municipalities after overlaying them with the 1857 units. The proportion of doctors and lawyers were computed by dividing the number of doctors by population and multiplied by 100,000.

## Railroad and Planned Railroad Density, 1869

The variable is computed after manually georeferencing Unknown Author (1869) and drawing all the railroads as polylines. There are two variables of interest on this map – "befahrene Eisenbahnen" or "railroads in operation" and "projectierte - auch concessionirte, aber noch nicht ausgeführet Bahnen" or "projected - even concessioned, but not yet executed." The density was obtained by dividing the total length of the road per municipality polygon by the 2011 municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Thoroughfare Density, 1940

The variable is computed after manually georeferencing Generalstab des Heeres, Abt. für Kriegskarten und Vermessungswesen (1940) and drawing all the railroads as polylines. The variable of interest from this map is "Durchgangsstrasse" or "through road" or "thoroughfare". The density was obtained by dividing the total length of the road per municipality polygon by the 2011 municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

### Asphalt and Good Roads Density, 1957

The variable is computed after manually georeferencing V. Bohinec and Fr. Planina (1957) and drawing the asphalt and 'good' roads as polylines. The density was obtained by dividing the total length of the road per municipality polygon by the 2011 municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Pct. Dwellings No Water, 2011

The data is from the Croatian Bureau of Statistics (2017, pp. 157-211). I calculated the percentage of dwellings without access to water by dividing the absolute number of dwellings without access to water supply by the total number of dwellings and multiplied by 100. Therefore, the measurement unit is percentage, while the unit of analysis is municipality (općina).

## Pct. People at Risk of Poverty, 2011

Data on poverty rate is obtained from https://geostat.dzs.hr (Last checked: May 16, 2018). The exact name of the variable for income is "Distribution of the poverty risk – Income method – At risk-of-poverty rate –2011". The data is compiled based on the project titled "Mapping and Assessment of the Geographical Distribution of Poverty and Social Exclusion Risks for Small Areas of the Republic of Croatia" conducted by the Croatian Central Bureau of Statistics and the World Bank. The Standard Survey on Households, the EU-SILC Statistics on Income and Living Conditions and the Household Budget Survey conducted by the Central Bureau of Statistics are the main sources of poverty data and social exclusion. The unit of measurement is percent and the unit of analysis is municipality (općina).

## Pct. Less Educated People, 2011

Data on the share of less educated people is obtained from https://geostat.dzs.hr (Last checked: May 16, 2018). The exact name of the variable is "Population – Share of less educated persons aged 25 and over – 2011". The data is originally compiled from the 2011 Population Census. The unit of measurement is percent and the unit of analysis is municipality (općina).

## Log Area Covered by Zadrugas, 1895

The variable represents the area taken by zadrugas in yokes. The exact variable name is 'Od ukupne površine povisane g. 1895 odpada na: zadružna gosp.: postojećih zadruga' or 'Of the total area calculated in 1895: house communities: existing zadrugas in yokes.' The data is from Royal Statistical Office in Zagreb (1898). The data is measured at a village level. The unit of measurement is yokes and the unit of analysis is locality.

### Pct. Area Covered by Zadrugas/Total Area, 1895

The variable is obtained by dividing the area taken by zadrugas in yokes ('Od ukupne površine povisane g. 1895 odpada na: zadružna gosp.: postojećih zadruga') over the total area of the village ('Ukupna površina'). The data is measured at a village level. The unit of measurement is yokes and the unit of analysis is locality.

## Log Pop. in Zadrugas, 1895

The variable is obtained by multiplying the total number of people ('Broj ziletjva') by the area of zadrugas ('Od ukupne površine povisane g. 1895 odpada na: zadružna gosp.: postojećih zadruga') and then dividing everything by the area of the village ('Ukupna površina'). The data is measured at a village level. The unit of measurement is yokes and the unit of analysis is locality.

## Trust People, 2006-16

The data is collected from the 2006, 2010 and 2016 Life in Transition Survey (LiTS). The survey was designed in two stages and stratified by geographical region and level of urbanity (urban or rural areas). The question is phrased in the following way: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please answer on a scale of 1 to 5, where 1 means that you have complete distrust and 5 means that you have complete trust." The unit of analysis is the individual.

#### Trust Family, 2016

The data is collected from the 2016 Life in Transition Survey (LiTS). The survey was designed in two stages and stratified by geographical region and level of urbanity (urban or rural areas). The question is phrased in the following way: "To what extent do you trust people from the following groups - Family living with you? Please answer on a scale of 1 to 5, where 1 means that you have complete distrust and 5 means that you have complete trust." The unit of analysis is the individual.

## Trust Foreign Investors, Presidency, 2006-16

This is question "To what extent do you trust the following institutions: Foreign Investors, Presidency". Answers range from Complete distrust (1) to Complete trust (5). The unit of analysis is the individual.

## Bribery Road Police, Unemployment Benefits, 2006-16

This is question: "In your opinion, how often do people like you have to make unofficial payments or gifts in these situations? Interact with road police / Request unemployment benefits". Answers range from Never (1) to Always (5). The unit of analysis is the individual.

## Participate Demonstrations, Sign petitions, 2006-16

This is question: "How likely are you to...attend a lawful demonstration / sign petitions". Answers are 1- Have done or 0 - Might Do and Would never do". The unit of analysis is the individual.

#### Elevation

This is the mean municipality elevation obtained by overlaying a map of modern Croatian municipalities on 30 arc second (1 km) resolution elevation data included in the National Elevation Dataset by USGS. I downloaded all the dataset tiles under "ASTER GLOBAL DEM" that correspond to Croatia from https://earthexplorer.usgs.gov/ (Last checked: May 18, 2018). I created a raster dataset based on such tiles and reprojected the compiled dataset to WGS 84 / UTM zone 34N projection system. I then created zonal statistics for all the Croatian municipalities in 2011. The unit of measurement is meters, while the unit of analysis is municipality (općina).

### Slope

I calculated slope by municipality using the slope tool in ArcGIS 10.5 based on the USGS elevation raster, where higher values mean higher slope. I then calculated municipality zonal statistic. The unit of measurement is degree.

## Avg. Temperature and Precipitation, 2010

I calculated the annual temperature and precipitation for 2010, based on data from the Center for Environmental Data Analysis (http://data.ceda.ac.uk/badc/cru/data/cru\_ts/cru\_ts\_3.21/data/tmp/ - temperature and http://data.ceda.ac.uk/badc/cru/data/cru\_ts/cru\_ts\_3.21/data/pre/ - precipitation - Last checked: May 15, 2018). The dataset that I downloaded is: cru\_ts3.21.2001.2010.tmp.dat.nc.gz and cru\_ts3.21.2001.2010.pre.dat.nc.gz, respectively. The calculation of annual average temperature entailed multiple steps: (1) Converting the .nc files to geotiff files (2) Projecting the raster files to WGS 84 / UTM zone 34N projection system (3) Calculating mean zonal statistic and in cases where that was not possible (i.e. when the area of the pixel was similar in size or smaller than the area of the municipality), extracting raster values to points (municipality centroids) and joining that variable back to the municipality (polygons) (4) Calculating annual averages based on the 12 months of 2010, that are present in the original dataset. The unit of measurement is degree Celsius for temperature and millimeters of rain for rainfall.

## Maize suitability

Maize suitability value is calculated based on the maizemed raster from the Caloric Suitability for Individual Crops dataset (Galor & Özak, 2016), for rainfed agriculture under medium input. Note that the dataset contains agricultural suitability both for irrigated and rain-fed crops. The dataset is constructed based on the Global Agro-Ecological Zones (GAEZ) project of the Food and Agriculture Organization (FAO). It is available for 5' by 5' grid cells. Data is available at - https://ozak.github.io/Caloric-Suitability-Index/ (Last checked: May 15, 2018). The measurement unit is millions of kilo calories, per hectare, per year.

## Total river in km and River Density

In order to calculate river density, I downloaded the river data from the European Environment Agency. The data is available at: https://www.eea.europa.eu/data-and-maps/data/european-catchments-and-rivers-network/rivers/spatialite-file (Last checked: May 15, 2018). The relevant shapefile is main.c\_tr, within a geodatabase called "EcrRiv\_sqlite.gdb". In order to calculate river density, (1) I reprojected the shapefile to WGS 84 / UTM zone 34N projection system, (2) extracted only the rivers for Croatia, (3) intersected the rivers with the municipalities, (4) added elevation information from the elevation data from USGS (5) added that length of all the river segments and (6) obtained river density per municipality by dividing the sum of all the river segments by the area of the municipality. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Trade Route Dens., 1450

The variable is collected after manually georeferencing Magocsi (2002, p. 11) and drawing all the trade routes as polylines. In order to calculate trade route density, (1) I intersected the road polyline with the 2011 municipality polygons, (2) I added surface information (the DEM from USGS previously mentioned), (3) I added up all the segments by unique polygon id (4) and I joined the total length back to the polygons. Finally, I calculated road density by dividing the total length of the road per municipality polygon by the municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Trade Centers, 1450

The variable is collected after manually georeferencing Magocsi (2002, p. 11) and geolocating all the trade centers in Croatia. I then added all the trade centers that fall within the 2011 municipality boundaries. The measurement is therefore a simple count of trade centers, while the unit of analysis is municipality (općina).

#### Pct. Out-migration, 1857

Data on out-migration in 1857 is from the Austrian Ministry of Internal Affairs (1859) which lists the number of absent people or "abwesend." The percentage was calculated by dividing the number of people absent by the population and multiplying it by 100. The unit of analysis is kreis, comitat or regiment.

## Pct. Out-migration, 1944

Data on out-migration in 1944 is from the Draganović (1939) which lists the number of people who are absent. The percentage was calculated by dividing the number of people who are absent to the population and multiplying it by 100. The results were obtained by overlaying the 1944 districts to the 2011 municipalities.

#### Net Migration Rate, 2011

Data on migration in 2011 is from the Croatian Bureau of Statistics. The net migration rate is calculated using the following formula: N = (I - E) / M X 100, where N=Net Migration Rate; I = Number of Immigrants Entering the Area; E = Number of Emigrants Leaving the Area; M = Mid Year Population. The Mid Year Population is given by [Population at Start of Year + Population at End of Year]/2, where the Population at End of Year is given by Population at Start of Year + In-migration - Out migration + Live births - Deaths.

## Pct. Croats and Serbs, 1921, 1931, 1991, 2001, 2011

The data on ethnicity comes from a variety of sources. For 1921, I digitized the 1921 census (Yugoslavia Opšta Državna Statistika, 1932). For 1931, I digitized the 1931 census (Kraljevina Jugoslavija Opsta Državna Statistika, 1940). The unit of analysis for 1921 and 1931 is the canton or the srez. Data on percentage of Serbs and Croats is from the 1991 census which I also digitized (Republika Hrvatska, Republički zavod za statistiku, 1992). In order to match the data to Croatian municipalities in 2011, I geolocated every location from the census using Google API (6788 cities, towns and villages) and then spatially joined the towns to the municipality polygons. The unit of measurement is percent and the unit of analysis is municipality. Data on percentage of Croats and Serbs in 2001 and 2011 is from http://pop-stat.mashke.org/ (Last checked: May 15, 2018), which is obtained from the official Croatian census for 2001 and 2011. To calculate percentage of Croats and Serbs, I divided the number of Croats and Serbs, respectively by the population size at a municipality level and multiplied by 100. Therefore the unit of measurement is percent and the unit of analysis is municipality.

## Planned Railroads, 1884

The variable is computed after manually georeferencing Unknown Author (1884) and drawing all the railroads as polylines. The variable of interest on this map – "projectierte - auch concessionirte, aber noch nicht ausgeführte Bahnen" or "projected - even concessioned, but not yet executed." The density was obtained by dividing the total length of the road per municipality polygon by the 2011 municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Residential and Road Trunk Density, 2017

The data was downloaded from http://download.geofabrik.de/europe.html in March 2017. According to http://wiki.openstreetmap.org, the tag highway=trunk is used for high performance or high importance roads that don't meet the requirement for motorway. Similarly, highway=residential tag is used on roads that provide access to, or within, residential areas but which are not normally used as through routes. Most traffic on a residential road will be for the access to, or from, residential properties. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Log No. WW2 Bombs and Tons of TNT, 1939-45

The data is from the Theater History of Operations (THOR) Data: World War II – https://data.world/datamil/world-war-ii-thor-data/workspace/project-summary (Last checked: June 06, 2018). The project combines digitized paper mission reports from WW2. The records include U.S. and Royal Air Force data, as well as some Australian, New Zealand and South African air force missions. In the analysis, I use the log no. of bombs after having counted all the bombs at a district level and the log tons of TNT, based on the variable TONS\_OF\_HE. Check the section on WW2 data in the Online Appendix. The unit of analysis is municipality (opéina).

## Log Concentr. Camp Count, Concentr. Camp prisoners, 1944

The data is taken from Israeli (2013); Tomasevich (2001); Yeomans (2015). The authors indicate both the location of the concentration camps, the duration of operation, the approximate number of prisoners and deaths and who operated them (whether Ustaša, Germans or the Italians). In the analysis, I use the log of concentration camps, log of concentration camp prisoners. Note that the data on the number of prisoners and the number of deaths is likely to be incomplete due to their illicit nature. The unit of analysis is municipality (općina).

#### Log Massacre Death Count, 1944

The data is from Bjelić (2008); Federative People's Republic of Yugoslavia (1946); Goldstein (2006); Hoare (2006); Judah (2000); Narod.hr (2015); Paris (1961); Pavelic (2013); ?); Tomasevich (2001). Beyond the names of the location where the massacres occurred, I recorded the number of deaths and the name of the perpetrator, whether the Ustaše, Chetniks, Italian forces or Partisans. The unit of analysis is municipality (općina).

## Total Cooperatives, Households with No Cooperative Members, and Cooperative Plows, 1950

The data for total cooperatives or 'Broj opštih zemljoradničkih zadruga' and no. of cooperative members 'Broj domaćinstava iz kojih nijedan član nije zadrugar' was created after digitizing Federal People's Republic of Yugoslavia - Federal Statistical Office (1952a, pp. 26-33), while the data on the cooperative plows or 'Poljoprivredne sprave - plugovi svih vrsta (sem ralica)' was calculated after digitizing Federal People's Republic of Yugoslavia - Federal Statistical Office (1952b, pp. 15-48). The unit of analysis is county (srez).

## Communist Torture – Oneself / Family / Grandparents

This is question q925a, q925c, and q925d from LITS 2016: "Did the government in Croatia before [1989] [1991] engage in persecution, torture, or any acts of violence against yourself / your immediate family (parents, siblings) / grandparents?" Answers can be 0 – Not mentioned; 1 – Mentioned. The unit of analysis is the individual.

#### No. of Deaths

The data is from Sundberg & Melander (2013). This is UCDP's most disaggregated dataset, covering individual events of organized violence (phenomena of lethal violence occurring at a given time and place). These events are sufficiently fine-grained to be geo-coded down to the level of individual villages, with temporal durations disaggregated to single, individual days.

## Building Damage 1 (Light Damage) - 6 (Complete Destr.)

The data is taken from the one of the ICJ court cases, specifically the Case Concerning the Application Of The Convention On The Prevention And Punishment Of The Crime Of Genocide (Croatia V. Yugoslavia) Memorial Of The Republic Of Croatia appendices. The document is available at http://www.icj-cij.org/files/case-related/118/18184.pdf (Last accessed May 17, 2018). The relevant data is in Addendum 1: "Introductory Text to the List of War Damages of Cultural Monuments done by Ministry of Culture of the Republic of Croatia" (pp. 169-301). The data also contains information about the degree of the damages: 1 – minor superficial damage; 2 – light damage (constructional unit); 3 – light damage of portable construction; 4 – serious damage of portable construction; 5 – building partially destroyed; 6 – building completely destroyed. Every building in the document was identified geographically using Google API. The measurement unit is a simple count of all the damages recorded, while the unit of analysis is municipality (općina).

## Buildings, Churches, Schools, Hotels, Monuments

The data is taken from the one of the ICJ court cases, specifically the Case Concerning the Application Of The Convention On The Prevention And Punishment Of The Crime Of Genocide (Croatia V. Yugoslavia) Memorial Of The Republic Of Croatia appendices. The document is available at http://www.icj-cij.org/files/case-related/118/18184.pdf (Last accessed May 17, 2018). The relevant data is in Addendum 1: "Introductory Text to the List of War Damages of Cultural Monuments done by Ministry of Culture of the Republic of Croatia" (pp. 169-301.) To simplify the categories, I created the variable "Buildings" which contains category (8) buildings (farming, business, tenement, cultural...) and (1) houses, residences, villas, summer houses. Every single building in the document was identified geographically using Google API. The measurement unit is a simple count of all the damages recorded, while the unit of analysis is municipality (općina).

### Injury WW2

This is question q924a from LITS 2016: "Were you, your parents or any of your grandparents physically injured or were your parents or any of your grandparents killed during the Second World War?". Answers can be 0 – Not mentioned; 1 – Mentioned. The unit of analysis is the individual.

## Move WW2

This is question q924b from LITS 2016: "Did you, your parents or any of your grandparents have to move as a result of the Second World?". Answers can be: 0 – Not mentioned; 1 – Mentioned. The unit of analysis is the individual.

## Injury Yug. Confl.

This is question q924c from LITS 2016: "Were you or any member of your household physically injured as a result of the conflict in Yugoslavia (1991-2001)". Answers can be: 0 – Not mentioned; 1 – Mentioned. The unit of analysis is the individual.

## Distance from Bosnia and Serbia

This is the distance in km from the border with Bosnia and Serbia. The unit of analysis is the 2011 municipality.

## Road Density, 2022

The data was downloaded from http://download.geofabrik.de/europe.html in August 2022. The data contains all types of roads in Bosnia and Croatia. The density was obtained by dividing the total length of the road per municipality polygon by the 2011 municipality polygon area. The unit is decimal degree (length of the line) by squared decimal degree (area of the polygon). The unit of analysis is 2011 municipality.

## Ethnic and Religious Fractionalization in 1921, 1931, 1991, 2001, 2011

Data on ethnic fractionalization index is calculated using the Herfindahl formula for population shares and indicates the probability that two randomly drawn individuals within a country are not from the same ethnic or religious group. For 1921, I digitized the 1921 census (Yugoslavia Opšta Državna Statistika, 1932). For 1931, I digitized the 1931 census (Kraljevina Jugoslavija Opšta Državna Statistika, 1940). The unit of analysis for 1921 and 1931 is the canton or the srez. Data on the percentage of different ethnicities is from the 1991 census which I also digitized (Republika Hrvatska, Republički zavod za statistiku, 1992). Data on the percentage of different ethnicities in 2001 and 2011 is from http://pop-stat.mashke.org/ (Last checked: May 15, 2018), which is obtained from the official Croatian census for 2001 and 2011.

#### Local Gvt. Budget Transparency, 2016

The data on government budget transparency is from Ott  $et\ al.\ (2018)$  and covers 2017. The variable ascertains the quantity of budget documents published on the local government units' official websites ranging from 1 - very low - to 5 - very good.

### Pct. Armed Forces in 1857, 1900, 1910, 1931, and 1991

Data on percentage of people working in the military was calculated after digitizing the 1857 census (Austrian Ministry of Internal Affairs, 1859), the 1900 census (Royal Statistical Central Office in Budapest, 1902a), the 1910 census (Hungarian Statistical Office, 1915), the 1931 census (Kraljevina Jugoslavija Opsta Državna Statistika, 1940), the 1991 census (Republika Hrvatska, Republički zavod za statistiku, 1992). For 1857 to 1910, there is an exact variable that captures the number of people involved in the military. The variable in 1931 which includes the military is 'Javna služba, slobodna zanimanja i vojska' or 'Public service, liberal professions and the army'. The units of analysis are: 1857 - kreis, comitat or regiment; 1900 and 1910 - settlement; 1931 - Srez or canton; 1991 - (settlements aggregated at).

## Ottoman attacks

Despite the creation of the military colony, Ottomans kept attacking certain parts of the military colony during the 16th and 17th century. During those times, "many locals ran away, entire villages were deserted and numerous localities were destroyed and burned" (Blanc, 1957, p. 65). The settlements that were attacked are: Gorski Kotar, Lič, Lokve, Plaski, Lička Jesenica, Modruš, Ogulin, Gomirje, Vrbovsko, Ostarije, Delnice, Dreznica, Ravna Gora, Gvozd, Karlovac, Banija, Glina, Topusko, Jesenica, Mrkopalj, Dreznik, Bosiljevo, Kostajnica and Sisak. Nevertheless, Blanc (1957) suggests that outside of the main roads, invasion routes, isolated settlements remained intact: "Nothing is more stable than a rural population, which, in the face of all the misfortunes, all the threats, remains attached to the ancestral land and, despite the past danger, persists in cultivating the land" (Blanc, 1957, p. 69). All the municipalities that incorporate these settlements were excluded from the main analysis in the sample robustness of the analysis.

# 4 RD Assumptions Tests

## 4.1 Covariate Balance

As mentioned in the main text, the key identifying assumption for an RDD is that relevant factors besides treatment vary smoothly at the boundary (Keele & Titiunik, 2015, p. 130). To test such statement in a more rigorous way, I examine differences in important geographic characteristics: elevation, slope, annual average temperature, annual average precipitation, maize suitability (as an example of a crop relevant for the area), river length, and density of rivers per municipality. To evaluate economic outcomes prior to the creation of the border, I use maps that trace the presence of trade routes and trade centers from Magocsi (2002, p. 11). All the results use regressions of the form described in equation 1 in the main text, together with region fixed affects.

Table A.3 shows that most of the above-mentioned variables are balanced. Check the codebook section for explanations on data sources and how the variables were calculated. There is a modest difference in average temperature and river density, but the coefficients are very small relative to the mean. To make up for this imbalance, I add one additional model to the main analysis in which I include average annual temperature and river density on the right-hand side.

Table A.3: Covariate Balancing – Geography and Economy prior to the Border

					Dependent var	riable			
	Elevation	Slope	Avg. Temperature	Avg. Precipitation	Maize Suitability	Total River Length in km	River Density	Trade Route Density 1450	No. of Trade Centers 1450
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Military Territory	66.542 (50.589)	0.272 (0.331)	$-0.420^{***}$ (0.151)	4.297 (2.729)	-1,766.755 $(1,382.238)$	16.044 (14.594)	56.034* (33.187)	-0.008 (0.007)	0.003 (0.013)
Mean SD	211.316 176.607	1.477 1.626	11.277 1.074	112.664 27.975	24569.884 5781.174	36.719 51.8	338.383 164.846	$0.015 \\ 0.041$	0.005 0.07
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	402	402	399	399	402	402	402	402	402
Adjusted R <sup>2</sup>	0.327	0.516	0.495	0.872	0.359	0.213	0.117	0.062	0.002

Notes: Coefficients and municipality (opcina) clustered robust standard errors in parantheses from OLS regression. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is municipality (opcina). See codebook in the appendix for data sources and how the variables were calculated.

# 4.2 Sorting

A second assumption is that of no selective sorting. Selective migration is unlikely to be

a confounding factor. Qualitative historical accounts indicate that population movement was minimal inside the military colony both during its existence and after it was abolished. Quantitative accounts present a similar story. Table A.4 displays the differences in the percentage of out-migrants (based on the 1857 Habsburg Census), 1944 (based on a 1944 Catholic parish census), and the net migration rate in 2011. I calculate Net Migration Rate using the following formula: 1000 x (I - E) / P, where I – number of people immigrating into the country; E – number of people emigrating out of the country and P – the estimated mid-year population. For the old data, I digitized the relevant historical sources. The modern data is from the Croatian Bureau of Statistics (2011).

Table A.4: Selective migration

	Pct. Out-Migration 1857	Dependent variable Pct. Out-Migration 1944	Net Migration Rate 2011
	(1)	(2)	(3)
Military Territory	1.660	-0.329	$-0.211^*$
	(1.126)	(1.150)	(0.126)
Mean	3.431	3.478	-1.303
SD	3.347	8.802	8.802
Boundary FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Observations	86	313	392
Adjusted R <sup>2</sup>	0.088	0.325	0.355

Notes: Coefficients and County clustered robust standard errors in parantheses from OLS regression.  $^*p<0.1$ ;  $^*p<0.05$ ;  $^***p<0.01$ . The unit of analysis for the 1857 census can be city or district (stadt) or (land bezirke). The unit of analysis for the 1944 Catholic parish census is parish (zupa) and the unit of analysis for the 2011 Census is municipality (opcina). See codebook in the appendix for data sources and how the variables were calculated.

Tables A.5 and A.6 examine the extent to which the ethnic composition of the military and civilian areas changed over time. The results do not indicate any differences in 1921, 1931, 1991, 2001 and 2011. In addition, to further check if there is any significant change in the ethnic composition of the two area, as a result of the Yugoslav Wars, I also examine the percentage change in Serbs and Croats from 1991 to 2001. The results in column (5) of the two tables do not indicate any significant difference.

Table A.5: Selective migration – Pct. Serbs

			Depe	endent var	iable	
	1921	1931	1991	2001	Change '91-'01	2011
	(1)	(2)	(3)	(4)	(5)	(6)
Military Territory	3.355	4.969	1.805	-1.119	1.795	-0.507
	(3.222)	(5.607)	(2.611)	(2.611)	(1.506)	(2.067)
Mean	19.54	19.112	11.232	5.986	-5.606	6.068
SD	29.782	29.135	20.474	13.732	11.422	14.42
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	514	563	425	418	414	423
Adjusted $\mathbb{R}^2$	0.253	0.253	0.350	0.189	0.430	0.200

Notes: Coefficients and robust standard errors in parantheses from OLS regression. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The units of analysis are settlements for the corresponding censuses. See codebook in the appendix for data sources and how the variables were calculated.

Table A.6: Selective migration – Pct. Croats

			Depe	endent vari	iable	
	1921	1931	1991	2001	Change '91-'01	2011
	(1)	(2)	(3)	(4)	(5)	(6)
Military Territory	-3.331 (3.357)	-4.346 (5.959)	-2.051 (2.933)	1.301 $(2.933)$	1.795 (1.506)	0.727 $(2.067)$
Mean SD	76.721 31.058	77.518 30.249	78.696 $24.29$	87.53 17.045	9.182 12.466	87.457 $17.657$
Boundary FE Region FE	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Observations Adjusted R <sup>2</sup>	$514 \\ 0.231$	$563 \\ 0.255$	$425 \\ 0.397$	$418 \\ 0.291$	414 0.430	$423 \\ 0.318$

Notes: Coefficients and robust standard errors in parantheses from OLS regression.  $^*p<0.1; ^{**}p<0.05; ^{***}p<0.01$ . The units of analysis are settlements for the corresponding censuses. See codebook in the appendix for data sources and how the variables were calculated.

# 5 Qualitative Historical Sources about Intentional Discrimination

Figure A.7 displays a portion of the original memorandum sent by Josheph II to Marshall Hadick (president of the Hofkriegsrat between 1774 and 1790) from the Vienna War Archives together with a transliteration in German. According to the king, it was imperative for the empire to retain the services of the military colonists and, therefore, imperial support for education in the military colony should be limited. Too much education could be harmful to soldiers. In his own words:

The schools which already exist are not to be neglected for some education of the people, but this should not be carried too far as this could be rather harmful than useful for the circumstances of the natives because too much education would make the usefulness of these people [for the state] dangerous; also when selecting Staff Sergeants, one should look mainly at their virtuousness, good conduct in war and their ability, than at [their] writing or German language; which can also be observed with the officers; as there the art of writing will not be so necessary as with regular infantry regiments. That is why they will have to be relieved from unnecessary submissions and protocols (Translation from German) (Kriegs Archiv Memoirs, 1779, Folios 57-58).

The authorities' perception that too much knowledge might cause harm to the natural aptitudes of the population is also acknowledged by Vaníček, Fr. (1875, p. 580), who argues that for the "development of Greek Oriental schools, the state did nothing. [The little education that existed] was the effort of aristocracy, the metropolitan, and the clergy."

Figure A.7: Memorandum Excerpt by Joseph II to Marshall Hadick

govern zu ninigen Rufflanning In Loudow wift you Annuniflistingne, in. Jol musthen faller milt new worit yn: twinbour warehu, In fin in le Cher = firman In Pursion afaith fified nin yar za grofin diffliving Olubruing Jinfan Smitan ynfiste lif wirfun win in , wormanger In regulairan J. lan zu dispensione fryn

Die Schulen, die schon bestehen, sind zwar zu einiger Aufklärung der Leuten nicht zu vernachlässigen, jedoch müssen selbe nicht zu weit getrieben werden, da sie den Umständen der Native eherder schädlich als nützlich seyn können. weil eine gar zu große Aufklärung den Gebrauch dieser Leuten gefährlich machen würde; [?] auch

bey Auswählung der Unter Officier hauptsächlich auf deren Rechtschaffenheit,
Wohlverhalten im Krieg und ihre Erfahrenheit mehr zu sehen seyn wird,
als auf die Schreibung oder deutsche
Sprache; welches auch bey den Officiern
wird können beobachtet werden; da
die Schreibkunst dabey nicht so nothwendig, wie bey regulairen Infanterie Regimentern, seyn wird. weswegen sie dann auch von mehreren
unnöthigen Eingaben und Protocollen zu dispensiren seyn werden.

Source: Joseph II to FM Hadik, Vienna, December 9, Kriegs Archiv Memoirs (1779), Folios 57-58

# 6 Evidence: Inflexibility of Labor

As already argued in the main text, an important treatment within the military colony was the inflexibility of labor. Locals were part-time soldiers and part-time farmers. This is different from the civilian area, where serfs until 1848 and peasants after 1848, had much more freedom to seek employment or develop their own businesses. To further document labor market inflexibility, I digitized all the occupations in the Habsburg census of 1857 (Austrian Ministry of Internal Affairs, 1859). The results in Table A.7 indicate indeed that there are many more soldiers in the military colony than outside of it - column (3). A variety of other occupations are also in lower quantities compared to the civilian areas: priests, civil servants, writers and artists, lawyers, doctors, manufacturers, merchants, fishermen, craftsmen, tradesmen, and day-workers. The only category of work that is statistically indistinguishable from the civilian area is the percentage of people who are farmers. This therefore illustrates the ways in which labor market opportunities were restricted in the military area, in a way that is different from the civilian area where serfdom was in place until 1848.

Table A.7: Occupational Structure in 1857

							Dependent va	riable:					
	Pct. Priests	Pct. Civil Servants	Pct. Military	Pct. Writers Artists	Pct. Lawyers	Pct. Doctors	Pct. Manufacturers	Pct. Merchants	Pct. Fishermen	Pct. Agriculture	Pct. Workers Crafts	Pct. Workers Trade	Pct. Day Workers
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Military Territory	-0.111** (0.049)	-0.256** (0.112)	5.394*** (0.327)	-0.076* (0.041)	-0.021** (0.010)	-0.051* (0.026)	-1.363** (0.640)	-0.192** (0.084)	-1.944** (0.826)	1.786 (1.963)	-0.801* (0.422)	-0.094*** (0.031)	-0.789*** (0.208)
Mean SD	0.178 $0.192$	0.431 0.558	0.973 2.184	0.078 $0.127$	0.022 0.046	0.067 0.097	1.395 2.069	0.227 0.402	1.029 3.073	14.785 6.987	1.127 1.702	0.129 0.273	1.124 1.375
Boundary FE Region FE	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Moran eigenvectors Moran's I Residual	Yes -1.34	Yes -1.166	Yes -2.205	Yes -1.273	Yes -1.485	Yes -1.275	Yes -1.118	Yes -2.03	Yes -1.827	Yes -1.092	Yes -1.186	Yes -0.659	Yes -1.229
Observations Adjusted R <sup>2</sup>	77 -0.011	-1.100 77 -0.017	-2.205 77 0.880	-1.275 77 0.056	-1.465 77 -0.030	-1.275 77 0.098	-1.116 77 0.122	-2.03 77 -0.014	-1.827 77 0.565	-1.092 77 0.171	-1.180 77 -0.052	-0.059 77 -0.155	-1.229 77 0.181

Notes: Coefficients and Country cluster robust standard errors in parantheses from OLS regressions. \*p.0.1; \*\*p.0.05; \*\*\*p.0.01. The unit of analysis for the 1857 census can be city (stast) coefficients of Country cluster (land beginning from the 1857 census can be city (stast) coefficients of Country clusters (land beginning from the 1857 census can be city (stast) coefficients of Country clusters (land beginning from the 1857 census can be city (stast) coefficients of Country clusters (land beginning from the 1857 census can be city (stast) coefficients of Country clusters (land beginning from the 1857 census can be city (stast) coefficients and Country clusters (land beginning from the 1857 census can be city (stast) coefficients and Country clusters (land beginning from the 1857 census can be city (stast) coefficients and Country clusters (land beginning from the 1857 census can be city (stast) coefficients and Country clusters (land beginning from the 1857 census can be city (stast) coefficients and country clusters (land beginning from the 1857 census can be city (stast) coefficients and country clusters (land beginning from the 1857 census can be city (stast) coefficients and country clusters (land beginning from the 1857 census can be city (stast) coefficients and control coefficients (land beginning from the 1857 census can be city (stast) coefficients (land beginning from the 1857 census ce

# 7 Robustness: Outcomes using Different specifications

In this section, I verify the robustness of the results to different specifications and sample selections. To save space, I only do that for one modern outcomes - percentage of dwellings that do not have access to water in 2011. Similar results can be obtained for all the other modern and historical variables (available upon request). Results indicate that there are six percentage points more dwellings in the former colony that do not have access to sewer installations, which is two thirds of a standard deviation.

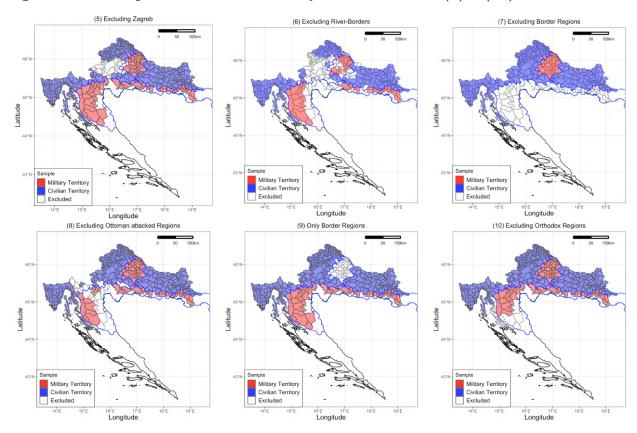
Column (1) in Table A.8 uses a local linear polynomial in latitude and longitude, column (2) adds average annual temperature, river density (the two mildly significant geographic covariates), and trade route density (as a potential confounder for levels of development prior to creation of the border), column (3) includes a local linear polynomial in distance to the boundary, and column (4) includes both latitude and longitude and distance to the military colony border. Results are similar across these specifications. Results are robust to the exclusion of Zagreb county (Zagrebačka županija) which includes the capital of Croatia (column (5)). They are also robust to the exclusion of municipalities that are closest to segments of the border that coincide with rivers (column (6)). The logic is that crossing rivers entails transportation costs, which prevents economic spill-overs between the two areas, which could in turn, explain why two areas could be economically different.

Table A.8: Access to Water

				Dependent vari	able: Pct. Dw	ellings No Water			0.1	
	Lat-Lon	Lat-Lon + Controls	Distance Brd.	Lat-Lon and Distance Bnd.	Excluding Zagreb	Excluding River-Borders	Excluding Border Regions	Excluding Ottoman attacked Regions	Only Border Regions	Excluding Orthodox Regions
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Military Territory	6.042*** (1.076)	5.031*** (1.139)	5.919*** (1.082)	6.476*** (1.108)	5.317*** (1.180)	5.070*** (1.308)	6.925*** (1.566)	5.075*** (1.166)	5.035*** (1.312)	5.683*** (1.187)
River Density		0.0003 (0.002)								
Temperature Avg.		-1.027* (0.582)								
Trade Route Dens., 1450		3.889 (7.947)								
Mean	9.181	9.181	9.181	9.181	9.181	9.181	9.181	9.181	9.181	9.181
SD	8.548	8.548	8.548	8.548	8.548	8.548	8.548	8.548	8.548	8.548
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Moran eigenvectors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Moran's I Residual	-1.732	-2.162	-1.927	-2.012	-1.466	-1.85	-1.808	-2.211	-2.371	-1.402
Observations Adjusted R <sup>2</sup>	393 $0.439$	393 0.448	393 0.441	393 0.446	358 $0.427$	298 0.483	340 0.495	373 0.454	355 0.409	386 $0.442$

Notes: Coefficients and county-clustered robust standard errors in parantheses from OLS regression. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is municipality (opcina). Data on percentage access to water is from the Croatian Bureau of Statistics (2017, pp. 157-211), based on data from the 2011 census. See codebook in the appendix for data sources and how the variables were calculated.

Figure A.8: Samples used for the Analyses in Columns (5) - (10)

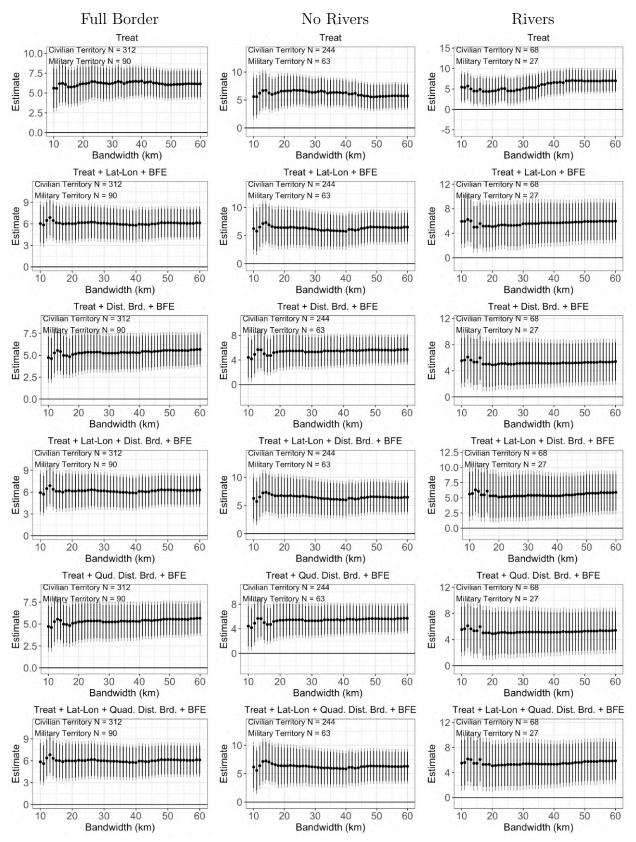


Results in Figure A.9 document the robustness of the results to a variety of bandwidth selections and functional forms: comparison of means (row 1) and a specification which includes linear latitude and longitude together with border fixed effects - BFE (row 2). The other

rows use different RD polynomials: linear distance to the boundary and BFE (row 3), both linear latitude-longitude, linear distance to the boundary and BFE (row 4), and analogous specifications using quadratic functional forms and BFE (rows 5 and 6). The results are very similar for historical and modern outcomes - available upon request.).

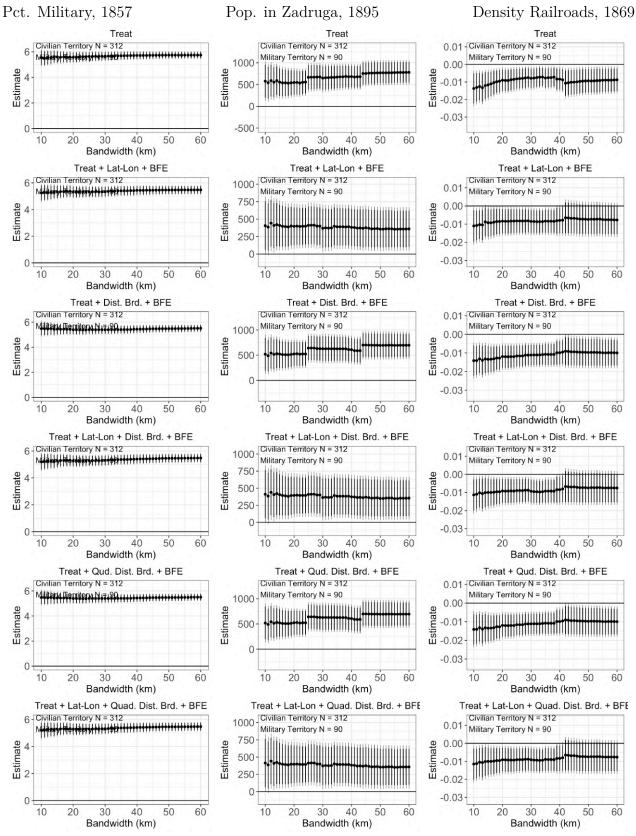
Finally, I also examine local average treatment effects for intermediary outcomes. The results in Figure A.10 indicate a visible statistically significant difference in the percentage of people involved in the military in 1857, the proportion of people living in communal properties in 1895, and in density of railroads in 1869. Thus, all these three factors were present in the treatment area.

Figure A.9: Percentage of Dwellings with no access to public water, 2011



Notes: Each sub-figure plots the point estimates of  $\gamma$  (vertical axis) from equation (1) for different bandwidth values between 10-60 kilometers in 1 km increments (horizontal axis). The estimates in the first column are based on the full border while those in the second column exclude municipalities closest to boundary segments A22

Figure A.10: Intermediary Outcomes



Notes: Each sub-figure plots the point estimates of  $\lambda$  (vertical axis) from equation (1) for different bandwidth values between 10-60 kilometers in 1 km increments (horizontal axis). Thin lines stemming from the point estimates show 95% confidence intervals while the slightly thicker lines show 90% confidence intervals. The panels in different rows correspond to different polynomial functions for geographic location.

## 8 Additional Results: Historical Access to Public Goods

In this section, I show that limited infrastructural investment and poverty persisted over time. First, I use data from the 1857 census to estimate the effects of the military colony for access to state infrastructure and economic prosperity close to the time of the dissolution of the military colony. The results indicate that the military colony has fewer marketplaces – column (1), a lower proportion of lawyers and notaries to the total population – column (2), a lower proportion of doctors to the total population – column (3).

Table A.9: Effects of the military colony on 1857 outcomes

		Dependent variable:	
	No. Marketplaces, 1857	Prop. Lawyers and Notaries, 1857	Prop. Doctors, 1857
	(1)	(2)	(3)
Military Territory	$-10.445^{***}$	$-10.467^{***}$	$-24.834^{***}$
	(0.297)	(0.594)	(1.001)
Mean	8.129	11.774	40.502
SD	5.592	10.683	34.345
Boundary FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Moran eigenvectors	Yes	Yes	Yes
Moran's I Residual	-3.461	-3.692	-2.853
Observations	402	402	402
Adjusted $\mathbb{R}^2$	0.943	0.960	0.983

Notes: Coefficients and county-clustered robust standard errors in parantheses from OLS regression.  $^*p<0.1$ ;  $^*p<0.05$ ;  $^{***}p<0.01$ . The unit of analysis is municipality (opcina) after overlaying them with 1857 units (bezirke). The data for the dependent variables is from Austrian Ministry of Internal Affairs (1859). Dependent variables are standardized. See codebook for details.

In order to evaluate how the lack of government provided goods persisted both during the existence of the colony and afterwards, I digitized a series of historical maps depicting public roads and railroads. Table A.10 considers density (length of polyline divided by the area of municipality) of railroads in 1869, 1884, of roads (or thoroughfares) in 1940, of asphalt roads in 1957 and of residential and road tracks in 2017. The results indicate that roads and railroads are less dense in the military colony both historically and to the modern day.

Table A.10: Historical roads and railroads

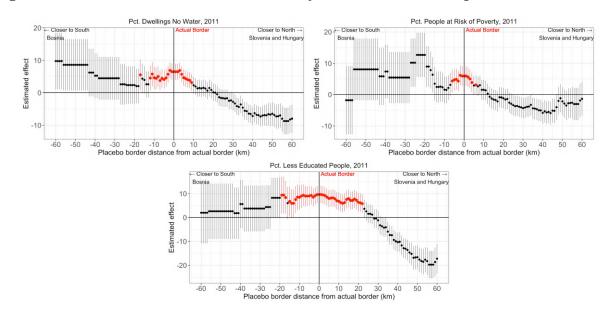
				Depend	lent variable			
	Railroad Density 1869	Planned Railroad Density 1869	Planned Railroad Density 1884	Thoroughfare Density 1940	Asphalt Road Density 1957	Good Road Density 1957	Residential Road Density 2017	Road Track Density 2017
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Military Territory	-0.009*** (0.003)	-0.011* (0.006)	$-0.009^*$ (0.005)	-0.021*** (0.007)	-0.011* (0.006)	-0.014** (0.007)	-0.148*** (0.046)	$-0.123^{**}$ $(0.059)$
Mean	0.007	0.022	0.023	0.047	0.026	0.036	0.439	0.685
SD	0.03	0.049	0.055	0.084	0.075	0.063	0.726	0.665
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Moran eigenvectors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Moran's I Residual	-2.323	-2.841	-1.64	-2.354	-2.507	-2.687	-2.708	-2.187
Observations	402	402	402	402	402	402	402	402
Adjusted R <sup>2</sup>	0.383	0.445	0.298	0.362	0.496	0.355	0.435	0.787

Notes: Coefficients and robust standard errors in parantheses from OLS regression. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is the 2011 municipality. Data is based on EigenthumVerlag1869, EigenthumVerlag1884, Generalstab des Heeres, Abt. für Kriegskarten und Vermessungswesen (1940); V. Bohinec and Fr. Planina (1957) and Open Street Maps. Every regression includes the following covariates: a linear polynomial in latitude and longitude, distance to Zagreb, and boundary segment FE.

## 9 Falsification Tests

This section provides a test for whether one can interpret the border sample analysis as a 'historical experiment' where the Habsburg military colony affiliation is 'randomly assigned.' Such test is derived from regression discontinuity analysis (Imbens & Lemieux, 2008; Lee & Lemieux, 2010). For this, I created "placebo" borders at 1-kilometer intervals from the actual military colony, then reran the local linear regression tests. This approach is similar to that used by Lee & Schultz (2012). The results presented in Figure A.11 show exactly how many kilometers north and how many kilometers south, a different border location would still yield a significant result. The figures depict the estimated coefficients for access to water, percent people who are at risk of poverty, and share of less educated people, all for 2011, along with their 95 percent confidence intervals. This is from a series of tests using the actual border and placebo borders in increments of 1 km. The narrowest placebo area is for access to water and for poverty: one can move the border only up to 10km north and 10km south, which is less than one half of a standard deviation of the distance to the military colony border, for the effect still to hold. Any movement beyond that would render the results insignificant. The widest placebo area is for share of less educated people: one can move the border only up to 20km north and 20km south for the effects still to hold, which is one standard deviation in the municipalities' distance to the border.

Figure A.11: The estimated discontinuity at the actual and placebo borders



# 10 Alternative Explanations

As already indicated in the main text, the main findings for the effect of military colonialism on state infrastructure could be the result of a variety of sources of post-treatment bias. I group them in three categories: (1) temporal intermediary treatment factors, that could have affected the treatment and the control group differentially - these are discussed in subsection 10.1; (2) structural treatment factors, that could (have) impact(ed) the treatment group simply by being in a border area - discussed in subsection 10.2; (3) alternative mechanisms by which military colonialism affected the way the state behaves in the former military colony discussed in subsection 10.3.

# 10.1 Temporal intermediary factors: Historical Events

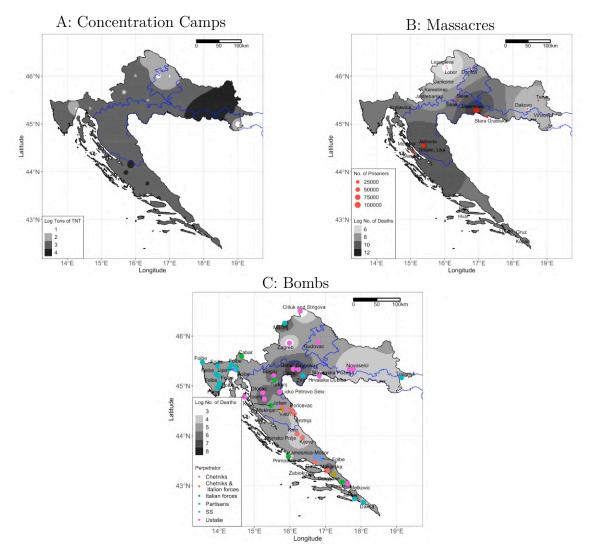
First, there have been many important historical events that could be confounding the effect on the provision of public infrastructure. Such events include Ottoman attacks. This should be of limited concern, given that the main analyses do not include municipalities that are contiguous with the Ottomans Empire. To further alleviate this concern, I also created a list of all settlements that have been attacked by the Ottomans at any point in time, based on accounts by historians. The results remain virtually unchanged (see column (8) in Table A.8).

## 10.1.1 Effect of World War 2

Other kinds of intermediary factors include the Ustaša regime being in power (1930-1945) - a Croatian ultranationalist and ultra-Fascist organization, whose members organized massacres and built concentration camps to exterminate thousands of Serbs, Jews, and Roma (Tomasevich, 2001). Charnysh & Finkel (2017) suggests that the presence of concentration camps could lead to a real estate boom in the surrounding communities, which in turn, might affect development. In order to evaluate such possibility, I compiled a list of all concentration camps that were built by the Ustaša regime, prisoners of concentration camps, and massacre death counts based on historical accounts. These are depicted in panel A and B in Figure A.12.

See the codebook for a full description on the data sources and how the data was collected. The sources include: Hoare (2006); Israeli (2013); Paris (1961); Pavlović & Pavlowitch

Figure A.12: Concentration Camps, Massacres, and Bombs in WW2 Croatia



(2008); Tomasevich (2001); Yeomans (2015). Results in Table A.11 indicate a lower number of concentration camps and concentration camp prisoners in the former military colony area, and no difference when it comes to massacre count. At the same time, it is not the case that Allied powers (US and Britain) bombed one area more than the other (see columns (1) and (2) of Table A.11 and panel C in Figure A.12.

Table A.11: Effects of World War 2

	Dependent variable:					
	Log. No. Bombs	Log. Tons TNT	Log Concentration Camp Count	Log Concentration Camp prisoners	Log Massacre Death Count	
	(1)	(2)	(3)	(4)	(5)	
Military Territory	-0.220 $(0.756)$	0.763 $(0.736)$	$-2.428^{**}$ $(0.965)$	$-0.439^{**}$ $(0.214)$	0.235 $(0.158)$	
Mean	0.116	0.186	0.026	0.173	0.305	
SD	0.51	0.96	0.14	1.227	1.221	
Boundary FE	Yes	Yes	Yes	Yes	Yes	
Region FE	Yes	Yes	Yes	Yes	Yes	
Observations	402	402	402	402	402	
Adjusted $\mathbb{R}^2$				0.027	0.050	
Akaike Inf. Crit.	277.675	258.914	105.975			

Notes: Results are coefficients and standard errors from negative binomial models. \*p<0.1; \*\*p<0.05; \*\*\*\*p<0.01. The unit of analysis is municipality (opcina). See codebook for data sources and how the variables were calculated.

## 10.1.2 Effect of Communist Collectivization and Repression

Communism was in place in Croatia between 1945 and 1992. An important part of the communist program was the collectivization of agriculture. Given that zadrugas persisted much longer in the military colony, one could argue that municipalities in the treatment group might have been collectivized more extensively. In order to evaluate such hypothesis, I collected data on the number of cooperatives or "Broj opštih zemljorad-ničkih zadruga" and the number of households with no cooperative members or "Broj domaćinstava iz kojih nijedan član nije zadrugar" from Federal People's Republic of Yugoslavia - Federal Statistical Office (1952a, pp. 10-40). In addition, I also collected data on the number of cooperative plows or "Poljoprivredne sprave - plugovi svih vrsta (sem ralica)" from Federal People's Republic of Yugoslavia - Federal Statistical Office (1952b, pp. 15-48). The results displayed in Table A.12 do not indicate any difference in the level of collectivization between the former military colony and the civilian area.

Table A.12: Effects of Collectivization

	Dependent variable:				
	Total Cooperatives 1950	Households with No Cooperative Members 1950	Cooperative Plows 1950		
	(1)	(2)	(3)		
Military area	-1.665 (2.599)	$ -770.969 \\ (671.109) $	136.665 (121.381)		
Mean SD	18.051 9.806	831.705 1300.489	344.226 550.943		
Boundary FE	Yes	Yes	Yes		
Region FE	Yes	Yes	Yes		
Observations	78	78	93		
Adjusted R <sup>2</sup>	0.299	0.186	0.311		

Notes: Coefficients and robust standard errors in parantheses from OLS regressions. p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is canton (srez). See codebook for data sources and how the variables were calculated.

Communist regimes could also be repressive towards their citizens, despite the fact they may not be as repressive as personalist or military regimes (Davenport, 2007). Results in

Table A.13 do not indicate that the communist authorities repressed violently the inhabitants living in the territory of the former colony. The results are based on data from LITS - EDBR (2016).

Table A.13: Perception of Communist Torture in 2016

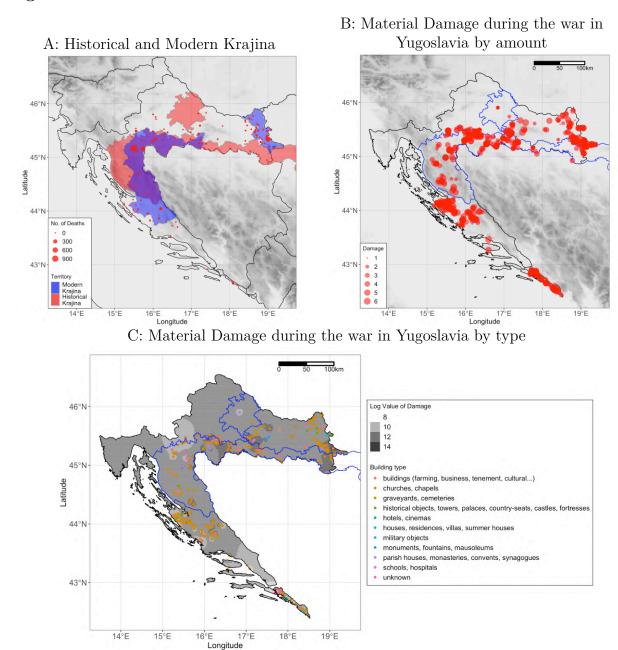
	Dependent variable:				
	Torture against Oneself	Torture against Family	Torture against Grandparents		
	(1)	(2)	(3)		
Military Territory	-0.006	-0.009	-0.020		
	(0.008)	(0.031)	(0.018)		
Mean	0.003	0.059	0.019		
SD	0.058	0.236	0.138		
Boundary FE	Yes	Yes	Yes		
Survey Year FE	Yes	Yes	Yes		
Demographic Covariates	Yes	Yes	Yes		
Observations	912	912	912		
Adjusted $\mathbb{R}^2$	-0.001	0.078	-0.003		

Notes: Coefficients and robust standard errors in parantheses from Logit regression. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is the individual. See codebook for data sources and how the variables were calculated.

## 10.1.3 Effect of Yugoslav Wars

The Yugoslav Wars are a series of ethnic conflicts, wars of independence fought in the former Yugoslavia between 1991 to 2001 (Pavković, 2011). The biggest concern is whether the territory of the military colony coincides with the self-declared Republic of Serbian Krajina. It turns out that only 44% of the territory of the Republic of Serbian Krajina coincides with the Habsburg Military Colony (see panel A in Figure A.13). In addition, the Habsburg Military colony consisted of not only Serbs, but also Croats, Germans, and Hungarians (O'Reilly, 2006; Rothenberg, 1966). The second concern is whether the area of the former military colony might have been more affected by the war in the form of material destruction and human loss. The maps in Figure A.13 do not indicate that areas of the historical military zone were more likely to be attacked.

Figure A.13



To evaluate this more systematically, the results in Table A.14 indicate no differential effect in the former military colony when it comes to the number of deaths (column (1)) based on data from Sundberg & Melander (2013), the number of buildings destroyed based on the gravity of the damage (columns (2) - (7)) or the number of buildings depending on their type (columns (8)-(11)). In all likelihood, the results suggest fewer buildings attacked or destroyed on the military colony side. The results are based on data from documents published by the International Court of Justice (2001).

Table A.14: War in Yugoslavia

Dependent variable:										
No. of Deaths	Light Damage 1	Light Damage 2	Light Damage 3	Serious Damage 4	Partial Destr. 5	Complete Destr. 6	Buildings	Churches	Schools	Monuments
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
-0.821** $(0.385)$	-1.402** (0.681)	-1.028* $(0.544)$	$-2.187^{***}$ $(0.597)$	-0.732 $(0.720)$	$-1.157^*$ $(0.678)$	-0.698 $(0.825)$	-1.880*** $(0.676)$	-0.173 $(0.587)$	-1.378 (1.256)	-2.005*** $(0.529)$
0.303 0.991	0.562 4.698	1.087 10.104	0.617 4.478	0.299 1.96	0.358 $2.822$	0.194 1.475	2.279 18.417	0.602 2.365	0.072 $0.507$	0.107 0.761
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
										402 201.818
	Deaths (1) -0.821** (0.385) 0.303 0.991 Yes Yes 402	Deaths   Damage 1   (1)   (2)     (2)     (-0.821**   -1.402**   (0.385)   (0.681)   (0.303   0.562   (0.991   4.698   Yes   Yes	Deaths         Damage 1         Damage 2           (1)         (2)         (3)           -0.821**         -1.402**         -1.028*           (0.385)         (0.681)         (0.544)           0.303         0.562         1.087           0.991         4.698         10.104           Yes         Yes         Yes           Yes         Yes         Yes           402         402         402	Deaths         Damage 1         Damage 2         Damage 3           (1)         (2)         (3)         (4)           -0.821**         -1.402**         -1.028*         -2.187****           (0.385)         (0.681)         (0.544)         (0.597)           0.303         0.562         1.087         0.617           0.991         4.698         10.104         4.478           Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes           402         402         402         402	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Serious Damage 4           (1)         (2)         (3)         (4)         (5)           -0.821**         -1.402**         -1.028*         -2.187***         -0.732           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)           0.303         0.562         1.087         0.617         0.299           0.991         4.698         10.104         4.478         1.96           Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes           402         402         402         402         402	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Serious Damage 4         Partial Destr. 5           (1)         (2)         (3)         (4)         (5)         (6)           -0.821***         -1.402**         -1.028*         -2.187***         -0.732         -1.157*           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)         (0.678)           0.303         0.562         1.087         0.617         0.299         0.358           0.991         4.698         10.104         4.478         1.96         2.822           Yes         Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes           402         402         402         402         402	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Light Damage 4         Partial Destr. 5         Complete Destr. 6           (1)         (2)         (3)         (4)         (5)         (6)         (7)           -0.821***         -1.402**         -1.028*         -2.187***         -0.732         -1.157*         -0.698           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)         (0.678)         (0.825)           0.303         0.562         1.087         0.617         0.299         0.358         0.194           0.991         4.698         10.104         4.478         1.96         2.822         1.475           Yes         Yes         Yes         Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes         Yes         Yes         Yes           402         402         402         402         402         402         402         402         402	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Light Damage 4         Partial Destr. 5         Complete Destr. 6         Buildings           (1)         (2)         (3)         (4)         (5)         (6)         (7)         (8)           -0.821**         -1.402**         -1.028*         -2.187***         -0.732         -1.157*         -0.698         -1.880***           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)         (0.678)         (0.825)         (0.676)           0.303         0.562         1.087         0.617         0.299         0.358         0.194         2.279           0.991         4.698         10.104         4.478         1.96         2.822         1.475         18.417           Yes         Yes         Yes         Yes         Yes         Yes         Yes         Yes           Yes         Yes         Yes         Yes         Yes         Yes         Yes         Yes           402         402         402         402         402         402         402         402         402	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Light Damage 4         Serious Damage 4         Partial Destr. 5         Complete Destr. 6         Buildings         Churches           (1)         (2)         (3)         (4)         (5)         (6)         (7)         (8)         (9)           -0.821**         -1.402**         -1.028*         -2.187***         -0.732         -1.157*         -0.698         -1.880***         -0.173           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)         (0.678)         (0.825)         (0.676)         (0.587)           0.303         0.562         1.087         0.617         0.299         0.358         0.194         2.279         0.602           0.991         4.698         10.104         4.478         1.96         2.822         1.475         18.417         2.365           Yes         Yes	No. of Deaths         Light Damage 1         Light Damage 2         Light Damage 3         Light Damage 4         Serious Damage 4         Partial Destr. 5         Complete Destr. 6         Buildings         Churches         Schools           (1)         (2)         (3)         (4)         (5)         (6)         (7)         (8)         (9)         (10)           -0.821***         -1.402**         -1.028*         -2.187****         -0.732         -1.157*         -0.698         -1.880****         -0.173         -1.378           (0.385)         (0.681)         (0.544)         (0.597)         (0.720)         (0.678)         (0.825)         (0.676)         (0.587)         (1.256)           0.303         0.562         1.087         0.617         0.299         0.358         0.194         2.279         0.602         0.072           0.991         4.698         10.104         4.478         1.96         2.822         1.475         18.417         2.365         0.507           Yes         Yes

Notes: Coefficients and standard errors in parantheses from a negative binomial. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is municipality (opcina). See codebook for data sources and how the variables were calculated.

To reinforce the results on the effects of WW2 and the Yugoslav Wars, I also use perception data from LITS (2016) to analyze whether descendants of the military colonists are more likely to respond that they or their ancestors were targeted as a result of these events - see Table A.15. The results indicate that the respondents or their families were not more likely to report injury or having had to move because of WW2. There is also no systematic difference in perception about injury or forced movement as a result of the conflict in Yugoslavia.

Finally, another concern related to the effect of Yugoslav Wars is whether the differences in investment in infrastructure are driven by the fact that many Serbs had to leave during the war, leading to shortages in human capital. In order to deal with this concern, I use data from the censuses from 1991 (before the conflict) and 2001 (after the conflict) and restrict the analysis to municipalities where the absolute value of the percentage change in Serbs is less than 5%, in other words, where there is a minimal change in the Serbian ethnic composition. The main results for access to public goods remain largely unchanged (available upon request).

Table A.15: Effect of Wars – perceptions

	Dependent variable:					
	Injury during WW2	Had to Move during WW2	Injury during Yugoslav Conflict			
	(1)	(2)	(3)			
Military Territory	0.080 $(0.057)$	-0.084 (0.281)	0.060 $(0.041)$			
Mean	0.203	0.094	0.104			
SD	0.402	0.292	0.306			
Boundary FE	Yes	Yes	Yes			
Survey Year FE	Yes	Yes	Yes			
Demographic Covariates	Yes	Yes	Yes			
Observations	794	42	850			
Adjusted $\mathbb{R}^2$	0.096	-0.030	0.056			

Notes: Coefficients and robust standard errors in parantheses from Logit. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The unit of analysis is the individual. See codebook for variable descriptions.

# 10.2 Structural Treatment factors: Military Colonialism as a Physical Border

The second set of alternative explanations focus on structural factors. The link between military colonialism and economic development could simply be the result of the military colony being placed at the border (initially with the Ottoman Empire and subsequently, Bosnia). A large literature suggests that borders could be spaces of the fugitives and state runaways (Scott, 2010), or spaces co-administered by contiguous nations, blurring the space of sovereignty (Carter & Goemans, 2014; Longo, 2018; Lee, 2020), nationality (Sahlins, 1989) and ethnicity (Cederman et al., 2009; Gleditsch, 2007; Michalopoulos & Papaioannou, 2016). In addition, contested borders are typically associated with lower economic outputs, due to the higher economic transaction costs (Simmons, 2005; Wolf et al., 2011).

To reiterate, the municipalities that are directly adjacent to the Ottoman/Bosnian border are not included in the analysis. However, to further mitigate the concern about the effect of the border as a physical space that could be directly correlated with economic output (e.g.: borders are often contested, and see military action, or illegal crossings or trade), I pursue three strategies.

The first one is to investigate heterogeneous treatment effects by interacting the treatment variable with the variable that captures the distance to the Ottoman Empire/Bosnia. The results visible in Table A.16 provide mixed conclusions about such an effect. For percentage of dwelling with no access to water, the interaction effect between the military territory and the distance to Bosnia is statistically insignificant. In the case of percentage of people at risk of poverty and share of less educated people, the results are inconclusive. Specifically, the number of people who are at risk of poverty becomes smaller in closer proximity to the border while the share of less educated people becomes higher at closer distances from the Bosnian border. Both of these effects are statistically significant but small in terms of magnitude when compared to the mean and standard deviation. Given the fact that for one variable the interaction is insignificant and for the other two the interaction effect is contradictory, the

heterogeneous treatment effects are inconclusive.

Table A.16: Effect of Distance to the Ottoman/Bosnia border

		Dependent variab	le
	Pct. Dwellings No Water 2011	Pct. People at Risk of Poverty 2011	Pct. Less Educated People 2011
	(1)	(2)	(3)
Military Territory	3.129**	6.855***	5.182*
	(1.563)	(1.558)	(2.709)
Military Territory x Distance Bosnia in km	0.036	-0.095***	0.061
	(0.026)	(0.032)	(0.046)
Distance Bosnia in km	-0.076	-0.190***	$-0.103^*$
	(0.051)	(0.037)	(0.056)
Mean	9.181	24.759	43.948
SD	8.548	12.625	13.391
Boundary FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Moran eigenvectors	Yes	Yes	Yes
Moran's I Residual	-1.421	-2.082	-2.132
Observations	393	395	395
Adjusted R <sup>2</sup>	0.435	0.566	0.528

Notes: Coefficients and County clustered robust standard errors in parantheses from OLS regression.  $^*p<0.1$ ;  $^*p<0.05$ ;  $^{***}p<0.01$ . The unit of analysis is municipality (opcina). See codebook in the appendix for data sources and how the variables were calculated.

The second strategy to mitigate whether the results are driven by border effects is to investigate whether lower economic outcomes are also visible in what is today Bosnia (the former Ottoman Empire), at the border with Croatia. In other words, could it be the case that the results are driven by "international border" effects? In order to answer that question, I conduct two falsification exercises: 1) an exercise in which I compare municipalities in Bosnia adjacent to the border in Croatia to the other municipalities in Bosnia (see map 3 in Figure A.14), and 2) another exercise in which I compare the former military colony in Croatia to the municipalities in Bosnia in the immediate adjacency to Croatia. The economic outcome which I investigate are modern roads that were collected from Open Street Maps in August, 2022. The results together with the maps of the samples used are visible in Table A.17 and Figure A.14. Consistent with the previous results, the analyses indicate that modern roads are less dense in the territory of the military colony (column (1)). These are also visible

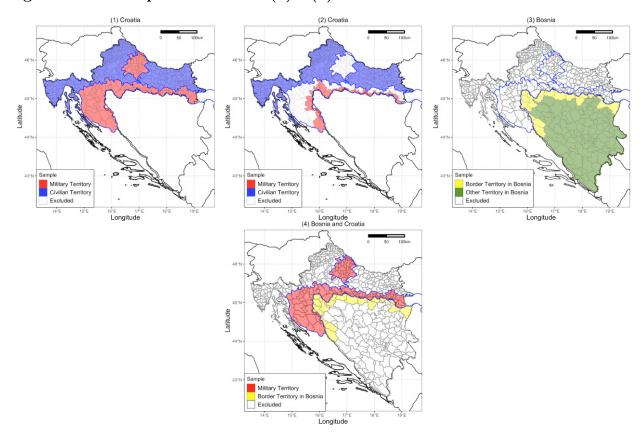
when the military colony is simply restricted to the municipalities adjacent to the border with Bosnia (column (2)). When it comes to comparing border municipalities in Bosnia with the rest of the Bosnian territory, the results are not statistically significant (column (3)), providing limited evidence for international border effects. In other words, if the results in Croatia are driven by international border effects, the results for the municipalities in the immediate adjacency to Croatia should be significant. The results of no international border effects are further reinforced by the findings in column (4), which suggest that even when comparing the municipalities adjacent to Croatia with the military colony, the locations in the military colony are indeed worse-off. In this case, if international borders had an effect, there should not have been any statistically significant difference between the military area and the territory adjacent to Croatia.

Table A.17: International Border Effects

	Dependent variable: Road Density, 2022 Specification						
	Croatia	Croatia	Bosnia	Bosnia and Croatia			
	(1)	(2)	(3)	(4)			
Military Territory	$-142.850^{***}$ $(20.911)$	$-138.216^{***}$ (42.596)		-32.221** (16.145)			
Border Territory in Bosnia	` ,	,	-15.762 (42.411)	,			
Mean	283.32	311.14	225.53	184.14			
SD	203.53	218.93	171.43	66.03			
Observations	430	340	141	137			
Adjusted R <sup>2</sup>	0.096	0.027	-0.006	0.021			

Notes: Coefficients and standard errors in parantheses from OLS regression.  $^*p<0.1; ^{**}p<0.05; ^{***}p<0.01$ . The unit of analysis is municipality (opcina). Data captures modern road density from Open Street Map.

Figure A.14: Samples - Columns (1) - (4)



The third strategy to further investigate border effects, is to run placebo tests to ascertain the extent to which running any line (that has the same shape as the line that divided the Habsburg civilian area from the military colony) in a north-south direction would generate a similar effect. To assess this, I re-estimated the models for the main outcomes of interest at 1-kilometer intervals from the actual military colony. The tests suggest that similar results could only be obtained if one moves the border line up to 10-15km (see Figure A.11). This re-enforces the idea that the results are driven by the line dividing the civilian area from the military colony, located in the middle of the country, as opposed to proximity to the border with Ottoman Empire/Bosnia.

#### 10.3 Alternative Mechanisms: Civic Society versus Government

The final set of alternative explanations have to do with alternative mechanisms by which people have lower access to public goods. First, it could be the case that low involvement in public affairs is caused by the ethnic heterogeneity rather than the lack of horizontal ties beyond extended family communities (caused by institutionalized zadrugas). As already indicated, the military colony was inhabited mostly by Serbs, Croats, Hungarians, and Germans (O'Reilly, 2006; Rothenberg, 1966). Previous research showed that heterogeneous communities tend to cooperate less, which is why they need the state for investment in infrastructure (Charnysh, 2019). The results in Table A.18 do not indicate significant differences between the military colony and the civilian area when it comes to ethnic/religious fractionalization in 1921, 1931, 1991, 2001 and 2011. This renders little possibility to the idea that ethnic fractionalization should be connected to economic development.

The second alternative mechanism has to do with the persistence of the military as an occupation in the former colony, which in turn might have distracted the attention of locals from lobbying the government for infrastructural investment and from being involved in public affairs. In order to eliminate such hypothesis, I collected and digitized data from the following sources: Royal Statistical Central Office in Budapest (1902b, 1913); Kraljevina Jugoslavija Opsta Državna Statistika (1940); Republika Hrvatska, Republički zavod za statistiku (1992). Results in Table A.19 do not indicate that the military colony is more likely to be populated

Table A.18: Ethnic/Religious Fractionalization and Government Transparency

	Dependent variable							
	Religious Fractionalization 1921	Ethnic Fractionalization 1931	Ethnic Fractionalization 1991	Ethnic Fractionalization 2001	Ethnic Fractionalization 2011	Local Government Transparency, 2016		
	(1)	(2)	(3)	(4)	(5)	(6)		
Military Territory	0.024 $(0.019)$	0.035 $(0.028)$	-0.013 $(0.057)$	0.007 $(0.057)$	0.007 $(0.044)$	0.156 (0.183)		
Mean	0.174	0.175	0.26	0.175	0.172	3.233		
SD	0.185	0.183	0.23	0.18	0.183	1.418		
Boundary FE	Yes	Yes	Yes	Yes	Yes	Yes		
Region FE	Yes	Yes	Yes	Yes	Yes	Yes		
Observations	514	561	397	390	390	395		
Adjusted R <sup>2</sup>	0.210	0.290	0.484	0.401	0.401	0.036		

Notes: Coefficients and robust standard errors in parantheses. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. The units of analysis are settlements for the corresponding censuses. See codebook in the appendix for data sources and how the variables were calculated.

with military personnel after its dissolution. There is no significant difference in the percentage of people who are involved in the military in 1931, and 1991.

Table A.19: Effect of Being involved in the Military Affairs

	Dependent variable:						
	Pct. Military	Pct. Military	Pct. Military	Pct. Armed Forces			
	1857	1900	1910	1931	1991		
	(1)	(2)	(3)	(4)	(5)		
Military Territory	5.212***	0.057	0.106	-0.187	-0.177		
	(0.457)	(0.204)	(0.138)	(1.113)	(0.132)		
Mean	0.973	0.298	0.25	85.556	1.757		
SD	2.184	1.638	1.118	10.802	1.032		
Boundary FE	Yes	Yes	Yes	Yes	Yes		
Survey Year FE	Yes	Yes	Yes	Yes	Yes		
Demographic Covariates	Yes	Yes	Yes	Yes	Yes		
Observations	77	475	498	559	418		
Adjusted R <sup>2</sup>	0.745	-0.006	-0.003	0.267	0.212		

Notes: Coefficients and County clustered robust standard errors in parantheses from OLS regressions. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. All regressions include a linear RD polynomial in latitude and longitude, a control for distance to Zagreb, and boundary segment fixed effects. See codebook for data sources and how the variables were calculated.

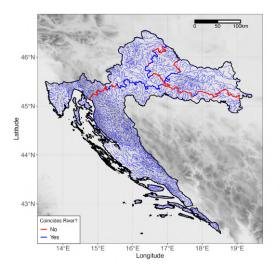
The third alternative mechanisms has to do with the role of local governments or the supply side of the story. Previous research on imperial extraction found that through the delegation of power by the imperial elites to local authorities, local elites become less accountable, more authoritarian and less likely to invest in infrastructure (Lowes & Montero, 2021; Mamdani, 1996; Nathan, 2019). While there is no data available that captures perfectly the performance of local bureaucrats, data on local government transparency could be used as a proxy for local government performance. It could be the case that local governments prevent "active citizens'

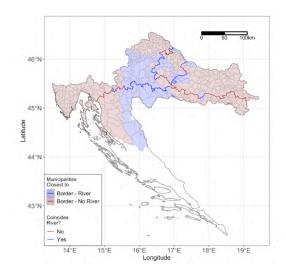
participation in taking decisions on the collection and spending of local funds" (Ott *et al.*, 2018, p. 2). The results in column 6 in Table A.18 do not indicate that local governments in the military colony are any more or any less transparent than those in the civilian area.

#### 11 Placement of the Border

As already argued in the main text, the placement of the border was the result of both socioeconomic interests and the presence of natural features such as rivers. One important concern
is that the socio-economic interests might be related to subsequent developmental outcomes
in a way that is unrelated to the policies adopted in the border region. In order to evaluate
that, I identified the segments of the border that coincide with rivers and subsequently ran
analyses on samples made out of (1) municipalities that are close to river-borders and (2)
municipalities that are close to non-river-borders. The logic for that differentiation is that if
the results also hold for sections of the border which coincide with rivers, that would mitigate
to some extent the possibility that the socio-economic interests even prior to the creation
of the border might be related to subsequent developmental outcomes, irrespective of the
subsequent policies which were adopted in the border area.

Figure A.15: The Border and Coincidence with Rivers

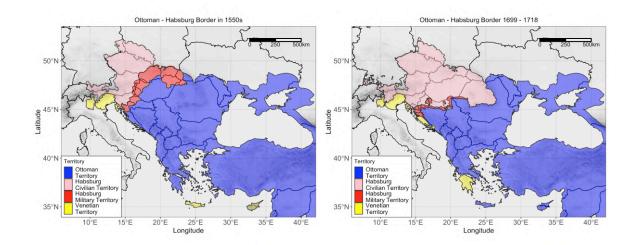


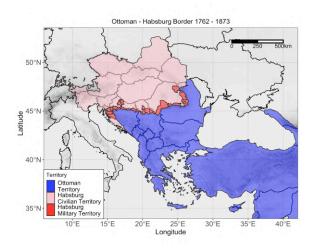


### 12 The Evolution of the Border

The Military Colony evolved over time. While initially Ferdinand I (1556-1564) sent mercenary troops to help defend the Habsburg territories against the Ottoman, such measure proved economically unsustainable. Therefore, he started giving locals and refugees land in exchange for military service. The territory inhabited by them started to be called the *Military Colony* and stretched from what is today Croatia, all the way into Hungary, part of Slovakia, Poland and Romania (see map below). The shape of the military colony continued to change with the ever changing border between the Habsburgs and the Ottomans until it reached a somewhat stable shape in 1699 after the Treaty of Karlowitz. The military colony was always placed where the Habsburg Empire ended and where the Ottoman Empire began. The map for the very first frontier was created based on Magas (2015, p. 258) and Pálffy (2009, p. 94). For the second configuration of the border between 1699 and 1718, I used Wessely (1973). For the third map, I used the most precise borders of the colony available, which are visible in the Josephine maps (mapire.eu - Last checked: October, 13, 2021).

Figure A.16





## 13 LITS Data and Analysis

The public opinion survey is based on data from the 2006, 2010, and 2016 Life in Transition Survey organized by the European Bank for Development and Reconstruction. The survey was designed in two stages by geographical region. The map in Figure A.17 shows the placement of respondents' locations and the historical border area. The left-hand map displays the location of the Primary Sampling Units (PSUs) for all the survey years in 2006, 2010, and 2016, while the map on the right displays the number of respondents based on proximity to the border: 20, 40, and 60 km. Note that there are approximately 20 respondents for every sampling unit.

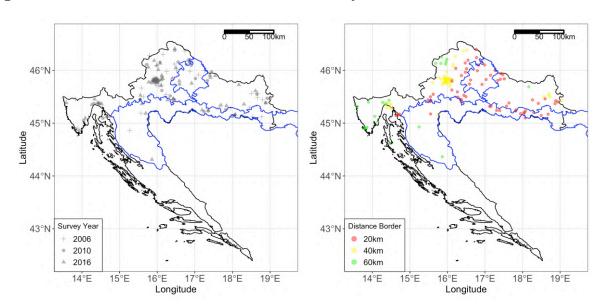
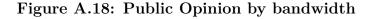
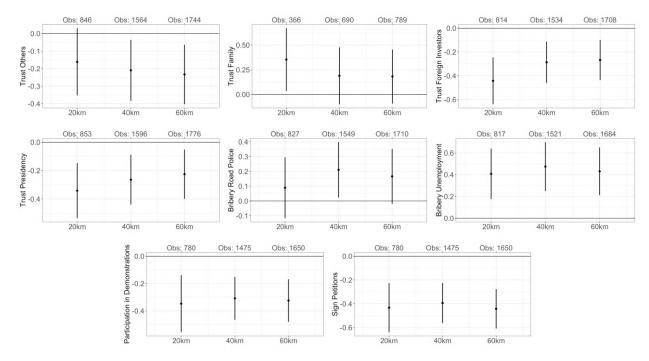


Figure A.17: PSU Location in the LITS Survey

The results in Table 4 in the main text, were based on the entire LITS sample corresponding to Croatia. However, an important question is whether there are enough PSUs around the border and whether the results still hold if only respondents from close proximity to the border were included in the analysis. In order to alleviate such a concern, I split the border in three bandwidths: within 20km, 40km, and 60km from the border and re-ran the analyses in Table 4. The results in Figure A.18 generally corroborate the results in Table 4 of the main text with some noise for trust in others and bribery to road police within the narrow 20km bandwidth.





An important additional question is to what extent the modern attitudes and norms can in fact be traced all the way back to the treatment. No historical surveys were unfortunately conducted. In order to answer the question, however, I split my sample in three groups: the respondents born before 1945, between 1945 and 1990 (people who were born under communism), and after 1990. The logic would be that if exposure to military colonialism impacted people's attitudes, we should see all the three cohorts having similar perceptions, and more importantly, potentially that earlier generations should have stronger views about the answer to all the questions.

The results in Figure A.19 overall corroborate the main results in Table 4, although the statistical power drops substantially as a result of the limited number of cases for the cohort born before 1945 and for the cohort born after 1990. Therefore, both older and younger generations from the military colony trust non-family members less, trust foreign investors less, trust institutions such as the presidency less, and are more likely to offer bribes, and are less likely to sign petitions. The results are however more ambiguous for trust in family members and for participation in demonstrations.

Obs: 84 Obs: 1320 Obs: 320 Obs: 1315 Obs: 1315 Trust Family 0.00 0.0 Linst Others 0.0 0.0 0.4 Trust Foreign Inve Born Before 1945 Born Before 1945 Born Before 1945 Born Born Born Born Born Born Between 1945-1990 Between 1990-2016 Between 1945-1990 Between 1990-2016 Between 1945-1990 Between 1990-2016 Obs: 352 Obs: 1354 Obs: 96 Obs: 327 Obs: 1298 Obs: 93 Obs: 332 Obs: 1273 Obs: 89 0.6 Bribery Unemployment 0.0.0 -0.5 -1.0 Road Police Trust Presidency 1.0--0.6 Born Born Born Before 1945 Born Born Born Born Born Born Between 1945-1990 Before 1945 Between 1945-1990 1945-1990 1990-2016 1945 1990-2016 1990-2016 Obs: 310 Obs: 99 Participation in Demonstratio 0.50 0.00 0.25 Petitions -0.25 0.00 -0.50 -0.25-0.50 -1.00 Born Between 1945-1990 Born Between 1990-2016 Born Born Between 1945-1990 1990-2016

Figure A.19: Public Opinion by Birth Cohort

## 14 External Validity

The Habsburg military colony is not unique to the Habsburg Empire. In fact military colonies existed throughout human history. For example, in the Roman Empire, during Caesar Augustus (27 BCE-14 CE), the Roman Empire expanded its territory and brought troops from the center to its frontiers. This was a period of consolidation of client states in the periphery (Longo, 2018, p. 29). The border was maintained mostly through small auxiliary units, while the legions were placed on the roads between the center and the periphery, acting as mobile military forces. The client states, similar to the military colony in the Habsburg Empire, acted as a buffer area, taking the burden of external attacks until Roman defenses arrived. In fact, Machiavelli in the *Prince* comments on the Roman tactics in the outer provinces arguing that they "sent out colonies, indulged the lesser powers without increasing their power, put down the powerful and did not allow foreign powers to gain reputation there" (Machiavelli, 1996, III, 12). It is through the roads emanating from the capital that the Romans were able to establish and maintain control. They continued to be used under Alexander Severus (208-235)

CE) in the third century and they were looked down upon by the professional troops. Subsequently, under Diocletian (244-311 CE) and Constantine (272-337 CE) there was a change in their status whereby both the position of a colonist, called *limitanei*, and the plots of land which they controlled, became hereditary (Isaac, 1988).

#### 14.1 The Russian Military Colony

The most relevant efforts to build military colonies which were very similar to the Habsburg ones, date back to the 1800s in the Russian Empire. Historical sources indicate that it was in fact the Habsburg military colonies which provided an inspiration for the Russian ones. For example, in 1810 Alexander I of Russia (1777-1825) considered adopting them throughout the empire, but he did not realize the full importance of such establishments until 1814 when he "appreciated with his own eyes and recognized the glorious merits of the military colonies in Austria" (Desprez, 1847, p. 725). Given the large spread of the empire, professional soldiers would only be able to arrive on time with great difficulty to counteract potential attacks on the Western or Southern imperial border. By placing such colonies in those strategic locations, the imperial government could buy itself enough time to bring the professional army to rescue (Desprez, 1847, p. 730). There were four additional reasons according to Ybert-Chabrier (2004, p. 549), which led to the creation of new military colonies by Alexander I: 1) reducing army expenses; 2) ensuring easy recruitment in the army; 3) maintaining agriculture in times of peace and having the troops always ready to act; 4) giving a place of exile to retired and disabled soldiers. Finally, the goal was to gradually replace the entire professional Russian army with troops from these military colonies.

Lyall (1824, pp. 22-23) explains the process of militarization: the Russian emperor issued a decree nominating "the crown-villages which are to become military colonies. In the designated villages, (which are inhabited by crown-peasants, and consequently are at the Emperor's disposal), the name, age, property, and family of each householder are registered; those who are above 50 years old are chosen to form what is called Master-Colonists." Soldiers from the regular army would be brought to live together with existing farming families. Desprez (1847)

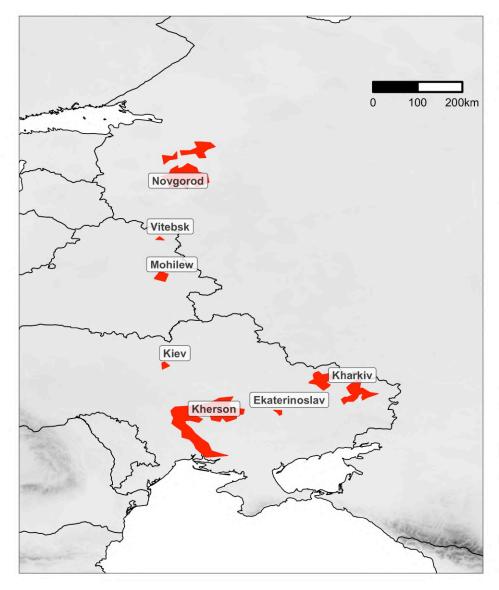
describes the difficult situation of professional soldiers when they were separated from their families and were forced to live in unknown farming communities. Receiving communities were expected to tolerate the presence of soldiers on their land while in exchange, "were exempted from the tax which they owed to the state and also owned their homes in perpetuity" (Desprez, 1847, p. 730). The reality however was different, with soldiers being perceived as "foreigners." They would stop being labelled as such once they married within the local farming community. In order for the locals and soldiers to become one unitary community, and for the distinction between soldiers and settlers not to be made, a few generations would have to pass (Desprez, 1847).

Within the designated villages, land was divided into equal portions with colonists enjoying communal property rights. The pastures and meadows would also be enjoyed by everyone. Each Master-Colonist would receive about forty acres of land. If the family did not have enough cattle or agricultural tools to survive, they would have to unite their property with that of others. The Master-Colonist would train to become a soldier himself and would be expected to wear a uniform, march on relevant occasions, use a sabre, and military salutes.

Russian military colonies were widespread throughout the history of the Russian Empire. They were located north and south of Saint Petersburg, Novgorod, Witebsk, Mohilew, Kharkiv, Kiew, Podolia, and Kherson (Pipes, 1950). Additional historical colonies were located at the borders with Poland, Austria, and Turkey. Figure A.20 displays the Russian military colonies in mid nineteenth century.

In a similar way to the Croatian military colony, people did not fully enjoy property rights: they were effectively tenants of the state without real "ownership" to land (Bitis & Hartley, 2000) and lived a highly constrained life despite the appearance of freedom: "nobody can move, sell not even their waste, without special authorization" (Desprez, 1847, p. 731) or "the moral constraints imposed by legislation are always excessive and freedom, null" (Desprez, 1847, p. 731). Given the permanent military jurisdiction and careful military surveillance, community members lived in perpetual discomfort with the state invading and controlling all aspects of their private life including the ability to move or to sell property. The means of

Figure A.20: Russian Militay Colonies in the Russian Empire in the Nineteenth Century



Notes: Redrawn based on Military Encyclopedia (1912). Elevation and modern borders in the background.

production were heavily limited and economic exchanges were hampered by the lack of means of communication.

## 14.2 Military Colonialism in French Algeria

Military colonialism went beyond Europe. Such institution was adopted by the French Empire in the early 1800s, following the Habsburg and Russian models (Azan (1936); Marmont (1837);

Rashid (1960), Rothenberg (1966)).

French rule in Algeria started in 1830 with the invasion of Algiers and lasted until the Algerian War of Independence of 1962. The need to create military colonies emerged in the early phase of conquest. Within this period, French presence in Algeria only consisted of scattered villages, built around posts to protect communication between the capital and other towns where a few military garrisons were stationed. According to Bussière (1853), the population who moved was attracted by the new concessions of land. The first French settlers went to the suburbs of Algiers, followed by Vieux Kouba, Tixeraïn, and Rassauta. It is after 1835 that the French expanded to places like Boufarik, Arba, and Beni Moussa. While the new settlers expected their security to be ensured by the continuous passage of troops, this proved insufficient. Attacks against the French by the local tribes in Algeria were a common occurrence between 1830 and 1842 when the first settlers came in: "For twelve years, thefts, arson, assassinations covered Mitidja with misery, ruins, and blood, and it is with good reason that this period was called the gunpowder period" (Rouire, 1901, p. 358). It is in this period when French authorities created soldier settlements in places where fights were still taking place: they also built houses for the soldiers and roads connecting the military settlements to the civilian ones.

The first political debates surrounding the concept of military colonialism indicate that the Habsburg military colonies in Croatia, Serbia, and Romania constituted a model for the French imperial enterprises in North Africa. This is most obviously demonstrated in an essay called Experiment on the organization of military borders in Austrian border regiments and considerations on the application of this system to a certain degree, to the organization of French possessions in Africa. The title in French is Essai sur l'organisation des frontières militaires en régiment frontière de l'Autriche et considérations sur l'application de ce systeme, a un certain degré, a l'organisation des possessions françaises de l'Afrique, cited in Émerit (1959, p. 94), by A. de Terrasson, a French military official who visited Croatia in 1837. On his visit, he noted some of the characteristics of Croatian locals, which made them suitable candidates to become warriors and help defend the empire. He agreed with the descriptions

of one of the leading social engineers of the Habsburg military colony - commander Joseph Friedrich von Sachsen-Hildburghausen (1702-1787):

I saw a warring people, courageous, rough, and ignorant, children of nature; who feed on simple and coarse food, and living without culture like the oak in the forest, reached the heights of the first human races; good and savage, but superstitious and full of enthusiasm for military glory, familiar with the perils of combat, and eager to plunder, as a reward for bravery and skill; having few needs, poor in knowledge and enlightenment, of an energy that is not soft and refined, steadfastly attached to national customs and therefore, to their land, faithful to their word and willing to keep their promises; naturally marked with frankness and intrepidity, but which, facing both violence and severe repression for a long time, has become suspicious and obstinate; capable of absolute loyalty and the most unshakable devotion, and yet driven by a desire to try all the might of one's strength transformed into fiery ardor and spirit of revolt (von Hietzinger, 1817, pp. 298-299)

Terrasson contended that the local population in Algeria was very similar to the warrior population in Croatia and, as a result, could help defend the French settlements in Algeria. The locals would be organized in military regiments, very similar to the Croatian military colonies. Terrasson also recommended replacing the local administrative units in Algeria - the douars, with zadrugas, which would become the organizational basis for Arab property (Émerit, 1959, p. 94).

Marie-Théodore de Rumigny (1835-1848) was a military general who was of the opinion that the local Kabyle population (Berber indigenous group in the North of Algeria) could and should be used as infantry and cavalry under the leadership of French officials. Together, they could thrive by "combining warrior and agricultural lives" (de Rumigny, 1850, p. 52).

Part of ensuring French long-term success in Algeria was according to de Rumigny, adopting military colonies. In the second part of his article, de Rumigny (1850) explained the

advantages and relevance of military colonialism for the French imperial project in Algeria, "a system that is practiced since ancient times, and which was successful in all times and climates" (de Rumigny, 1850, p. 44). He therefore proposed the creation of communities commanded by French officials: three legions per province, backed up by two or three battalions and if necessary, aided by a proportionally-sized cavalry in the designated locations. Every legion would have its designated space, with each company and family of settlers being grouped around the battalion.

In a speech to the French Chamber of Deputies on January 15, 1840, Thomas Robert Bugeaud (1784-1849), Marshal of France and Governor-General of Algeria from 1841 to 1847, argued: "We need military or civilian settlers, whatever you want to call them; but [we need to] organize them militarily as the colonist-warriors in similar countries" (cited in Émerit (1959, p. 95)). Bugeaud had been very impressed with the ability of the Austrians and the Russians to easily levy military recruits and he thought that imperial expenditures could be reduced in this manner in Algeria as well. Once he became governor of Algeria, Bugeaud sent the French government multiple ideas for the implementation of such plans. Despite some resistance from the Ministry of War, he managed to create military colonies with farmer-soldiers living under communal properties: "the army supplied in abundance men who were still young, accustomed to fatigue, acclimatized, having acquired a taste for the country, and brought up to work in the fields" (Bussière, 1853, p. 458).

The basic demographic unit in the Kabyle military settlements was the "smala" or units of approximately 150 families. They were, according to French authorities of the time, areas of land in which native horsemen or spahis were establishing tents for themselves, their families, and their herds. The lands would be cultivated by their children or their parents. The French authorities were very clear in indicating that land within smalas was not to be operated by the entire squadron, but rather, by individual families under a communal property regime. Within the smala, the role of the captain was very important. De Monglave (1857, p. 146) describes it in the following way: "In the garrison or on patrol, his authority only reaches the spahis, while in the smala, his influence goes beyond, to his extended family. This soldier, almost

100 200km Douera Bonne La Calle Djidjeli Algiers Koleah Bougie Blida Guelma Tenes Boufarik Constantine Miliana Monstaganem' Medea Setif Orleansville Arzeu Oran Mascara Tlemsen Civilian/Military Civilian Military

Figure A.21: French Military and Civilian Colonies in Algeria 1844

Notes: Drawn based on data from Ministère de la Guerre (1845).

always rich, brings to the territory where the smala is set up, everything that belongs to him, his women, his children, his servants, his horses, his troops. Often his father, his mother, his brothers, set up their tents near his and live with him as a family unit (De Monglave, 1857, pp. 146-147).

There are few indications about the developmental effects of military colonialism in the French primary sources. This is not surprising, given the much more limited duration of such an institution. Nevertheless, Yacono (1969, p. 378) mentions the agricultural "backwardness" of the areas exposed to military colonialism as a result of a variety of factors. Such factors

include lack of tools to be involved in agricultural production; a lack of interest in devoting oneself to agriculture; the limited concessions of land, which were sometimes less than ten hectares, sometimes six, instead of the fifteen or eighteen, stipulated by the Regulations of 1862; limited availability of teachers passing on agricultural knowledge, etc. Similarly, Emerit also mentioned that many villages, originally assigned as military colonies, were "deprived of stimuli and ability to enjoy individual profit" (Émerit, 1959, p. 96).

To conclude, the Habsburg military colony is not an isolated institution specific to the Habsburgs. It developed at the same time with the Russian military colonies and represented a model which the French emulated in many of their colonies in Africa including Algeria, Senegal, and Madagascar.

## 15 References for Online Appendix

- Bitis, Alexander, & Hartley, Janet. 2000. The Russian Military Colonies in 1826. *The Slavonic and East European Review*, **78**(2), 321–300.
- Bjelić, Miodrag. 2008. Sabirni ustaški logor u Slavonskoj Požegi 1941 godine. Joint Ustaše Camp in Slavonia Požega in 1941. Tech. rept. Ministry of Culture of the Republic of Serbia. Available at: http://www.muzejgenocida.rs/images/izdanja/Bjelic,%20Miodrag,%20Sabirni%20ustaski%20logor%20u%20Slavonskoj%20Pozegi% 201941.%20godine.pdf. Last checked: June, 3, 2018.
- Blanc, André. 1957. La Croatie occidentale. Étude de Géographie humaine. Paris: Institut D'Études Slaves de l'Université de Paris.
- Carter, David, & Goemans, H. E. 2014. The temporal dynamics of new international borders.

  Conflict Management and Peace Science, 31(3), 285–302.
- Cederman, Lars-Erik, Girardin, Luc, & Gleditsch, Kristian Skrede. 2009. Ethnonationalist triads: Assessing the influence of kin groups on civil wars. World Politics, 61(03), 403–437.
- Charnysh, Volha. 2019. Diversity, Institutions, and Economic Outcomes: Post-WWII Displacement in Poland. *American Political Science Review*, **113**(2), 423–441.
- Charnysh, Volha, & Finkel, Evgeny. 2017. The Death Camp Eldorado: Political and Economic Effects of Mass Violence. *American Political Science Review*, **111**(4), 801–818.
- Davenport, Christian. 2007. State Repression and the Tyrannical Peace. *Journal of Peace Research*, **44**(4), 485–504.
- Federative People's Republic of Yugoslavia. 1946. Report on Italian crimes against Yugoslavia and its people. Belgrade: The State Commission for the Investigation of War Crimes.
- Galor, Oded, & Özak, Ömer. 2016. The Agricultural Origins of Time Preference. *American Economic Review*, **106**(10), 3064–3103.

- Gleditsch, Kristian Skrede. 2007. Transnational Dimensions of Civil War. *Journal of Peace Research*, **44**(3), 293–309.
- Goldstein, Ivo. 2006. The Independent State of Croatia in 1941: On the Road to Catastrophe.

  Totalitarian Movements and Political Religions, 7(4), 417–427.
- Hoare, Marko Attila. 2006. Genocide and Resistance in Hitler's Bosnia: The Partisans and the Chetniks. Oxford: Oxford University Press.
- Imbens, Guido W., & Lemieux, Thomas. 2008. Regression discontinuity designs: A guide to practice. *Journal of Econometrics*, **142**(2), 615–635.
- Isaac, Benjamin. 1988. The Meaning of the Terms Limes and Limitanei. *The Journal of Roman Studies*, **78**, 125–147.
- Israeli, Raphael. 2013. The Death Camps of Croatia: Visions and Revisions, 1941-1945. New Brunswick: Transaction Publishers.
- Judah, Tim. 2000. The Serbs: History, Myth and the Destruction of Yugoslavia. New Haven: Yale University Press.
- Keele, Luke J., & Titiunik, Rocío. 2015. Geographic Boundaries as Regression Discontinuities.

  Political Analysis, 23(1), 127–155.
- Lee, Alexander, & Schultz, Kenneth A. 2012. Comparing British and French Colonial Legacies: A Discontinuity Analysis of Cameroon. *Quarterly Journal of Political Science*, **7**(4), 1–46.
- Lee, David S., & Lemieux, Thomas. 2010. Regression Discontinuity Designs in Economics.

  Journal of Economic Literature, 48(2), 281–355.
- Lee, Melissa M. 2020. Crippling Leviathan: How Foreign Subversion Weakens the State. New York: Cornell University Press.
- Longo, Matthew. 2018. The politics of borders: sovereignty, security, and the citizen after 9/11. Cambridge: Cambridge University Press.

- Lowes, Sara, & Montero, Sergio. 2021. Concessions, Violence, and Indirect Rule: Evidence from the Congo Free State. *The Quarterly Journal of Economics*, **136**(4), 2047–2091.
- Machiavelli, Niccolo. 1996. The Prince. Chicago: University of Chicago Press.
- Mamdani, Mahmood. 1996. Citizen and subject: contemporary Africa and the legacy of late colonialism. Princeton studies in culture/power/history. Princeton, NJ: Princeton University Press.
- Michalopoulos, Stelios, & Papaioannou, Elias. 2016. The Long-Run Effects of the Scramble for Africa. *American Economic Review*, **106**(7), 1802–1848.
- Narod.hr. 2015 (July). U Srbu se slavi antifašistički ustanak, a radi se o genocidu nad Hrvatima izvršenom u srpnju i kolovozu 1941. godine. [An anti-fascist uprising is celebrating in Serbia, which is about the genocide of Croats in July and August 1941]. Available at: https://narod.hr/kultura/u-srbu-se-slavi-antifasisticki-ustanak-a-radi-se-o-genocidu-nad-hrvatima-izvrsenom-u-srpnju-i-kolovozu-1941-godine. Last checked on June, 3, 2018.
- Nathan, Noah L. 2019. Electoral Consequences of Colonial Invention: Brokers, Chiefs, and Distribution in Northern Ghana. World Politics, **71**(3), 417–456.
- O'Reilly, William. 2006. Border, Buffer and Bulwark. The Historiography of the Military Frontier, 1521-1881. Pages 229–244 of: Ellis, Steven G., & Esser, Raingard (eds), Frontiers and the Writing of History, 1500-1850. Hannover-Laatzen: Werhahn Verlag.
- Ott, Katarina, Bronić, Mihaela, Petrušić, Miroslav, & Stanić, Branko. 2018. Budget transparency in Croatian counties, cities and municipalities (November 2017 March 2018).

  Institute of Public Finance Newsletter, July, 1–14.
- Paris, Edmond. 1961. Genocide in satellite Croatia, 1941-1945: a record of racial and religious persecutions and massacres. Chicago, IL: American Institute for Balkan Affairs.

- Pavelic, Boris. 2013 (July). Anti-Fascist Uprising Commemorated in Croatia. Available at: https://web.archive.org/web/20161220173509/http://www.balkaninsight.com/en/article/croatia-antifascist-uprising-marked-in-srb/1460/30. Last checked on June 3, 2018.
- Pavković, Aleksandar. 2011. Recursive Secession of Trapped Minorities: A Comparative Study of the Serb Krajina and Abkhazia. *Nationalism and Ethnic Politics*, **17**(3), 297–318.
- Pavlović, Dobroslav St., & Pavlowitch, Stevan K. 2008. *Hitler's New Disorder: The Second World War in Yugoslavia*. New York: Columbia University Press.
- Rashid, Asma. 1960. Emir Abd-al-Qadir and the Algerian struggle. *Pakistan Horizon*, **13**(2), 117–129.
- Rothenberg, Gunther E. 1966. The Military Border in Croatia, 1740–1881: A Study of an Imperial Institution. Chicago, IL: University of Chicago Press.
- Sahlins, Peter. 1989. Boundaries: The Making of France and Spain in the Pyrenees. Oxford: University of California Press.
- Scott, James C. 2010. The Art of Not Being Governed. An Anarchist History of Upland Southeast Asia. New Haven: Yale University Press.
- Simmons, Beth. 2005. Rules over Real Estate: Trade, Territorial Conflict, and International Borders as Institutions. *Journal of Conflict Resolution*, **49**(6), 823–848.
- Sundberg, Ralph, & Melander, Erik. 2013. Introducing the UCDP Georeferenced Event Dataset. *Journal of Peace Research*, **50**(4), 523–532.
- Tomasevich, Jozo. 2001. War and Revolution in Yugoslavia, 1941–1945: Occupation and Collaboration. Stanford: Stanford University Press.
- Wessely, Kurt. 1973. The Development of the Hungarian Military Frontier until the Middle of the Eighteenth Century. *Austrian History Yearbook*, **9**, 55–110.

- Wolf, Nikolaus, Schulze, Max-Stephen, & Heinemeyer, Hans-Christian. 2011. On the Economic Consequences of the Peace: Trade and Borders after Versailles. *The Journal of Economic History*, **71**(4), 915–949.
- Yacono, Xavier. 1969. La colonisation militaire par les smalas de spahis en Algérie. *Revue Historique*, **242**(2), 347–394.
- Ybert-Chabrier, Édith. 2004. Hordes faméliques et colons militaires en Russie d'après le baron de La Ruë (1834). *Cahiers du Monde russe*, **45**(3/4), 521–529.
- Yeomans, Rory. 2015. The Utopia of Terror: Life and Death in Wartime Croatia. Rochester: University of Rochester Press.