How Exposure to Violence Affects Ethnic Voting
Supplementary Information (SI)

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This file contains supplementary material for 'How Exposure to Violence Affects Ethnic Voting'. Its contents include details on the Bosnian case, a list of parties that participated in the various elections along with their classifications, descriptive statistics of key variables, model diagnostic plots, supplementary model results discussed throughout the paper, and qualitative comparisons of cases identified using nearest neighbor and high-dimensional block matching.

SI1: Background on the Bosnian Case

Bosnia held its first competitive, multi-party elections in November of 1990, roughly 17 months preceding the onset of the war. The national legislature consisted of two chambers, the Chamber of Citizens and the Chamber of Municipalities. Elections to the two chambers were contested under different electoral rules, closed-list proportional representation for the Chamber of Citizens and a two-stage majoritarian runoff system for the Chamber of Municipalities. Because post-war parliamentary elections have been contested under proportional representation, we use the pre-war election results for the Chamber of Citizens in our analysis. Doing so makes comparisons between pre- and post-war ethnic voting more valid.

In the elections that year, both ethnic and non-ethnic parties participated. The three most competitive ethnic parties were the Bosniak Party of Democratic Action (SDA), the

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Serb Democratic Party (SDS), and the Croatian Democratic Union of Bosnia and Herzegovina (HDZ BiH). While some smaller ethnic parties contested the elections as well, the overwhelming majority of the ethnic party vote share was captured by the SDA, the SDS, and the HDZ BiH. The non-ethnic parties that participated included Bosnia's reformed communist party (SK BiH), along with a high number of other parties that tended to be either Socialist, Social Democratic, or Green in their ideological orientation. Ethnic parties significantly outperformed non-ethnic ones, and in February of 1992, the Bosniak and Croat members of the new government staged an independence referendum that was overwhelmingly approved by voters but boycotted by Bosnia's Serbs. The civil war broke out shortly thereafter, in April of 1992.

At the war's onset, the country's Bosniak and Croat leaderships were allied against Serb forces who received aid and support from Serbia's Slobodan Milošević and the Yugoslav People's Army headquartered in Belgarde. The Serb leadership in Bosnia had declared an independent Republika Srpska months earlier with the intention to ultimately join Serbia proper in what was often referred to as a 'Greater Serbia'. The initial alliance between Bosniak and Croat forces turned out to be short-lived as the President of Croatia, Franjo Tudjman, and Milošević reached an agreement that envisioned ethnically homogenous Serb and Croat regions constituting much of Bosnia, to be eventually annexed by Serbia and Croatia, respectively. Tudjman subsequently exercised pressure on the ethnic Croat leadership in Bosnia, breaking the alliance between Bosniak and Croat forces and leading to the Croat-Bosniak War fought mostly in central and southern Bosnia. Following 20 months of bitter warfare, the Washington Agreement in March of 1994 resulted in a ceasefire between Croat and Bosniak forces and the alliance was reformed. The war continued along these lines until NATO forces intervened in mid-1995 and finally brought an end to open hostilities later that year with the signing of the Dayton Agreement.

The electoral system that was adopted following the war involves a complex system of ethnic quotas intended to ensure political parity between the country's three major groups. For instance, Bosniaks, Croats, and Serbs need to be equally represented in Bosnia's House of Representatives. This, however, only applies to the ethnic identity of the representatives and not the orientation of the parties themselves (ethnic or non-ethnic). As was already noted, elections to the House or Representatives are contested under proportional representation. While early post-war elections employed a closed-list system, more recent ones (including 2006, 2010, and 2014) have used open lists.

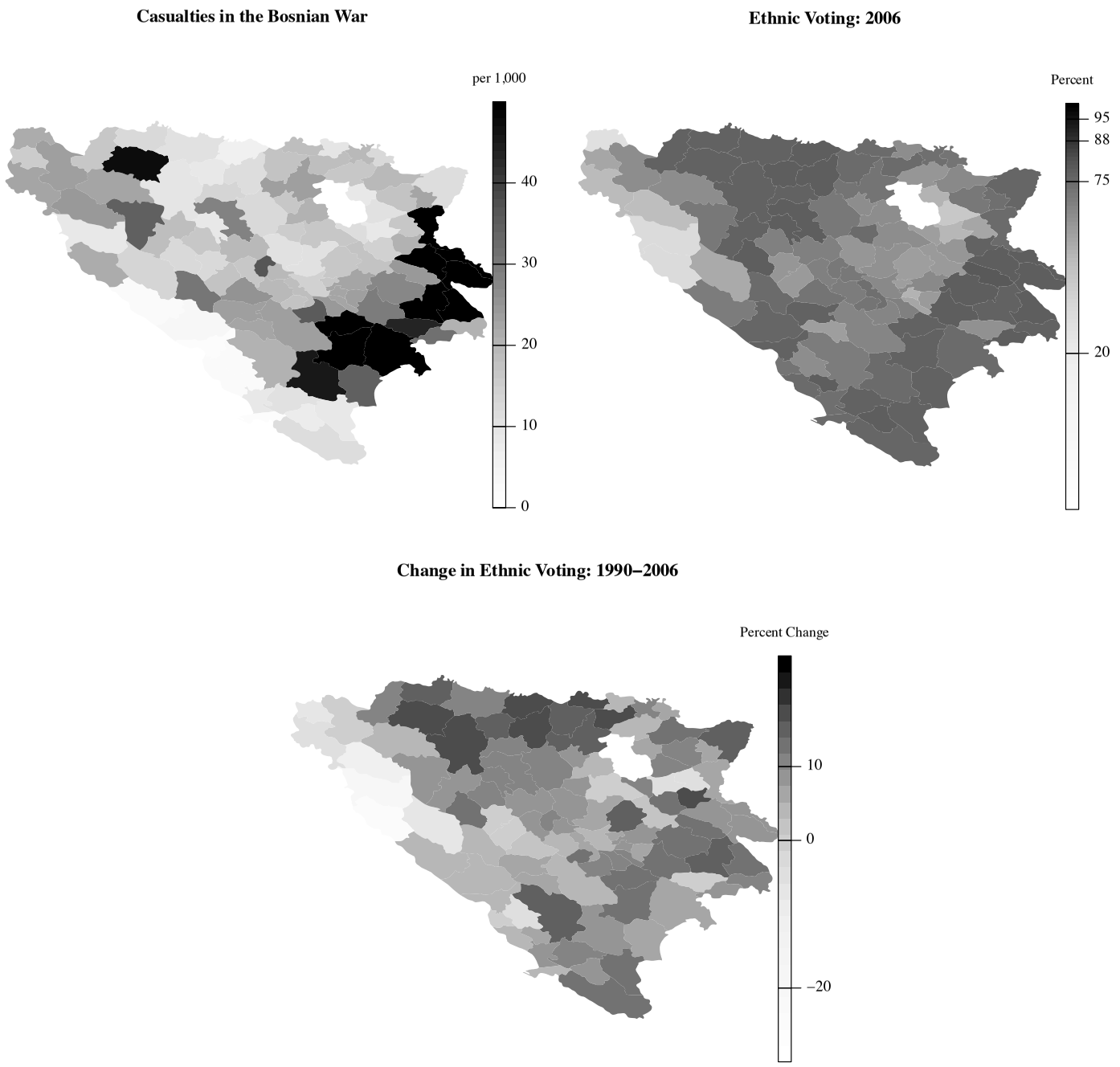
For much of the post-war period, the three most competitive ethnic parties have remained the pre-war ones, the SDA, the SDS, and the HDZ BiH. However, other competitive ethnic parties have emerged as well, the two most notable being the Party for Bosnia and Herzegovina (SBiH) and the Alliance of Independent Social Democrats (SNSD). The most competitive non-ethnic party has been the Social Democratic Party (SDP), but following an internal split in 2013, the breakaway Democratic Front (DF) has emerged as another viable non-ethnic party.

To provide a visual representation of the relationship between violence and ethnic voting, Figure SI1.1 shows three maps of Bosnian pre-war municipalities. The first map shows the amount of casualties at the municipal-level, our independent variable. This is followed by a

map of the ethnic vote in 2006 – the first post-war election included in our study.[2] These two maps bear quite a bit of resemblance. We see a high casualty rate in the south-eastern part the country and a correspondingly high ethnic vote in 2006. The high casualty rate in the northwest is similarly clearly reflected in the 2006 ethnic voting map. Accounting for pre-war salience of ethnic identity, the third map shows the change in ethnic vote share between 1990 and 2006. Comparing this map to the first one, we see some overlap between the changes in ethnic voting and the degree of violence experienced by municipalities. The overlap is not perfect, but it is suggestive. This first impression holds up in the more rigorous empirical analysis we undertake in the paper.

[2]The two municipalities that are dropped from the analysis are color-coded white.

Figure SI1.1: Bosnian Pre-War Municipalities



SI2: Measurement and Descriptive Statistics

SI2.1: Classification of Parties/Coalitions

In coding parties as either ethnic or multi/non-ethnic, we used the definition from Chandra.[3] That is, parties that portray themselves as representatives of a specific ethnic group or demonstrate favoritism toward that group relative to others were coded as ethnic, while parties that did not were coded as multi/non-ethnic.

Identifying whether a party has an ethnic or non-ethnic orientation is relatively straightforward, because most parties in Bosnia advertise their ethnic or non-ethnic/multi-ethnic status in their official campaign documents such as manifestos, and/or propose policies with a clear ethnic orientation. Even when a party's ethnic identity is not explicitly noted, nationalist symbols associated with each of the country's major ethnic groups are often found on the websites or in the documentation. Additionally, multi/non-ethnic parties tend to target and criticize ethnic ones, describing them as one of the primary impediments to effective governance. In some instances, multi/non-ethnic parties even declare that they refuse to enter into governing coalitions with ethnic ones.

For 1990, parties that participated in that year's national elections are described by Sambró i Melero,[4] which was used to code the pre-war parties. When coding parties that were not covered by Sambró i Melero, we used the parties' manifestos and other party documentation found on the parties' websites whenever possible. When this material was not available, as was often the case with smaller parties, we used secondary, journalistic accounts of the parties that noted a party's ethnic orientation. In some instances, the smallest parties did not manage websites and we could not find secondary, journalistic material. These parities, however, did often manage Facebook accounts that included elements of their platforms. Finally, in those cases where all of the aforementioned material was not available, we determined a party's ethnic or non-ethnic orientation from the biography of its leader. Often, such leaders were prominent former members of bigger parties whose ethnic orientation we knew and could use to code the ethnic orientation of the leader's new party. We considered this appropriate because often these flash parties were created for just one election, after which the leader would dissolve the new party and return to his/her former party.

Below is a list of the parties that participated in the 1990, 2006, 2010, and 2014 parliamentary elections, with names as they appear in Sambró i Melero[5] and on the electoral commission's website.

1990 Parties/Coalitions

Multi/Non-Ethnic
Demokratski Socijalistički Savez BiH
Savez Reformskih Snaga Jugoslavije za BiH
Savez Socijalističke Omladine – Demokratski Savez BiH i EKO Pokret 'Zeleni'

[3] Chandra 2004.
[4] Sambró i Melero 2009.
[5] Ibid.

Savez Komunista BiH – Stranka Demokratskih Promjena
Stranka Privatne Inicijative
Demokratska Partija Mostar
Stranka Jugoslovena za BiH
Radnička Demokratska Stranka – Stranka Federalista
Demokratska Stranka Tuzla
Savez Komunista BiH – Stranka Demokratskih Promjena
i Demokratski Socijalistički Savez BiH
Savez Reformskih Snaga Jugoslavije za BiH i Demokratska Partija Mostar

Bosniak
Stranka Demokratske Akcije
Muslimanska–Bošnjačka Organizacija

Croat
Hrvatska Demokratska Zajednica BiH

Serb
Srpska Demokratska Stranka BiH

2006 Parties/Coalitions

Multi/Non-Ethnic
Demokratska Narodna Zajednica BiH
SDP – Socijaldemokratska Partija BiH – Socijaldemokrati BiH
Narodna Stranka Radom za Boljitak
Liberalno Demokratska Stranka BiH
Pokret za Promjene Bosne i Hercegovine
Patriotski Blok BOSS – SDU BiH
Demokratska Stranka Invalida BiH
Evropska Ekološka Stranka E – 5
Građanska Demokratska Stranka BiH
SP – Socijalistička Partija
Bosansko Podrinjska Narodna Stranka
BH – Slobodni Demokrati
Stranka Penzionera – Umirovljenika BiH
Politički Pokret Mladih BiH

Bosniak
SDA – Stranka Demokratske Akcije
Stranka za Bosnu I Hercegovinu
Bosanskohercegovačka Patriotska Stranka – Sefer Halilović
Narodna Bošnjačka Stranka
Kongresna Narodna Stranka Zaštite Prava Boraca i Građana – Pravde I Morala BiH

Croat
Hrvatsko Zajedništvo (HDZ 1990 HZ – HSS – HKDU – Demokrščani)
HDZ – Hrvatska Koalicija – HNZ
HSP Đapič – Jurišič i NHI – Koalicija za Jednakopravnost

Serb
Savez Nezavisnih Socijaldemokrata – SNSD – Milorad Dodik
Demokratski Narodni Savez – DNS
SDS – Srpska Demokratska Stranka
PDP RS – Partija Demokratskog Progresa Republike Srpske
Srpska Radikalna Stranka Republike Srpske
Srpska Radikalna Stranka Dr. Vojislav Šešelj Bijeljina
Penzionerska Stranka RS i Narodna Demokratska Stranka
DEPOS – Demokratski Pokret Srpske
Nova Snaga Srpske
DSS – Demokratska Stranka Srpske

2010 Parties/Coalitions

Multi/Non-Ethnic
SDP – Socijaldemokratska Partija BiH
Narodna Stranka Radom za Boljitak
BOSS – Bosanska Stranka – Mirnes Ajanović
Demokratska Narodna Zajednica – DNZ BiH
Stranka Kokuza – SKOK
Naša Stanka – Nova Socijalistička Partija Zdravko Krsmanović
SDU BiH – Socijaldemokratska Unija BiH
Demokratska Stranka Invalida BiH
Stranka za Narod BiH
Liberalno Demokratska Stranka – Evropska Ekološka Stranka E – 5
Koalicija Preokret: GDS BiH I NEP BiH
Stranka Penzionera – Umirovljenika BiH
Socijalistička Partija

Bosniak
SDA – Stranka Demokratske Akcije
Savez za Bolju Budućnost BiH – SBB BiH Fahrudin Radončić
Stranka za Bosnu i Hercegovinu
BPS – Sefer Halilović
Stranka Demokratske Aktivnosti A-sda

Croat
HDZ BiH – Hrvatska Demokratska Zajednica BiH

Hrvatska Koalicija HDZ 1990 – HSP BiH
HSS – NHI

Serb
Savez Nezavisnih Socijaldemokrata – SNSD – Milorad Dodik
DNS – Demokratski Narodni Savez
SDS – Srpska Demokratska Stranka
PDP – Partija Demokratskog Progresa
Demokratska Partija – Dragan Čavić
Srpska Radikalna Stranka Dr. Vojislav Šešelj
Srpska Radikalna Stranka Republike Srpske
Srpska Napredna Stranka
Narodna Demokratska Stranka
Savez za Demokratsku Srpsku

2014 Parties/Coalitions

Multi/Non-Ethnic
Demokratska Fronta – Željko Komšić
SDP – Socijaldemokratska Partija BiH
Narodna Stranka Radom za Boljitak
Zajedno za Promjene (SPP-SDU-DNZ)
Naša Stranka
BOSS – Bosanska Stranka – Mirnes Ajanović
Unija Socijaldemokrata – Unija za Sve Nas
Laburistička Stranka BiH – Laburisti BiH
Komunistička Partija
Novi Pokret BiH
Socijalistička Partija

Bosniak
SDA – Stranka Demokratske Akcije
SBB – Fahrudin Radončić
BPS – Sefer Halilović
Stranka za Bosnu i Hercegovinu
A-SDA Stranka Demokratske Aktivnosti
Stranka Dijaspore BiH

Croat
HDZ BiH, HSS, HKDU BiH, HSP Dr. Ante Starčević, HSP Herceg-Bosne
HDZ 1990 Hrvatska Demokratska Zajednica
Snaga BiH – HSP BiH – DSI
Hrvatski Savez HKDU – HRAST

Serb
Savez Nezavisnih Socijaldemokrata – SNSD – Milorad Dodik
PDP – NDP
SDS – Srpska Demokratska Stranka
DNS – Demokratski Narodni Savez – NS – SRS
Srpska Napredna Stranka – SNS
Stranka Pravedne Politike

SI2.2: Descriptive Statistics

Control and balance variables

We used the 1992 *Statistical Almanac of the Republic of Bosnia and Herzegovina*, which contains data from the pre-war 1991 census along with other relevant information, to construct all of the control variables described in this section. Each of these control variables has been widely employed in work concerning the determinants of ethnic violence as well as ethnic voting. One such variable is the ethnic makeup of a polity,[6] which we measure as follows. First, we calculated the share of the pre-war 1991 municipality population identifying as Bosniak, Serb, or Croat.[7] With these data we were able to construct Herfindahl-Hirschman indices of concentration (HHI)[8] for each ethnic dyad representing identities along which violence occurred: *HHI Serb-Bosniak*, *HHI Croat-Bosniak*, and *HHI Serb-Croat*. We then weighted each index by the combined share of the two groups in the municipality population. High values represent domination of one ethnic group over the other, relative to the total population.

We also control for a number of additional demographic variables, all reflecting conditions shortly preceding the outbreak of the war (i.e., unaffected by the level of wartime violence). *Population density* is measured as the number of municipality inhabitants per square kilometer. Areas that are densely inhabited can suffer higher casualties.[9] At the same time, such areas may witness more non-ethnic voting due to more tolerant values.[10]

Average age is measured as the mean age of the municipality. We also include a squared term of this variable because the very young and the very old are less likely to engage in violence.[11] The role of ethnicity in political behavior may also vary by generation.[12]

Income per capita controls for the pre-war level of wealth in a municipality. Prior empirical evidence suggests a strong negative association between income and violence,[13] possibly because high incomes make violence more costly and create incentives to avoid it.

[6]Pugh and Cobble 2001; Slack and Doyon 2001; Weidmann 2011.

[7]Individuals could also identify as Yugoslav or 'other'. Very few did, which is why we did not consider these in our controls.

[8]The index represents the probability of two randomly selected individuals from a given municipality being of the same ethnic identity.

[9]Weidmann 2011.

[10]Pugh and Cobble 2001.

[11]Humphreys and Weinstein 2008.

[12]Landa, Copeland, and Grofman 1995.

[13]Collier and Hoeffler 2002.

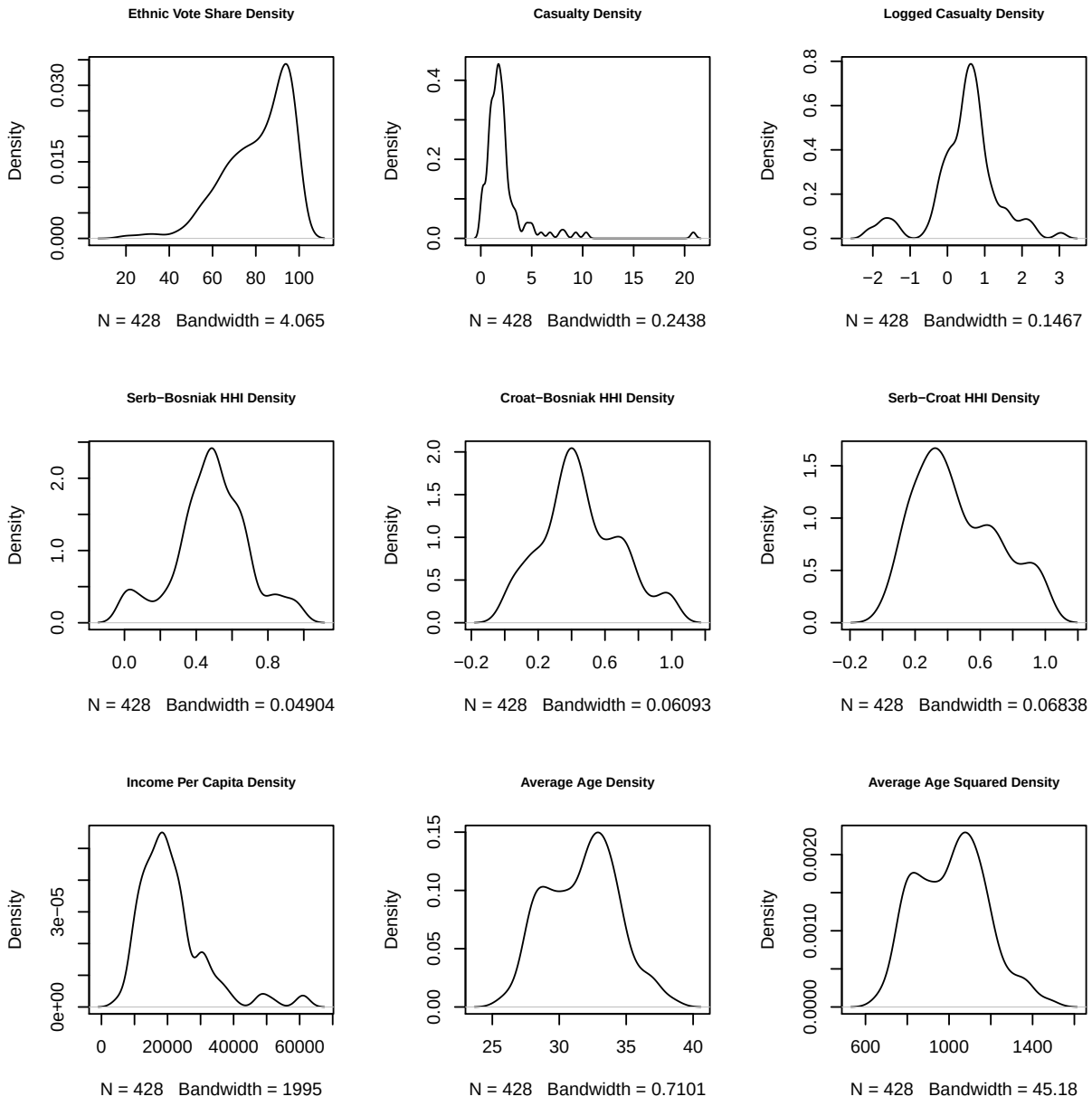
Descriptive statistics for the outcome, explanatory, and control variables, which we also use for testing balance in the treatment assignment, are included in Table SI2.2.1.

Table SI2.2.1: Descriptive Statistics

Variable	**N**	**Mean**	**St. dev.**	**Min.**	**Max.**
Ethnic vote share	428	80.99	15.17	19.33	99.49
Casualty	428	2.32	2.54	0.12	20.86
log(Casualty)	428	0.49	0.87	-2.15	3.04
HHI Serb-Bosniak	428	0.49	0.21	0.00	0.97
HHI Croat-Bosniak	428	0.46	0.24	0.00	0.99
HHI Serb-Croat	428	0.46	0.26	0.01	0.99
Income per capita	428	21258.19	10192.47	4983.86	61510.37
Average age	428	31.69	2.65	25.80	38.44
Average age squared	428	1011.33	168.65	665.65	1477.79
Population density	428	163.71	396.98	6.38	2846.17

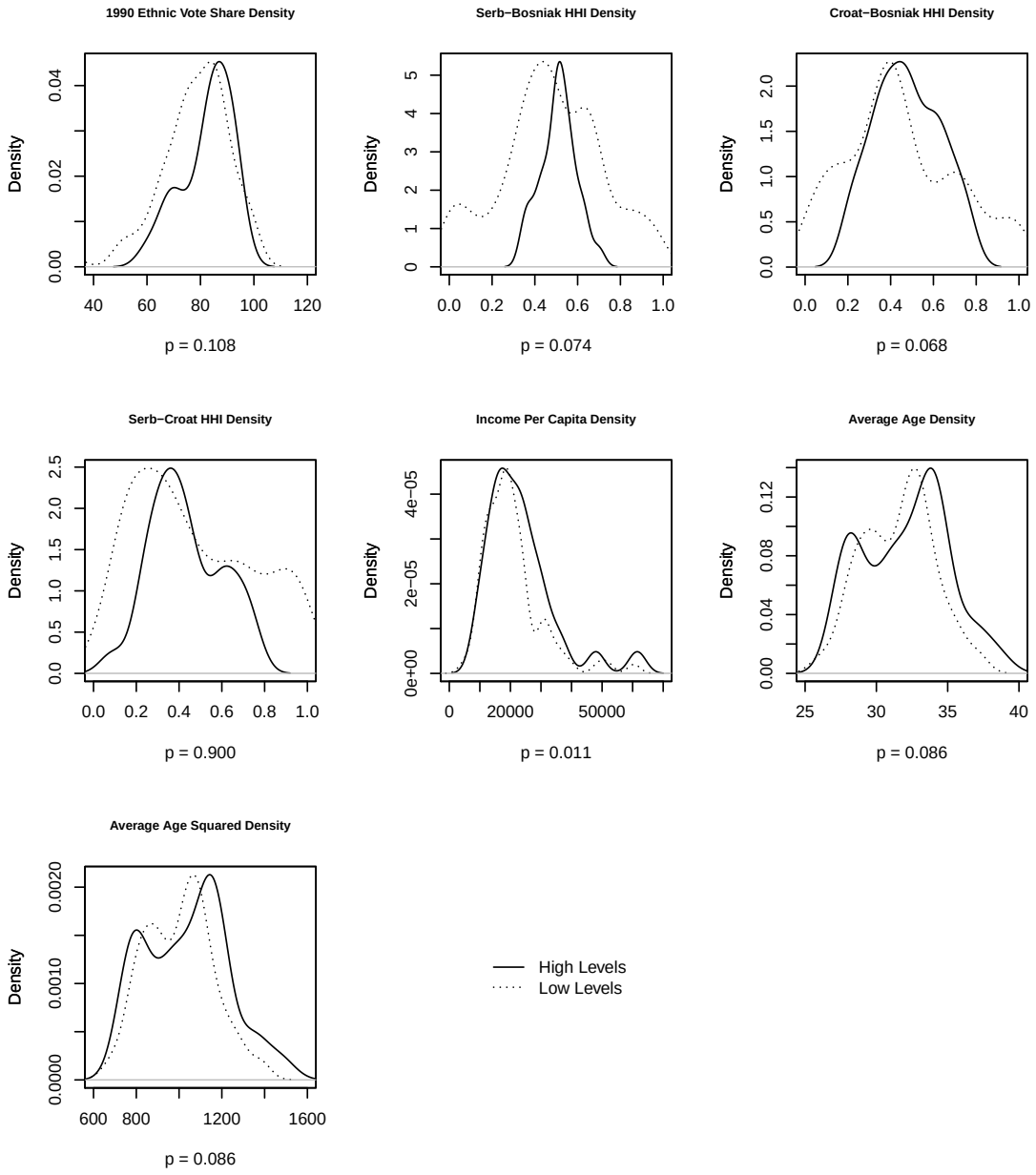
The densities are plotted in Figure SI2.2.1. As seen, there are no major concerns with skewness across the variables, with the exception of casualty. The density of the logged casualty variable shows that the transformation is generally correcting the skew.

Figure SI2.2.1: Variable Densities



The densities after dichotomizing the treatment variable *Casualty* are plotted in Figure SI2.2.2. Those municipalities above the mean level of *Casualty* are shown with a solid line, while those below are shown with a dashed line. There are no large differences in the density plots between the two levels of treatment across the seven variables. In order to test for balance in the main model more formally, wilcoxon p-values are shown beneath each plot. Only *Income per capita* is statistically distinguishable from zero when comparing the groups. The absence of large and reliable imbalances across most of our covariates suggests that the low and high violence communities are relatively similar. There is little evidence that the modeling strategy we employ would lead to overestimation of the effect size.

Figure SI2.2.2: Variable Densities, Dichotomized

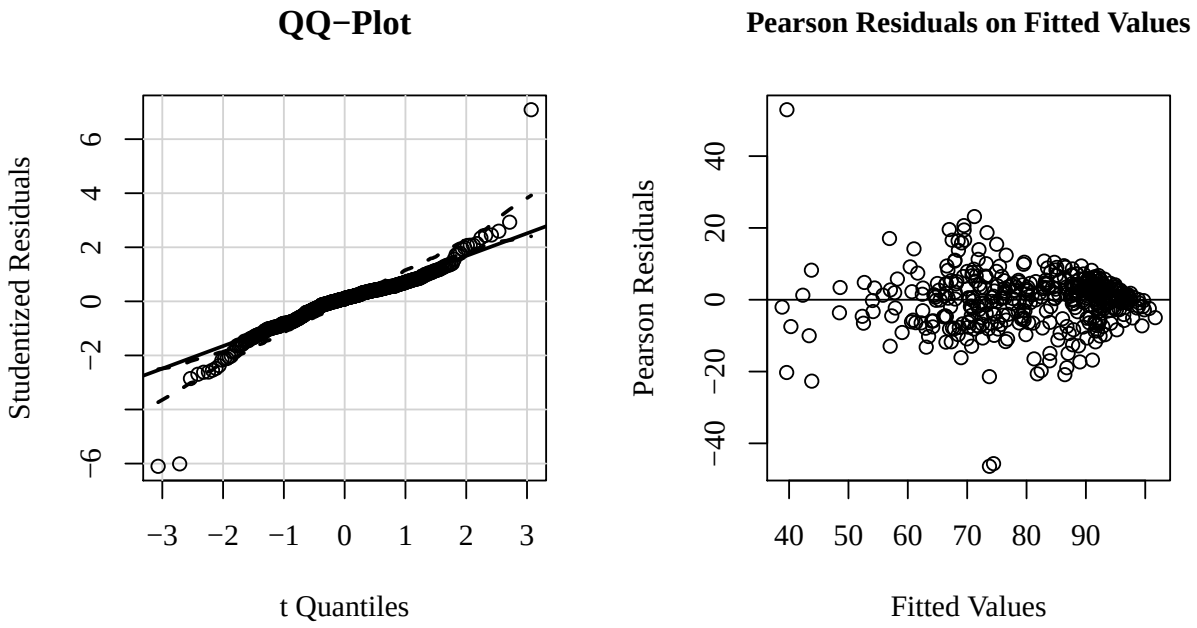


SI3: Model Diagnostics

Figure SI3.1 shows the diagnostics for the model that uses our primary measure of violence, log(*Casualty*), indicating the need for clustered robust standard errors. The left panel shows the quantile comparison plot, and the right panel shows the Pearson residuals on the fitted values. There is clear deviance from normality in the tails.

We also run a Bayesian hierarchical model with municipality-level random intercepts rather than fixed effects with clustered errors, and the reliability of our variable of interest does not decrease. Also, as Bertrand, Duflo, and Mullainathan argue, in addition to being mindful of the standard errors when doing difference-in-differences estimation, a correction should be used where the data is collapsed into a pre- and post-period when dealing with many years of data.[14] We do not think our data merits this correction due to the relatively few number of post-treatment elections analyzed, but nevertheless, when we do collapse the observations the results hold. We test for correlations between the residuals and all of the variables we think of interest for the balance test using the `cor.test` function in `R`. No p-values are close to zero, suggesting that there is no cause for concern.

Figure SI3.1: Model Diagnostic Plots



[14] Bertrand, Duflo, and Mullainathan 2004.

SI4: Supplementary Model Results

This section includes the results of the following additional model specifications that are mentioned in the main text. Where appropriate, we have also added a short discussion of the tests we performed.

* Table SI4.1 shows the results after omitting statistical outliers. Specifically, there were three potential outliers determined by a Bonferroni outlier test: Drvar in 2006, Bosansko Grahovo in 2006, and Velika Kladuša in 1990. Because Velika Kladuša in 1990 is a pre-war, baseline observation, omitting this observation also requires omitting post-war observations for this municipality. Therefore, we ran two models. Model 1 shows the results when only omitting Drvar and Bosansko Grahovo in 2006 (post-war), while Model 2 shows the results when omitting these observations as well as all observations for Velika Kladuša.
* Table SI4.2 shows the results when omitting ethnic Serb enclaves where Serb parties did not compete in 2006. These include Bosansko Grahovo, Drvar, and Glamoč.
* Table SI4.3 shows the results using the unlogged *Casualty* predictor.
* Table SI4.4 shows the results using the civilian casualty rate.
* Table SI4.5 shows the results of the null model (i.e., excluding the variable of interest).
* Table SI4.6 shows the results of the model with dichotomized treatment.
* Table SI4.7 shows the results when only using the sample of unpartitioned municipalities.
* Table SI4.8 shows the results of the model estimating the direct effect of *Casualty* allowing for mediating effects of homogeneity, as measured in 2013. Because both *Casualty* and *HHI 2013*, the measure for homogeneity, are constant, including fixed effects for municipalities and these two variables makes the model unidentified. We therefore instead included random effects for municipalities. We also include the municipal-level controls used in the survey analysis to alleviate some concerns regarding municipal-level confounders.
* Table SI4.9 shows the results of the model estimating the direct effect of *Casualty* allowing for mediating effects of homogeneity, as measured over time in 87 municipalities. In this analysis, homogeneity is measured at each election year, which allows using our initial modeling strategy (i.e., fixed effects for both time and year). This mediation analysis uses bootstrapping methods for the standard errors, so we depart from our clustered robust standard errors used in the main analysis. The standard errors are actually more conservative in the bootstrapped analysis than they are using the clustered robust approach.
* Table SI4.10 shows the results of the models estimating the direct effect of *Casualty* allowing for mediating effects of displacement measured over time. Model 1 uses *Net displacement* as the mediator while Model 2 uses *Gross displacement*. Both mediators are described in greater detail in the main text of the paper.
* Table SI4.11 shows the results of the models employing two of the alternative measures of violence, *Refugees* and *Prison Camps*, logarithmically transformed.
* Table SI4.12 shows the results of the models using survey data with binary self-reported exposure to violence as the variable of interest. Both the results presented in the main text and the results from these models are presented side-by-side. Because of the endogeneity issues that arise from such self-reported data involving both the respondents' opinions towards in- and out-groups and the respondents' personal experiences with violence (presumably primarily from out-groups), and because we are primarily interested in community-level

exposure (not individual-level), we do not present these findings in the main text. Results are reliable for the first model and in the correct direction for the other three models. This is consistent with what Ward and co-authors conclude, who in their study of attitudes about inter-ethnic cooperation, also do not find evidence that personal exposure to violence has an independent effect.[15] In line with our design, the authors speculate that 'it might be that respondents who are located in sites of particularly nasty violence...might be better proxies for the impact of violence than self-reports'.[16] This is also consistent with other research that suggests that fear for one's group (which is likely more affected by community-level violence) shapes attitudes while personal war-related experiences do not.[17]

[15]Ward et al. 2006.
[16]Ibid., 13.
[17]Maoz and McCauley 2005; Strabac and Ringdal 2008.

Table SI4.1: The Effect of Wartime Violence on Ethnic Vote Share, Without Statistical Outliers

Variables	Model 1: Omit-Post	Model 2: Omit-Pre/Post
$\log(\text{Casualty}) \times D_{2006}$	2.795^{*}	3.017^{*}
	(0.650)	(0.640)
$\log(\text{Casualty}) \times D_{2010}$	2.065^{*}	2.278^{*}
	(0.773)	(0.735)
$\log(\text{Casualty}) \times D_{2014}$	0.415	0.598
	(0.649)	(0.647)
λ_{2006}	3.268^{*}	3.889^{*}
	(0.971)	(0.852)
λ_{2010}	-1.527	-0.939
	(1.193)	(1.117)
λ_{2014}	3.450^{*}	3.955^{*}
	(0.826)	(0.770)
N	426	422
R^2	0.993	0.994

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.2: The Effect of Wartime Violence on Ethnic Vote Share, Without Ethnic Enclaves

Variables	**Estimates** *(robust s.e.)*
$\log(\text{Casualty}) \times D_{2006}$	2.724^{*}
	(0.660)
$\log(\text{Casualty}) \times D_{2010}$	2.065^{*}
	(0.769)
$\log(\text{Casualty}) \times D_{2014}$	0.415
	(0.651)
λ_{2006}	3.568^{*}
	(0.940)
λ_{2010}	-1.527
	(1.200)
λ_{2014}	3.450^{*}
	(0.837)
N	425
R^2	0.993

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.3: The Effect of Wartime Violence on Ethnic Vote Share, Casualty Unlogged

Variables	**Estimates** *(robust s.e.)*
Casualty $\times$ D_{2006}	0.779^{*}
	(0.341)
Casualty $\times$ D_{2010}	0.807^{*}
	(0.292)
Casualty$\times$ D_{2014}	0.050
	(0.210)
λ_{2006}	1.664
	(1.735)
λ_{2010}	-2.391
	(1.618)
λ_{2014}	3.536^{*}
	(1.225)
N	428
R^2	0.991

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.4: The Effect of Wartime Violence on Ethnic Vote Share, Civilian Casualties

Variables	**Estimates** *(robust s.e.)*
Civilian casualty $\times$ D_{2006}	0.800^{*}
	(0.395)
Civilian casualty $\times$ D_{2010}	1.137^{*}
	(0.459)
Civilian casualty$\times$ D_{2014}	0.184
	(0.305)
λ_{2006}	2.521
	(1.592)
λ_{2010}	-1.349
	(1.570)
λ_{2014}	3.956^{*}
	(1.224)
N	404
R^2	0.990

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.5: The Effect of Wartime Violence on Ethnic Vote Share, Null Model

Variables	**Estimates** *(robust s.e.)*
λ_{2006}	3.460^{*}
	(1.333)
λ_{2010}	-0.520
	(1.300)
λ_{2014}	3.652^{*}
	(1.033)
N	428
R^2	0.990

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.6: The Effect of Wartime Violence on Ethnic Vote Share, Dichotomized Treatment

Variables	**Estimates** *(robust s.e.)*
Treated $\times D_{2006}$	4.962^{*}
	(2.325)
Treated $\times D_{2010}$	4.337
	(2.423)
Treated $\times D_{2014}$	-1.500
	(2.132)
λ_{2006}	2.115
	(1.732)
λ_{2010}	-1.696
	(1.659)
λ_{2014}	4.059^{*}
	(1.304)
N	428
R^2	0.991

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.7: The Effect of Wartime Violence on Ethnic Vote Share, Sample of Unpartitioned Municipalities

Variables	**Estimates** *(robust s.e.)*
$\log(\text{Casualty}) \times D_{2006}$	3.257^{*}
	(0.965)
$\log(\text{Casualty}) \times D_{2010}$	2.781^{*}
	(0.967)
$\log(\text{Casualty}) \times D_{2014}$	1.631
	(0.838)
λ_{2006}	2.611
	(1.577)
λ_{2010}	-2.023
	(1.664)
λ_{2014}	3.849^{*}
	(1.265)
N	304
R^2	0.991

Note: Cell entries represent unstandardized coefficient estimates clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.8: The Effect of Wartime Violence on Ethnic Vote Share, Mediating Effects of Homogeneity

Variables	**Estimates** *(robust s.e.)*
$\log(\text{Casualty}) \times D_{2006}$	5.332^{*}
	(1.048)
$\log(\text{Casualty}) \times D_{2010}$	4.278^{*}
	(0.936)
$\log(\text{Casualty}) \times D_{2014}$	2.630^{*}
	(0.919)
HHI Serb-Bosniak	-10.946^{*}
	(3.315)
HHI Croat-Bosniak	-3.635
	(2.507)
HHI Serb-Croat	34.067^{*}
	(2.763)
Population density	-0.009^{*}
	(0.001)
Income per capita	-0.000
	(0.000)
Average age	6.647
	(6.054)
Average age squared	-0.111
	(0.095)
λ_{2006}	0.574
	(1.738)
λ_{2010}	-2.846
	(1.655)
λ_{2014}	2.116
	(1.433)
Constant	-24.581
	(94.932)
N	412
AIC	3155.452

Note: Cell entries represent unstandardized coefficient estimates with bootstrapped standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). Random effects for municipality not shown. $^{*}p < 0.05$

Table SI4.9: The Effect of Wartime Violence on Ethnic Vote Share, Mediating Effects of Homogeneity Over Time

Variables	**Estimates** *(robust s.e.)*
$\log(\text{Casualty}) \times D_{2006}$	2.655^{*}
	(1.132)
$\log(\text{Casualty}) \times D_{2010}$	2.494^{*}
	(1.219)
$\log(\text{Casualty}) \times D_{2014}$	0.765
	(1.182)
λ_{2006}	-1.900
	(1.809)
λ_{2010}	-6.490^{*}
	(1.865)
λ_{2014}	-0.505
	(1.647)
N	348
R^2	0.988

Note: Cell entries represent unstandardized coefficient estimates with bootstrapped standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.10: The Effect of Wartime Violence on Ethnic Vote Share, Mediating Effects of Population Displacement

Variables	Model 1: Net Displacement	Model 2: Gross Displacement
$\log(\text{Casualty}) \times D_{2006}$	4.274^{*}	4.778^{*}
	(1.327)	(1.316)
$\log(\text{Casualty}) \times D_{2010}$	3.243^{*}	3.747^{*}
	(1.376)	(1.330)
$\log(\text{Casualty}) \times D_{2014}$	1.592	2.099
	(1.295)	(1.295)
λ_{2006}	2.020	3.929^{*}
	(1.829)	(1.780)
λ_{2010}	-1.373	0.538
	(1.707)	(1.787)
λ_{2014}	3.626^{*}	5.545^{*}
	(1.547)	(1.581)
N	412	412
R^2	0.991	0.991

Note: Cell entries represent unstandardized coefficient estimates with bootstrapped standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^{*}p < 0.05$

Table SI4.11: The Effect of Wartime Violence on Ethnic Vote Share, Logged Alternative Violence Measures

Variables	Model 1: log(Refugees)	Model 2: log(Prison Camps)
log(Refugees) $\times$ D_{2006}	6.073*	
	(1.938)	
log(Refugees) $\times$ D_{2010}	1.794*	
	(0.830)	
log(Refugees) $\times$ D_{2014}	2.045*	
	(0.731)	
log(Prison Camps) $\times$ D_{2006}		2.476*
		(1.198)
log(Prison Camps) $\times$ D_{2010}		2.096*
		(0.794)
log(Prison Camps) $\times$ D_{2014}		1.229
		(0.778)
λ_{2006}	−2.181	8.609*
	(2.543)	(2.561)
λ_{2010}	−2.186	4.562*
	(1.378)	(2.019)
λ_{2014}	1.753	7.334*
	(1.080)	(1.804)
N	428	388
R^2	0.991	0.991

Note: Cell entries represent unstandardized coefficient estimates with clustered (on municipality and year) robust standard errors in parentheses. The dependent variable is *Ethnic vote share* (on 0-100 scale). The intercept term is dropped to allow fixed effects for municipality and year (not shown). $^*p < 0.05$

Table SI4.12: Individual-Level Effects of Wartime Violence

Variables	Model 1: Ethnic Friends		Model 2: Closest Friends		Model 3: National Trust		Model 4: Representation	
log(Casualty)	0.667*		−0.514*		−0.395*		−0.219	
	(0.183)		(0.170)		(0.151)		(0.228)	
Violence		0.593*		−0.210		−0.020		−0.195
		(0.177)		(0.174)		(0.208)		(0.161)
Gender	−0.113	−0.078	0.265*	0.239*	0.089	0.079	−0.071	−0.088
	(0.126)	(0.126)	(0.098)	(0.097)	(0.112)	(0.110)	(0.121)	(0.119)
Age	0.005	0.006	0.001	−0.000	−0.005	−0.005	−0.007	−0.008*
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
HHI Serb-Bosniak	0.057	2.916*	0.337	−1.711	2.065	0.614	4.671*	3.690*
	(1.462)	(1.343)	(1.037)	(0.917)	(1.474)	(1.333)	(1.913)	(1.409)
HHI Croat-Bosniak	−0.526	0.452	−0.800	−1.425*	−0.429	−0.869	0.252	−0.083
	(0.841)	(0.946)	(0.670)	(0.671)	(0.786)	(0.764)	(1.089)	(0.908)
HHI Serb-Croat	1.043	0.455	−0.591	−0.010	−0.889	−0.373	−1.564	−1.360
	(1.041)	(1.197)	(0.763)	(0.919)	(0.865)	(0.986)	(0.905)	(0.959)
Population density	0.000*	0.000*	−0.000	−0.000	−0.000	−0.000	−0.000*	−0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Income per capita	−0.000	−0.000	0.000	0.000	−0.000	−0.000	−0.000	−0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	1401	1401	1401	1401	1401	1401	1371	1371
χ^2 (df = 8)	119.767*	84.635*	74.021*	42.275*	47.239*	23.077*	150.943*	147.381*

Note: Cell entries represent unstandardized coefficient estimates with clustered robust standard errors in parentheses. The dependent variable is listed in the column heading and is on a 1-5 scale. Threshold coefficients are not presented. $^*p < 0.05$

SI5: Illustrative Cases Using Matching Methods

A comparison of similar municipalities with different levels of exposure to wartime violence provides yet another way of substantively illustrating our finding. In order to systematically select cases for comparison, we used matching methods: nearest neighbor matching and high-dimensional block matching.

Nearest Neighbor Matching

In order to perform nearest neighbor matching for identifying most similar cases for illustrative comparison, we first dichotomized the continuous treatment (*Casualty*) at the median value so as to have two equally sized groups from which to match cases. Then, we employed nearest neighbor matching with the Mahalanobis metric as the distance measure, creating municipality pairs with one municipality having experienced a higher than median casualty rate while the other experienced a lower than median rate. The municipalities were matched according to the controls in our model. Table SI5.1 contains information on the relevant controls for Kakanj and Vitez, the matched pair we compare in this section.

These are municipalities are relatively similar except for the level of wartime violence that they experienced. While the two municipalities match quite well on population density, income per capita, average age, and average age squared, they do noticeably differ in their values for the Serb-Bosniak and Serb-Croat dyads. Nevertheless, given that Kakanj and Vitez experienced similar levels of ethnic voting in 1990 (75.56 percent for Kakanj and 74.43 percent for Vitez), diverge considerably in how much violence they endured, and matched well on a number of controls, a comparison between the two can provide some insights into the relationship between exposure to violence and ethnic voting.

In terms of exposure to violence, the experiences of these two municipalities were starkly different. Kakanj, with a 1.02 percent casualty rate, experienced less violence than 84 of the other 106 municipalities in the analysis. In contrast, Vitez, with a casualty rate of 3.61 percent, lost a higher share of its pre-war population than did 94 of the other municipalities. Unlike Kakanj, Vitez was the site of some of the war's more gruesome episodes, including the Ahmići massacre in which Croat forces killed over 100 Bosniak civilians.[18] This history of violence is reflected in Vitez's relatively high casualty rate of 3.61 percent. In contrast, only around 1.02 percent of Kakanj's pre-war population perished during the war. In the elections that followed the war, ethnic parties have consistently exceeded their 1990 vote shares in Vitez, while their support has remained fairly constant or declined in Kakanj. In Vitez, such parties received 86.86 percent of the vote in 2006 (12.43 percentage point increase), 79.82 percent in 2010 (5.39 percentage point increase), and 87.99 percent in 2014 (13.56 percentage point increase). In Kakanj, on the other hand, ethnic parties received 74.82 percent of the vote share in 2006 (0.74 percentage point decrease), 66.33 percent in 2010 (9.23 percentage point decrease), and 76.02 percent in 2014 (0.46 percentage point increase).

[18] BBC News. 2000. Flashback: The Ahmići Massacre. [Accessed 9 June, 2015]. `http://news.bbc.co.uk/2/hi/europe/603420.stm`.

Table SI5.1: Comparison of matched municipalities, nearest neighbor matching

Variable	Kakanj	Vitez
Casualty	1.02	3.61
Population density	148.41	175.21
Income per capita	21620.64	22011.20
Average age	28.39	28.43
Average age squared	806.10	808.39
HHI Serb-Bosniak	0.48	0.37
HHI Croat-Bosniak	0.46	0.44
HHI Serb-Croat	0.25	0.41
Ethnic voting 1990	75.56	74.43
Ethnic voting 2006	74.82	86.86
Ethnic voting 2010	66.33	79.82
Ethnic voting 2014	76.02	87.99
Ethnic difference 2006	-0.74	12.43
Ethnic difference 2010	-9.23	5.39
Ethnic difference 2014	0.46	13.56

High-Dimensional Blocking

A different pair of municipalities, Sanski Most and Prijedor, were matched through an alternative method: high-dimensional blocking. The same variables that were used in the nearest neighbor matching are also employed here for blocking. One advantage of high-dimensional blocking is that we can match municipalities on the relevant variables without having to make arbitrary decisions about the continuous treatment, such as dichotomizing it at the mean or median value. The drawback to this approach is that without considering the treatment in the process, we are not assured that municipalities with varying levels of exposure to violence will be matched. Despite this, we obtained a strong match between Sanski Most and Prijedor. The Mahalanobis distance between the two is approximately 0.522.

Table SI5.2 contains information on our treatment (*Casualty*) as well as the relevant controls and ethnic voting figures that are of interest. The municipalities match quite well on the HHI dyads and age, less so on population density and income per capita.

With respect to our treatment, Sanski Most experienced a moderate level of violence at 2.25 percent, close to the mean of 2.32 percent. Prijedor, on the other hand, at 4.69 percent, lost a higher share of its pre-war population than all but nine of the other 106 municipalities included in the analysis. It was the location of numerous war crimes committed by Serb forces against Bosniak civilians; a site of some of the most infamous concentration camps and of the second-largest massacre (after the Srebrenica genocide) committed during the Bosnian Civil War[19]

It is interesting to note that ethnic parties actually obtained a higher vote share in the 1990 election in Sanski Most (79.71 percent) than they did Prijedor (69 percent). Following the war, however, ethnic vote share has moderately but consistently declined in Sanski

[19]Mojzes 2011.

Most, by 3.18 percentage points in 2006, 7.91 percentage points in 2010, and 6.86 percentage points in 2014. Ethnic parties have consistently obtained vote shares in the low to mid 70 percent range during this time. In contrast, ethnic parties have substantially increased their vote shares in Prijedor, the site of one of the war's most infamous violence campaigns. Such parties outperformed their 1990 vote share by 27.34 percentage points in 2006, 21.88 percentage points in 2010, and 23.07 percentage points in 2014. Ethnic vote share has stood in the low to mid 90 percent range over this period of time.

These examples further illustrate that exposure to violence can have a substantively meaningful effect on political preferences. Overall, the results of our analysis so far are compelling. There is strong evidence that increased exposure to violence leads to substantially increased ethnic voting.

Table SI5.2: Comparison of matched municipalities, high-dimensional blocking

Variable	**Sanski Most**	**Prijedor**
Casualty	2.25	4.69
Population density	61.35	134.94
Income per capita	13572.92	17292.29
Average age	30.80	31.87
Average age squared	948.45	1015.86
HHI Serb-Bosniak	0.44	0.43
HHI Croat-Bosniak	0.41	0.40
HHI Serb-Croat	0.37	0.38
Ethnic voting 1990	79.71	69.00
Ethnic voting 2006	76.53	96.34
Ethnic voting 2010	71.80	90.88
Ethnic voting 2014	72.85	92.07
Ethnic difference 2006	-3.18	27.34
Ethnic difference 2010	-7.91	21.88
Ethnic difference 2014	-6.86	23.07

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