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## **The loser's long curse: electoral consequences of a class conflict**

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**Abstract:** This paper presents evidence of political legacies of exposure to a violent class conflict over 100 years. We revisit the Finnish Civil War of 1918 and first trace out the impact of local conflict exposure on electoral outcomes over a quarter-century period between the World Wars. The electoral performance of left-wing parties that backed the insurgents was persistently and negatively affected by civil war casualties on both sides of the conflict. Our evidence suggests that this effect can be attributed to at least three mechanisms: a mechanical effect of party supporters perishing in the civil war, a backlash against the losing side, and voters reacting to post-civil war concessions and reforms that most impacted war-affected municipalities. We also show that the civil war had a persistent impact on the Finnish electoral politics: left-wing parties have been less popular in conflict-hit municipalities even in modern-day elections.

**Key words:** civil war, class conflict, electoral politics, impact persistence, left-wing parties

**JEL classification:** D72, D74, N94, O12

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## 1 Introduction

What are the electoral consequences of class conflict? The writings of Marx and Engels point towards asymmetric impacts (Marx 1867; Marx and Engels 1848). While rebellion can cause major economic and political losses to the ruling elites, it can also benefit the working classes by decreasing inequality and boosting political empowerment. Indeed, successful revolutionary parties often take control of the government. But what happens to parties that support unsuccessful revolutions? The electoral repercussions of conflict in such situations are often unclear. Voters might be inclined to punish the instigators or reward the attempt. Moreover, even unsuccessful revolutions can lead to rapid social change, and they may be followed by increased concessions and redistribution.

Multiple, intertwined, and even divergent mechanisms make understanding political behaviour and preferences in post-conflict societies a complicated task. We touch upon these issues by studying the consequences of the Finnish Civil War of 1918 (see, e.g. Alapuro 1988 and Upton 1980 for background). The Finnish Civil War is commonly characterized as a class conflict between the insurgents (the Reds) and the government troops (the Whites). It started as an offshoot of the Bolshevik Revolution in Russia, and the roots of local variation in insurgency participation were in economic and political inequalities and associated grievances, such as coercive practices in the agricultural labour markets (Meriläinen et al. 2022). The uprising ended up being one of the bloodiest civil conflicts experienced in Europe during the 1900s, and it resulted in around 39,000 casualties. The civil war ended in May 1918 with the win of the conservative Senate-led forces.

The primary purpose of this working paper is to trace out the effects of local conflict exposure on the electoral support of left-wing parties—which had close ties with the losing insurgent side of the Finnish Civil War—over the medium and long run. Our main focus is on the quarter-century period between the World Wars. Although historians have argued that the civil war left Finnish society more polarized than it was before the conflict, the period that we study has commonly been referred to as the era of reconciliation, during which the country became reunited. We shed light on the political transformation that happened during this period. Our empirical analysis makes use of detailed individual-level data on civil war casualties and a 26-year panel of municipal electoral results coupled with a difference-in-differences strategy. These data allow us to separate civil war casualties by the side of the conflict and municipality of census registration, which again enables us to construct different measures of exposure to the Finnish Civil War.

Our main finding is that the support of left-wing parties was persistently and negatively affected by civil war casualties on both sides of the conflict. Voters reacted particularly strongly to casualties on the government side and in regions that the government controlled at the end of the civil war. While our focus is on the more immediate inter-war period, when the nation was rebuilding, we also show that the adverse effects of the civil war on left-wing parties' electoral support persist even today—more than 100 years after the conflict. The Finnish case we study bears similarities to many other setups where a civil war has influenced party politics in this manner. For instance, in Ireland, Fianna Fáil emerged as the party of the victors, while Fine Gael became the party of the losers (Gallagher 1985).

We explore the mechanisms behind this adverse electoral effect, and conclude that there are at least three plausible factors that can explain our findings. First and perhaps foremost, the Finnish Civil War was followed by important political and economic reforms—especially a major land reform and an extension of franchise in municipal elections—and voters reacted to these by rewarding the governing parties from the political centre and the right (cf. Caprettini et al. 2022; de Janvry et al. 2014; De La O 2013; Zucco Jr. 2013). Following fundamental policy changes such as a major land reform and franchise extension in local elections, economic inequality went down in particular in those places that had more

insurgency participation (see also Meriläinen et al. 2022)—although not in municipalities that had more White casualties. The adverse effect in these regions calls for alternative explanations.

A second plausible mechanism is a societal backlash against the parties associated with the losing side of the civil war, which was more significant in localities with greater exposure to the civil war. This societal backlash mechanism is indirectly suggested by the facts that the effects are larger in absolute terms for White casualties and in White Finland—that is, in the government-controlled regions.<sup>1</sup> Lastly, part of the negative impact can be attributed to a mechanical effect: supporters of the left-wing parties perished in the war. However, this mechanical effect cannot explain why voters would have reacted to White casualties in a similar manner.

Contrary to several earlier studies on civil wars and their political impacts (Alacevich and Zejcirovic 2020; Blattman 2009; Iwanowsky and Madestam 2019), we do not find any evidence that municipalities that were more exposed to the civil war would have had lower (or higher) voter turnout rates. This echoes the result of Coupé and Obrizan (2016), that victimization in the Eastern Ukraine conflict has not increased political participation—which they conclude highlights the importance of country- and context-specific studies. Furthermore, we provide suggestive evidence that the winning side did not capture the electoral process. More precisely, we do not find evidence that local civil war exposure would be associated with election tampering via the disqualification of votes.

The present study of the political effects of the Finnish Civil War of 1918 makes a number of contributions to the literature on the consequences of civil wars.<sup>2</sup> First, we present evidence on the role of identity—namely, social class—in violent politics and its legacies. This identity channel of conflict still remains understudied, even though it has been profoundly shaping the mass politics of Europe in the nineteenth and twentieth centuries.<sup>3</sup> Of course, class conflicts have not been merely a historical phenomenon. For instance, societal inequalities have driven more recent societal unrest in Latin American countries (UNDP 2013).

Second, we study a country that became fully democratic shortly after the civil war and that has since developed into a strong economy with strong institutions. Many of the existing analyses concern countries that are still in the process of economic and political development, ranging from Cambodia (Iwanowsky and Madestam 2019) to Uganda (De Luca and Verpoorten 2015; Haass and Ottmann 2022).

Third, this paper provides a comprehensive picture of the electoral consequences of civil war violence by studying both sides of the conflict with plausibly differential effects. This approach contrasts prior work, which has typically focused on the consequences of rebel violence (Blattman 2009; Cassar et al. 2013; Weintraub et al. 2015), or violence by government forces (Balcells 2012; Miguel and Roland 2011; Rozenas et al. 2017).<sup>4</sup>

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<sup>1</sup> Another important feature of our rich data is that they allow us to study how the effects vary by the type of victimization. We find that the effect is primarily driven by executed individuals on both sides of the conflict, and prison camp deaths. Battle deaths appear to matter to a lesser extent. This provides further support for the second mechanism.

<sup>2</sup> See Blattman and Miguel (2010) for a general overview of the civil war literature and Davenport et al. (2019) for a survey of the literature on political consequences of civil wars.

<sup>3</sup> While much of the extant work focuses on religious or ethnic conflict instead of class conflict, one recent exception is a study by Tur-Prats and Valencia Caicedo (2020), who investigate the long-term effects of the Spanish Civil War on trust and political behaviour. However, whether the Spanish Civil War was just a class war could be debated. According to some commentators, it can also be seen as a religious conflict or a struggle between dictatorship and democracy (Juliá 1999).

<sup>4</sup> Furthermore, some authors have measured conflict exposure with other types of losses, such as destroyed infrastructure (see, e.g. Coupé and Obrizan 2016).

Fourth and last, instead of addressing the immediate political fallout of a civil war, we are able to quantify the electoral repercussions over a longer course of time (cf. Barceló 2021; Costalli and Ruggeri 2019; Tur-Prats and Valencia Caicedo 2020). We know that conflict can shape subsequent political engagement (Alacevich and Zejcirovic 2020; Bellows and Miguel 2009; Blattman 2009; Iwanowsky and Madestam 2019), but the long-term political consequences are among the most poorly understood repercussions of civil wars (Blattman and Miguel 2010; Davenport et al. 2019). By providing such evidence, this paper also adds to the burgeoning literature on historical persistence in economic and political development.<sup>5</sup>

The remainder of the paper is organized as follows. In Section 2 we discuss the historical background of our study, and continue with relevant theoretical considerations in Section 3. Section 4 introduces our data and empirical approach. We then present our empirical findings in Section 5. The sixth and final section concludes the study.

## 2 The Finnish Civil War of 1918 and its aftermath

Finland was an autonomous part of Russia until the Russian Revolution of 1917—which presented the country with an opportunity to become independent. This did not happen under easy circumstances. The political power over the Grand Duchy of Finland was handed over to the weak Finnish Parliament, and the Russian-backed police were dissolved. This transition created a power vacuum both politically and in law enforcement, and unrest began to arise (Upton 1980). Strikes and demonstrations became more frequent across the country. People demanded better working conditions, land reform, and an extension of the franchise. While the conservative government had made significant concessions by November 1917, these were not considered substantial enough by the insurgents and the conflict for the control of Finland continued.

The Finnish Civil War officially began in January 1918.<sup>6</sup> It was a class conflict between two parties. The insurgents (also known as the Reds) were led by a section of the Social Democratic Party, and they mainly consisted of industrial and agricultural workers. Meriläinen et al. (2022) show that one important driver of local insurgency participation was economic inequality, together with associated phenomena such as the coercion of agricultural workers. Besides Finnish soldiers, the Reds were supported by Russian volunteers. The government side (also known as the Whites) were volunteers from the middle and upper classes, although the government also drafted soldiers from the areas that it controlled during the civil war. The Whites were also supported by the German Imperial Army.

The hostilities of 1918 lasted for four months, from January 1918 until May 1918. The conflict ended with victory for the Senate-led forces. The civil war (and its aftermath) saw around 39,000 casualties, approximately 1 per cent of the population. This makes it one of the bloodiest civil wars in Europe. Most of the casualties were among the insurgents. However, most insurgent casualties were not the result of battles; rather, many Reds were executed, and the vast majority died in prison camps after the war.

The civil war tore Finnish society apart. According to many historians and social scientists (e.g. Alapuro 1988), the post-conflict Finnish society was even more polarized than before the civil war. The Whites were the winners of the civil war, and they stayed in control of political and economic life. The Reds, who had lost the conflict that they started, faced a societal backlash. Immediately following the war there

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<sup>5</sup> For recent reviews of the persistence literature, see Cantoni and Yuchtman (2020), Arroyo Abad and Maurer (2021), and Cirone and Pepinsky (2022). Moreover, Walden and Zhukov (2020) offer a review focused on political legacies of violence.

<sup>6</sup> For more in-depth accounts of the Finnish Civil War, we refer to Alapuro (1988) and Upton (1980).

were almost 80,000 Reds held at prison camps in poor conditions, with not enough food and rampaging contagious diseases. Beyond that, Reds and their families faced diverse forms of discrimination (Alapuro 1991; Heimo 2010). Reds were portrayed as gruesome murderers, while the violence from the White side was downplayed or not discussed at all. There was also occasional political violence against those individuals who were known to have fought on the Red side (Tikka 2005).<sup>7</sup>

Finland, however, gradually became more harmonious during the time period between the World Wars. Scholars of Finnish history often note that the nation had at least partially healed from its wounds and reached national unity by the time the country fought in the Winter War.<sup>8</sup>

One crucial factor in keeping further conflict at bay was the introduction of fundamental policy changes that reduced economic and political inequality after the civil war. The extensive land reform the state carried out during the post-conflict years was particularly significant. As Finland heavily relied on agriculture at the time, much of the underlying economic inequality was tied to inequality in landownership. Indeed, Meriläinen et al. (2022) show that following the Finnish Civil War, inequality decreased more in places that were the most unequal before the conflict and that consequently had the most insurgents.

Moreover, the central government implemented a major reform that established universal suffrage in municipal elections. Before this change, many individuals were not able to influence municipal decision-making at all. While national elections had been organized using universal and equal suffrage since 1906, voting rights (and the number of votes each voter could cast) in local elections were tied to the amount of taxes a voter paid.<sup>9</sup> This was an important restriction, given the vast number of policies determined at the local level.

These changes occurred despite the fact that the left became weaker in terms of its electoral support.<sup>10</sup> While the Social Democratic Party held 92 out of 200 seats in the Parliament the year before the civil war, it lost 12 seats after the civil war in the 1919 election.

To what extent did the civil war shape the electoral support of the left? Our primary interest is in the political repercussions of the Finnish Civil War. In particular, we want to understand how *local exposure* to the civil war affected the electoral support of parties that were close to the Reds.

### 3 Civil war exposure and the electoral support of the left

From a theoretical point of view it is not obvious that there is a net effect of civil war exposure on political behaviour. And if there is one, its direction is not obvious. Given these complexities, we study

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<sup>7</sup> According to Tikka (2005), around 200 individuals who were associated with the Reds were killed during the three years that followed the Finnish Civil War.

<sup>8</sup> This unity is commonly referred to as the *Spirit of the Winter War*.

<sup>9</sup> There had been earlier, unsuccessful attempts to reform the municipal franchise already in the early 1900s. The municipal voting rights reform was finally passed in the Parliament after the declaration of independence, some months before the conflict onset in late 1917. However, municipal elections with universal suffrage were not organized until after the civil war. There were no major changes to the franchise or the electoral system at the national level during the inter-war period that most of our paper focuses on.

<sup>10</sup> The narrative that dominates the historical accounts suggests that the elites saw the reforms as necessary means of sustaining peace after the civil war (see also Meriläinen et al. 2022). This is broadly in line with the threat of revolution hypothesis of Acemoglu and Robinson (2000), suggesting that franchise extensions and subsequent redistribution in the West occurred as a response to an increased perceived threat of revolt.

the electoral consequences (and the underlying mechanisms) of the Finnish Civil War in an exploratory manner.

It is possible that the major reforms in post-conflict Finland—the municipal franchise reform and the land reform—mattered the most in places that also saw the highest participation rates in the insurgency. Voters might have rewarded the incumbent government for these policies and improvements in their well-being instead of voting for the left-wing parties that were in opposition.

But the civil war could also have had more direct effects. The first possibility is that there were mechanical effects. Those who participated in the civil war likely had some ties with political parties. The insurgents were close to the socialist parties, while those who fought for the government were more likely supporters of the political parties of the centre and the right. If supporters of a particular party perished in the conflict, we would expect the party support to decline accordingly.

Related to this, Costalli and Ruggeri (2019) discuss organizational (or meso-level) consequences of civil war. They argue that former combatants can create strong local party organizations that can help mobilize voters in elections. If localities with more civil war casualties had more fighters in general, the implications of greater exposure to the civil war become less opaque.

On the other hand, a *vendetta hypothesis* would suggest that the left-wing parties may have suffered from a societal backlash due to their association with the Reds that initiated the rebellion (Balcells 2010, 2017). Having said that, the governing parties could also have experienced a similar backlash from the violence perpetrated by the government troops (cf. Balcells 2012). Instead of a backlash effect, civil war casualties could also have triggered a ‘rally round the flag’ effect that has been documented in the context of international conflict and retrospective voting (e.g. Berinsky 2009). However, such effects do not have robust support (Getmansky and Weiss 2022; Karol and Miguel 2007).

What further complicates the relationship between civil war exposure and party support is that civil conflict affects civic participation in post-conflict societies, which is well documented in the civil war scholarship (Alacevich and Zejcirovic 2020; Blattman 2009; Iwanowsky and Madestam 2019). If the Finnish Civil War also affected voter turnout negatively, it is important to bear in mind that changes in the turnout base may have had additional, ambiguous partisan consequences.

These considerations yield inconclusive predictions in terms of the effect sign. However, they do exemplify that the effects of civil war exposure may vary by the side of the casualties and possibly geographically depending on which side of the conflict controlled the region during the civil war. We will explore this further in our empirical analyses.

Besides a more immediate electoral fallout, the Finnish Civil War may have generated long-lasting political legacies. It is well documented in the political science and economics literature that individuals can be socialized into having a set of stable attitudes and opinions that they may transmit to future generations (Alesina et al. 2013; Bisin and Verdier 2000, 2001; Nunn 2009). If the civil war influenced the views of those who experienced the conflict, they may have passed their ideas to their children and other community members. Institutionalization of the civil war is another plausible channel through which victimization could matter for electoral outcomes in the long and very long run, for instance through written histories and memorialization. For further discussion on mechanisms such as these, we refer to Walden and Zhukov (2020).

## 4 Data and empirical approach

This section describes our data and empirical strategy. We have collected and digitized an extensive amount of historical data which we will analyse using a difference-in-differences approach.

### 4.1 Data

Our data set combines municipality-level data on civil war exposure with election results and other variables. Overall, the data cover 419 municipalities.

#### *Civil War casualties*

We use a unique data set of all Finnish Civil War casualties, collected by the Finnish government in the *Suomen sotaturmat 1914–22* project, to measure exposure to the civil war. Importantly, these data include the side of the conflict (Red or White) and the municipality of birth of each individual who died in the civil war. There are about 39,550 individuals in the data set.<sup>11</sup> We scale the number of casualties by the total population in 1910. On average, 0.92 per cent of the municipal population died in the civil war. Most of them were insurgents (0.77 per cent of the population versus 0.16 per cent for the Whites). Panels A–C of Figure 1 illustrate the geographical variation in civil war exposure. Municipalities in southern parts of the country were hit hardest by the civil war in terms of casualty rate, and most of these casualties were Reds. However, municipalities on the western coast and in the southeastern parts of the country witnessed many casualties (relative to the municipal population) on the White side.

#### *Electoral outcomes*

We have further collected novel municipality-level information on voting in Parliamentary elections. In the main analyses, we focus on elections held between 1910 and 1917 (preceding the civil war) and 1919–36 (following the civil war). In total, we use data from 13 elections spanning 26 years. The election results come from official publications by Statistics Finland. Among some other information, they report voter turnout, votes by party, and the number of rejected votes. Our main focus is on the electoral performance of left-wing parties, although we also consider some auxiliary dependent variables. On average, left-wing parties gained almost 40 per cent of the municipal vote share. We are mainly interested in how this vote share changes depending on exposure to the civil war. Panel D of Figure 1 shows the changes on the Finnish map. The left experienced greater declines in its popularity especially in southern parts of the country. In other parts, such as in many northern municipalities, left-wing parties grew in popularity after 1918.

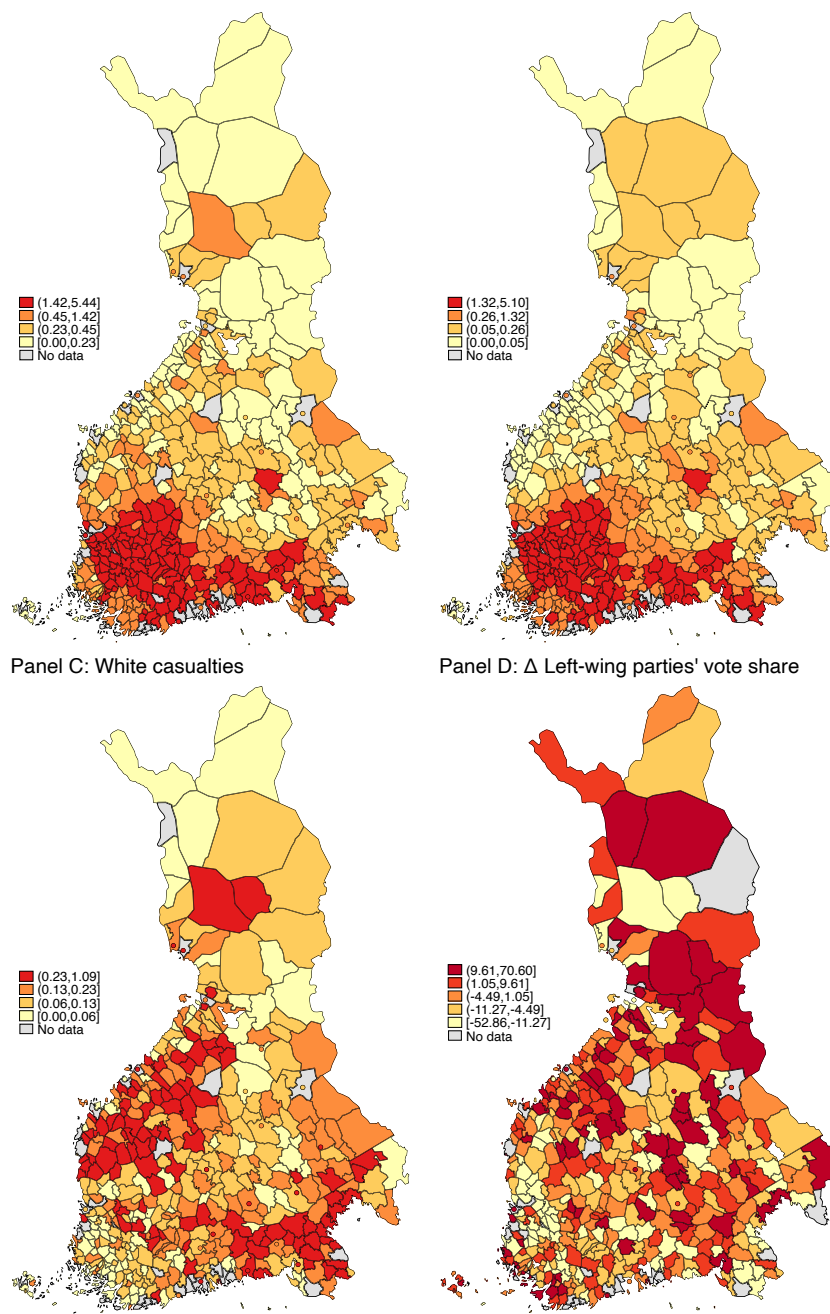
Although there were some changes in the party system around the civil war years, the major parties did not experience any party break-ups. Nor were any new major parties born during the inter-war period that is our main focus. The largest left-wing party was the Social Democratic Party, on top of which there were a number of less important socialist parties.

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<sup>11</sup> The Finnish National Archive has made these data publicly available online at <http://vesta.narc.fi/cgi-bin/db2www/sotasurmaetusivu/main> (accessed 31 May 2019).



Figure 1: Civil war exposure and change in left-wing electoral support



Note: casualty rates are expressed as the percentage of casualties over population in 1910. Change in left-wing electoral support refers to the difference between the average vote share of the left-wing parties between 1919 and 1936 and the average between 1910 and 1917.

Source: authors' compilation based on data from Statistics Finland and the *Suomen sotaturmat 1914–22* project.

### Control variables

We combine our data on civil war exposure and electoral outcomes with municipalities' background characteristics. The first covariate that we include in our analyses is local economic inequality before the Finnish Civil War (more specifically, in 1904). Including this control is important, because pre-conflict inequality was a prominent driver of civil war participation and the electoral success of the Social Democratic Party before 1918 (Meriläinen et al. 2022). We further exploit geographical information

(longitude, latitude, ruggedness, and altitude) of the municipalities as well as their population size as control variables.<sup>12</sup>

## 4.2 Empirical strategy: difference-in-differences

With these data at hand, we estimate two types of difference-in-differences specifications that relate civil war casualties with electoral outcomes. The first one is a standard difference-in-differences specification of the following form:

$$y_{mt} = \beta \mathbf{1}[Year_t > 1917] \times Civil\ war\ casualties_{m,1918} + \lambda_m + \lambda_t + \varepsilon_{mt} \quad (1)$$

Here,  $y_{mt}$  is either left-wing parties' vote share or another dependent variable in municipality  $m$  in year  $t$ .  $\beta$  is the regression coefficient of interest which corresponds to the effect of civil war exposure on the dependent variable. We control for municipality fixed effects,  $\lambda_m$ . This means that we net out all time-invariant municipality-level characteristics and estimate our results using within-municipality variation in civil war exposure. Moreover, we control for year-specific shocks by netting out time fixed effects,  $\lambda_t$ .<sup>13</sup>  $\varepsilon_{mt}$  is the error term.

To illustrate the dynamic, long-run relationship between civil war casualties and voting behaviour, we also estimate the following event-study specification:

$$y_{mt} = \sum_{s \neq 1916} \delta_s (Civil\ war\ casualties_{m,1918} \times \mathbf{1}(Year_t = s)) + \lambda_m + \lambda_t + \eta_{mt} \quad (2)$$

Now,  $\delta_t$  are year-specific coefficients for the effect of civil war casualties on voting outcomes, relative to the base year 1916.

If two assumptions hold, we can treat the difference-in-differences estimates as causal. First, there should be no time-varying confounders at the local level that affect the dependent variable that we have not accounted for. Any confounders that are fixed over time are absorbed by the municipality fixed effects, and the year fixed effects control for shocks that are common for all municipalities in a given year. Second, we assume that vote shares would have evolved in the same way in differentially exposed localities, had the municipalities not been exposed to the civil war. While this assumption cannot be directly tested, we can provide support for this assumption by verifying that there are no observable pre-treatment trends in the more exposed municipalities. In the baseline specification, we can assess robustness to the inclusion of time trends. Furthermore, in the event-study specification the year-specific regression coefficients should be indistinguishable from zero for pre-civil war years.

## 5 Results

We report our empirical findings in this section, first focusing on the period between the World Wars, considered national rebuilding after the civil conflict. We report adverse electoral effects on the left-wing parties close to the insurgents. We also shed light on several mechanisms that could explain our results. Lastly, we examine the impacts of the civil war on voting behaviour in the long run.

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<sup>12</sup> The terrain controls are drawn from the Global Agro-Ecological Zones (GAEZ) database.

<sup>13</sup> Some of our specifications control for region-specific time fixed effects instead, and we also include pre-treatment covariates interacted with the time fixed effects in some of the models.

## 5.1 Short- and medium-run results

### *Civil war casualties and support for the left*

Column (1) of Table 1 presents our main result using the baseline difference-in-differences specification. In Panel A, we only control for municipality and year fixed effects. The estimation result suggests that a 1 percentage point increase in civil war casualties (the mean death rate being about 0.9 per cent of the municipal adult population) is associated with a decrease of around 3.6 per cent. This implies that one standard deviation increase in civil war casualties is associated with a decrease of 0.15 standard deviations in the left-wing vote share. Given the effect magnitude, and often close Parliamentary elections, it is plausible that the civil war prevented a socialist majority from forming in post-conflict Finland. In Panel B, we introduce additional controls: region-specific year fixed effects and year fixed effects interacted with a host of pre-civil war characteristics. Although including these covariates tones down the point estimate slightly, the main message remains unchanged.

The corresponding results from the dynamic difference-in-differences specification that includes a full set of covariates are available in Figure 2. We observe that the fall in the support of the left-wing parties was immediate after the civil war, and it persisted at least until 1936—the last election before the Second World War. That is to say, the negative effect on left-wing parties' electoral support persisted even if the country gradually became more unified again.

Another observation that arises from Figure 2 is that civil war casualties appear to be associated with left-wing parties' electoral performance already a year before the conflict. This dip in the point estimates that occurs before the civil war raises some concerns regarding the causal interpretation of our results, although an obvious possibility is that the estimates are picking up effects of milder skirmishes that started already in the fall of 1917.<sup>14</sup> In line with this, the point estimates are very stable and statistically indistinguishable from zero for the years 1910–16. Furthermore, if we control for linear time trends in our baseline specification, our results remain unchanged (see Appendix Table A1). This is also reassuring news.

### *Effects by casualty side*

Our data distinguish casualties by the side of the conflict, which allows us to separately assess how casualties on the insurgent and government sides mattered for election outcomes after the civil war. We turn to this analysis in columns (2) and (3) of Table 1.<sup>15</sup> These regression results show that both Red and White casualties mattered for left-wing parties' electoral success. Furthermore, it appears that voters responded more strongly to White casualties: a 1 percentage point higher White casualty share is associated with an 8 percentage point decrease in left-wing parties' vote share, while the same estimate is around 2.3–3.5 percentage points for Red casualties. However, there were considerably fewer White casualties than Red casualties, and the overall effect seems to be driven by the insurgent casualties. It is also worth noticing that the standardized effect sizes implied by the estimation results are slightly smaller for casualties who fought alongside the government troops.

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<sup>14</sup> After Finnish independence from Russia, there was no national police or army presence to maintain order, which had always been provided by the powerful Russian Empire (Alapuro 1988). Labour organizations formed municipal militias that took on the role of keeping the peace, while right-wing groups created their own guards to control the increased striking that started to turn violent and revolutionary (Upton 1980).

<sup>15</sup> Appendix Figure A1 presents the corresponding event-study graphs.

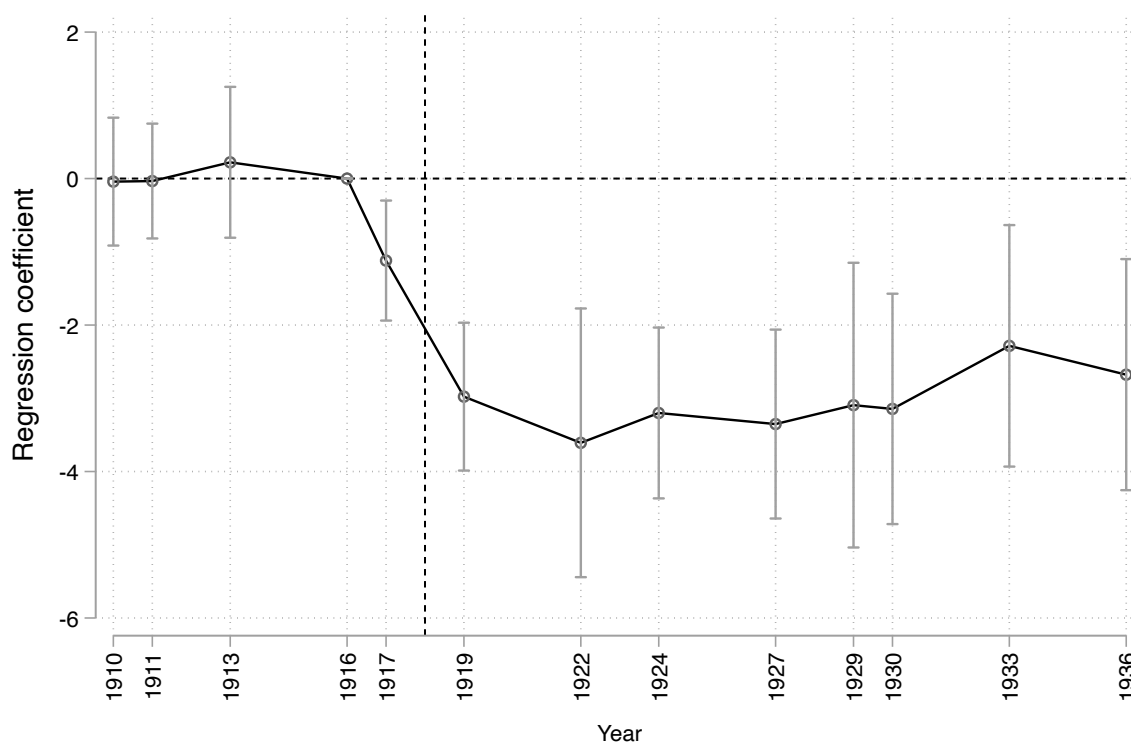
Table 1: Effect of civil war casualties on left-wing parties' vote share

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Panel A: No controls</b>									
Civil war casualties × 1[Year > 1917]	-3.590*** (0.362)			-1.832** (0.740)			-4.698*** (0.662)		
Red casualties × 1[Year > 1917]		-3.483*** (0.365)			-1.839** (0.791)			-4.412*** (0.654)	
White casualties × 1[Year > 1917]			-7.982*** (2.597)			-6.610* (3.682)			-8.481*** (3.093)
<i>N</i>	5,337	5,337	5,337	955	955	955	4,382	4,382	4,382
<i>R</i> <sup>2</sup>	0.87	0.87	0.87	0.86	0.86	0.86	0.86	0.86	0.85
Outcome mean	40.01	40.01	40.01	55.17	55.17	55.17	36.71	36.71	36.71
Standardized effect size	-0.15	-0.14	-0.05	-0.18	-0.17	-0.07	-0.15	-0.13	-0.05
<b>Panel B: Controls included</b>									
Civil war casualties × 1[Year > 1917]	-2.851*** (0.572)			-2.621*** (0.847)			-3.364*** (0.823)		
Red casualties × 1[Year > 1917]		-2.730*** (0.605)			-2.605*** (0.887)			-3.148*** (0.859)	
White casualties × 1[Year > 1917]			-9.423*** (2.938)			-5.902 (4.057)			-11.656*** (3.714)
<i>N</i>	5,300	5,300	5,300	955	955	955	4,345	4,345	4,345
<i>R</i> <sup>2</sup>	0.90	0.90	0.90	0.89	0.89	0.89	0.89	0.89	0.89
Outcome mean	40.19	40.19	40.19	55.17	55.17	55.17	36.90	36.90	36.90
Standardized effect size	-0.12	-0.11	-0.06	-0.26	-0.24	-0.06	-0.11	-0.10	-0.07

Note: the table reports regression coefficients from a difference-in-differences specification. In Panel A we only control for municipality and election year fixed effects. In Panel B we control for municipality and region-specific time fixed effects, and pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is left-wing parties' vote share. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

Figure 2: Effect of civil war casualties on left-wing parties' vote share



Note: the figure plots point estimates from an event-study specification and the 95 per cent confidence intervals that are constructed using standard errors clustered at the municipality level. We use 1916 as the base year. Estimations include municipality fixed effects, county-specific election year fixed effects, and controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The vertical line marks the civil war year.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

### *Regional heterogeneity*

During the civil war the Reds mostly controlled parts of southern Finland and the Whites controlled the rest of the country. We further examine whether territorial control during the civil war interacted with the casualty shares in columns (4)–(9) of Table 1, where we split the municipalities in our sample into ‘Red Finland’ and ‘White Finland’. The regression coefficients are greater in absolute terms for municipalities that were located in White Finland than for municipalities that were located in Red Finland. Having said that, the standardized effects of overall and Red casualties are larger in Red Finland than in White Finland. Appendix Figures A2 and A3 present the corresponding event-study graphs. The patterns we see in these graphs echo the results shown here.

### *Type of victimization*

Our analysis thus far pools together all types of casualties, independent of the *type* of victimization. However, our data allow us to separate the effects by cause of death: battle deaths, executions, and prison camp deaths. The latter include only Reds who died in prison camps, many of them after the civil war was over.

We separate casualties by the type of victimization in Table 2. The regression coefficients are predominantly negative (albeit not always statistically significant) in line with the main estimation results. Regression coefficients are particularly large in Panel B, where we look at deaths due to executions. This

points towards an animosity against Reds from the insurgency being a plausible driver of the electoral punishment that followed from greater civil war exposure, although we stress that there are mostly no major differences in the standardized effect sizes across the panels.

Table 2: Effect of civil war casualties (by cause of death) on left-wing parties' vote share

	Entire country		Red Finland		White Finland	
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A: Battle casualties</b>						
Red battle casualties $\times$ 1[Year > 1917]	-1.134 (2.548)		-2.150 (3.433)		-2.260 (4.538)	
White battle casualties $\times$ 1[Year > 1917]		-6.383 (4.079)		18.002* (9.835)		-8.535** (4.321)
<i>N</i>	5,034	5,034	955	955	4,079	4,079
<i>R</i> <sup>2</sup>	0.89	0.90	0.89	0.89	0.89	0.89
Outcome mean	41.55	41.55	55.17	55.17	38.36	38.36
Standardized effect size	-0.01	-0.04	-0.05	0.08	-0.01	-0.05
<b>Panel B: Executed</b>						
Executed Reds $\times$ 1[Year > 1917]	-7.444*** (1.025)		-5.691*** (1.536)		-10.326*** (1.755)	
Executed Whites $\times$ 1[Year > 1917]		-11.410*** (4.271)		-8.767** (3.922)		-22.339*** (7.269)
<i>N</i>	5,034	5,034	955	955	4,079	4,079
<i>R</i> <sup>2</sup>	0.90	0.90	0.90	0.89	0.89	0.89
Outcome mean	41.55	41.55	55.17	55.17	38.36	38.36
Standardized effect size	-0.11	-0.04	-0.22	-0.08	-0.10	-0.05
<b>Panel C: Prison camp deaths</b>						
Prison camp deaths $\times$ 1[Year > 1917]	-2.892** (1.254)		-0.914 (2.171)		-3.927** (1.612)	
<i>N</i>	5,034		955		4,079	
<i>R</i> <sup>2</sup>	0.90		0.89		0.89	
Outcome mean	41.55		55.17		38.36	
Standardized effect size	-0.07		-0.04		-0.08	

Note: the table reports regression coefficients from a difference-in-differences specification. All specifications control for municipality and region-specific time fixed effects, and pre-conflict characteristics (longitude, latitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is left-wing parties' vote share. Columns (1)–(2) include data from all municipalities in the estimation, and columns (3)–(4) and (5)–(6) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively. Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

## 5.2 Potential mechanisms

### *Changes in redistribution*

The first and perhaps most important mechanism that we consider here is that civil war exposure was associated with changes in redistribution (Caprettini et al. 2022; de Janvry et al. 2014; De La O 2013; Zucco Jr. 2013). In our case, the incumbent government was composed of parties of the political centre and the right. On the other hand, the reduced inequality might also have led to less demand for redistribution, as suggested by the much celebrated politico-economic theory of redistribution by Meltzer and Richard (1981).

To explore this mechanism, we take data on economic inequality from the years 1904 and 1938 and use these data to quantify the association between civil war casualties and changes in the Gini coefficient.

These regression results are presented in Table 3. We see that, on average, inequality decreased the most in locations that were the most exposed to the civil war. This result echoes the findings of Meriläinen et al. (2022), who provide a more detailed look at the changes in redistributive outcomes in Finland after the civil war of 1918.

A closer look at the data reveals that the relationship is entirely driven by Red casualties and municipalities in Red Finland. The main takeaway from these findings thus is that changes in redistribution could have mattered also for voting behaviour, but this ought to be only part of the story. If changes in redistribution had been the only driver of electoral change, we would have expected to see similar results also for White casualties and White Finland.

#### *Backlash against the losing side*

Our results on redistribution suggest that the main finding cannot be—at least not fully—attributed to voters showing loyalty to the right-wing parties thanks to the redistributive reforms, instead of voters punishing the left-wing parties for initiating the civil war. The events that followed the civil war may have encouraged some voters to distance themselves from the socialist parties. This is somewhat in line with the argument of Balcells (2012), that individuals reject the political identities associated with the perceived perpetrators of violence. Balcells provides evidence of this mechanism in the context of the Spanish Civil War.

After the Finnish Civil War, the Reds faced a societal backlash. While those who had fought for the Reds and their supporters thought that the Reds had fought against wealthy elites with the aim of making society more equal, the Whites dominated the post-civil war narratives and framed Reds as perpetrators of violence. According to the Whites, they had fought for the freedom of the Finnish people and for Finnish independence.

The heterogeneity analyses provide further indicative support for the backlash mechanism. While the regression coefficients are negative and statistically significant throughout the table, they are larger in absolute terms for White casualties—the side that won the war—and in White Finland—where the citizens might have been least sympathetic towards the losing side of the war. Moreover, we see in Table 2 that the effects are particularly large for executed individuals, which suggests that the atrocities of the civil war triggered an emotional reaction against the parties on the losing side of the conflict.

#### *Mechanical effects*

It is plausible that part of our findings are explained by a mechanical effect. Most of the casualties of the civil war fought for the Reds, and they were typically supporters of the left-wing parties. Locations that saw more casualties may have experienced a greater decline in left-wing parties' vote share merely because of this. Yet, it is unlikely that this kind of mechanical effect would be the sole driver of our results, for at least two reasons: first, the absolute value of the regression coefficient for Red casualties is greater than 1; second, we see that casualties on both sides of the war had a similar effect on the electoral performance of the left.

Table 3: Effect of civil war casualties on economic inequality

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties $\times$ 1[Year > 1917]	-0.014*			-0.018			-0.010		
	(0.007)			(0.011)			(0.010)		
Red casualties $\times$ 1[Year > 1917]		-0.015**			-0.019			-0.011	
		(0.007)			(0.012)			(0.010)	
White casualties $\times$ 1[Year > 1917]			-0.001			0.010			0.009
			(0.025)			(0.063)			(0.057)
<i>N</i>	816	816	816	148	148	148	668	668	668
<i>R</i> <sup>2</sup>	0.92	0.92	0.97	0.93	0.93	0.92	0.91	0.91	0.91
Outcome mean	0.37	0.37	0.37	0.42	0.42	0.42	0.36	0.36	0.36
Standardized effect size	-0.08	-0.08	0.00	-0.16	-0.16	0.01	-0.04	-0.05	0.01

Note: the table reports regression coefficients from a difference-in-differences specification that controls for municipality fixed effects and county-specific election year fixed effects. The dependent variable is the Gini coefficient. We also include controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. We use data from the years 1904 and 1938. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.



### *Conflict exposure and voter turnout*

Our data suggest that there was a strong positive correlation between voter turnout and electoral support of the left-wing parties before the civil war. The pairwise correlation coefficient between these two variables before 1918 is about 0.14 with  $p < 0.01$ . Scholarship on the political consequences of civil conflict has widely documented that exposure to civil conflict affects voter turnout, although the direction of this effect is unclear. On the one hand, conflict could undermine trust, which could have detrimental effects on turnout as well. For instance, Alacevich and Zejcirovic (2020) provide evidence from Bosnia and Herzegovina that is in agreement with this argument. On the other hand, conflict and repression could increase support for pluralism and thereby bolster civic participation—see, for example, Iwanowsky and Madestam (2019) for evidence from Cambodia.

Be it as it may, voter turnout is one potential channel through which the Finnish Civil War could have mattered for the subsequent support of the left-wing parties. In Table 4 we examine whether civil war casualties are associated with changes in voter turnout. This does not appear to be the case. The point estimates are small in magnitude and statistically insignificant throughout the table.

### *Impact of civil war exposure on disqualified votes*

Last, we consider disqualified votes as an outcome variable. These may capture diverse factors from election tampering or elite capture of the electoral process to protest voting. Table 5 presents regression results on disqualified votes. The point estimates are close to zero and statistically insignificant. This points towards voters truly changing their voting behaviour instead of other forces driving the greater partisan shift in municipalities more exposed to the Finnish Civil War.

## **5.3 Other parties' electoral performance**

Which parties got the votes that the left-wing parties lost? In Figure 3, we shed light on other parties' electoral success before and after the civil war.<sup>16</sup> We split the parties into two groups: the Agrarian Party (*Maalaisliitto*)—the main moderate party in Finland at the time—and (centre-)right-wing parties. Panel A of the figure suggests that the vote share of the Agrarian Party was potentially positively affected by civil war exposure in the short run, but the effects become smaller in absolute terms and statistically insignificant already in 1922. It appears that other parties in the political centre and right were the main benefactors (Panel B). Their vote share was positively and persistently affected by the civil war. We further look at effect heterogeneity in Red Finland and White Finland in Appendix Table A2. The effects are mainly driven by municipalities in Red Finland.

Historians have frequently noted how Finland was more polarized soon after the Finnish Civil War than before. Our findings agree with this remark, as we see that the vote shares of the main proponents of the left-wing parties increased the most in locations that were more exposed to the civil war. Towards the Second World War, the polarization was increasingly driven by the rise of the radical right. We thus complement our findings in Appendix Table A3 by looking at the performance of the radical right-wing party, the Patriotic People's Movement, in the 1936 election when it ran as a stand-alone party for the first time. We see that greater civil war exposure is indeed positively associated with the electoral performance of the party, in particular in White Finland.

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<sup>16</sup> The graph plots regression results from an event-study specification. We complement these results with regression results from a simple difference-in-differences specification; see Appendix Table A2. These regression results confirm the findings presented here.

Table 4: Effect of civil war casualties on voter turnout

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties $\times$ 1[Year > 1917]	0.471 (0.467)			0.075 (0.533)			0.473 (0.615)		
Red casualties $\times$ 1[Year > 1917]		0.528 (0.477)			0.117 (0.547)			0.517 (0.624)	
White casualties $\times$ 1[Year > 1917]			-0.697 (2.391)			-1.070 (3.337)			-0.419 (3.015)
<i>N</i>	5,303	5,303	5,303	955	955	955	4,348	4,348	4,348
<i>R</i> <sup>2</sup>	0.79	0.79	0.79	0.77	0.77	0.77	0.78	0.78	0.78
Outcome mean	59.67	59.67	59.67	65.96	65.96	65.96	58.29	58.29	58.29
Standardized effect size	0.04	0.04	-0.01	0.01	0.02	-0.02	0.03	0.03	-0.00

Note: the table reports regression coefficients from a difference-in-differences specification that controls for municipality fixed effects and county-specific election year fixed effects. We also include controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is voter turnout. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

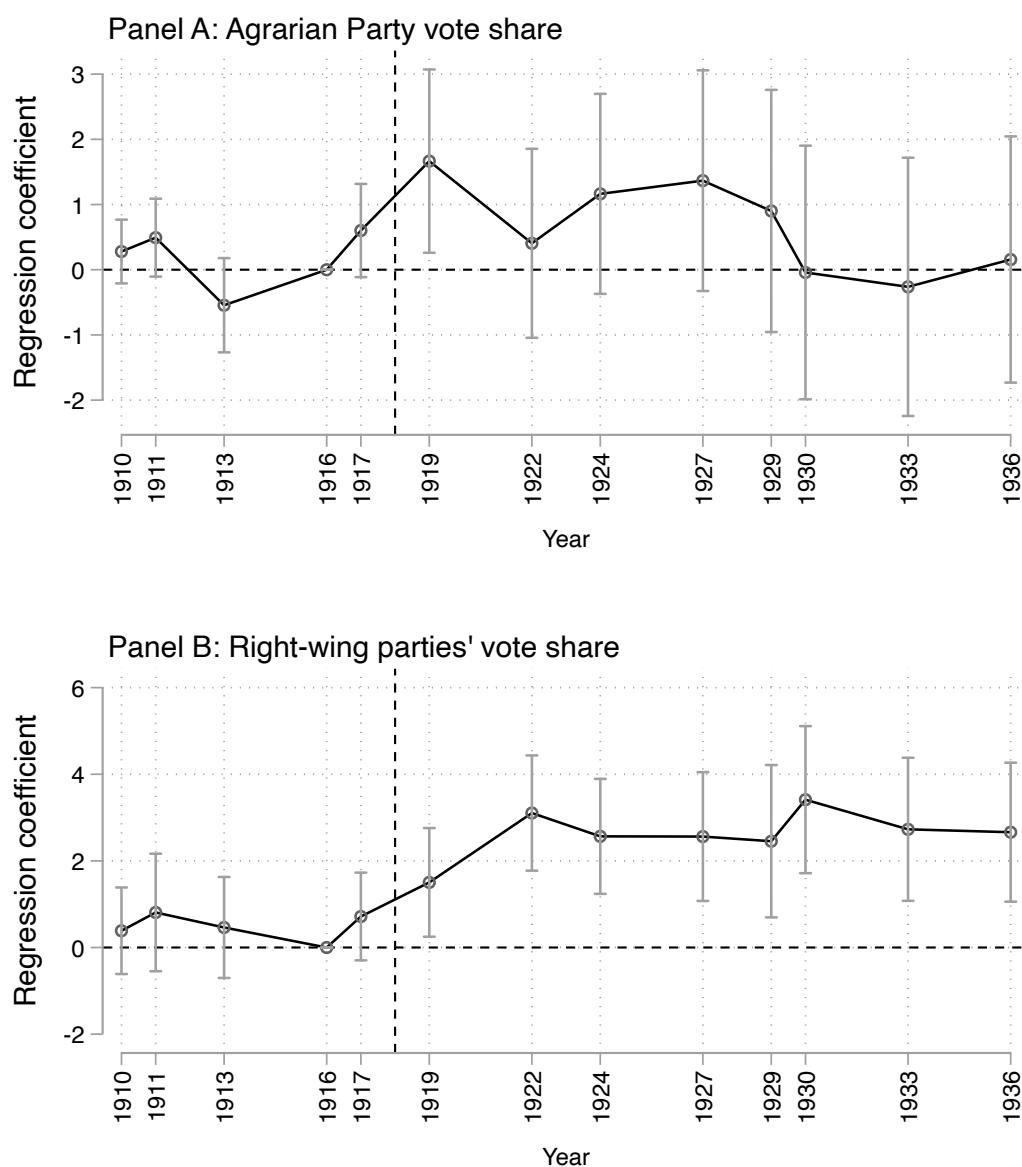
Table 5: Effect of civil war casualties on disqualified votes

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties $\times$ 1[Year > 1917]	0.012 (0.029)			0.056 (0.048)			0.028 (0.037)		
Red casualties $\times$ 1[Year > 1917]		0.020 (0.029)			0.061 (0.050)			0.037 (0.037)	
White casualties $\times$ 1[Year > 1917]			-0.207 (0.164)			-0.011 (0.348)			-0.193 (0.169)
<i>N</i>	4,925	4,925	4,925	881	881	881	4,044	4,044	4,044
<i>R</i> <sup>2</sup>	0.37	0.37	0.37	0.64	0.64	0.64	0.37	0.37	0.37
Outcome mean	0.50	0.50	0.50	0.54	0.54	0.54	0.49	0.49	0.49
Standardized effect size	0.02	0.03	-0.05	0.12	0.12	-0.00	0.04	0.05	-0.05

Note: the table reports regression coefficients from a difference-in-differences specification that controls for municipality fixed effects and county-specific election year fixed effects. We also include controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is the share of disqualified votes. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

Figure 3: Effect of civil war casualties on vote share of the Agrarian Party and the right-wing parties



Note: the figure plots point estimates from a distribution regression and their 95 per cent confidence intervals that are constructed using standard errors clustered at the municipality level. We use 1916 as the base year. Estimations include municipality fixed effects, county-specific election year fixed effects, and controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

#### 5.4 Long-term consequences of the civil war

Do the electoral consequences of the Finnish Civil War persist until today? We compile municipality-level data on left-wing vote share in the national election for the years 1983–2019 and combine these

with data from the pre-civil war era.<sup>17</sup> With these data, we study the relationship between civil war casualties and the long-run change in left-wing parties' vote share using the same parametric difference-in-differences approach as before. Here we estimate the municipality difference-in-differences by civil war casualties from the 1910–17 pre-period to the recent 1983–2019 post-period.

The electoral impact of the civil war that we saw in the short run is also visible in a much longer course of time in Table 6. We find that a 1 percentage point increase in civil war casualty rate is associated with a larger than 4 percentage point decrease in left-wing parties' electoral support in the long run (column 1), which translates to around 12 per cent relative to the outcome mean. This result indicates that the Finnish Civil War left a permanent mark on the Finnish political landscape. As before, we also consider effect heterogeneity with respect to the side of the conflict and regional control. The effects appear to be driven by Red casualties and White Finland. Having said that, our results in columns (4)–(6) are similar to those in columns (7)–(9), albeit statistically insignificant.

It is important to note that the Finnish party system in modern times is vastly different from the pre-civil war party configuration. To illustrate this, consider the last pre-civil war election in which the Social Democratic Party gained more than 40 per cent of the popular vote, but the non-socialist parties got more than half of the votes together. In the 2019 Parliamentary election, the Social Democrats got less than 20 per cent of the vote, there being two other major parties of a similar size and a number of smaller parties.<sup>18</sup>

## 6 Concluding remarks

This paper presents new evidence on the political repercussions of a class conflict. In particular, we have studied the lasting impacts of the Finnish Civil War of 1918. We find that the support of left-wing parties, which backed the insurgents in the civil war, was persistently and negatively affected by civil war casualties on both sides of the conflict. This resonates with concerns that many Social Democratic Party insiders had. For example, Edvard Gylling, one of the leading members of the working-class movement, spoke against revolting before the civil war (quoted in Upton 1980): 'The revolution [...] endangered all that the workers' movement had accomplished so far; organizations, property, its status in the parliament, where new victories could be taken [...] The revolution should be avoided in all ways.'

We attribute the negative effect to three mechanisms: a mechanical effect of party supporters perishing in the civil war, a backlash against the losing side, and voters reacting to post-civil war reforms that mattered the most in war-affected municipalities. Moreover, we present evidence against two possible mechanisms. Neither changes in voter turnout or the winning side capturing the elections appears to be behind our results. The null result on voter turnout interestingly contrasts many existing studies, which further highlights that the political consequences of conflict may be heavily context-dependent.

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<sup>17</sup> We focus on this time period due to convenient data availability. When considering the long-run changes, we are left with a smaller sample than in our earlier analyses. This is because of a municipal boundary reform that happened after the Second World War, and because Finland had to cede some of its area to the Soviet Union.

<sup>18</sup> See also Benedetto et al. (2020), who discuss the rise and fall of Social Democracy between 1918 and 2017.

Table 6: Long-run effect of civil war casualties on left-wing vote share

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties $\times$ 1[Year > 1917]	-5.347*** (1.336)			-4.018 (2.569)			-7.014*** (1.690)		
Red casualties $\times$ 1[Year > 1917]		-5.843*** (1.369)			-4.633* (2.693)			-7.590*** (1.710)	
White casualties $\times$ 1[Year > 1917]			4.457 (6.691)			8.840 (9.931)			6.386 (9.296)
<i>N</i>	608	608	608	120	120	120	488	488	488
<i>R</i> <sup>2</sup>	0.84	0.84	0.83	0.86	0.86	0.85	0.82	0.82	0.81
Outcome mean	33.97	33.97	33.97	44.41	44.41	44.41	31.40	31.40	31.40
Standardized effect size	-0.21	-0.22	0.06	-0.25	-0.27	0.06	-0.21	-0.22	0.07

Note: the table reports regression coefficients from a difference-in-differences specification that controls for municipality fixed effects and county-specific election year fixed effects. The dependent variable is the left-wing party vote share. We also include controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. We use data from the years 1983–2019 and 1910–17. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

Our analysis communicates with a prominent thesis stemming from the writings of Karl Marx and Frederick Engels, which points towards asymmetric consequences of class conflict (Marx 1867; Marx and Engels 1848). While rebellion can cause major economic and political losses to the ruling classes, it also benefits the working classes by decreasing inequality and boosting political empowerment. Before the civil war, the major left-wing party, the Social Democrats, was the largest single party in Finland, but it was systematically left outside of the governing coalitions. This exclusion, however, ended after the conflict. We may speculate whether this happened despite or because of its electoral decline. Namely, it is possible that the party became a viable coalition partner after it became smaller and less powerful. In that regard—and given the redistributive changes that took place after the conflict—our findings tally with the Marxist view on the societal change that follows class conflict. But, it is important to remark that these changes did not occur because exposure to the class conflict boosted the popularity of the left. The overall lessons from our article also speak to the thesis of Przeworski and Wallerstein (1982) about class compromise in democratic capitalist societies.

We also document that historical conflict can leave a more permanent mark on the political landscape of a country. In the Finnish case, this echoes the notion that the wounds of the conflict are still present in subtle ways in society, even with a seemingly swift recovery after the civil war. For instance, the Finnish public broadcasting company YLE surveyed a number of Finns 100 years after the conflict, in 2018, and 68 per cent of respondents said the conflict still divides Finns at least to some extent.<sup>19</sup> Future work should aim to shed more light on this divide; for instance, are individuals' political preferences affected by family history or the local historical context? This would also illuminate the mechanisms underlying our long-term findings.

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<sup>19</sup> The survey results are summarized at [https://yle.fi/uutiset/osasto/news/civil\\_war\\_still\\_divides\\_finland\\_after\\_100\\_years\\_poll\\_suggests/10025538](https://yle.fi/uutiset/osasto/news/civil_war_still_divides_finland_after_100_years_poll_suggests/10025538) (accessed 21 July 2022).

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## Appendix A: Additional tables and figures

This Appendix presents additional figures and tables. Table A1 shows regression results from a difference-in-differences specification in which we control for municipality-specific linear time trends. Our results are robust to this specification, which gives us further confidence in our results.

We conduct additional event-study estimations. Figure A1 plots regression results from an event-study regression where we separate the effects by side of the conflict, and Figures A2 and A3 look at heterogeneity with respect to the side of the conflict that controlled the region at the end of the civil war. These results are largely in line with those that we present in the main text.

Table A2 analyses the impact of civil war exposure on the electoral performance of the Agrarian Party and (centre-)right-wing parties. It confirms what we learned from the event-study regression presented in the main text: it was mainly the political right that gained from the electoral demise of the left-wing parties. The table also presents some additional heterogeneity analyses. We find that the effects are mainly driven by municipalities in Red Finland.

Table A3 shows that a greater exposure to the civil war contributed to the rise of the radical right-wing party the Patriotic People's Movement in the 1936 election. The results suggest that the Finnish Civil War had radicalizing impacts in particular in White Finland.

Table A1: Effect of civil war casualties on left-wing parties' vote share (municipality-specific time trends included)

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties $\times$ 1[Year > 1917]	-3.175*** (0.580)			-0.694 (0.781)			-3.709*** (0.749)		
Red casualties $\times$ 1[Year > 1917]		-3.138*** (0.601)			-0.591 (0.726)			-3.605*** (0.780)	
White casualties $\times$ 1[Year > 1917]			-7.650** (3.678)			-4.374 (5.678)			-9.269** (4.653)
<i>N</i>	5300	5300	5300	955	955	955	4345	4345	4345
<i>R</i> <sup>2</sup>	0.93	0.93	0.93	0.94	0.94	0.94	0.92	0.92	0.92
Outcome mean	40.19	40.19	40.19	55.17	55.17	55.17	36.89	36.89	36.89
Standardized effect size	-0.14	-0.13	-0.05	-0.07	-0.06	-0.05	-0.12	-0.11	-0.06

Note: the table reports regression coefficients from a difference-in-differences specification. In Panel A we only control for municipality and election year fixed effects. In Panel B we control for municipality and region-specific time fixed effects, and pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is left-wing parties' vote share. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotasurmat 1914–22* project, and the GAEZ database.

Table A2: Effect of civil war casualties on the Agrarian Party and right-wing parties' support

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Panel A: Agrarian Party vote share</b>									
Civil war casualties × 1[Year > 1917]	0.511 (0.734)			0.252 (1.024)			0.859 (1.047)		
Red casualties × 1[Year > 1917]		0.301 (0.773)			0.517 (1.032)			0.440 (1.087)	
White casualties × 1[Year > 1917]			7.180 (4.619)			-7.102 (5.214)			12.903** (6.133)
<i>N</i>	5,323	5,323	5,323	955	955	955	4,368	4,368	4,368
<i>R</i> <sup>2</sup>	0.86	0.86	0.86	0.78	0.78	0.78	0.84	0.84	0.84
Outcome mean	22.38	22.38	22.38	7.21	7.21	7.21	25.69	25.69	25.69
Standardized effect size	0.02	0.01	0.04	0.04	0.07	-0.11	0.03	0.01	0.07
<b>Panel B: Right-wing parties' vote share</b>									
Civil war casualties × 1[Year > 1917]	2.150*** (0.654)			2.193*** (0.750)			2.561*** (0.921)		
Red casualties × 1[Year > 1917]		2.320*** (0.679)			1.978** (0.801)			2.866*** (0.945)	
White casualties × 1[Year > 1917]			-0.544 (4.379)			10.745** (4.642)			-3.999 (5.901)
<i>N</i>	5,317	5,317	5,317	955	955	955	4,362	4,362	4,362
<i>R</i> <sup>2</sup>	0.89	0.89	0.89	0.90	0.90	0.90	0.89	0.89	0.89
Outcome mean	37.59	37.59	37.59	38.10	38.10	38.10	37.47	37.47	37.47
Standardized effect size	0.08	0.08	-0.00	0.20	0.17	0.10	0.06	0.07	-0.02

Note: the table reports regression coefficients from a difference-in-differences specification that controls for municipality fixed effects and county-specific election year fixed effects. We also include pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The dependent variable is the vote share of the Agrarian Party in Panel A, and the vote share of right-wing parties in Panel B. We use data from the years 1904 and 1938. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

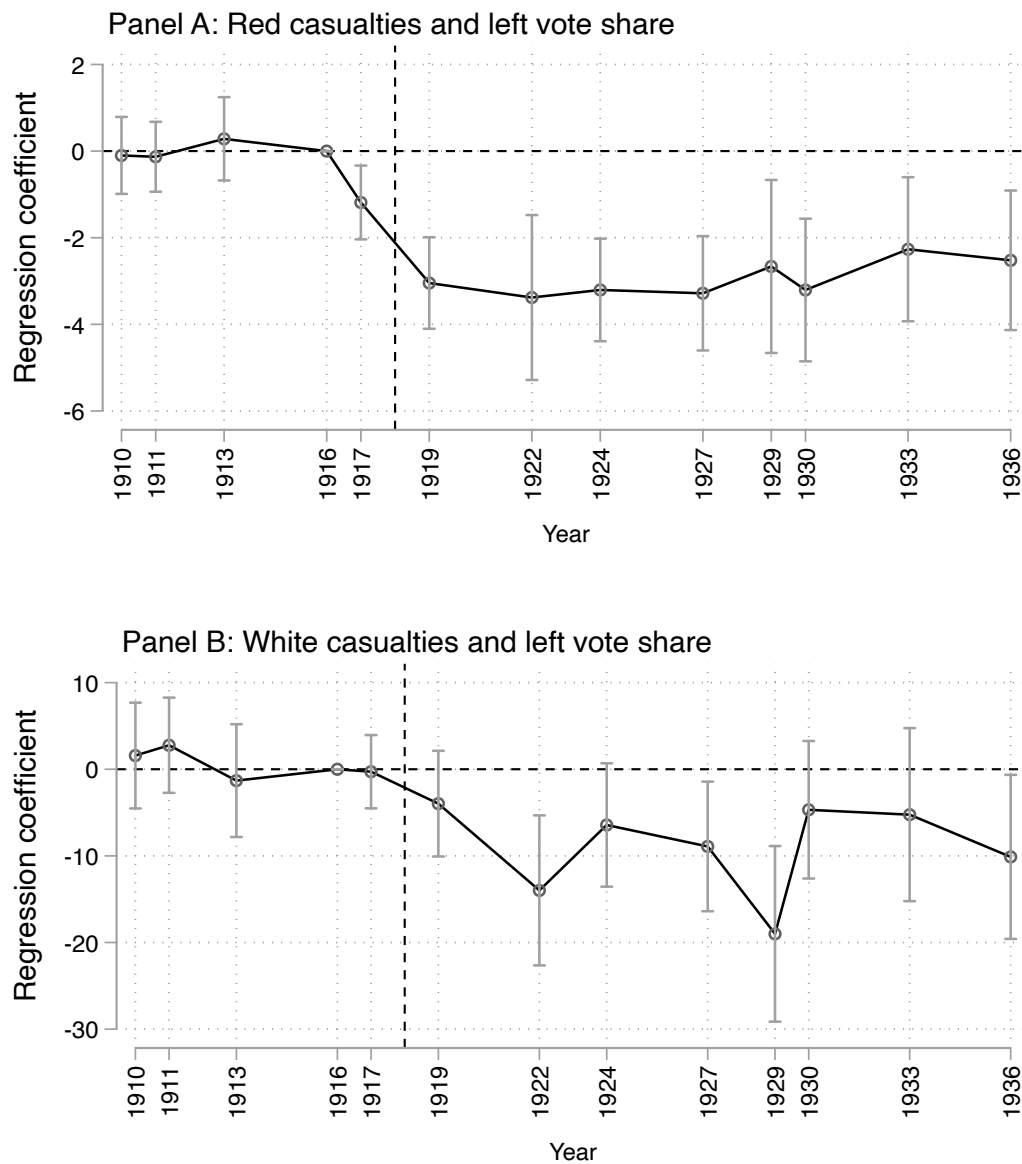
Table A3: Civil war exposure and votes for the Patriotic People's Movement

	Entire country			Red Finland			White Finland		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Civil war casualties	1.195*** (0.374)			1.147 (0.761)			1.317*** (0.497)		
Red casualties		1.013*** (0.372)			1.139 (0.771)			1.022** (0.481)	
White casualties			7.854** (3.494)			2.671 (4.748)			10.466** (4.197)
<i>N</i>	405	405	405	73	73	73	332	332	332
<i>R</i> <sup>2</sup>	0.18	0.18	0.19	0.38	0.38	0.37	0.12	0.12	0.14
Outcome mean	8.13	8.13	8.13	10.76	10.76	10.76	7.55	7.55	7.55
Standardized effect size	0.19	0.16	0.17	0.16	0.15	0.06	0.17	0.13	0.23

Note: the table reports regression coefficients from a regression that controls for county fixed effects, longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910 interacted with time fixed effects. The dependent variable is the vote share of the Patriotic People's Movement in the 1936 election. Columns (1)–(3) include data from all municipalities in the estimation, and columns (4)–(6) and (7)–(9) split the data into subsamples by side controlling the region during the civil war. \*, \*\*, and \*\*\* denote statistical significance at 10, 5, and 1 per cent, respectively.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

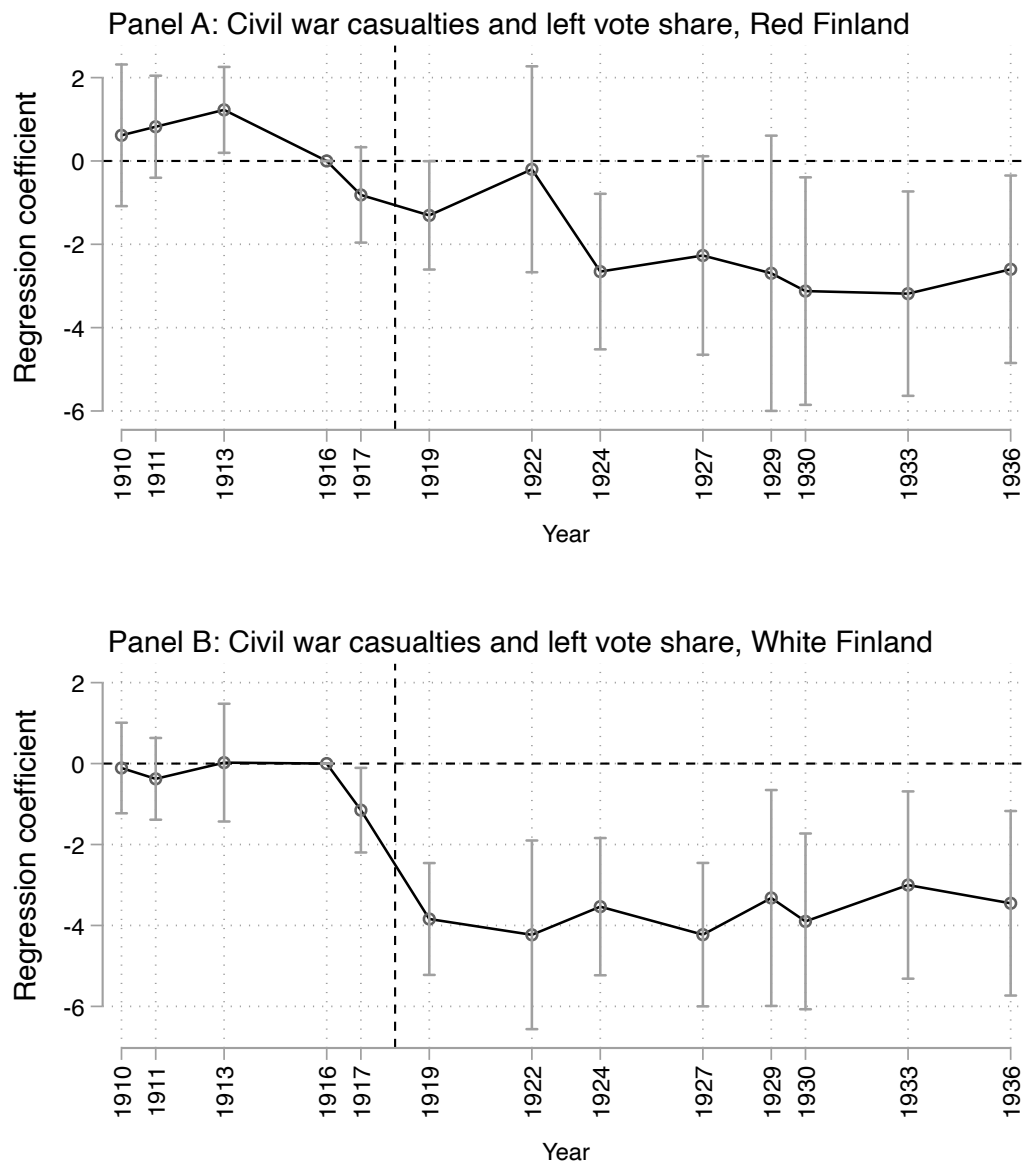
Figure A1: Effect of civil war casualties by side on left-wing parties' vote share



Note: the figures plot point estimates from an event-study specification and the 95 per cent confidence intervals that are constructed using standard errors clustered at the municipality level. We use 1916 as the base year. Estimations include municipality fixed effects, county-specific election year fixed effects, and controls for pre-conflict characteristics (longitude, latitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The vertical line marks the civil war year.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

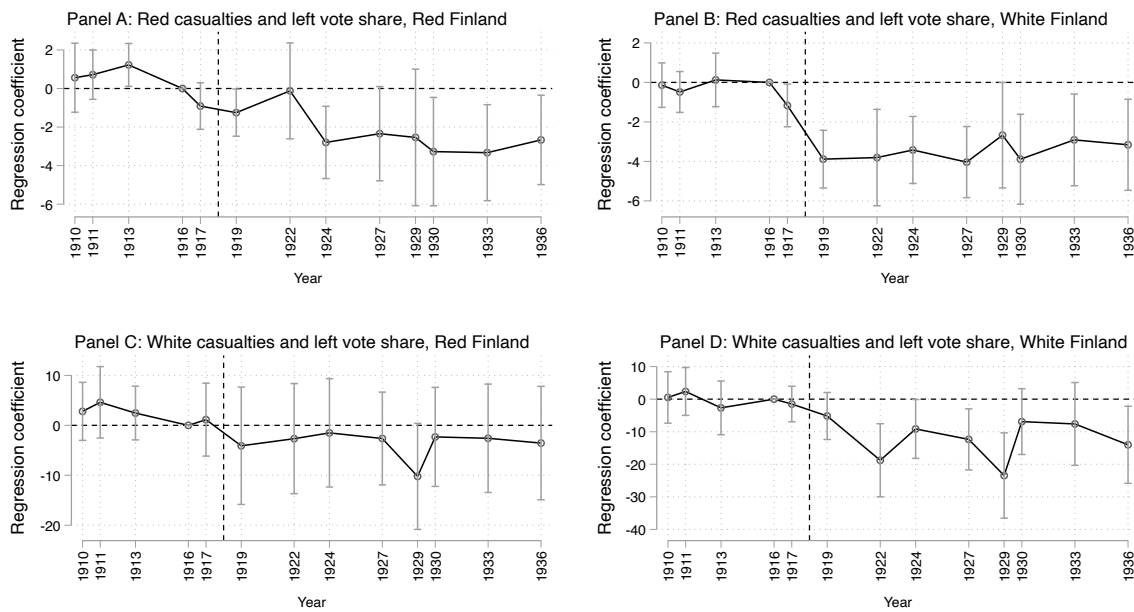
Figure A2: Effect of civil war casualties on left-wing parties' vote share by regional control



Note: the figures plot point estimates from an event-study specification and the 95 per cent confidence intervals that are constructed using standard errors clustered at the municipality level. In Panel A, the estimation sample consists of counties controlled by the Reds. In Panel B, the estimation sample consists of counties controlled by the Whites. We use 1916 as the base year. Estimations include municipality fixed effects, county-specific election year fixed effects, and controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The vertical line marks the civil war year.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.

Figure A3: Effect of civil war casualties by side on left-wing parties' vote share by regional control



Note: the figures plot point estimates from an event-study specification and their 95 per cent confidence intervals that are constructed using standard errors clustered at the municipality level. In Panel A, the estimation sample consists of counties controlled by the Reds. In Panel B, the estimation sample consists of counties controlled by the Whites. We use 1917 as the base year. Estimations include municipality fixed effects, county-specific election year fixed effects, and controls for pre-conflict characteristics (longitude, latitude, ruggedness, altitude, Gini coefficient in 1904, and population in 1910) interacted with time fixed effects. The vertical line marks the civil war year.

Source: authors' compilation based on data from Statistics Finland, the *Suomen sotaturmat 1914–22* project, and the GAEZ database.