Repression, Military Service and Insurrection

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Why do some military veterans take up arms against the state, while others do not? Past research has identified the long-term effects of repression on political behavior and the crucial role of combat experience in advancing human capital, yet little is known about how combat veterans from marginalized backgrounds utilize these skills in a post-war society. Using multiple datasets containing millions of individual records on the Russian Imperial Army conscripts of WWI, soldiers of the revolutionary Red Army and state-backed Imperial White Guard of the Russian Civil War, I study whether WWI veterans from ethnic minority groups were more likely to rebel. The results provide strong evidence that soldiers from marginalized groups and inhabitants of ethnically diverse districts were more likely to join the revolutionary forces to fight against the crumbling empire, while ethnic Russians joined state forces against the revolutionary movement. These long-term effects matter – in authoritarian settings, even more so – because the state resorts to its military to ensure regime survival when internal security agencies fail in the face of domestic unrest.

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1. INTRODUCTION

"Your majesty must remember, that the people and the army are but one, and that in the event of revolution only a small portion of the army can be counted on to defend the dynasty."
— Sir George Buchanan, *My Mission to Russia**

A distinguishing feature of colonial or imperial armies is the diversity of soldiers along ethnic, religious, racial, and other social cleavages. From the Persian Kings and the Roman Emperors, to the Mongol Khans and the Ottoman Sultans, to the Monarchs of the Austria-Hungarian Empire and the Soviet leadership, rulers have commanded over multi-ethnic forces since ancient times. Multi-ethnic and multi-faith armies can pose both enormous challenges to organization, integration, and management of troops and opportunities to enforce ethnic dominance, social cohesion, and a single national identity in authoritarian states. The threats and promises associated with commanding a multinational army manifest themselves in different forms depending on how the state treats its heterogeneous groups before they are called to the line of duty. There is a growing narrative in the political science literature about the negative impact of pre-war marginalization and repression of marginalized groups on their battlefield performance (Lyall, 2020; Peled, 2019; Rozenas, Talibova and Zhukov, 2021). While questions of loyalty during combat are gaining importance, less is known about how such discriminatory and repressive policies affect the political behavior of these marginalized individuals in a post-war environment.

The impact of the mobilization for war and subsequent combat exposure on marginalized groups is crucial to our understanding of the potential utility of the acquired battlefield skills and the durability of ideological indoctrination – the inherent component of military training. Past research has identified the important role of military service in improving organizational skills and the ability to engage in collective action (Campante and Yanagizawa-Drott, 2015; Jha and Wilkinson, 2012). Several studies have looked into how combat veterans utilize these newly gained skills in a post-conflict society. Combat exposure, in general, has been shown to increase political participation (Bellows and Miguel, 2009; Blattman, 2009; Teigen, 2006), social cohesion (Gilligan, Pasquale and Samii, 2014; Voors et al., 2012), and volunteer activities (Nesbit and Reingold, 2011), spur integration into host communities (Mazumder, 2019), strengthen national identification (Sambanis, Skaperdas and Wohlforth, 2015), advance literacy rates (Eynde, 2016) and skills necessary for entrepreneurial success (Avrahami and Lerner, 2003), facilitate sound wartime deci-

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*British Ambassador to the Russian Empire between 1910-1917 (Buchanan, 1923).

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sions (Horowitz and Stam, 2014), and lead to less use of force (Janowitz, 1961). On the other hand, research suggests combat exposure can lead to negative post-conflict behavior, such as increased militarism (Bessel, 1991; Snyder, 1989) and support for right-wing parties (Grossman, Manekin and Miodownik, 2015). While these studies suggest combat experience has long-lasting effects on social and political attitudes, they fail to consider how preexisting communal cleavages shape these outcomes.

Another key question in studying the effects of war is whether mass mobilization can reshape the state's institutional capacity in fundamental ways. Scholars have found strong positive relationships between military mobilization and increased political stability and institutional development (Besley and Persson, 2010; Blaydes and Paik, 2016; Przeworski, 2009; Scheve and Stasavage, 2010, 2016; Tilly, 1992), democracy (Ferejohn and Rosenbluth, 2016; Levi, 1997; Ticchi and Vindigni, 2008), and economic growth (Cassidy, Dincecco and Onorato, 2017; Dincecco and Onorato, 2018). However, since these macro-level outcomes are measured from the perspective of the historical development of states using a longer time-frame, the immediate effects of veteran's war experiences on their relationship with the state and its institutions remain unexplored.

Building on these two strands of literature, which explore individual and macro-level changes separately, I argue that the state's exclusionary treatment of its minority groups before military service can have powerful effects on the subsequent attitudes and behavior of marginalized individuals that extend beyond the battlefield. Prominent theories suggest two competing mechanisms through which the military service of individual soldiers can shape their post-war behavior. First, military service could increase the sense of national unity and loyalty to the regime through intensive discipline and ideological indoctrination (Weber, 1976; Yanagizawa-Drott, 2014) or increased social-learning and inter-group contact (Samii, 2013; Wilcox, 2011) and, therefore, induce obedience toward the state. Second, military service could either reinforce (Dietz, Elkin and Roumani, 1991; Rosen, 1996) or further exacerbate existing cleavages (Downing, 1993; Enloe, 1980), increase aggression toward rivals (Grossman, Manekin and Miodownik, 2015), and provide a conducive environment where historically disadvantaged individuals gain the organizational skills necessary for engaging in collective action (Jha and Wilkinson, 2012). What form this general relationship between military service and post-service political behavior takes is likely to depend on the level of discrimination soldiers were exposed to in their communities prior to enlistment:[1] exposure to exclusionary treatment, such as

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[1]Military sociologists argue that the product of military training is a function of what the trainee brings into that environment (Karsten, 1978). Similarly, historians have concluded that how the African soldiers fighting for colonial states during WWI reacted to the war and what role they played during the subsequent African independence movements depended on their ethnicity and class origins (Israel, 1992;

discrimination and repression, during peacetime, might make soldiers resilient to direct inculcation of unitary identity and national propaganda at wartime. Moreover, important organizational and fighting skills gained during military training and on the battlefield, which are usually difficult to attain outside military institutions and denied to individuals from marginalized groups, could bolster these individuals' ability to challenge the state. This is consistent with the empirical evidence that shows the acquisition of the resister toolkit by repressed individuals is crucial for their ability to organize and mount an armed resistance (Finkel, 2015). These potentially differential effects of military service across soldiers merit separate attention for both its theoretical and policy implications.

This paper aims to empirically test the hypothesis that the participation of previously marginalized individuals in military service plays an important and qualitatively different role in their post-conflict political behavior compared to soldiers from the dominant group. To test this argument, I focus on the case of the Russian Empire during World War I, the Russian Revolution of 1917, and the ensuing Russian Civil War. Drawing on several newly-constructed sets of large administrative and conflict data containing millions of declassified personnel records on the Russian Imperial Army conscripts of the First World War, the soldiers of the Revolutionary Red Army and Imperial White Guard during the Russian Civil War, and the 1897 Russian Imperial Census, I investigate how the army experiences of soldiers from the marginalized groups impacted their behavior toward the Russian state after WWI – whether they fought in support of the state or joined the revolutionary forces.

The case of the Russian Empire and WWI is compelling for several substantive and empirical reasons. The Great War was one of the deadliest conflicts in the history of the human race, claiming over 35 million military and civilian lives worldwide. The Russian Empire suffered the second-largest military losses among the belligerents, following Germany with over 9.1 million total battlefield casualties[2] – 76% of its mobilized WWI forces (Urlanis, 1971). WWI marked the first massive military mobilization in Russian history. Nearly 13 million active army personnel, including millions of non-Russians, served the Russian Empire until its last days. Although mobilization was based on universal conscription, certain ethnic and religious groups were initially not allowed to serve due to concerns of loyalty to the Empire. The military experience of WWI is also unique because the war culminated in "national mobilization" across all combatant countries (Horne, 2002), particularly in Imperial Russia (Holquist, 1997). States *"sought to stimulate and control 'opinion' and 'morale' (civil as well as military) to a degree and in ways that were hitherto*

Parsons, 1999).

[2]This number includes those that were killed, wounded, captured and reported missing in action.

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inconceivable," according to historian John Horne (Stockdale, 2018). This fact makes the case of WWI especially relevant for testing the proposed argument. The Great War serves as the hard test in this case: if the WWI veterans exhibited disloyalty off the battlefield despite such a high degree of nationalistic propaganda and patriotic upsurge, the conventional wisdom that military service increases national unity is either directly challenged or the longevity of such social identity transformation is put under question. Similarly, the timing, scale, and severity of the Russian Civil War provide a unique opportunity to trace the immediate post-war behavior of WWI veterans. The Russian Civil War immediately followed the Great War and engulfed the country, devastating the society with crime, famine, and disease and claiming over 5 million lives, over 90% of which were civilian losses (Figes, 1990). Finally, previously inaccessible declassified and digitized archival records on the Russian imperial army conscripts and revolutionary movement participants allow individual-level analysis with a high degree of spatial and temporal detail.

I conduct analyses at two different levels – individual and community (based on birth location) – to study how the army experiences of these soldiers from the marginalized and repressed minority groups impacted their behavior toward the Russian state after WWI. I exploit spatial regression discontinuity design at the district borders to empirically identify the post-conflict behavior of former imperial soldiers during the Russian Civil War. I control for several pre-war characteristics of the Russian state and society using district-level covariates constructed from the 1897 Russian Imperial Census.

The preliminary findings suggest that soldiers from marginalized minority groups were more likely to join the Red Army to fight against the crumbling empire. Ethnic Russian veterans of WWI, on the other hand, were more likely to join the White Army to suppress the revolutionary movement. Moreover, inhabitants of ethnically heterogeneous districts were more likely to join revolutionary forces, while soldiers from districts with less ethnic diversity continued to fight on behalf of the imperial forces. Further analysis of different wartime conditions provides evidence in support of the argument about the differential effect of combat exposure on post-war resistance. I conduct a series of robustness checks to address alternative explanations, possible measurement errors and validity of the regression discontinuity design. These results highlight the important role of military service for vulnerable groups in organizing a meaningful challenge against an authoritarian regime.

This article contributes to the literature on discrimination and repression, mass mobilization and the role of military service, and civil conflict. First, the findings demonstrate that the effects of pre-war social cleavages travel beyond soldiers' battlefield performance.

Veterans turn against the discriminatory state when an opportunity to challenge state institutions arises. These longer-term effects matter – in authoritarian settings, even more so – because the state resorts to its military to ensure regime survival when internal security agencies fail in the face of domestic unrest. Second, these individual-level experiences have spillover effects in areas with a high diversity of marginalized groups. In heterogeneous societies, where territorial boundaries do not mirror existing cleavages, even individuals who do not experience discrimination might support their neighbors in their fight against the state. Third, the results capture a consequential trade-off for the state: in times of war, it may need to rely on marginalized groups to defend itself from the external enemies, but doing so jeopardizes state survival in the long run. By and large, these results reinforce the claims made in the literature about the crucial importance of military service to patterns of communal and national politics (Krebs, 2006).

The article proceeds as follows. In the next section, I lay out my theoretical assumptions on the relationship between pre-war repression and post-war political behavior, the mediating role of military service, and spillover effects. Section 3 provides historical background of the Imperial minority policies within the Russian society and in the Imperial Army. Section 4 describes the data and new measures of ethnicity. In sections 5 and 6, I outline empirical strategies used to identify the effects of pre-war repression and intermediate role of military service on soldiers' post-war behavior. Section 7 presents main empirical results. In section 8, I consider a set of alternative explanations. The final section concludes with a discussion of the implications of findings.

2. THEORETICAL EXPECTATIONS

2.1. *Legacies of Targeted Repression*

A rich literature in conflict studies examining the legacy of state-sponsored repression on political behavior has established that violent events can affect the political preferences and identities of targeted individuals. Moreover, recent work has argued that these effects can persist across generations (Charnysh and Finkel, 2017; Homola, Pereira and Tavits, 2020; Lupu and Peisakhin, 2017; Rozenas and Zhukov, 2019; Zhukov and Talibova, 2018). Yet, there is no consensus among scholars about the direction these effects can take: repression can make citizens compliant (Bautista, 2015; García-Ponce and Pasquale, 2015; Wang, 2021) or provoke resistance against the state (Bautista et al., 2020; Bellows and Miguel, 2009; Lawrence, 2017; Rozenas, Schutte and Zhukov, 2017). Ethnic inequality, in particular, has been shown to increase the likelihood of violent resistance by marginalized groups (Cederman, Gleditsch and Buhaug, 2013).

I expect targeted repression of ethnic minority groups to affect their likelihood of regime support in the long run. Consistent with the previous empirical findings, I argue that the coercive or alienating effects of minority group repression can be durable and manifest more conspicuously in times of crisis. Collective experiences of historical marginalization and discrimination of minority ethnic groups can shape their collective identities (Eyerman, 2001; Hutchison, 2016; Nugent, 2020; Shamir and Arian, 1999), and collective identities can persist for long periods of time (Darden and Grzymala-Busse, 2006; Wittenberg, 2006). Whether the outward political behavior of affected communities reflects these identities or not is contingent on the regime's ability to sustain high levels of repression, which, itself, depends on the coercive capacity of the state (Rozenas and Zhukov, 2019). If the signal of state coercive capacity is real and the costs of defiance are high, citizens will mask their identities and falsify their preferences and anti-regime attitudes (Kuran, 1991). However, in the absence of a credible threat of coercion, the expected cost of persecution will go down, and overt contentious behavior will resurface. These key insights imply that when the regime's strength is tested in critical junctures of history, like financial and institutional collapse after a major war, marginalized communities are presented with political space to exercise their rights and display behavior consistent with their identities.

Building on prior research on the long-term legacies of violence for political behavior, I formulate the following hypotheses relating pre-war repression to post-war outcomes:

H1. (Backlash) Individuals from minority ethnic backgrounds will join the revolutionary forces to overthrow the regime.

H2. (Compliance) Individuals from minority ethnic backgrounds will join the state forces to suppress the revolutionary movement.

2.2. *The Role of Military Service*

Military service is considered a socially transformative institution – a community-building school for individuals from all walks of life. National leaders have historically used the military institution as a nation-building exercise, hoping it would remold unskilled and illiterate rural peasants or unruly people living on the fringes of the society into a unified citizenry (Krebs, 2004). This transformation is expected to be three-fold: an *identity transformation* – through the transmission of social and cultural values and intense socialization with other soldiers; a *skills transformation* – through extensive military training and discipline, as well as direct battlefield experiences; and *transformation of potential* –

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through prospective career advancement whether facilitated by social networks or prestige of serving. To the extent that military service might transform the lives of ordinary young men – a critical segment of any society – investigating differential patterns and effects of human capital accumulation across recruits is equally important. Are the military service's transformative effects similar for all individuals, including those from various ethnic, religious, and socio-economic backgrounds? More importantly, are these effects durable and permanent, or do they vanish outside the barracks?

The social experiences of soldiers and how the state treats them before they join the military can significantly impact the effectiveness and speed of the military service's transformative processes in multiple ways. Exposure to discriminatory and repressive policies prior to enlistment may increase the salience of social identity transformation by feeding the individual's desire to integrate and gain reputation in the eyes of the state. Intense intergroup contact and socialization, especially in the context of mass mobilization, could also reduce animosity between groups (Mazumder, 2019). Prospects for career advancement and use of veteran status to climb up the ladder of political or public office would, therefore, loom large in the calculations of these individuals.[3] As such, these individuals will be more likely to assimilate and continue to serve the state loyally following de-mobilization.

> H3. (Loyal veterans) Combat exposure during military service will increase marginalized individuals' sense of national unity and make them loyal citizens of the regime after the military service is over.

An alternative path is that the state's exclusionary treatment may slow the process of identity transformation, by making individuals more resilient to cultural and ideological indoctrination. The Soviet Army's propaganda efforts, for example, were met by high skepticism and derision by many of the non-Slav soldiers (Ball, 1994). Militarized socialization could exacerbate existing social cleavages by reinforcing the privileged position of dominant groups and entrenching unequal social hierarchy (Levy, 1998). Additionally, fueled by grievances for unjust treatment compared to the dominant group, individuals might act friendly during intergroup contact to avoid punishment but retain hostile attitudes against the dominant group. If so, the internalization of an alternative identity would either not occur or not be genuine enough to survive outside the military. As Krebs (2006, 108) states, "because identity is highly contextual, one should not be surprised to see soldiers adopting regional, class, gendered, religious, or ethnic perspectives

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[3]This logic is supported by studies that demonstrate that military service can provide opportunities for minority groups to gain social and political equality (Klinkner and Smith, 1999; Parker, 2009).

when they are off base or out of uniform or when they have returned to civilian life." Employment prospects and potential elite status also would lose their allure in this case, given the perception that whatever one does off the battlefield and after service will be subject to the same social prejudices and state sanctions. Hopeless about future civilian career prospects and facing constant military nationalistic propaganda that reinforces the comparatively inferior status of his kin, a previously marginalized individual might perceive the benefits of skills acquisition more promising for future interaction with the state than accepting a different social identity. As such, these individuals will be more likely to turn their newly acquired skills into instruments of contention directed against the state following de-mobilization.

> H4. (Opportunistic veterans) Combat exposure during military service will exacerbate the existing cleavages and turn marginalized individuals into opportunistic fighters, who will use their newly acquired skills to fight the state after the military service is over.

2.3. Spillover Effects

Are these competing theoretical expectations restricted to historically marginalized groups, or should we expect communal spill-over effects? Communal level effects are possible in two ways: First, long-time co-existence and collective socialization during civilian life should make dominant-group members more supportive of their non-native neighbors. Second, upon return to their respective communities, veterans should be able to influence and mobilize their neighbors and friends. After all, military service is expected to play a fundamental role in strengthening the organizational and leadership skills of servicemen.

The "intergroup contact hypothesis," laid out initially by Allport, Clark and Pettigrew (1954), posits that increased interaction between members of different groups reduces intergroup prejudice. This is different from the intergroup contacts and socialization that takes place during military service in two critical ways: (a) the time-frame is generally much longer than some arbitrary service period, and (b) the setting is more natural, far-reaching, and not directly controlled by the state. Ties that bond individuals from different groups can naturally extend to family members and friends, reinforcing and increasing over a person's lifetime – from formative childhood years to adulthood. Military service, in this sense, serves as an experimental lab, where a short-time horizon or one-dimensional and forced nature of contact attenuates the efficiency of the interaction.

A second factor that may contribute to spillover effects is the role that army veterans play upon return to their respective communities. The ability to start and sustain an

armed resistance against a state requires strong organizational and operational skills, albeit slightly different from those provided during conventional military training (Finkel, 2015). In addition to using the acquired military training for individual resistance, newly-minted veterans could also use their leadership and organizational skills to mobilize their community members against the state. Therefore, these individuals should be more likely to persuade members of their community to follow their cause at times of crisis, whether in support of or against the state.

H5. (Spillover effects) Individuals from highly diverse districts will choose to support the revolutionaries, regardless of the level of pre-war repression. Similarly, individuals from homogeneous districts will choose to support the state forces, regardless of the level of pre-war repression.

3. ETHNIC MARGINALIZATION AND NATIONAL ARMY

3.1. *Minorities in the Russian Society*

Unlike many of its multi-ethnic contemporaries, Imperial Russia did not provide administrative and cultural autonomy to its ethnic constituents, although Russians accounted for less than half of the empire's 130 million population at the turn of the century (Kappeler, 2014).[4] Nor was it particularly keen on enfranchising its minority populations (Grosfeld and Zhuravskaya, 2015). Political, social, and cultural oppression and persecution were prevalent in society, and political censorship and cultural assimilation were the dominant state policy choices of the time. Many ethnic groups were deprived of their linguistic rights. For example, Tsar banned the Lithuanian language in all writings starting in 1864, restricted Ukrainian-language publications in 1876, and outlawed the Polish language in churches and schools (Eversley, 1915; Lieven, 2016).[5] Jews had limited geographic mobility, were banned from pursuing certain occupations, and faced ethnic mob attacks until the end of WWI (Grosfeld, Sakalli and Zhuravskaya, 2020).

With the assassination of Tsar Alexander II, a period of counter-reforms began, aimed at reversing the late ruler's reformist policies. Anti-Semitism, persecution of non-Russian populations, censorship, and police surveillance were at the center of these counter-reforms. Following the initial 1905 upheaval, the intensity of extra-judicial administrative repression reached unprecedented levels (Rabe, 1985). The Russian nationality policy, as the foundation of imperial strategy, evolved in two directions: political integration based on loyalty to the empire and Russianness delineated along ethnic and religious categories

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[4]The Russian Empire stretched across territories that currently belong to over 18 independent states.
[5]Mandatory Russian language educational curriculum was imposed on all ethnic minority groups.

(Staliūnas, 2007). The Imperial Monarchs used the Russian Orthodox Church as a tool to legitimize their autocratic rule. Religious affiliation carried significant importance for civil status (Engelstein, 2011), and any form of religious dissent carried punishable consequences. The official ideology of "Autocracy, Orthodoxy, and Nationality" pervaded all levels of governance (DeBardeleben, 1997). Tsarism's perpetual fear of dissent along ethnic and religious lines produced a repressive socio-political and cultural environment conducive to a centralized discriminatory rule.

3.2. Minorities in the Imperial Army

Long before the Great War, since its founding by Peter the Great, the Russian Empire has been skeptical of integrating non-Russian ethnicities (*inorodtsy*) into military and security institutions. Despite being home for hundreds of diverse ethnic groups with Islamic, Asian, Jewish, and European heritages, the Russian Empire's conscription policy officially allowed recruitment of only "native-born Russians," as documented in the Imperial Decree of May 17, 1798 (Curran and Ponomareff, 1982).[6] The Caucasians and Central Asians were considered inherently disloyal to the regime and expressly excluded from military service (Blauvelt, 2003). The exclusion of ethnic minorities continued until the universal conscription statute of 1874, introduced by Alexander II, which proclaimed the defense of the empire to be "the sacred obligation of all its sons, regardless of social state or race (Baumann, 1987)."[7] The number of non-Russians slowly continued expanding, reaching 30,000 before the Russo-Japanese war and 60,000 by the end (Arapov, 2006).

In the summer of 1914, when Tsar Nicholas dragged his empire into one of the deadliest wars in human history, he commanded the largest standing army in the world. Within a few months following Germany's declaration of war, more than a million individuals belonging to various ethnic and religious minority groups were conscripted to serve in the Russian Imperial Army on the multiple fronts of the First World War. By 1917, every sixth soldier of the Imperial Army was Muslim (Tamarin, 1917) – a numerically significant[8], though not the only minority group within Russian society.[9] The imperial recruitment policy at the time unambiguously exempted and excused minorities from the universal

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[6]At the time, this category included *malorusskix* – Ukrainians and Belorussians.

[7]An exception to the early exclusionary policy was the subjection of Jews to compulsory military service from 1827 (Litvak, 2006).

[8]Sources suggest close to 21 million Muslim population residing in the territories of the empire on the eve of the Great War (Rybakov, 1913).

[9]Officially, the Russian Empire considered the Muslim peoples of European Russia, the Volga region, the Urals, Siberia, the Caucasus, Crimea and Central Asia as "muslims", despite their apparent ethnic, social and cultural distinctions (Iskhakov, 2017). The concept of nationality was so weakly defined that the state decided to exclude direct questions about nationality in the 1897 imperial census, fearing that the population would not know how to respond (Cadiot, 2005).

conscription in conformity with the regime's stipulation that the ethnic composition of the military units should be no less than seventy-five percent Slavic (Curran and Ponomareff, 1982). Even with the universal conscription, millions of Kirghiz, Uzbeks, Tajiks, and Karakalpaks were ruled out of service because officials worried multiple years of service in the imperial army would "teach them how to handle weapons and thereby possible to fill the ranks of the empire's enemies (Von Hagen, 2004)." Fearing the rise of a literate and physically stronger male population, trained in active combat, the government resisted any reformist efforts (Sanborn, 2003).

An important place in deliberations about inclusive multinational army held the debate around whether the state should form special units made up of national minorities or distribute them among the various service branches and units. Separate ethnically distinct units helped alleviate the language problem and could be used against each other to quash potential rebellions. On the other hand, such segregation raised questions about control and reliability. In the end, the decision to form national units was abandoned and deemed not viable and politically risky due to concerns of concerted disloyalty. This policy was abandoned a few years into the war, as the "Wild Division" was formed from volunteer fighters of the mountainous regions of the Caucasus, and separate national cavalry regiments were formed for Crimean Tatars and Turkmens (Lapin, 2001). In the last years of the war, when in desperate need of manpower, additional imperial reforms ordered a mobilization in the steppe region of Central Asia for service in the rear.

A few months later, as a bitter civil war engulfed the Russian Empire, the prime movers behind the revolutionary process turned out to be the members of the minority groups that had served in the Imperial Army (Dreisziger, 1990). Roughly 30% of the newly formed Red Army of Workers and Peasants consisted of ethnic and religious minorities (Alexiev, 2019). In a short span of time, thousands of elite Latvian riflemen ("*Latishskie strelki*") division sided with the Bolsheviks (Ezergailis, 1968). The contradictory policies pursued by the Imperial military authorities prior to and during the war gave rise to the exclusionist definition of nationalist identities and conflicts over them (Von Hagen, 2004). Not long ago fighting for the same side on the battlefronts of WWI, the individual Imperial Army soldiers ended up fighting against each other, split between the Bolshevik forces and the White Army. Figure 1 highlights the key events leading up to the Russian Revolution and the Russian Civil War that culminated in the formation of the Union of Soviet Socialist Republics.

Figure 1: Timeline of the Key Events
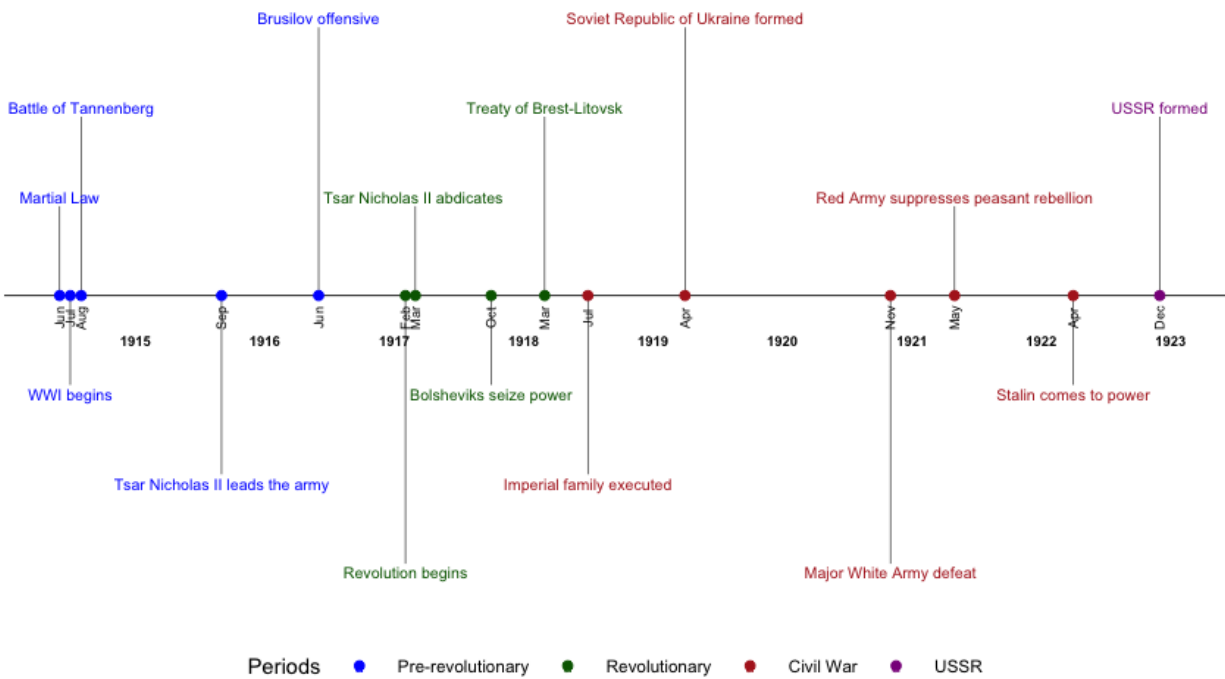
Note: The Battle of Tannenberg was the first major battle of WWI, where the Russian forces experienced a crushing defeat. Brusilov Offensive – the most lethal offensive in world history – marked the last major success of the Russian Imperial Army in WWI. The Treaty of Brest-Litovsk that ended Russia's participation in WWI was signed between the newly formed Bolshevik government and the Central Powers.

4. Data, Sources, and Measurement

To test these countervailing theoretical propositions, I explore how army service interacted with past experiences to affect the political behavior of veterans in the Russian Empire during the revolutionary movement and the Russian Civil War of 1917-1922. I employ several original multi-level datasets constructed from declassified administrative military personnel records, archival materials and lists, the first and only Russian Imperial Census of 1897, historical-geographical atlases, and contextual data from additional contemporary resources to investigate the relationship between the military service of previously disenfranchised soldiers and their post-war political behavior. This section describes the data and provides some general formulas for the measures I have constructed. Table 1 presents summary statistics of all variables used in the analysis, and the Appendix lays out further details.

The territorial-administrative division of the Russian Empire before the start of WWI was four-tiered: 101 unique provinces (*gubernia or oblast*)[10], 824 unique districts (*uezd*)[11], and thousands of localities (*volost*) and villages (*derevnya or selo*). I only include provinces and districts for which administrative and Census data exists. Due to the autonomous status of the Grand Duchy of Finland within the Russian Empire before the start of the war, I exclude 8 provinces (*gubernias*) and corresponding 49 districts (*uezds*) from the geographic scope of the analysis.[12] The final data includes 775 unique districts, reflecting the territories that are administratively part of the current-day Russian Federation and former Soviet Republics. Appendix A3 describes temporal administrative reorganizations and district matching in detail.

The Russian Imperial Borders

Using the 1897 map of the Russian Empire, I develop the geographical boundaries of the Russian districts.[13] The overlap of the fixed timing of 1897 boundaries and Census data facilitates smooth integration of geospatial and non-spatial data, eliminating the need to use weighting techniques for interpolation. However, since the lower-level administra-

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[10]By 1914, there were 81 *gubernias* and 18 *oblasts* in the territories of the Empire, in addition to 2 special zones.

[11]The districts usually included a central town and surrounding rural areas.

[12]The excluded gubernias are: Turku and Pori Province (Abo-Byornoborgskaya), Kuopio Province (Kuopioskaya), Vaasa Province (Nikolaystadskaya/Vazaskaya), Uusimaa Province (Nyulandskaya), Mikkeli Province (Sankt-Mikhelskaya), Hame Province (Tavastgusskaya), Oulu Province (Uleaborgskaya), Viipuri Province (Viborgskaya).

[13]The basic shapefile of the Russian Empire at the district level corresponds to the administrative-territorial division of 1897 and is retrieved from the Electronic Repository of Russian Historical Statistics (Kessler, 2017).

Table 1: Descriptive Statistics for the Main Variables Used in the Analysis

	N	Mean	St. Dev.	Min	Max
Ethno-cultural characteristics					
Number of Ethnic Groups	1,998,346	23.470	9.441	3	63
Number of Religious Groups	1,998,346	9.939	2.497	2	16
Share of Ethnic Russians	1,998,346	0.509	0.402	0.000	1.000
Share of Orthodox believers	1,998,346	0.803	0.252	0.001	1.000
Ethnic Diversity Index	1,998,346	0.465	0.176	0.037	0.903
Religious Diversity Index	1,998,346	0.238	0.201	0.001	0.924
Human Capital					
Share of Men	1,998,346	0.490	0.026	0.274	0.786
Share of Military Eligible Men	1,998,346	0.647	0.030	0.364	0.850
Share of Married Men	1,998,346	0.396	0.034	0.060	0.544
Share of Literate Men	1,998,346	0.261	0.108	0.006	0.902
Share of Urban Population	1,998,346	0.099	0.118	0.006	0.960
Number of Learned Societies	1,998,346	0.185	0.682	0	14
Combat Veterans (per district)					
Number of WWI Veterans	1,998,346	4,679	3,165	1	22,056
Number of Decorated Veterans	1,998,346	85	87	1	607
Veterans in Red Army	1,998,346	10	16	1	155
Veterans in White Guard	1,998,346	41	35	1	212
Geography					
Elevation (m)	1,998,346	151.200	154.200	−31	1,999
Population Density (per sq. km)	1,998,346	36.660	38.590	0.023	667.700
Distance to Border (km)	1,994,343	17.060	22.708	0.0003	1,434.60
Distance to Orthodox church (km)	1,998,346	31.435	64.839	0.016	1,601.95
Wealth					
Share of Peasants	1,998,346	0.841	0.164	0.001	0.998
Share of Nobles	1,998,346	0.012	0.019	0.0001	0.368
Share of Meshchane	1,998,346	0.096	0.086	0.0001	0.877
Employment					
Share of Men in Armed Forces	1,998,346	0.006	0.012	0.000	0.229
Share of Men in Civil Service	1,998,346	0.002	0.002	0.0001	0.019

Note: All columns report summary statistics of the respective variables per district. All demographic values (excluding values for combat veterans) are from 1897. Share of military eligible men are used instead of general share of men in the main analysis.

tive boundaries of the Russian Empire changed between 1897-1914, I performed several adjustments in order to construct a time-consistent map and to provide accurate geo-references for the point data on WWI. I consulted several historical atlases and archival records of territorial and administrative boundary shifts to carry out necessary geospatial data harmonization and integration.[14] The data codebook features detailed maps of each province and corresponding districts.

World War I: Military Personnel Records

The data on participants of WWI comes from the "In Memory of the Heroes of the Great War 1914-1918 *(Pamyati Geroev Velikoy Voyni)*" archival portal (Pamyati Geroev, 2020), cre-ated and maintained by the Russian Ministry of Defense with the support of the Federal Archival Agency and the Russian Historical Society.[15] The database provides unique ac-cess to basic biographical information and details on the combat experiences and sub-sequent fate of those who served in the Imperial Russian army from 1914 to 1918. The complete data contains several documents on a given soldier, including 6,666,243 regis-tration records of losses on the battlefronts, 5,606,545 records of casualties of soldiers and officers, 3,465,033 records on prisoners of war, 476 burial area records of 8133 known and 38,940 unknown soldiers, and 845,168 award records, along with detailed chronicles of primary combat operations.[16]

There are over 2,392,761 unique personal records in the full data. I geocoded each sol-dier's birth location using the full birth location address listed in the records. I exclude 297,925 records that have missing birth location addresses or do not contain information below province level.[17] The geocoordinates are developed, taking into account the cor-relation of modern maps with the directories of the administrative-territorial division of the provinces of the Russian Empire (1897 territorial-administrative borders).[18]

Similarly, 42,660 soldiers who were confirmed as killed in action during WWI (13,380 soldiers with known birth locations) and 4,196 soldiers whose bodies were left on the bat-

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[14]Consulted historical atlases include collections of digitized cartographic materials provided by the Russian Geographical Society, the digital Russian historical map collection of the New York Public Library, as well as "Geographical description of the Russian Empire by provinces and regions with geographical maps," printed in 1913.

[15]I collected the WWI data by scraping the online website of the Federal Archival Agency's records.

[16]Daily troop movement and battle information, collected using the combat records of WWI soldiers of the Russian Empire, covers dozens of major combat operations across multiple fronts. These include seven army formations on the Western front, eight on the North-Western front, ten on the South- Western front, five on the Northern front, four on the Romanian front, and one on the Caucasus front.

[17]This study assumes that the missing birth location information is missing at random.

[18]All geocoding is done manually to avoid incorrect matching via automatic geocoding due to thousands of spelling irregularities and historical name and temporal boundary reforms.
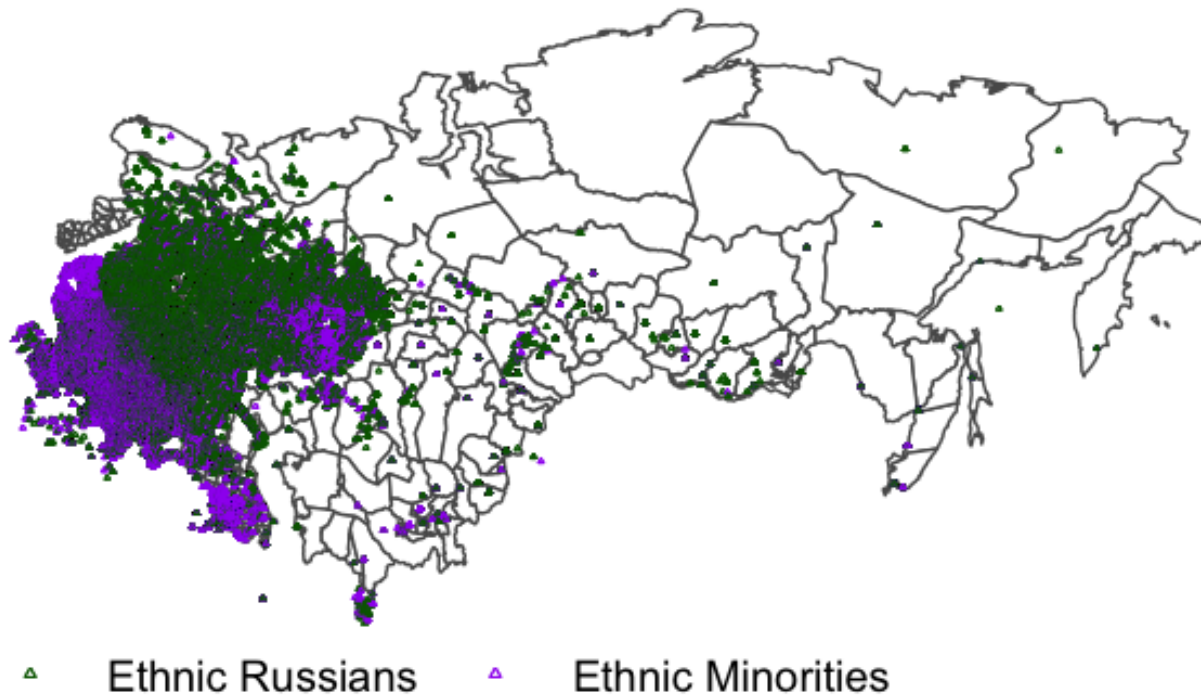
Figure 2: Ethnic composition of WWI soldiers, by birth location

tlefield (2,504 soldiers with known birth locations) were also excluded from the analysis, as it remains unknown what their post-war behavior would have been during the revolutionary movement and civil war. Because information about the fate of 243,962 individual soldiers from the full data is missing, I kept them in the final data to avoid introducing additional biases. The resulting data, following preprocessing and deduplication, include full information on the birthplace of 2,047,980 unique individuals, on which I focus my analysis. Figure 2 shows the spatial distribution of WWI soldiers' birth locations.

Russian Civil War: Red Army Records

The second dataset contains information on thousands of participants of the Russian Civil War – soldiers of the Workers' and Peasants' Red Army[19] – and is constructed from multiple archival books, casualty lists, and award orders. The primary source of the data is an archival record book published in 1926 by the Office of the Creation and Service of Troops of the Main Directorate of the Workers' and Peasants' Red Army (RKKA) (G.U.R.K.K.A., 1926). It lists basic biographical information, enlistment logs, address records, and casualty reasons for more than 50,000 Red Army soldiers who died during the Russian Civil

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[19]The so-called "Red Guards" were Bolshevik's private militia army in the early stages of the civil war. They later constituted the core of the Soviet Red Army.

War. Although it is the largest existing record-book for the WPRA personnel from the Russian Civil War, this source is limited as the records represent only those who lost their lives in civil war either while fighting on the battlefield or due to wide-spread diseases in the fledgling Red Army.[20]

To augment this data source, I use additional information from combined archival documents, including the list of awardees for the "Cavaliers of the Order of the Red Banner" and the "Honorary Revolutionary Weapon Award" given for battlefield performance in the Russian Civil War. The Order of the Red Banner was the first Red Army order (one of the highest) to be established for exceptional bravery, dedication, and courage displayed in defense of Socialist Motherland.[21] The Honorary Revolutionary Weapon, as an exceptional award, was awarded for notable military distinctions demonstrated by the highest commanders. Only 21 commanders of the Red Army received this distinction during the Russian Civil War.[22] Additional data sources include memorial lists, immigration documents, and record books for civil war veterans that are publicly available.

Russian Civil War: White Guard Records

The data on soldiers of the White Guard during the Russian Civil War are assembled from the digitized "Participants of the White movement in Russia *(Uchastniki Belogo dvijeniya v Rossii)*" archival record-book (Volkov, 2016), created and maintained by Russian historiographers since 1995. The record book includes details for soldiers who participated in the anti-Bolshevik struggle in 1917-1922 within the ranks of the White Guard.[23] The lists contain the names of all soldiers irrespective of their fate on the battlefield. The lists draw on 1.5 million entries compiled from a variety of sources, including official archives,[24] personal memoirs, emigrant records, obituaries and mourning announcements in the

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[20]Although additional sources are leveraged to account for missingness due to soldiers' destiny, the final data might be inaccurate representation of the full sample of revolutionary movement participants. However, missing records of soldiers who survived the war should bias the results of this study toward zero.

[21]The insignia of the Order of the Red Banner of the RSFSR, established on September 16, 1918, during the Russian Civil War by the decree of the All-Russian Central Executive Committee, was adopted as the basis for the order.

[22]Notably, 20 of these commanders had previously fought within the Russian Imperial Army and received multiple awards and distinctions for their bravery in WWI. Only 8 of them were Russian. The breakdown of nationalities for the remaining are as follows: 3 Ukrainians, 2 Polish, 1 Belorussian, 1 Moldovan, 1 Estonian, 1 Lithuanian, 1 Latvian, 1 Armenian, 1 Bashkir, and 1 Cherkess.

[23]Among these were rank and file soldiers, officers, volunteers, and Cossacks.

[24]Previously Prague Emigre archives currently maintained in the Russian State Military Archive and the State Archive of the Russian Federation, White Guard records and other trophy documents remaining in the Soviet Union, and the archives of the Russian All-Military Union in Jordanville and Stanford University.

Russian foreign press, necropolises (including unpublished ones) of Russian cemeteries abroad, award orders, wartime issues of newspapers, and information provided by surviving family members.[25] In total, 30 documents and 9800 pages of records provide biographical information on approximately 350,000 soldiers across all of the Russian Empire.[26]

Figure 3: Distribution of WWI Veterans in the Russian Civil War, by birth location

| (a) Revolutionary Red Guard | (b) Imperial White Guard |
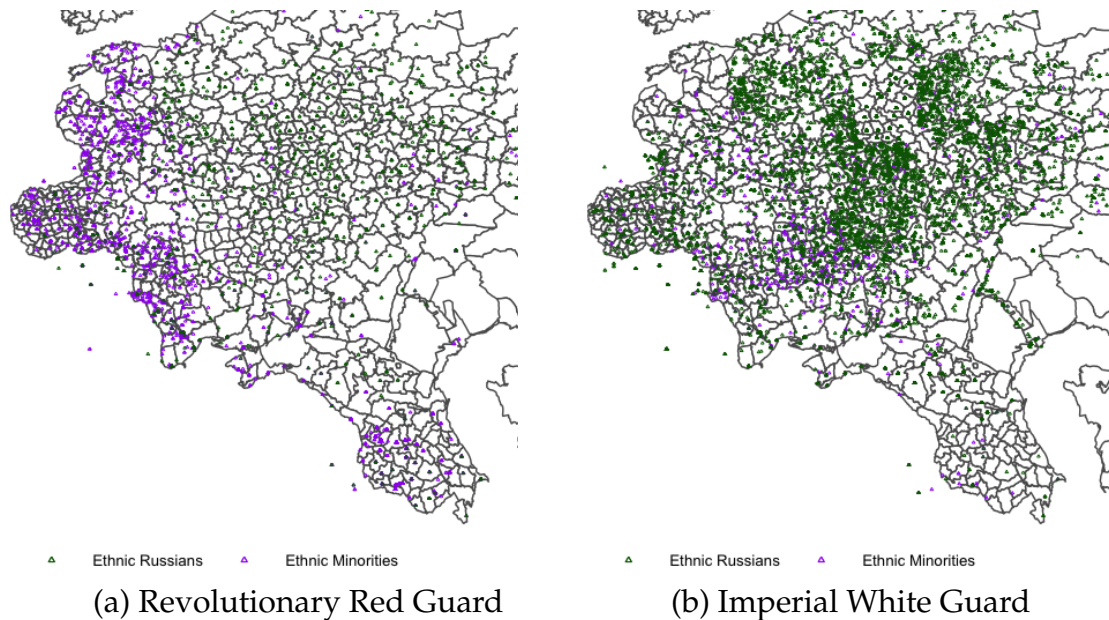
Note: The two maps count the number of WWI veterans who were identified as the Russian Civil War participants, with the left-side map showing fighters of the Revolutionary Red Guard and the right-side map showing those who fought on behalf of the Imperial White Guard. Finnish territories are excluded from the map.

Figure 3 shows the geographic distribution of birthplaces of WWI veterans who participated in the Russian Civil War.

Imperial Census: Cultural and Demographic Data

To control for several characteristics of soldiers' birth locations, I construct a comprehensive dataset on district-level socio-economic, cultural, and demographic statistics of the Russian society based on the rich administrative data from the first and only Russian Imperial Census of 1897 (Troynitsky, 1899). The comprehensive data for each of the 775 districts were manually coded from 120 separate books, each containing detailed statis-

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[25]The completeness and detail of information about each individual person is not associated with an assessment of his role and significance in the White Guard, but is conditioned only by the circumstances related to the safety and availability of information about him.

[26]The average number of sources from which information is collected for any given individual is 5, with a range of 1-20 source references.

tics for a unique province.[27] For this study, I retain data on total population, social class, literacy rates, gender, marital status, civil service employment numbers, and religious (16 distinct religious groups) and ethnolinguistic (130 distinct ethnolinguistic groups) composition for 775 districts included in the analysis. I produce spatial data layers based on cultural and census demographic attributes at the district level.

In the main analysis, I control for a set of district characteristics obtained from the Census that may be correlated with changes in treatment and military service: the proportion of military-age males, proportion of literate men, proportion of married men, proportion of men in professional armed-forces (pre-WWI), social class,[28] population density, share of urban population, share of workers in civil service. The original data for density is in square "versts",[29] which I convert to square kilometers for ease of calculation.

Project Imperiia: Additional Data

The Imperiia project (The Imperiia Project, 2021), which documents the spatial history of the Russian Empire, is the source for additional variables used in the paper. The first one is the list of geocoded locations for learned societies formed in the expanses of the Russian Empire during the reign of Tsar Nicholas II, which I use to construct a measure representing the number of societies in each district.[30] The second is the locations of Russian Orthodox Churches across towns and villages of the Russian Empire, which I use as an instrument for ethnic disenfranchisement (see results in Appendix A5.9). Finally, I use the geographic coordinates for the central locality of each district to collect data on altitude.

Measuring Ethnicity

The administrative records on the military personnel of WWI and the Russian Civil War do not contain information on individual soldiers' ethnic backgrounds. To address this shortcoming, I develop three different, albeit related, measures of ethnicity that capture both the ethnic background of a given individual and the ethnic composition of the district corresponding to the birth location. The first and second measures are direct mea-

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[27]For the full list of all sources, check Appendix A2.

[28]The main social classes in the Russian society at the time were nobility, clergy, merchants, meshchane (bourgeoisie), peasants, and cossacks. The cossacks constituted a rare category and were underrepresented in many districts. Only statistics on nobility, peasants, and meshchane are included in the analysis.

[29]Imperial Russian measurement unit of length, corresponding to 1.1 km or 0.66 mile.

[30]The data includes 118 unique societies headquartered in 71 cities. Learned societies of Russia were "The Free Economic Society," "Moscow Agricultural Society," "Russian Geographical Society," "The Society of Friends of Natural History," "Russian Technical Society," "Society of Russian Physicians," etc.

sures of an individual's ethnicity, while the last is a measure of ethnic heterogeneity of the birth location.

Individual Ethnicity: Matching Approach To predict minority ethnicities, I employ a four-tiered approach. Taking advantage of the Memorial archive, which provides ethnic background information for approximately 1 million arrestees (Zhukov and Talibova, 2018), I first match soldiers' surnames deterministically with those from the archives. Additionally, I augment the Memorial data with a comprehensive list of ethnic Jewish last names found in the books of rabbinates of Russia's pre-revolutionary period.[31] As as second step, I use Jarro-Winkler string distance to predict ethnicity for non-unique matches. Then, I use well-known ethnic last name endings and pre-fixes to assign ethnicity information.[32] Finally, for the remaining 380 unique last names, I use an SVM classifier trained on the Memorial dataset to predict their ethnicity.[33] Based on the final output, I categorize last names into two: a native-born Russian or a member of a non-Russian ethnic group.[34] I assign an indicator variable to each last name in the WWI military personnel data where one predicts ethnic Russian background. The process resulted in classification of 51.4% of surnames as ethnic Russian last names. Appendix A1 details these four steps and provides descriptive summaries of common names found in the dataset.

Individual Ethnicity: Classification Approach As an alternative approach to ethnicity classification, I use one of the most extensive publicly available geospatial genealogical services – www.forebears.io – to predict the surnames' contemporary country of origin (Cannella, Makarin and Pique, 2021). The service portal utilizes data for 27.6 million unique surnames of more than 4 billion individuals. The new binary variable considers a surname Russian if its most likely country of origin corresponds to present-day Russia, and minority if it is any other territory. The advantage of this approach is that it considers both first and last names instead of the last name-based matching. The complete WWI data includes approximately 1.2 million unique last name and first name combinations. On average, 47.9% of surnames were predicted to be Russian, with some heterogeneity across different districts.

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[31]I gathered Jewish last names by scraping a freely available list on an ethnic genealogy website.

[32]Some examples include distinct Lithuanian, Latvian, Estonian, German, Georgian, Armenian, Chechen last names.

[33]The out-of-sample predictive accuracy of the classifier reached 96.5% in previous applications (Rozenas, Talibova and Zhukov, 2021).

[34]Ukrainians and Belorussian last names are also categorized into minority ethnic group.

Ethnic Diversity Index: Birth location Approach In addition to the binary categories for individual ethnicity information, I use the detailed data from 1897 Census to build a separate ethnic heterogeneity index that measures the ethnic diversity of districts corresponding to soldiers' birth locations. Historically, scholars have measured ethnic diversity by the Herfindahl-Hirschmann concentration index (Hirschman, 1964), which lacks a relational dimension in that it fails to distinguish between the effects of in-group size, out-group variety, and out-group population balance (Alesina, Harnoss and Rapoport, 2016; Koopmans and Schaeffer, 2013). To capture the ethnocultural diversity effects accurately, I use a composite measure representing a) the share of the dominant group and b) the heterogeneity of the ethnic population in each district. The first component measures the share of Russians in the total population, while the latter is calculated out of the overall non-Russian population. The resulting index is the equally weighted linear combination of the two measures.

Let n_i represent the number of individuals that belong to the dominant group i, where N is the total population and k refers to the number of non-dominant groups. Similarly, let n_j represent to the number of individuals that belong to the out-group j, with $j = 1, ..., J$, then the Ethnic Diversity Index can be expressed as:

$$EDI = \begin{cases} \dfrac{1 - n_i}{N} & \text{ethnic share} \\ 1 - \sum_{j=1}^{J} \left(\dfrac{n_j}{N_k}\right)^2 & \text{ethnic diversity} \end{cases}$$

Figure 4 shows how the two constituent measures – ethnic share and ethnic heterogeneity – vary in isolation across the most conspicuous geographic fault line of Imperial Russia. The districts with the highest percentage of the Russian population also tend to host the most diverse ethnic groups. In 43% of all imperial districts, the share of Russians exceeded half of the local population.

Measuring Religious Diversity

To measure the religious diversity of districts, I use a slightly modified version of the Religious Diversity Index (RDI) based on 16 major religious categories practiced in Imperial Russia at the time.[35] The RDI measure uses the inverted Herfindahl-Hirschman Index, where higher scores indicate higher religious diversity (Johnson and Grim, 2013). When

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[35]The included categories are Orthodox, Old Believers, Armenian Orthodox, Armenian Catholics, Roman Catholics, Lutherans, Reformers, Protestants, Baptists, Mennonites, Anglicans, Other Christians, Karaites, Muslims, Jews, and Buddhists.

Figure 4: Ethnic share and ethnic heterogeneity in Russian Empire's western borderlands
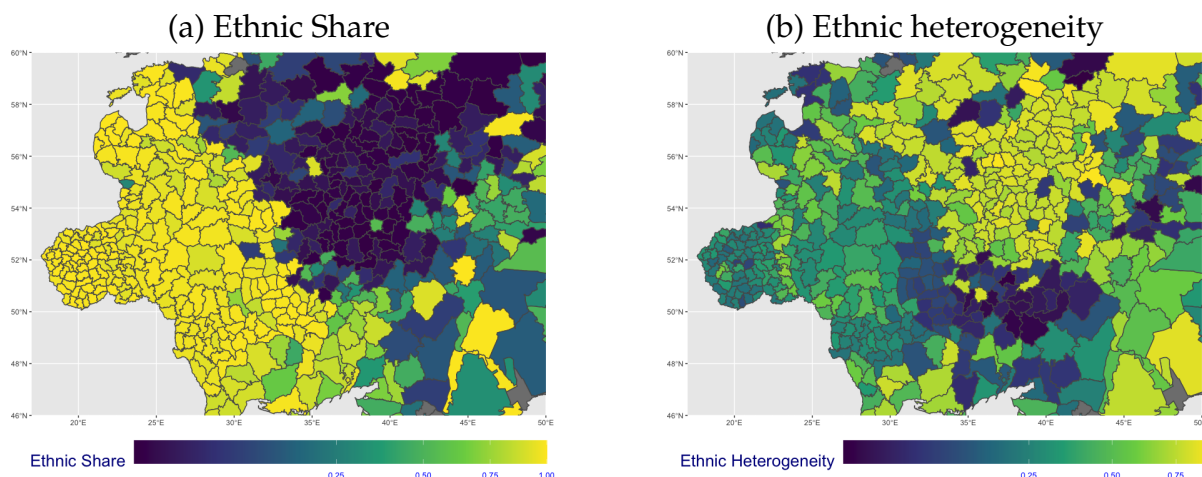
(a) Ethnic Share	(b) Ethnic heterogeneity

the entire population belongs to a single religious group, the score is at 0. If the population is equally distributed among all existing religious groups, the score is 10. I scale the final measure to vary between 0 and 1, with 1 indicating the highest level of religious diversity.[36] In the top ten districts with the highest religious diversity measure, the largest group does not constitute more than 50% of the entire population.

The maps in Figure 5 illustrate the scale of (a) ethnic and (b) religious heterogeneity in the country, with lighter colors representing higher levels of diversity. The two measures of ethnicity, the ethnic diversity measure, and the religious diversity index, are the key independent variables. Appendix A1 provides a detailed description of all measures (ethnicity and religion) used in the paper.

Linking and Geocoding

I used the compiled records from the three administrative military personnel datasets to construct the outcome variables measuring veterans' post-war loyalty: whether veterans of the Russian Imperial Army of WWI joined the ranks of the Red Guard and the White Guard or did not directly participate in the civil war. I linked individuals across the three administrative datasets using a combination of unique full names and geographic birth locations for the 2.39 million soldiers who have officially recorded birthplace. I consider an individual in the WWI personnel data a match with a soldier's name in the Red Army

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[36]Scaling facilitates smooth comparison with the ethnic diversity index, which also varies between 0 and 1.

Figure 5: Ethnic and Religious Diversity Across Districts
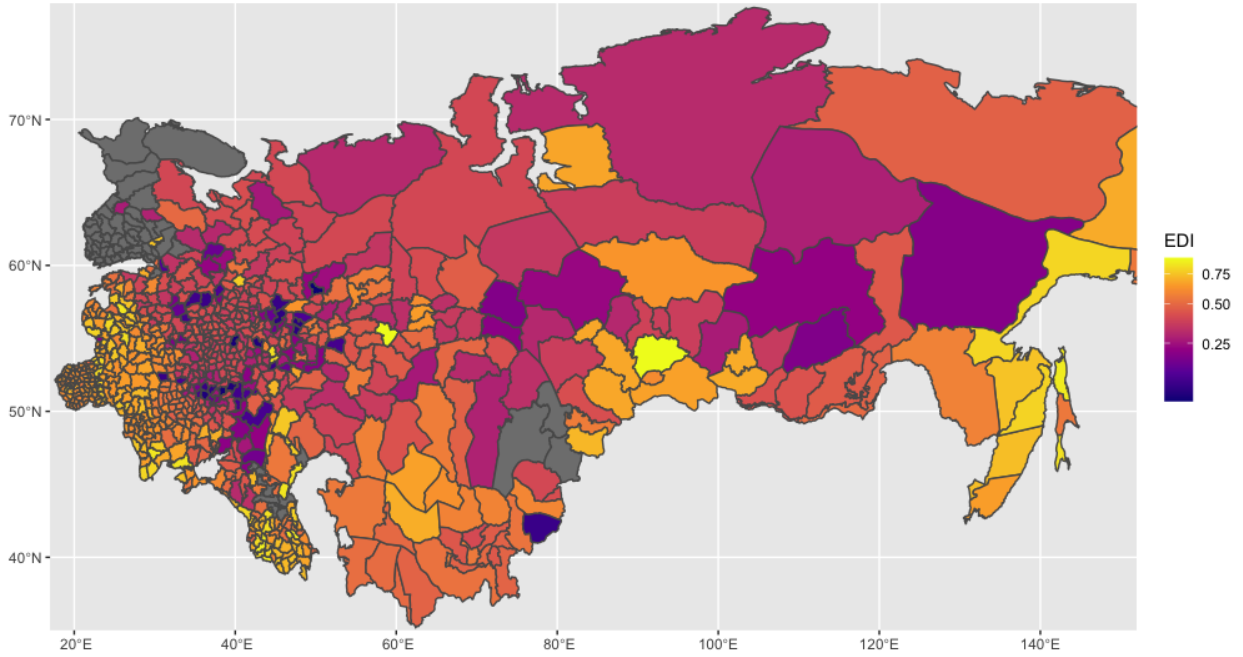
(a) Ethnic Diversity Index
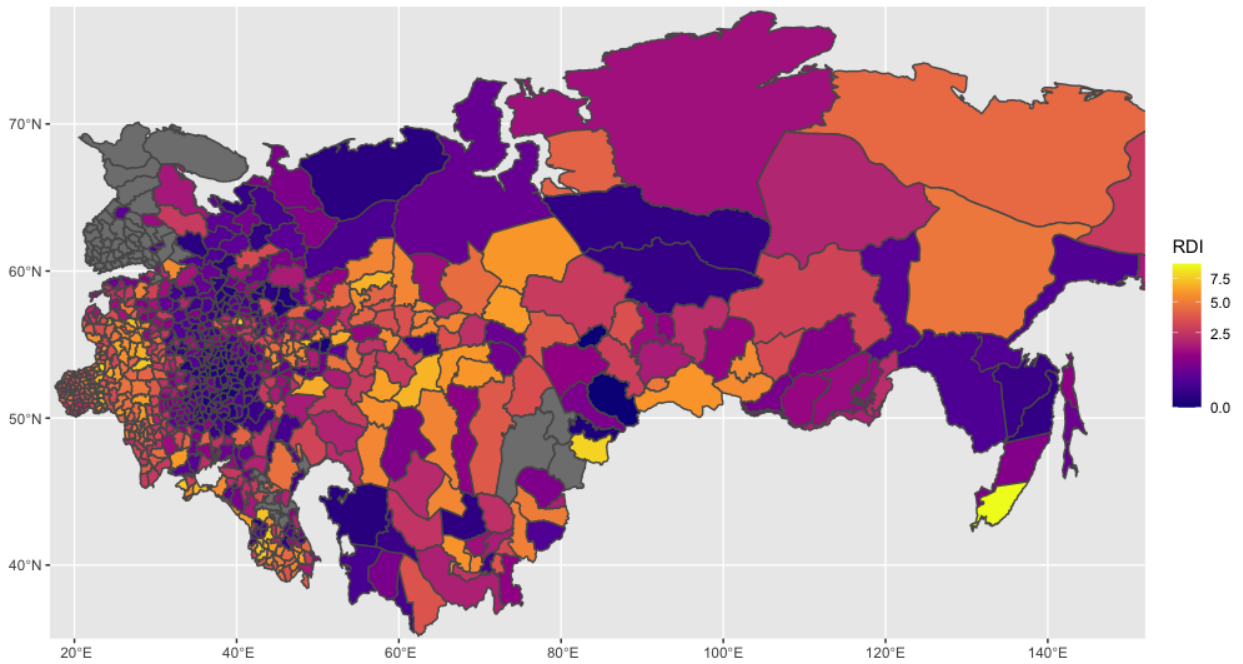
(b) Religious Diversity Index

if the two record's full name, birth province, and district are the same.[37] Next, I link records in WWI to the White Guard personnel list by considering all names in WWI data and consider a soldier a match if his last name and first name, and year of birth (where available) are exactly the same across both sources. The White Guard data does not list a birth location that can be used for matching. However, it contains a detailed description of an individual's combat locations in civil war and post-civil war life-path, from which birth locations can be inferred. For a small subset of records, where birth years were unavailable, manual labeling and matching were carried out, whereby existing contextual information and additional archival sources were leveraged to identify a birth district. Finally, I use a unique identifier assigned to each district to merge compiled individual records with the Census data and geospatial maps. Table 2 summarizes data processing.

Table 2: Data Collection, Merging, and Processing

	Original Source	Post-Processing
Number of WWI veterans	2,392,761	1,998,346
Number of White Guard Soldiers	20,098	19,523
Number of Red Army Soldiers	6,333	5,429
Number of provinces	101	93
Number of districts	824	775

Note: The left column summarizes raw data from original sources. The right column summarizes the counts in the final data, following cleaning, merging, and processing. The base data starts with the WWI administrative record data and then matches in data from the Red Army and White Guard administrative records by name and geography, and 1897 Census by district. Appendix A4 provides a detailed description.

I take multiple steps to geocode individual observations from WWI records. First, I manually geocode all 858,230 known unique birth locations in the cleaned administrative records to relevant districts. As a second step, and to ensure geocoding at a more fine-grained level, I use the GeoNames Gazeteer to geocode each birth location to its precise geocoordinates (at the village level). To check the accuracy of the automated geocoding process and improve its quality, I test whether the district polygon borders around the manually coded district centroid geocoordinates (second-tier administrative unit) contain the point location of the precise village geocoordinates from the automated process (fourth-tier administrative unit). For inaccurate matches, I return to the manual geocoding step, whereby I identify and code the correct locality location (third-tier administrative unit). The spatial shift between the automated geocoding process and the improved

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[37]The first linking procedure matches on full name, and the remaining individuals are matched by various combinations of the three name components. For details, see Appendix A4.

manual geocodes average 420 km per corrected record.[38] I then use district and locality location features for dynamic filtering to constrain precise village/town location predictions associated with the respective district boundaries. In other words, the geocoding API returns detailed address results restricted to a specific area – the bounding box that approximates the area of the district – to exploit the accuracy of originally hand-coded information. Appendix A4 the geocoding procedure and cross-validation methods.

5. ANALYSIS OF PRE-WAR MARGINALIZATION

This section evaluates the relationship between pre-war marginalization and post-war behavior using two empirical strategies: standard OLS regression with fixed effects and spatial regression discontinuity design.

5.1. OLS with Fixed Effects

I begin by testing the association between the ethnicity of individual veterans of WWI and their participation in the 1917 Revolution. I estimate two different versions of the following baseline empirical specification:

$$Y_i = \gamma \cdot \text{Ethnicity}_i + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\big(\text{lon}_{d[i]}, \text{lat}_{d[i]}\big) + \varphi_{p[i]} + \epsilon_{d[i]}. \tag{1}$$

where Y_i is an outcome variable for WWI veteran i and Ethnicity$_i$ denotes soldier's ethnicity, measured across two different specifications. The outcomes are enlistment in the Red Guard and the White Guard.

The vector $\boldsymbol{X}_{id}$ stands for a matrix of district-level pre-treatment covariates, which include the proportion of military eligible men[39] in the soldier's birth location, the proportion of men in marriage, number of men in uniform, number of men employed in civil service,[40] social class (to account for the disproportionate representation of minorities in certain classes, such as nobles, merchants, and peasantry),[41] male literacy level, number

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[38]Manual corrections beyond district overlap concerns address alternate spellings and historical name changes.

[39]This measure includes all men eligible by age, excluding foreigners and those with any disabilities. Military age is calculated based on the expected age (18-45) at the time of the draft. This corresponds to men of age 0-28 at the time of the Census.

[40]This category includes the number of men employed in public administration, court, police, and civil (land, city) service.

[41]Given the agrarian nature of its society, peasantry was the Russian Empire's largest and most exploited social class. Before the war, millions of unwilling peasants were forced into military service (Lieven, 2016).

of learned societies,[42] elevation, population density (to account for the possibility that ethnic minorities lived in more densely populated areas), and the share of urban population (to account for the uneven representation of minorities among rural dwellers).

The model also fits a two-dimensional spatial spline $s\big(\mathrm{lon}_{d[i]}, \mathrm{lat}_{d[i]}\big)$ to obtain smooth local spatial interpolation. To capture area-level unobservable characteristics, I include province-specific fixed effects $\varphi_{p[i]}$. Among other things, these fixed effects take into account regional conscription quotas instituted by Tsar Peter I (Blum, 1971). In addition, I cluster standard errors at the district level.

In addition to the above baseline specification, I adjust the equation to measure marginalization at the district level.

$$Y_{i,d,p} = \gamma \cdot \mathrm{Ethnicity}_{d[i]} + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\big(\mathrm{lon}_{d[i]}, \mathrm{lat}_{d[i]}\big) + \varphi_{p[i]} + \epsilon_{d[i]}. \tag{2}$$

where Y_i represents WWI veteran i in historical district d and historical province p, and $\mathrm{Ethnicity}_{d[i]}$ represents diversity level in the birth district d of soldier i as measured by the Ethnic Heterogeneity Index and the Religious Diversity Index.

5.2. Spatial Discontinuities: District Borders

Despite the robustness of the OLS estimates, potential endogeneity and measurement concerns require additional empirical strategies that could validate the results as causal. The first concern is the existence of unobservables. Certain characteristics of the physical environment or historical experiences might impact ethnic minorities' propensity to fight the state, and these traits could, in turn, affect whether ethnic minorities face discriminatory policies, creating a back-channel link between ethnic marginalization and subversive behavior in the absence of a causal relationship (Moscona, Nunn and Robinson, 2020). For example, the state's infrastructural or other provisional capacities can have independent relationships with its discriminatory policies and the willingness of ethnic minorities to rebel. [43] Alternatively, geographic conditions unaccounted for in the specification might have rendered ethnic marginalization more likely in certain places, but the same conditions might have affected revolutionary tendencies. Another potential challenge to this specification is reverse causality – the threat of rebellion could induce the state to repress its minorities. Finally, there may be a measurement error in ethnic marginalization proxies.

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[42]In authoritarian states, voluntary associations, such as learned societies in Imperial Russia, provide space of autonomy and representation where the marginalized can enter public life (Bradley, 2017).

[43]The administrative apparatus of Imperial Russia was notoriously inept.

To address these concerns, I exploit ethnic dissimilarities across the imperial district borders in a spatial regression discontinuity design. Districts varied in their ethnic composition significantly as ethnic groups lived in scattered clusters across the Russian Empire. Therefore, a village or town located in district A could be ethnically more heterogeneous than a town from a neighboring district B. The identifying assumption is that any outcome differences between cross-border soldiers, conditional on their observable characteristics, are likely due to the ethnic diversity differences across district borders.

I focus on a smaller, more specific geographical area – the European borderlands of Imperial Russia, to avoid the Compound Treatment Irrelevance assumption due to the overlap of boundaries between the treatment of interest and certain administrative boundaries of the Russian Empire (Keele and Titiunik, 2015). To isolate the precise ethnic heterogeneity effect, I choose a smaller subset of 25 provinces corresponding to 221 unique districts. This local focus ensures that districts where administrative boundaries mirrored ethnic cleavages (South Caucasus republics or Central Asian countries) are excluded from the design. The district borders in the European section did not correspond to any preexisting differences, unlike the southern and eastern frontiers, some of which correspond to the borders of independent nation-states before they were occupied by the Russian Empire. Nonetheless, I further investigate the possibility of violation of the continuity assumption by socio-economic and geographic characteristics of the districts with a pretreatment covariate balance test (see A5.1). All pre-treatment covariates change smoothly at the borders, with one exception: density exhibits a negative jump at the border. I include density as a covariate in all baseline specifications.

I employ two different approaches to the regression discontinuity design. In the first setting, I calculate mean ethnic minority share for the Russian Empire using data on ethnic counts from the 1897 Census, and divide districts into two: above and below the mean. The running variable is the minimum Haversine (spherical) distance between soldiers' birth location and the nearest district border.[44] I also include a higher-order polynomial term in the latitude and longitude of each observation (Dell, 2010). The treatment assignment is $D_i = \mathbb{1}\{\delta_{d[i]} \geq c\}$, where c is the cut point and $\delta_{d[i]}$ is the calculated distance. I then compare revolutionary behavior of soldiers born in districts inside the districts with high share of ethnic non-Russians with soldiers in a neighboring district that falls below the mean.

In the second setting, I calculate expected ethnic marginalization conditional on the local population size and urbanization levels, and identify districts where the ethnic di-

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[44]The haversine formula provides a better approximation of the distance between two points of the spherical Earth's surface, with a less than 1% error on average.

Figure 6: Ethnic diversity within 20 km of district borders
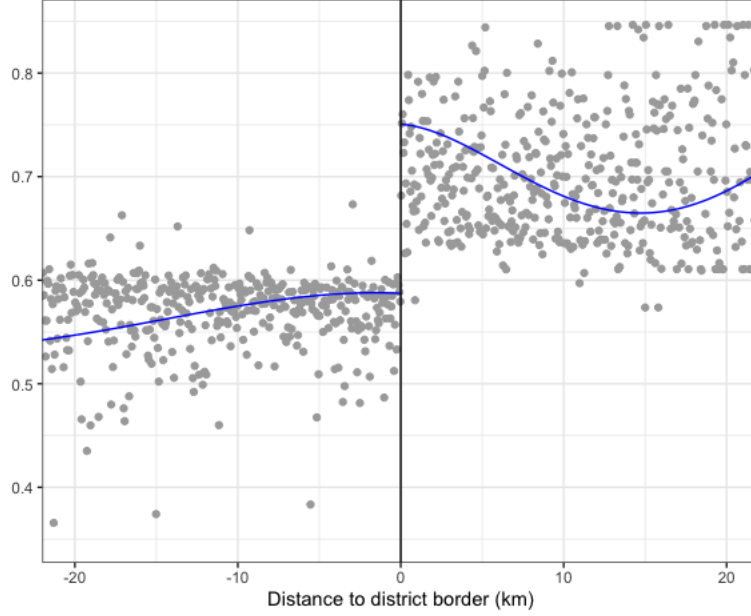
versity index falls below or above this expectation. For each district in the sample, I assign a district to the treatment group if the average residual for the district is positive and to the control group, if negative. The forcing variable takes a positive sign, when a given birth location is inside a high ethnic diversity district and paired with a low ethnic diversity district.

In the benchmark regressions, I only consider observations that reside within 50, 60 and 70 km from the closest district border.[45] Figure 6 reflects the relationship between the forcing variable and predicted levels of ethnic marginalization in a 20 km bandwidth with a discontinuous jump across district borders.

The empirical specification takes the following form:

$$\text{Ethnicity}_{d[i]} = \gamma \cdot \mathbb{1}\{\delta_{d[i]} > 0\} + (f)(\delta_{d[i]}) + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\left(\text{lon}_{d[i]}, \text{lat}_{d[i]}\right) + \epsilon_{d[i]} \qquad (3)$$

$$Y_{i,d} = \theta \cdot \text{Ethnicity}_{d[i]} + (f)(\delta_{d[i]}) + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\left(\text{lon}_{d[i]}, \text{lat}_{d[i]}\right) + \epsilon_{d[i]}$$

where (f) is a smooth function of the distance $\delta_{d[i]}$ estimated using natural cubic splines, $\mathbb{1}\{\delta_{d[i]} > 0\}$ is the instrument, and $\boldsymbol{\beta}' \boldsymbol{X}_{id}$ is a set of covariates.

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[45]Appendix A5.3 includes robustness test with alternative bandwidths ranging from 5 km to 80 km.

6. Effects of Combat Experience

I next investigate the mediating role of military service on post-war behavior through individual combat exposure in WWI. To do this, I parse military unit information that exists in the administrative records. Differences in individual combat experiences can arise due to a multitude of battle- and unit-specific conditions. I explore two key features of soldiers' exposure to combat. First, I consider that soldiers, who fought in longer, deadlier, and front-line battles, were more likely to be exposed to active battlefield combat. Second, their exposure to active combat instilled particular fighting, survival, and leadership skills that affected their ability to organize a successful resistance against the state. Because the treatment of interest is an active fighting effort by an individual, I proxy combat exposure in two distinct ways: (a) assignment to specific combat roles, and (b) assignment to battles.

6.1. Combat Roles

The *Military unit* variable provides detailed information about the specific role or task of the regiment (*"polk"*) to which soldiers were assigned. While the overall number of unit descriptions exceeds 200,000 unique values, I was able to identify units assigned support roles as opposed to active combat duties. Among these roles are "sanitary and disinfection unit," "culinary unit," "horse-care unit," "veterinary unit," "nurse-unit," "pharmacy unit," "infirmary unit," "military hospital unit," "repair unit," "hydro-technical unit," "epidemiology unit," "bread-baking unit," "flour-mill unit," "postal unit," "livestock herding unit," "uniform warehouse unit," "translation and correspondence administration unit," "economic planning unit," "laboratory unit," "reserve unit," "cargo unit," etc. Although providing essential services to the soldiers directly facing enemy fire, these units rarely had an opportunity to experience combat and develop fighting skills on the battlefield.

I estimate the following model, using reduced sample of ethnic minority soldiers:

$$Y_i = \gamma \cdot \text{Unit Task}_i + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\big(\text{lon}_{d[i]}, \text{lat}_{d[i]}\big) + \varphi_{d[i]} + \epsilon_{d[i]}. \tag{4}$$

where Y_i is an outcome variable for an ethnic minority soldier i in the Russian Civil War and Unit Task$_i$ stands for soldier's unit type, measured in a binary classification. The Unit Task variable takes a value of 0, if a soldier is assigned to a non-essential role, and 1 if assigned to strategic tasks.

6.2. Front Line Battles

Beyond specifically-tasked units, another way to identify direct battle exposure of individual soldiers is to trace their participation in front line battles of WWI. The Russian Imperial Army fought in several major battles of WWI. Three campaigns stand out among these: the Galicia Operation (August-September 1914), the Warsaw-Ivangorod operation (September-November 1914), and the Brusilov Offensive (June-September 1916). The Galicia Operation and Brusilov Offensive each involved more than 13 separate battle engagements and over 500 unique military regiments (see Table 3).

Table 3: Major Military Engagements of the Russian Empire in WWI

Galicia Operation 1914	Brusilov Offensive 1916
Rava-Russian operation	Sopanov breakthrough
Battle at Yaroslavitsy	The offensive of the Southwestern Front
Battle of Krasnik	Lutsk battle
Lublin-Kholm operation	Yazlovets battle
Battle of Komarov (Tomashevsky battle)	Dobronutskoe battle (Okne breakthrough)
Battle on the Zolotaya Lipa River	Kolomey battle
The battle the Gnilaya Lipa river	Baranovichi operation
The capture of Komarov	Battle of the Stokhod
Galich-Lvov operation	1st Kovel battle
The capture of Lvov by the Russian troops	Battle of Styr
The capture of Galich by the Russian troops	2nd Kovel battle
Gorodok battle	August operation of the Southwestern Front
Battle of the Marne	Kovel battle of the Southwestern Front

The Galicia Operation, stretching along a 400 km-long front line and involving over 2 million soldiers from all sides (5 Russian armies with 600,000 and 4 Austro-Hungarian armies with 850,000 soldiers), marked one of the earliest combat successes of the Imperial Army in WWI. In the course of the operation, Russia turned a major defensive campaign into an offensive posture, and completely paralyzed the Austria-Hungarian army until the end of WWI. The Austro-Hungarian army lost 45% of their military staff - 326,000 people, including 100,000 POWs. During the entire operation, the Russian troops advanced at an average 8-9 km per day (Zaionchkovsky, 2014). This is how a Russian Imperial Army officer described the final stages of the operation: *"Having passed through another small forest, we turned left, along the settlement leading to Maidan-Gurko. It ran right through the 336th hill. Having entered it, we involuntarily stopped: we were presented with a terrible picture of the kingdom of death - a mass of corpses lay in the enemy trenches, several artillery gunmen lying in a position that suggested that at their moment of death, they were trying to reach out for their weapons. All these were the results of the work of our batteries... From the ridge of heights at Maidan-Gurko, we had an endless view to the south and south-west. Tomashov was visible. But*

nowhere were any troops visible. No shots were heard. The enemy ... was crushed ..." (Chernysh, 2019).

The Warsaw-Ivangorod operation, or the Battle of the Vistula River, became the largest defensive and offensive operation of WWI both in terms of its design and the sheer number of forces participating in it (900,000). Half of the Russian Imperial forces, fighting against Austria-Hungary and Germany, participated in the operation. As a result, the Russian forces achieved their second major (after the Battle of Galicia) victory and inflicted a heavy defeat on the German troops. The losses of the two armies together amounted to 240,000 people. For the Austria-Hungarian armed forces, these were the heaviest average monthly losses in the entire WWI.

The Brusilov Offensive – the deadliest in military history and the most expansive Russian military operation of WWI – signified the last major military success of the Russian Empire in WWI. Within three weeks, the Russian Army decimated more than 50% of the opposing enemy forces. In a vivid account of the attack on Bukovina, a Hungarian officer wrote: *"The Russians are only employing their Caucasian divisions, and these are divided into small reconnoitering units, sometimes three hundred and sometimes a thousand strong... One of these Russian units succeeded in crossing the Hungarian frontier and in penetrating into the country for about twenty miles. They encountered, however, a superior force, and after a regular battle lasting for many hours, withdrew, only to appear at another point the next day. The infantry was almost as quick in gaining the summits as the cavalry, the latter having at times to climb steep places, and offering naturally a much better target than the infantry. In fact, Russian cavalrymen have shown remarkable aptitude in the fighting in this most difficult region"* (Horne, 1923, 205).

The military commanders of the Russian Imperial Army directed their best units to the front lines to achieve successful battlefield outcomes in the operations mentioned above. The units that were left out of these campaigns generally fought in the rear. Based on the information available from individual records, I match each individual's military unit to the battles of these three campaigns. I identify 1,088,899 individual soldiers who served in the units fighting in one of the three campaigns.

I use the following functional form:

$$Y_i = \gamma \cdot \text{Front Line}_i + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\big(\text{lon}_{d[i]}, \text{lat}_{d[i]}\big) + \varphi_{d[i]} + \epsilon_{d[i]}. \tag{5}$$

where Y_i is an outcome variable for an ethnic minority soldier i in the Russian Civil War and Front Line$_i$ is an indicator variable for front line units.

7. MAIN RESULTS

I first analyze how pre-war marginalization changed minority soldiers' post-war behavior, as measured by the propensity to join the Workers' and Peasants' Red Army. Columns 1-4 of Table 4 present the relationship between ethnic and religious background of soldiers and their participation in the civil war on the side of the revolutionaries controlling for province fixed effects. Columns 5-8 report the relationship between the ethnic and religious background of soldiers and their participation in the civil war on the side of the state. I find a positive and significant correlation across all models for the individual ethnicity and ethnoreligious background of each soldier. Coefficients in the first four rows are all positive and statistically significant at 95% confidence levels. Coefficients in the last four rows are all negative and statistically significant.

Table 5 reports the spatial regression discontinuity results where the forcing variable is created with the use of mean ethnic share levels. The bias-corrected local-polynomial estimate of the discontinuity effect is 0.8 percentage points for the coefficient (clustered standard error is 0.001 with 0.07-0.1 confidence intervals) (Calonico, Cattaneo and Titiunik, 2015). Table 6 shows coefficients for the fuzzy regression discontinuity with a spatial instrument. Estimates across these specifications remain positive and reach the high threshold of statistical significance levels.

Table 7 reports the estimated effects of unit combat exposure, measured through the unit assignment and battle participation, on the likelihood of joining the revolutionary movement. The smaller number of observations reflects the reduced sample of soldiers from ethnic minority backgrounds. The coefficient in the first column considers unit task as a proxy for combat exposure. Compared to an ethnic minority soldier conscripted to serve in a combat unit, a minority soldier tasked with non-combat duties is 0.6 percentage points less likely to rebel against the state. The coefficient in the second column suggests that the odds of joining the revolution for a minority soldier who experienced active combat zones in the front line battles of WWI was 43% higher than a soldier from rear units.

8. ALTERNATIVE EXPLANATIONS

The findings support my key expectations with respect to the effect of military experience on the subsequent political behavior of disenfranchised individuals. I now consider several alternative explanations and present additional tests to interrogate the robustness of these results.

Table 4: OLS results: Ethnicity and the Russian Civil War

	Dependent variable:			
	Revolutionary Red Army			
	(1)	(2)	(3)	(4)
Ethnicity (matching)	0.974***			
	(0.039)			
Ethnicity (classification)		1.215***		
		(0.024)		
Ethnic diversity			4.701***	
			(0.179)	
Religious diversity				1.692***
				(0.128)
	Imperial White Army			
	(1)	(2)	(3)	(4)
Ethnicity (matching)	−0.764***			
	(0.024)			
Ethnicity (classification)		−0.932***		
		(0.022)		
Ethnic diversity			−0.443***	
			(0.074)	
Religious diversity				−0.592***
				(0.073)
Controls	✓	✓	✓	✓
Fixed effects	✓	✓	✓	✓
Splines	✓	✓	✓	✓
Observations	1,597,032	1,597,032	1,988,241	1,985,573

Note: Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and ethnicity information. The dependent variable is a dummy variable that takes the value of 1 if an individual joined either side of the civil war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; *p $< .05$; **p $< .01$; ***p $< .001$.

Table 5: First RDD approach: Effect of ethnic diversity on revolution

	Revolutionary Red Army		
	50 km	60 km	70 km
Coefficient	4.732 (1.658)**	4.831 (1.612)**	4.802 (1.597)**
Mean Y	0.583	0.583	0.582
$\mathcal{F}$	84.77	84.79	84.85
Districts	221	221	221
Birthplaces	214,235	214,890	215,007
Soldiers	509,412	511,215	511,472

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use 50km, 60km, and 70km bandwidths, respectively. Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 70km from district borders. All models include cubic spatial splines and covariates. Significance levels: $^\dagger p < 0.1$; $^* p < .05$; $^{**} p < .01$; $^{***} p < .001$

Table 6: Second RDD approach: Effect of ethnic diversity on revolution

	Revolutionary Red Army		
	50 km	60 km	70 km
Coefficient	9.222 (1.743)***	9.558 (1.698)***	9.645 (1.715)***
Mean Y	0.489	0.488	0.487
$\mathcal{F}$	56.16	56.25	56.24
Districts	207	207	210
Birthplaces	55,561	55,813	55,914
Soldiers	147,333	147,866	147,996

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use 50km, 60km, and 70km bandwidths, respectively. Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 70km from district borders. All models include cubic spatial splines and covariates. Significance levels: $^\dagger p < 0.1$; $^* p < .05$; $^{**} p < .01$; $^{***} p < .001$

Table 7: Combat Exposure and the Russian Civil War

	Revolutionary Red Army	
	Unit Assignment	Front Line Battle
Combat Exposure	0.43 (0.01)***	0.36 (0.037)***
Districts	757	757
Birthplaces	276,318	276,318
Soldiers	565,871	565,871

Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and military unit information. The dependent variable is a dummy variable that takes the value of 1 if an individual joined the Revolutionary Red Army during the civil war, and 0 otherwise. All models include district fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; *p $< .05$; **p $< .01$; ***p $< .001$ Because data is subsample of WWI soldiers from ethnic minority backgrounds, sample size is much smaller. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$.

8.1. Differential Exposure to Adverse Conflict Outcomes

If there were differential exposure to conflict harm for soldiers from ethnic minority backgrounds, the samples of veterans from Russian and non-Russian ethnic backgrounds would be non-comparable. It is possible that, given the lack of value for the lives of individuals from ethnically diverse backgrounds, the Russian Empire used minority soldiers as "cannon fodders" on the front lines. If this is true, we should expect to observe a significant effect of ethnic background on casualties. To check whether the differential probability of individual conflict outcomes affects selection into the treatment and control samples, I take a closer look at the casualty and other adverse outcome rates in WWI. I group soldiers into two categories based on their "destiny" in WWI, by creating a binary variable that takes the value of 1 if a soldier died on the battlefield, was missing in action, or became prisoner of war, and 0 otherwise. Table 8 shows no statistically significant effect of ethnic background on the probability of dying, becoming a prisoner of war, or missing in action. These results align with recent scholarship that examines the casualty rates among Black soldiers of the U.S. Army (Huff and Schub, 2021).

8.2. Assignment to Non-Combat Tasks

Due to the general level of distrust toward non-ethnics and persistent fears of disloyalty and incompetency, the state might have systematically assigned soldiers from minority groups to "dirty tasks" that provided little to no opportunity for skills acquisition. How-

Table 8: Casualty Rate by Ethnic Background

|	Death / POW / MIA		
	1	2	3
Ethnicity	0.009 (0.014)		
Ethnic diversity		-0.081 (0.04)*	
Religious diversity			-0.002 (0.280)
Controls	✓	✓	✓
Fixed effects	✓	✓	✓
Splines	✓	✓	✓
Observations	1,707,804	1,707,804	1,707,804

Note: Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records with non-missing location and destiny information. The dependent variable is a dummy variable that takes the value of 1 if a WWI soldier died on the battlefield, was missing in action, or became prisoner of war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^\dagger p < 0.1$; $^* p < .05$; $^{**} p < .01$; $^{***} p < .001$

ever, the difference between ethnic minority and Russian soldiers assigned to tasks requiring fighting vs. manual labor is not large. Appendix A5.6 lists statistical details for each type of task that could be considered strategically unimportant for direct combat.

8.3. Conscription Timing

As discussed above, Tsar was not open to the idea of drafting certain ethnic minorities in the period leading to the start of WWI. Although all military-age male population of the country had been called to duty by the end of the war, it is possible that ethnic minorities arrived on the front lines much later and experienced different wartime conditions. Similarly, short-term service may have preempted socialization, but longer service could have exposed soldiers to more discrimination (or more egalitarian treatment), recalibrating their attitude toward the state. However, using timestamps from recruitment stations and different yearly cutoffs, I fail to find evidence that the rate of change for soldiers conscripted from minority groups differed significantly from ethnic Russians between 1914-1918 (see Figure 7). While the overall number of conscripted Russian soldiers was always higher than ethnic minority soldiers, the pattern of conscription across the two groups remained similar throughout WWI.

Figure 7: Number of Newly Conscripted Soldiers Between 1914-1918
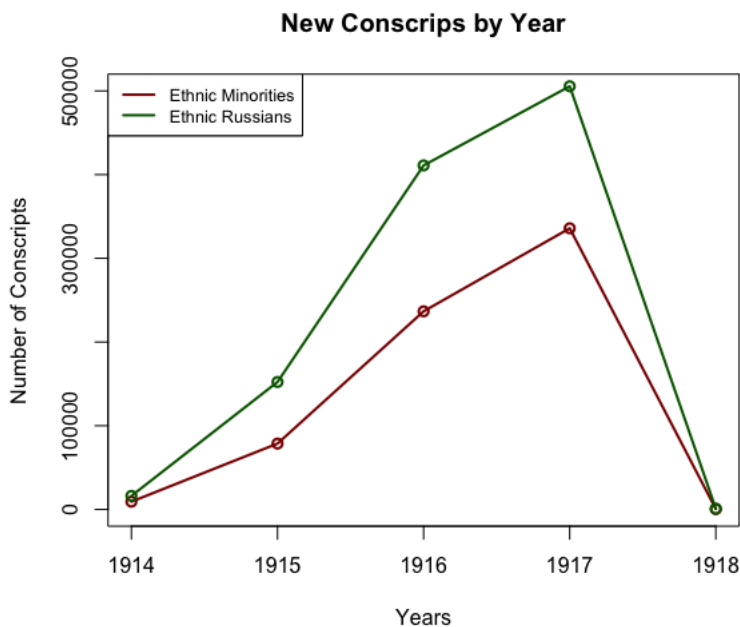
8.4. Missing Discharge and Birth Location Records

One possibility is that including observations with missing discharge records in the main analyses is biasing the results. The data contains no discharge information on 243,962 individual soldiers. It is unclear whether the discharge record is absent due to reporting bias or because soldiers with such records were considered missing at the end of WWI. My analyses assumed that soldiers without discharge records survived WWI and were considered as not having joined the revolutionary movement, if a match was not found in the civil war records. Appendix A5.7, I replicate the main analyses after excluding individuals whose fates were unknown after WWI. The conclusions remain robust.

The results could be questioned if there was an imbalance in ethnicities across missing birth locations that were excluded from the analysis. To show that geographical imprecisions are not systematically excluding certain types of minority soldiers, I take a closer look at the excluded sample with missing birth locations. I find that Russian soldiers were almost as likely to have missing geolocation as ethnic minority soldiers: the percentage of missingness for ethnic minorities and ethnic Russians are 17.6% and 15.7%, respectively.

8.5. Recognition of Sacrifice

One of the main challenges to my analysis is identifying whether the results are driven by pre-war marginalization or the discrimination ethnic minority soldiers faced during

the military service, or both. To examine the effect of possible wartime discrimination on the likelihood of revolutionary behavior, I use a new data set on WWI military decorations to construct a measure of "recognition" of sacrifice. The expected direction of the effect of discrimination depends on two separate relationships. First, the military command should have discriminated against ethnic minority soldiers when awarding medals for battlefield performance. Second, recognition of bravery should have dissuaded ethnic minority soldiers from joining the revolutionary movement. The first relationship is difficult to test directly. Ethnic minority soldiers could have received fewer military decorations because of their inferior skills than an average ethnic Russian. The literature on military effectiveness also shows that repressed citizens rarely take the kind of battlefield initiative that merits recognition (Rozenas, Talibova and Zhukov, 2021).

With these caveats in mind, I test the relationship between the ethnic background of a WWI soldier and the likelihood of receiving at least one military decoration for battlefield performance. I provide evidence below (see column 1 of Table 9) that ethnic minority soldiers were indeed less likely to receive military decorations compared to ethnic Russians. Whether we observe these effects because of an underlying discriminatory policy in the Imperial Army or lack of skills or initiative is a contested point. However, results also demonstrate that awarding of a military decoration did not make ethnic minority soldiers more or less likely to rebel (see column 1 of Table 9). In other words, irrespective of the nature of discrimination in the Imperial Army and the distribution of military decorations across soldiers, recognition of battlefield sacrifice does not alter a marginalized soldier's attitude toward the regime in the long term.

8.6. *Alternative Measures of District Diversity*

In order to check whether the district-level effects are driven by the nature of the Ethnic Diversity Index rather than the underlying location-specific diversity, I use an alternative, decomposed measures of diversity that separately captures a) the heterogeneity of non-Russian ethnic groups in each district and b) share of the non-Russians in the total population (Charnysh, 2019).

The new measure of ethnic diversity can be expressed as:

$$\sum_{j=1}^{J}[s_j * (1 - s_j)]$$

where s_j is the share of non-Russians from district j out of the total population of non-Russians and $j = 1, ..., J$. Because the first measure is calculated independent of the over-

Table 9: Recognition of Bravery and Revolutionary Movement

	Military Decoration	Revolutionary Red Army
Ethnicity	-2.112 (0.000)***	
Military Decoration		-1.948 (0.052)†
Districts	765	757
Birthplaces	676,761	276,318
Soldiers	1,605,117	565,871

Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and ethnicity information. The dependent variable in the first column is a dummy variable that takes the value of 1 if an individual received a military decoration, and 0 otherwise. The dependent variable in the second column is a dummy variable that takes the value of 1 if an ethnic minority veteran joined the Revolutionary Red Army during the civil war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; *p $< .05$; **p $< .01$; ***p $< .001$ Because data in the second specification is subsample of WWI soldiers from ethnic minority backgrounds, sample size is much smaller. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$.

all share of ethnic groups, the second measure – the share of non-Russians – is included as a control variable (Alesina, Harnoss and Rapoport, 2016). I replace the composite ethnic diversity measure with the two decomposed measures and replicate the main models. Analysis in Appendix A5.8 shows that the results are consistent with the main findings. The direction of the relationship for both ethnic share and ethnic heterogeneity is positive for the pro-Revolutionary outcomes and negative for pro-state outcomes.

I also consider the possibility that the aggregate district results reflect the overwhelming numbers of ethnic non-Russians residing in heterogeneous districts rather than the spillover effects of socialization and prolonged contact. To investigate this mechanism, I limit my sample to include only ethnic-Russians. I then replicate district-level analysis on the limited sample to identify whether ethnic Russians were more likely to join the revolutionary movement if their birth districts were ethnically diverse. Appendix A5.8 shows that the ethnic Russians were more likely to join the revolutionary movement, if they were born in ethnically diverse districts.

8.7. RDD Spatial Adjustments

I carry out a battery of robustness tests to address concerns about regression continuity design fit. I show that the results are robust to using different functional forms of geographic coordinates using lower and higher order polynomials. In addition to the direct linear control of the forcing variable and the natural cubic spline of the distance to the

district border (as reported in the main results), I use linear, quadratic, and quartic polynomials of the distance to border (see Appendix A5.2 for both results). In Appendix A5.3, I re-run RD analysis using various bandwidths, considering locations below 50 km and above 70 km from the district borders. To ensure that the results are not driven by the overlap between boundaries and infrastructural or other administrative characteristics of districts, I replicate the results on a smaller, alternative sample of 14 provinces deep within European Russia. As results in Appendix A5.4 show, the coefficients are positive and statistically significant. Finally, to account for unobserved spatial patterns, Appendix A5.5 re-estimates the RD effect using several placebo cutoffs, moving borders in two opposite directions by 10, 20, 30, and 40 km. All robustness check results remain consistent with the main RD estimates.

9. CONCLUSION

Russian imperial policy of cultural exclusivity, aimed at assimilating or otherwise repressing the freedoms of non-dominant ethnic groups, backfired when the state was forced to enlist soldiers from the same communities, thereby exposing them to important fighting (and survival) skills in a hands-on learning environment. As thousands of soldiers from historically disadvantaged groups learned to fight shoulder to shoulder with well-educated and politicized Russian recruits, they were introduced to a formal and informal learning environment previously denied to them by the regime.

Exclusionary state policies might have benefited the Tsar and the state in the short run. Depriving potentially seditious segments of the population of the skills necessary for upward social mobility may have served the dual purpose of avoiding the inclusion of the affected communities in the political, administrative, and security apparatus of the state and preempting a well-organized resistance against the regime. Yet, the provision and protection of political rights at peacetime is critical to securing the loyalty of the masses at wartime. States, especially those that do not have a professional standing army, lack manpower, or face formidable enemies, can not afford a draft based on loyalty to the throne under wartime conditions. Furthermore, mass mobilization against the shadow of a major war exhausts the state's ability to maintain tight control of the domestic population through traditional mechanisms, as the sole focus of the central government is to survive the war.

This study establishes two main results. First, army veterans from the ruling ethnic group are more likely than those from the marginalized communities to demonstrate their loyalty to the state during domestic turmoil. I also find that these identity-driven

individual-level effects have geospatial salience. Second, marginalized individuals with combat experience are more likely to use their acquired skills against the state when they expect the state to be fundamentally weakened. Taken together, these findings suggest that, when given a choice to demonstrate their loyalty to the throne or their people, army recruits from historically marginalized communities will choose the latter. The main explanation supporting these results is consistent with the literature on military performance: citizens who become soldiers rarely lose their civilian identities.

This article makes contributions to three strands of literature. Previous work on civil-military literature has established the importance of military experience for subsequent political behavior (Bellows and Miguel, 2006; Bauer et al., 2016). What is largely ignored in these discussions is how army service interacts with the past experiences of soldiers. Relying on highly detailed micro-level historical data, I show that lived experiences prior to enlistment can determine the intensity and direction of these effects for individual soldiers.

This paper also adds to our understanding of the role of military service and combat exposure to human capital accumulation. Human and social capital development is central to army service. Existing studies have rigorously examined socioeconomic returns to social capital attained during army service (Benoit, 1978; Berger and Hirsch, 1983; Angrist, 1990; Richard and Wilhite, 1990; Angrist and Krueger, 1994; Stroup and Heckelman, 2001; Aizenman and Glick, 2003; Bedard and Deschênes, 2006; Lee, 2012; Eynde, 2016; Hendrickson, Salter and Albrecht, 2018). However, these studies tend to focus on aggregate macroeconomic indicators, thereby ignoring individual-level effects. Furthermore, most of the previous work considers voluntary military service in professional armed forces, which provides a qualitatively different environment than a mass army.[46] This paper directly investigates the utility of the acquired capital for a conscripted individual beyond economic benefits. Rich individual-level observations, coupled with a diverse set of variables, allow me to draw conclusions about the individual behavior of each war veteran, thereby avoiding the ecological inference problem encountered in similar studies. Another advantage of studying the effects of military service in the mobilization context of the Russian Empire in WWI is that it offers an opportunity to produce estimates that are not biased due to selection into voluntary military service. An important caveat is that the sample used in this study does not include nonveterans, however given that all military-age male population of the Russian Empire was drafted to fight in WWI, the full list of WWI soldiers can be considered a representative sample of the general civilian male

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[46]A notable exception to this is a study by Annan and Blattman on impacts of service for forced soldiers (Blattman and Annan, 2010).

population.

These findings contribute to the rapidly emerging literature on legacies of conflict. Scholars of political violence have studied persistent effects of violence on affected communities (Balcells, 2012; Lupu and Peisakhin, 2017; Rozenas, Schutte and Zhukov, 2017). However there is no consensus on the intermediary mechanisms that contribute to the direction of these effects. Although direct testing of the mechanisms that affect relationship between military service and political behavior is beyond the scope of this article, I demonstrate that the negative impact of repression on political participation can shift depending on the opportunity structures that are made available to the affected communities.

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Appendix

Contents

A1. ETHNICITY & RELIGION

A1.1. *List of Ethnic and Religious Groups*

The data on ethnic composition of districts include approximately 130 distinct language groups, mapped to ethnic groups. The full list of ethnicities and their summary statistics are reported in Table A1.1 below.

Table A1.1: **List of Main Ethnicities by Language Groups**

	Number			**% of Population**		
	Overall	M	F	Overall	M	F
Russian	55,646,397	27,115,137	28,531,260	44.0539	21.4664	22.5875
Ukrainian	22,346,451	11,222,059	11,124,392	17.6911	8.8842	8.8069
Polish	7,443,834	3,708,044	3,735,790	5.8931	2.9356	2.9575
Belorusian	6,137,440	3,042,562	3,094,878	4.8589	2.4087	2.4501
Hebrew	4,816,057	2,352,160	2,463,897	3.8128	1.8621	1.9506
Tatar	3,306,649	1,755,353	1,551,296	2.6178	1.3897	1.2281
Kyrgyz	2,179,601	1,157,373	1,022,228	1.7255	0.9163	0.8093
Kazakh	1,900,546	1,021,875	878,671	1.5046	0.8090	0.6956
German	1,877,671	884,331	993,340	1.4865	0.7001	0.7864
Latvian	1,459,041	708,744	750,297	1.1551	0.5611	0.5940
Bashkir	1,293,129	649,064	644,065	1.0237	0.5138	0.5099
Lithuanian	1,211,447	595,932	615,515	0.9591	0.4718	0.4873
Armenian	1,178,724	624,348	554,376	0.9332	0.4943	0.4389
Moldovan	1,117,436	571,524	545,912	0.8846	0.4525	0.4322
Mordovian	1,023,887	498,348	525,539	0.8106	0.3945	0.4161
Estonian	990,924	485,218	505,706	0.7845	0.3841	0.4004
Sart	968,688	528,792	439,896	0.7669	0.4186	0.3483
Chuvash	843,889	421,395	422,494	0.6681	0.3336	0.3345
Georgian	823,924	437,061	386,863	0.6523	0.3460	0.3063
Uzbek	727,008	399,261	327,747	0.5756	0.3161	0.2595
Azerbaijani	534,087	297,824	236,263	0.4228	0.2358	0.1870
Turkish	518,402	278,973	239,429	0.4104	0.2209	0.1895
Samogitian	448,001	211,981	236,020	0.3547	0.1678	0.1869
Chechen	428,213	220,791	207,422	0.3390	0.1748	0.1642
Udmurt	420,236	207,654	212,582	0.3327	0.1644	0.1683
Greek	406,967	321,763	85,204	0.3222	0.2547	0.0675
Tadjik	347,596	188,227	159,369	0.2752	0.1490	0.1262
Turkmen	300,549	159,620	140,929	0.2379	0.1264	0.1116
Buryat	288,726	145,854	142,872	0.2286	0.1155	0.1131
Imeretian	273,080	135,971	137,109	0.2162	0.1076	0.1085

	Number			**% of Population**		
	Overall	M	F	Overall	M	F
Mingrelian	239,634	122,254	117,380	0.1897	0.0968	0.0929
Yakut	225,197	112,712	112,485	0.1783	0.0892	0.0891
Avar andic	213,260	108,297	104,963	0.1688	0.0857	0.0831
Karelian	208,419	96,373	112,046	0.1650	0.0763	0.0887
Bulgarian	172,189	89,003	83,186	0.1363	0.0705	0.0659
Ossetian	171,843	90,186	81,657	0.1360	0.0714	0.0646
Zyryan	152,392	71,807	80,585	0.1206	0.0568	0.0638
Finnish	143,025	67,713	75,312	0.1132	0.0536	0.0596
Dargin	131,490	65,897	65,593	0.1041	0.0522	0.0519
Lezgian	125,554	66,014	59,540	0.0994	0.0523	0.0471
Nogai	111,651	60,460	51,191	0.0884	0.0479	0.0405
Teptyar tatar	109,522	55,034	54,488	0.0867	0.0436	0.0431
Mari	109,009	54,594	54,415	0.0863	0.0432	0.0431
Karakalpak	104,820	53,855	50,965	0.0830	0.0426	0.0403
Permyak	104,789	48,887	55,902	0.0830	0.0387	0.0443
Kurdish	100,199	53,153	47,046	0.0793	0.0421	0.0372
Kabardian	98,563	50,790	47,773	0.0780	0.0402	0.0378
Tat	95,059	50,292	44,767	0.0753	0.0398	0.0354
Kumyk	86,901	46,035	40,866	0.0688	0.0364	0.0324
Lak	80,613	36,343	44,270	0.0638	0.0288	0.0350
Kalmyk	78,678	41,375	37,303	0.0623	0.0328	0.0295
Abkhaz	72,075	37,664	34,411	0.0571	0.0298	0.0272
Karapapak	63,572	33,013	30,559	0.0503	0.0261	0.0242
Tungus	61,928	31,473	30,455	0.0490	0.0249	0.0241
Uighur	56,466	29,616	26,850	0.0447	0.0234	0.0213
Chinese	54,286	44,315	9,971	0.0430	0.0351	0.0079
Mishar tatar	53,825	26,983	26,842	0.0426	0.0214	0.0213
Czech	49,459	25,838	23,621	0.0392	0.0205	0.0187
Ingush	47,587	24,066	23,521	0.0377	0.0191	0.0186
Circassian	46,005	24,660	21,345	0.0364	0.0195	0.0169
Gypsy	44,622	22,772	21,850	0.0353	0.0180	0.0173
Talysh	35,288	18,971	16,317	0.0279	0.0150	0.0129
Persian	32,499	24,593	7,906	0.0257	0.0195	0.0063

	Number			**% of Population**		
	Overall	M	F	Overall	M	F
Karachay	27,243	12,958	14,285	0.0216	0.0103	0.0113
Chudes	25,834	12,353	13,481	0.0205	0.0098	0.0107
Korean	25,054	15,357	9,697	0.0198	0.0122	0.0077
Khanty	20,303	10,607	9,696	0.0161	0.0084	0.0077
Chukchi	19,833	9,776	10,057	0.0157	0.0077	0.0080
Svan	15,764	7,891	7,873	0.0125	0.0062	0.0062
French	15,482	5,585	9,897	0.0123	0.0044	0.0078
Kashgar	14,938	8,135	6,803	0.0118	0.0064	0.0054
Swedish	14,201	6,454	7,747	0.0112	0.0051	0.0061
Ingrian	13,774	6,590	7,184	0.0109	0.0052	0.0057
Samoyedic	12,874	6,743	6,131	0.0102	0.0053	0.0049
Others	9,061	6,973	2,088	0.0072	0.0055	0.0017
Mansi	7,653	3,783	3,870	0.0061	0.0030	0.0031
Kipchak	7,607	4,089	3,518	0.0060	0.0032	0.0028
English	6,890	3,443	3,447	0.0055	0.0027	0.0027
Koryak	6,226	3,167	3,059	0.0049	0.0025	0.0024
Udi	6,211	3,809	2,402	0.0049	0.0030	0.0019
Gilaki	5,418	2,844	2,574	0.0043	0.0023	0.0020
Assyrian	5,338	3,339	1,999	0.0042	0.0026	0.0016
Italian	4,744	2,928	1,816	0.0038	0.0023	0.0014
Itelmen	3,975	2,002	1,973	0.0031	0.0016	0.0016
Northern tribes	3,904	2,048	1,856	0.0031	0.0016	0.0015
Manchu	3,392	2,128	1,264	0.0027	0.0017	0.0010
Japanese	2,324	1,274	1,050	0.0018	0.0010	0.0008
Eskimo	2,197	1,063	1,134	0.0017	0.0008	0.0009
Romanian	2,022	1,707	315	0.0016	0.0014	0.0002
Lappish	1,811	920	891	0.0014	0.0007	0.0007
Arabic	1,696	884	812	0.0013	0.0007	0.0006
Serbian	1,600	1,186	414	0.0013	0.0009	0.0003
Yukaghir	1,557	752	805	0.0012	0.0006	0.0006
Chuvan	1,019	541	478	0.0008	0.0004	0.0004
Norwegian	947	683	264	0.0007	0.0005	0.0002
Kartvelian	937	761	176	0.0007	0.0006	0.0001
Albanian	934	503	431	0.0007	0.0004	0.0003

	Number			**% of Population**		
	Overall	M	F	Overall	M	F
Hungarian	889	504	385	0.0007	0.0004	0.0003
Caucasian	846	721	125	0.0007	0.0006	0.0001
Mongol	770	438	332	0.0006	0.0003	0.0003
Danish	647	393	254	0.0005	0.0003	0.0002
Afghan	614	480	134	0.0005	0.0004	0.0001
Altai	544	320	224	0.0004	0.0003	0.0002
Slovak	400	255	145	0.0003	0.0002	0.0001
Votic	350	334	16	0.0003	0.0003	0.0000
Indian	294	277	17	0.0002	0.0002	0.0000
Dutch	269	181	88	0.0002	0.0001	0.0001
Khevsurian	163	142	21	0.0001	0.0001	0.0000
Laz	144	118	26	0.0001	0.0001	0.0000
Karaim	114	50	64	0.0001	0.0000	0.0001
Spanish	97	61	36	0.0001	0.0000	0.0000
Slovenian	78	68	10	0.0001	0.0001	0.0000
Siberian tatar	63	63	0	0.0000	0.0000	0.0000
Flemish	55	32	23	0.0000	0.0000	0.0000
Soyot	55	34	21	0.0000	0.0000	0.0000
Ingiloy	43	25	18	0.0000	0.0000	0.0000
Adjarian	39	35	4	0.0000	0.0000	0.0000
Portugese	30	21	9	0.0000	0.0000	0.0000
Kuraminsk	24	19	5	0.0000	0.0000	0.0000
Polynesian	24	3	21	0.0000	0.0000	0.0000
Ainu	16	14	2	0.0000	0.0000	0.0000
Teleut	15	12	3	0.0000	0.0000	0.0000
Qajar	14	14	0	0.0000	0.0000	0.0000
Gurian	9	6	3	0.0000	0.0000	0.0000
Pshavian	5	5	0	0.0000	0.0000	0.0000
Abyssin	4	4	0	0.0000	0.0000	0.0000
Orok	2	2	0	0.0000	0.0000	0.0000
Aleut	2	2	0	0.0000	0.0000	0.0000
Dakota	2	2	0	0.0000	0.0000	0.0000
Ket	1	1	0	0.0000	0.0000	0.0000
Nanai	1	1	0	0.0000	0.0000	0.0000

The full list of religious categories and their summary statistics are provided in Table A1.2.

Table A1.2: **List of Religions Practiced in the Russian Empire**

| | **Number** | | | **% of Population** | | |
	Overall	M	F	Overall	M	F
Orthodox	87,174,795	42,994,982	44179813	69.0141	34.0380	34.9760
Muslims	13,990,721	7,416,342	6574379	11.0761	5.8713	5.2048
Roman Catholic	11,463,701	5,683,594	5780107	9.0755	4.4996	4.5760
Jews	5,210,684	2,547,707	2662977	4.1252	2.0170	2.1082
Lutherans	3,585,712	1,746,294	1839418	2.8387	1.3825	1.4562
Old Believers	2,235,166	1,045,427	1189739	1.7695	0.8276	0.9419
Armenian Orthodox	1,170,918	621,460	549458	0.9270	0.4920	0.4350
Buddhists	304,043	171,576	132467	0.2407	0.1358	0.1049
Others	273,984	139,170	134814	0.2169	0.1102	0.1067
Reformers	85,992	43,203	42789	0.0681	0.0342	0.0339
Mennonites	66,476	33,549	32927	0.0526	0.0266	0.0261
Armenian Catholic	38,708	19,960	18748	0.0306	0.0158	0.0148
Baptists	38,596	18,598	19998	0.0306	0.0147	0.0158
Other Christians	25,539	12,956	12583	0.0202	0.0103	0.0100
Protestants	15,975	8,164	7811	0.0126	0.0065	0.0062
Karaites	12,903	6,376	6527	0.0102	0.0050	0.0052
Anglicans	4,030	1,944	2086	0.0032	0.0015	0.0017

A1.2. Measures of Ethnicity

A1.2.1 Ethnicity by Name To predict minority ethnicities, I employ a four-tiered approach.

1. Taking advantage of the Memorial archive, which provides ethnic background information for approximately 1 million arrestees (Zhukov and Talibova, 2018), I first match soldiers' surnames deterministically with those from the archives. The Memorial archive contains 163,284 unique surnames. The set of nationalities included in the Memorial dataset are: Armenian, Belarussian, Chechen, Chinese, Estonian, Greek, Jewish, Kabardin, Kalmyk, Korean, Latvian, Lithuanian, Ossetian, Polish, Russian, Tatar and Ukrainian. Additionally, I augment the Memorial data with a comprehensive list of ethnic Jewish last names found in the books of rabbinates of Russia's pre-revolutionary period.

2. I then use Jarro-Winkler string distance to predict ethnicity for non-unique matches.

3. Next, I use well-known ethnic last name endings and pre-fixes to assign ethnicity information. Some examples include distinct Lithuanian (`-ius`, `-aitis`), Latvian (`-ns`, `-is`), German (`-shtein`, `-berg`), Polish (`-wicz`, `-ski`), Ukrainian (`-enko`, Belarussian (`-chuk`, Georgian (`-dze`, `-vili`), Armenian (`-yan`), Chechen (`abdul-`, `abu-`, `-uddin`) last names.

4. For the remaining 380 unique last names, I use an SVM classifier trained on the Memorial dataset to predict their ethnicity.

Based on the final output, I categorize last names into two: a native-born Russian or a member of a non-Russian ethnic group. Ukrainians and Belorussian last names are also categorized into minority ethnic group. I assign a dummy variable to each last name in the WWI military personnel data where one predicts ethnic Russian background. The process resulted in classification of 51.4% of surnames as ethnic Russian last names.

Table A1.3 lists the 30 most common ethnic Russian and ethnic minority last names found in the data as a result of the matching and classification procedure.

Table A1.3: **Top 20 Last Names**

Russian	Count	Minority	Count
Ivanov	28,293	Bondarenko	6,926
Vasilyev	17,033	Davydov	4,149
Volkov	11,127	Ermakov	3,783
Andreev	10,985	Boyko	3,719
Alekseev	10,409	Bondar	2,656
Egorov	9,789	Isaev	2,499
Grigoryev	9,543	Demin	2,378
Zaytsev	9,117	Drozdov	2,046
Zakharov	8,402	Dyachenko	1,970
Bogdanov	7,716	Akimov	1,926
Vorobyov	7,192	Goncharenko	1,840
Baranov	6,997	Ageev	1,450
Antonov	6,923	Berezin	1,449
Smirnov	6,918	Ananyev	1,368
Borisov	6,697	Gavrilenko	1,277
Dmitriev	6,458	Isakov	1,245
Gusev	6,036	Arutyunov	1,193
Aleksandrov	5,986	Tyurin	1,170
Gavrilov	5,876	Babich	1,167
Yefimov	5,819	Bulatov	1,103
Zhukov	5,802	Dubinin	1,102
Danilov	5,471	Zakharchenko	1,096
Goncharov	5,358	Gavrilyuk	1,089
Belov	5,215	Gordienko	1,064
Vlasov	5,042	Zinchenko	1,063
Afanasyev	5,040	Antonenko	1,048
Abramov	4,988	Anokhin	996
Gerasimov	4,884	Dubrovkin	992
Belyaev	4,873	Zadorojniy	986
Bikov	4,743	Yevtushenko	986

A1.2.2 Ethnicity by District I leverage the detailed demographic data from the 1897 Census to build a separate Ethnic Heterogeneity Index that measures the ethnic diversity of districts corresponding to soldiers' birth locations across multiple dimensions. Historically, scholars have measured ethnic diversity by the Herfindahl-Hirschmann concentration index (Hirschman, 1964), which lacks a relational dimension in that it fails to distinguish between the effects of in-group size, out-group variety, and out-group population balance (Alesina, Harnoss and Rapoport, 2016; Koopmans and Schaeffer, 2013). To capture the ethnocultural diversity effects accurately, I use a composite measure representing a) the share of the dominant group and b) the heterogeneity of the ethnic population in each district. The first component measures the share of Russians in the total population, while the latter is calculated out of the overall non-Russian population. The resulting index is the sum of the two measures.

Let n_i represent the number of individuals that belong to the dominant group i, where N is the total population and k refers to the number of non-dominant groups. Similarly, let n_j represent to the number of individuals that belong to the out-group j, with $j = 1, ..., J$, then the Ethnic Diversity Index can be expressed as:

$$EDI = \sum \begin{cases} \dfrac{1 - n_i}{N} & \text{ethnic share} \\ 1 - \sum\limits_{j=1}^{J} \left(\dfrac{n_j}{N_k}\right)^2 & \text{ethnic diversity} \end{cases}$$

Table A1.4: **Top 10 Districts with the Highest EDI Score**

District	Province	Score
Tukalin	Tobol	0.903
Bugulmin	Samar	0.900
Kigizman	Kars	0.868
Akhaltsykh	Tiflis	0.863
Tashkent	Syr-Darya	0.858
Ardahan	Kars	0.856
Zakatala	Tiflis	0.852
Volmar	Liflyand	0.846
Akkerman	Bessarab	0.845
Khasavyurt	Ter	0.844

To measure the religious diversity of districts, I use a modified version of the Religious Diversity Index (RDI) based on 16 major religious categories practiced in Imperial Russia at the time. The included categories are Orthodox, Old Believers, Armenian Orthodox, Armenian Catholics, Roman Catholics, Lutherans, Reformers, Protestants, Baptists, Mennonites, Anglicans, Other Christians, Karaites, Muslims, Jews, and Buddhists. The RDI measure uses the inverted Herfindahl-Hirschman Index, where higher scores indicate higher religious diversity (Johnson and Grim, 2013). When the entire population belongs to a single religious group, the score is at 0. If the population is equally distributed among all existing religious groups, the score is 10. I scale the final measure to vary between 0 and 1, with 1 indicating the highest level of religious diversity. Scaling facilitates smooth comparison with the ethnic diversity index, which also varies between 0 and 1. In the top ten districts with the highest religious diversity measure, the largest group does not constitute more than 50% of the entire population.

Table A1.5: **Top 10 Districts with the Highest RDI Score**

District	Province	Score
Bel	Grodnen	0.804
Gijigin	Kamchatka	0.786
Shuy	Vladimir	0.772
Kars	Kars	0.769
Borchaly	Tiflis	0.769
Perekop	Tavrich	0.760
Kigizman	Kars	0.752
Kholm	Kholm	0.737
Grubeshov	Kholm	0.733
Kizlyar	Ter	0.732

A2. DATA AND SOURCES

A2.1. Red Army Records

The Red Army records are collected from several publicly available sources and archival materials. The primary source of the data is an archival record book published in 1926 by the Office of the Creation and Service of Troops of the Main Directorate of the Workers' and Peasants' Red Army (RKKA) (G.U.R.K.K.A., 1926).

Source: *G.U.R.K.K.A. 1926. Imennoy spisok poter na frontakh v lichnym sostave Raboche-Krestyanskoy Krasnoy Armii za vremya grashdanskoy voyni [List of casualties at the fronts among the personnel of the Workers and Peasants' Red Army during the Civil War]. Upravleniya ustroystva i slujby voisk G.U.R.K.K.A. [Directorate of the Creation and Service of the Troops of G.U.R.K.K.A.].*

The main source book lists basic biographical information, enlistment logs, address records, and casualty reasons for more than 50,000 Red Army soldiers who died during the Russian Civil War. Although it is the largest existing record-book for the WPRA personnel from the Russian Civil War, this source is limited as the records represent only those who lost their lives in civil war either while fighting on the battlefield or due to wide-spread diseases in the fledgling Red Army.

To augment this data source, I use additional information from combined archival documents, including the list of awardees for the "Cavaliers of the Order of the Red Banner" and the "Honorary Revolutionary Weapon Award" given for battlefield performance in the Russian Civil War. The Order of the Red Banner, established in August 1924, was the first Red Army order (one of the highest) to be established for exceptional bravery, dedication, and courage displayed in defense of Socialist Motherland. The first holder of the Order of the Red Banner of the RSFSR was the former Sormovo worker, chairman of the Chelyabinsk Revolutionary Committee, Vasily Konstantinovich Blucher. In 1918, having united several armed detachments under his command, he made a legendary campaign with them across the Urals, waging fierce battles with the White Guards. The ten thousandth partisan army led by him made a heroic raid on the rear flank of the White Army. Having walked 1,500 kilometers in continuous battles in 40 days, the partisans united with the regular units of the Red Army. In the meeting documents of the Revolutionary Military Council of the 3rd Army, which included the partisans of Blucher, it was mentioned: "The transition of Comrade Blucher's troops under impossible conditions can only be equated with the transitions of Suvorov in Switzerland." For this specific act, the All-Russian Central Executive Committee awarded Blucher the Order of the Red Banner of the RSFSR on September 30, 1918. For the feats accomplished during the Civil War,

Blucher was awarded the Order of the Red Banner three more times. Between 1919-1930, many military units were awarded the Order of the Red Banner of the RSFSR - the 5th Army, the Separate Caucasian Army; 7th, 15th and 24th rifle divisions; 3rd, 6th and 10th Cavalry Divisions; 93rd, 137th and 262nd Infantry Regiments; 19th and 29th cavalry regiments, as well as a number of other formations, units and subunits. By September 1, 1928, the number of holders of one Order of the Red Banner of the RSFSR was 14,678 people. 285 soldiers received it twice, 31 soldiers thrice, and only 4 soldiers received it four times.

Source: *1926. Sbornik lits nagrajdennix ordenom Krasnogo Znameni i Pochetnim Revolyutsionnim Orujiem [Compendium of Persons Awarded the Order of the Red Banner and the Honorary Revolutionary Weapon Award]. Gosudarstvennoe Voennoe Izdatelstvo [State Military Publishing Agency]. Moscow.*

Figure A2.1: Sample page from the Red Army record book

Г

Должность или звание	ФАМИЛИЯ, ИМЯ и ОТЧЕСТВО	Губернии	Уезда	Волости, села или деревни	Причина	Время	Новое наименование по состоянию на 1/I 1926 года
1	2	3	4	5	6	7	8
Кр-ц	Григорьевский Иван	Сведений	нет	—	убит	19—21 авг. 20 г.	
Св. нет	Григорьевский Петр Кар.	Донск. об.	Холерской окр.	ст. Урюпинской	умер	31 янв. 21 г.	Сталинградск. губ., Хоперск. окр.
Кр-ц	Григорьевский Порфирий	Сведений нет	—	—	"	Сведений нет	
"	Григоренко Дмитрий	Киевской	Киевской	Постав	"	14 дек. 20 г.	УССР Киевский окр.
Комэс.	Григоренко Михаил Кт.	Таврическ.	Мелитопольск.	Веселовской, с. Малин	убит в бою	2 дек. 20 г.	УССР Мелитоп. окр., Веселов. р.
Кр-ц	Григоренко Михаил Фед.	Харьковск.	Змиянской	Змиянск.	убит	19 мар. г. не ук.	
"	Григоренко Михаил	Кубанск.	Ейский	ст. Староцербиновская	"	28 апр. 22 г.	С.-Кавк. кр., Донск. о., Ейск. р.
Стрел.	Григоринко Яков	Витебск.	Полоцкой	Вознесенской, д. Светицы	"	31 июня г. не ук.	Бел. ССР, Полоцкий окр.
"	Григоринко Иван Михар.	Харьков.	Богодуховской	Сенненской	"	16 июня 20 г.	УСС Харьк. окр., Сенненский р.
Кр-ц	Григоров Александр	Сведений	нет	—	ум. от дизент.	6 марта 20 г.	
Пулем.	Григович Михаил	город	Львов	—	убит в бою	22 янв. 20 г.	В состав СССР не входит.
Стрел.	Григорский Абрам Арг.	Оренбург.	Оренбургской	Пречистенжой и села	"	9 апр. 19 г.	Прежнее
Кр-ц	Григорчиков Еремей	Томской	Н.-Николаевской	—	умер	9 июня 20 г.	Сиб. кр. Н.-Николаевский окр.
"	Григорщиков Еремей	"	"	—	"	в 20 г.	"
Св. нет	Григорьянц	Сведений	нет	—	"	21 марта 21 г.	"
Кр-ц	Григохин Евсей Аксен.	Сведений	нет	—	ум. от п. серд.	1 ноября 19 г.	
"	Григунов Егор	Кубанск.	Майкопской	—	убит	4 июля 20 г.	Сев.-Кавк. край, Майкопск. окр.
Огком	Гридасов Михаил Серг.	Самарск.	Бузулукской	Курланевской	убит в бою	19 сент. 19 г.	Прежнее
Кр-ц	Гридин Александр Мокс.	Курской	Льговской	Ивановской и села	"	21 окт. 20 г.	
"	Гридин Иван		Тимской	—	ум. от с. тифа	6 февр. 20 г.	Курской губ., Щигровский уезд
"	Гридин Иван	Ставроп.	Медвеженской	Медвеженск.	ум. от дизент.	24 янв. 21 г.	Сев.-Кавк. край, Ставроп. окр.
"	Гриднев Иван Тихонов.	Воронеж.	Новохоперской	Новогольской, п. Новогол.	убит в бою	22 авг. 20 г.	Прежнее
"	Гриднев Михаил Митр.	Курской	Обоянской	Казацкой, д. Злобинова.	"	9 авг. 20 г.	Курский губ., Курский уезд
"	Гриднев Семен	Воронеж.	Задонской	Сизовской, д. Алисово	убит	апр.-май 19 г.	Воронежской губ., Воронеж. уезд.
"	Гричаев Сергей Иванов.	Тамбовск.	Борисоглебской	—	умер	10 мая г. не ук.	Прежнее
"	Гриднэвский Антон	Оренбург.	г. Верхнеурат.	—	убит в бою	23 авг. 18 г.	Уральск. обл., Троицкий окр.
Св. нет	Гриев Василий	Сведений	нет	—	ум. от с. тифа	23 окт. 19 г.	
Стрел.	Грижатов Гер. Иванов.	Киевской	Звенигородской	Калигарс, с. Собосевка	убит в бою	6 сент. 20 г.	УССР Уманский окр., Звениг. р.
Кр-ц	Гримицкий Михаил Наз.	Сведений	нет	—	умер	10 мар. г. не ук.	
Санит.	Гринь Алексей Филиппов.	Витебской	Дриссанской	Филипповской	ум. от дизент.	Сведений нет	Бел. ССР Полоцкий окр.
Военм.	Грин Виктор	Сведений	нет	—	"	29 авг. 19 г.	
Кр-ц	Грин Мартын Крейхан.	Курлянск.	Матаевской	Груславый, хут. Грин	ум. от б. тифа	3 апр. 19 г.	В состав СССР не входит
"	Гринас Павел Яковлев.	Полтавск.	Локвицкой	Юсковской	ум. от с. тифа	12 янв. г. не ук.	Укр. ССР Ромен. окр., Локвиц. р.
Комвзв	Грибберг Александр Пет.	Лифляндск.	Рижской	Краппенской	самоубийца	18 июня 20 г.	В состав СССР не входит
Агент	Гринберг Ильяс	Сведений	нет	—	умер	30 июня 21 г.	—
Св. нет	Гринберг Эльза Иванов.	Лифляндс.	г. Рига	—	умерла	апр., май 21 г.	В состав СССР не входит
Кр-ц	Гринвальд Альфред	Сведений	нет	—	у. от кр. плэв.	25 марта 19 г.	—
"	Гринев Александр Них.	Ологецк.	Каргопольской	Дуговской, д. Кировской	убит в бою	31 авг. 19 г.	Вологодской губ., Карг. уезд.
"	Гринев Никон	Орловск.	Волховской	—	умер	13 дек. 19 г.	Прежнее
"	Гринев Федор	Оренбур.	Оренбургской	Булаковской, с. Булаковка	убит	в 1922 г.	—
"	Гринев Федор	Харьковск.	Изюмской	—	"	авг., сент. 20 г.	Украинская ССР
Делопр.	Гринев Яков	Таврич.	г. (Ген-к) Ген-к	—	убит в бою	авг., сент. 20 г.	УССР Мелитоп. окр., Гениш. р.
Кочег.	Гриневич Ефим Ефимов.	Могилевск.	Мстиславской	Хославическ., д. Мурашки	ум. от с. тифа	в янв. 20 г.	БССР Калинин. окр., Мстисл. р
Санит.	Гриневич Зина	Сведений	нет	—	умерла	в 1920 г.	—
Кр-ц	Гриневич Иван	Смоленск.	Рославльской	дер. Фролово	ум. от с. тифа	23 нояб. 19 г.	Прежнее
Св. нет	Гринзайт Анна Моисеев.	от Витебск.	Сведений нет	—	ум. от холеры	Сведений нет	Бел. ССР
Кр-ц	Гринин Иван	Сведений	нет	—	ум. от ран	3 марта 19 г.	—
От-ком	Гринина Матвей Федоров.	Калужск.	Ликвин. Лядом.	дер. Синявинская	убит в бою	23 дек. 20 г.	Прежнее
Кр-ц	Гринин Осип	Витебской		—	ум. от с. тифа	10 февр. 20 г.	Бел. ССР
Санит.	Гринкевич Анна	Московск.	Богородкой	Богородской	умерла	17 авг. 21 г.	Прежнее
Стрел.	Гринкин Петр	Сведений	нет	—	умер	10 сент. 20 г.	—
Кр-ц	Гринько Прохор Кузьм.	Харьков.	Староб.	Никольской, с. Ведин	ум. от в. тифа	Сведений нет	УССР Старобельский окр.
"	Гриньков Иван Дмитр.	Семиреч.	Копальской	Троицкой	убит в бою	12 апреля 21 г.	Казакск АССР, Джетисунк. обл
П. к. р.	Гриньков Кузьма Дмитр.	Сведений	нет	—	"	13 апр. 20 г.	—
Старш	Гриньков Сергей Васил.	Енисейск.	Мунусинской	Михайловск. д. Лузьинов.	"	4 февр. 21 г.	Сиб. край, Минусинский окр.
Кочег.	Гриннаук Андрей Ульян.	Курляндс.	Виндавской	Попенской, с. Пизин	ум. от т. легк.	4 февр. 20 г.	В состав СССР не входит
Кр-ц	Гринцевич Иван	Сведений	нет	—	ум. от кр. в. л.	17 марта 20 г.	—
"	Гринюк Шлеймович	Волынск.	Луцкой	Луцкой	убит в бою	28 июня 20 г.	—
"	Гринявин Иван	Сведений	нет	—	ум. от ран	7 июня 19 г.	—
Комвзв	Грибштейн Моисей Сол.	Волынск.	г. Житомир	—	убит в бою	31 июля 20 г.	УССР Волынский окр.
Кр-ц	Грисаев Иван Григорьев.	Кубан. об.	Баталпашинск.	—	"	14 февр. 20 г.	С.-Кавк. кр., Карач.-Черк. авт.об.
Лекп.	Гривцов Валентин Алекс.	Сведений	нет	—	умер	17 февр. 20 г.	—
Кр-ц	Грицаев Василий Иван.	Царицын.	Царицинской	—	ум. от в. тифа	30 мая г. не ук.	Сталинградской губ.
Помв.	Грицай Петр Михайлов.	Австрии	г. Черновицы	—	убит	16 авг. 20 г.	В состав СССР не входит
Кр-ц	Грицай Федор Прокоф.	Сведений	нет	—	умер	29 июня 20 г.	—
"	Грицанко Александр	Сведений	нет	—	"	5 авг. г. не ук.	—
"	Гриценко Гавриил	Тобольск.	Курганский	—	ум. от тифа	3 апр. 20 г.	Уральской обл., Курганск. окр.
"	Гриценко Никита Осип.	Донской	Ростовский	—	убит в бою	13 окт. 20 г.	Северо-Кавказский край
"	Гриценко Осип Марков.	Алтайск.	Бийский	Морушинской и села	"	31 окт. г. не ук.	Сибирский край, Бийский окр.
Стрел.	Гриценко Петр Осипов.	Ставроп.	Медвеженский	с. Ивановка	"	4 июля 20 г.	Саратовской губ., Камыш. уез.
Кд-ц	Гриценко Петр Петров.	Царицын.	Камышинской	Красноярской и села	"	31 мая 19 г.	С.-Кавк. кр., Майкопский окр.
"	Грициков Яков Иванов.	Кубан. об.	Майкопский	ст. Натырбово	ум. от б. тифа	14 мая 21 г.	
Комвзв	Гриценко Андрей	Томской	Барнаульский	Дресв. и села	убит	31 марта 19 г.	Сибир. край, Барнаульский окр.
Стрел.	Грицкевич Виктор Март.	Минской	Борисовский	Краснолуцк., д. Алексеев.	убит в бою	4 июня 20 г.	ССР Белор., Борисовский окр.
Кр-ц	Грицко Григорий Осип.	Енисей к.	Ачинский	—	умер	15 июня 21 г.	Сибирский край, Ачинский окр.
К-рот.	Грицо Ануфрий Степан.	Кам.-Под.	Проскуровский	д. Ивановка	убит в бою	26 ноября 20 г.	УССР Проскуровский окр.
Кр-ц	Грицов Тарас Хирсанов.	Самарск.	Бугурусланск.	Троицкая, с. Барречка	"	21 окт. 20 г.	Прежнее
"	Грицок Марнат	Ломжинск.	Ловяковский	Тущевск.	умер	23 апр. 21 г.	В состав СССР не входит

Figure A2.2: Sample page from the Red Army record book

A13

СБОРНИК ЛИЦ,

НАГРАЖДЕННЫХ ОРДЕНОМ
КРАСНОГО ЗНАМЕНИ
и
ПОЧЕТНЫМ РЕВОЛЮЦИОННЫМ
ОРУЖИЕМ

1 9 2 6

ГОСУДАРСТВЕННОЕ ВОЕННОЕ ИЗДАТЕЛЬСТВО
МОСКВА

Figure A2.3: Source Book for Red Army Soldiers Decorated during Civil War

A2.2. WWI Award Records

The data on WWI award records is extracted from the "In Memory of the Heroes of the Great War 1914-1918 *(Pamyati Geroev Velikoy Voyni)*" archival portal (Pamyati Geroev, 2020), created and maintained by the Russian Ministry of Defense with the support of the Federal Archival Agency and the Russian Historical Society. This data was scraped from the publicly available online website of the Federal Archival Agency's records, along with the administrative records. The database contains records for 2604 soldiers, who received at least one award for battlefield bravery during WWI. These decorations include:

- **Order of the Holy Great Martyr and Victorious George (4 classes)**: This order was Imperial Russia's highest exclusively military order. It was established in 1769 and was considered among the most prestigious military awards in the world. Usually, officers and generals would be awarded for special bravery, such as personally leading the troops in rout of a superior enemy force, or capturing a fortress. The award had to be approved by a council composed of Knights of the Order. The award could also include a distinctive ribbon – three black stripes on an orange background. Because of its prestige, Stalin borrowed it for a military decoration during WWII, although they were considered the traditional colors of the Romanov familiy. The award included 4 classes, which were awarded sequentially for individual acts of bravery, with the awarding of the highest class being a rare event.

- **St. George's Weapon**: This was an additional award to complement the Order of St. George. The St. George Weapon was very rarely awarded. An officer who received this award would be bestowed with a gold saber with the inscription: "For Gallantry" and marked with a small enamel St. George cross and with the black and orange St. George's ribbon for the sword knot. If the award was bestowed on a high ranking general or admiral, the weapon would include inset diamonds as an added distinction.

- **The Order of St. Prince Vladimir (4 classes)**: Established in 1782, this order was initially considered a civil order of merit and bestowed for such acts as saving a life or famine relief. Starting with the Crimean War, it was awarded for military merit. The Order of St. Vladimir also carried a privilege of hereditary noble rank. The award included 4 classes, which were awarded sequentially for individual acts of bravery. Czar Nicholas II, himself, carried the order of St. Vladimir, fourth class.

- **The Order of St. Anne (4 classes)**: This order ranked just below the order of St. Vladimir in the Imperial Russian hierarchy. The award was originally from SSchleswig-Holstien, named by the Duke of Holstein after his wife, Anne Petrovna – the daughter

of Peter the Great. In 1742, it became a Russian award, when the prince of Schleswig-Holstein ascended the Russian throne as Czar Peter III. The award included 4 classes. The top three classes could be awarded with swords for gallantry in action or military merit in times of war.

- **The Cross of Saint George (4 classes)**: Although associated with the Order of Saint George, this award was meant for enlisted men and NCO's. The award came in 4 classes. It was awarded for acts of distinction on the battlefield. Commanders in the field could award the St. George Cross on the spot.

- **The St. George Medal (4 classes)**: This medal was awarded for merit in combat. It was associated with the Order of St. George and was ranked below St. George Cross. The medal could be awarded to allied soldiers, in addition to the Imperial army members.

- **The Order of the White Eagle**: This was a Polish order, instituted by King Lasislas I of Poland in 1325. It became a Russian Imperial Order following the absorption of Poland into Russia in 1831. The Order of the White Eagle was a one-class order.

- **The Order of St. Stanislaus (3 classes)**: Established in 1765 by Sanislas Augustus Poniatowski – the last king of Poland prior to partition –, the order ranked second only to the Order of the White Eagle. The order came in 3 classes: Knight's Grand Cross, Commander, and Companion. The provisional Russian government continued to award the Order of St. Stanislaus. Companion crosses were awarded to both British and German servicemen in recognition of their assistance in fighting the Bolsheviks.

A2.3.   White Guard Records

The data on soldiers of the White Guard during the Russian Civil War are assembled from the digitized "Participants of the White movement in Russia *(Uchastniki Belogo dvijeniya v Rossii)*" archival record-book (Volkov, 2016), created and maintained by Russian historiographers since 1995. The record book includes details for soldiers who participated in the anti-Bolshevik struggle in 1917-1922 within the ranks of the White Guard. The lists contain the names of all soldiers irrespective of their fate on the battlefield. The lists draw on 1.5 million entries compiled from a variety of sources, including official archives, personal memoirs, emigrant records, obituaries and mourning announcements in the Russian foreign press, necropolises (including unpublished ones) of Russian cemeteries abroad, award orders, wartime issues of newspapers, and information provided by surviving family members.

Official archives include previously Prague Emigre archives currently maintained in the Russian State Military Archive and the State Archive of the Russian Federation, White Guard records and other trophy documents remaining in the Soviet Union, and the archives of the Russian All-Military Union in Jordanville and Stanford University. In total, 30 documents and 9800 pages of records provide biographical information on approximately 350,000 soldiers across all of the Russian Empire. The average number of sources from which information is collected for any given individual is 5, with a range of 1-20 source references.

Бабаев Михаил Степанович, р. 1895. В Вооруженных силах Юга России. Вахмистр. На 10 янв. 1920 в общежитии № 1 в Буюк-Дере (Константинополь). Жена Наталия Владимировна. /4-105/

Бабаев Николай Алексеевич. Произведен в офицеры за боевое отличие 1917. Прапорщик. Участник Белого движения. Подпоручик артиллерии. В эмиграции в Югославии, член Общества офицеров-артиллеристов. /620; 652-11/

Бабаев Павел Иванович*, р. 23 янв. 1896. Из казаков ст. Усть-Лабинской Кубанской области. Владикавказский кадетский корпус 1915, Михайловское артиллерийское училище 1915. Подъесаул 1-го Кавказского полка Кубанского казачьего войска. В Добровольческой армии; с янв. 1918 на Кубани, в мартовском восстании не участвовал, 12 сен. 1918 разжалован в рядовые за службу у большевиков. Во ВСЮР и Русской Армии до эвакуации Крыма. Восстановлен в чине, есаул (с 1 мая 1919). Был на о. Лемнос. Осенью 1925 в составе Кубанской конной батареи в Югославии. В эмиграции там же, член Общества офицеров-артиллеристов. Выдан в 1945 в Лиенце. После лагерей вернулся в Югославию, ум. 1979 в Белграде. /2; 104-6; 190; 620/

Бабаев Порфирий. В Русской Западной армии. С дек. 1919 в Германии. В апр. 1920 рядовой в 3-й роте 1-го пластунского батальона. /11-37/

Бабаев Сергей Алексеевич, р. в Самарской губ. Прапорщик. В белых войсках Восточного фронта. Взят в плен. На 25 дек. 1920 в СибУВУЗе. /7-103/

Бабаев Степан Мартынович, р. 1874. Во ВСЮР и Русской Армии до эвакуации Крыма. Расстрелян большевиками 5 дек. 1920 в Феодосии. /700/

Бабаев Хосров Айрапетович, р. 1853. В эмиграции в Швейцарии. Ум. 12 авг. 1938 в Женеве. /107/

Бабаев Чары. Юнкер милиции. В Добровольческой армии во 2-м конном (Дроздовском) полку; с 7 дек. 1918 прапорщик милиции. /30/

Бабаев Юхано Нисанович, р. 1880. Беженец. Во ВСЮР и Русской Армии до эвакуации Крыма в разведке. Расстрелян большевиками 13 дек. 1920 в Феодосии. /700; 801/

Бабаев Ярополк Веннаминович. Поручик технических войск. В Вооруженных Силах Юга России. В эмиграции на 1922 в Югославии. /652-12/

Бабаев. Вахмистр. В Вооруженных силах Юга России. 2 сен. 1920 проследовал через этап в Тульче в Рени для погрузки на пароход "Корнилов". /4-190/

Бабаев. Во ВСЮР и Русской Армии до эвакуации Крыма. Эвакуирован на корабле "Вел. Князь Александр Михайлович". /4-52/

Бабаев. Подпоручик. В Добровольческой армии; в Войсках Новороссийской области. На 9 дек. 1919 в Херсонской комендантской команде. /13-397/

Бабаев. Прапорщик. В Вооруженных силах Юга России; с 17 авг. 1919 в Туркменском полку в войсках Закаспийской области. /13-344/

Бабаев. Прапорщик. В Добровольческой армии в отряде полк. Дроздовского; участник похода Яссы-Дон в составе 1-го эскадрона Конного дивизиона. Убит 1919–1920. /708/

Бабаев. Штабс-капитан 3-го Особого пехотного полка. В Вооруженных Силах Юга России; после 1 янв. 1919 убыл из Салоников в Новороссийск. /590/

Бабаева Наталия Владимировна, р. 1898. Жена дворянина Киевской губ. Ум. 24 июля 1924 в Пирее (Греция). /510/

Бабаевский Василий Миронович. Во ВСЮР и Русской Армии до эвакуации Крыма. Галлиполиец. Осенью 1925 в составе Гвардейского отряда в Болгарии. Бомбардир. /2/

Бабаенко Арсентий Филипович, р. 1885 в с. Новоселицы Екатеринопольской вол. Подпоручик. В Вооруженных Силах Юга России. Взят в плен. На особом учете на Украине с 1923. /800/

Бабанчев Василий, р. в Кубанской обл. Во ВСЮР и Русской Армии до эвакуации Крыма. Вахмистр. Эвакуирован на корабле "Витим". /4-58/

Бабайлов Александр Селиванович, р. 1884. В белых войсках Восточного фронта до эвакуации Приморья. В конце 1922 — весной 1923 канцелярист в составе персонала госпиталя в Гензане (Корея). /653-49/

Бабайлов Леонид Александрович, р. 1864. Полковник. В эмиграции в Польше. Ум. 14 янв. 1938 в Молодечно. /400/

Бабайлов. Чиновник. В белых войсках Восточного фронта. Участник Сибирского Ледяного похода. На 18 окт. 1920 в Воткинском артиллерийском дивизионе. Титулярный советник. /41/

Бабайцев Николай Алексеевич, р. 1880 в Бессараб. губ. Чиновник военного времени. В Вооруженных Силах Юга России. Взят в плен. На особом учете на Укранне с 1920. /800/

Бабак Александр Гаврилович, р. 30 нояб. 1892 в Полтавской обл. 1-я Омская школа прапорщиков 1916. Поручик 84-го пехотного полка. В белых войсках Восточного фронта; на 1 янв. 1919 обер-офицер для поручений при начальнике санитарно-эвакувционной части штаба Верховного Главнокомандующего. /6-85/

Бабак Анатолий Иванович. Поручик. Участник белого движения. Взят в плен. Летом 1920 передан из Особого отдела в части и военкоматы СКВО. /698-45/

Бабак Василий Данилович, р. 1877 в м. Воронеж Черниговской губ. Прапорщик. В армии УНР. Взят в плен. На особом учете на Украине с 1923. /800/

Бабак Василий. Коллежский регистратор, военно-морской чиновник. Во ВСЮР и Русской Армии. Губернский секретарь (с 29 мар. 1920). /30; 59/

Бабак Евгения Ниандровна. В эмиграции и. Ум. 4 сен. 1943 в Харбине. /470/

Бабак Иван Асонович, р. 1895 в д. Ново-Николаевка Зин у. Юнкер. В Вооруженных Силах Юга России. Взят в плен. На особом учете на Украине с 1925. /800/

Бабак Иван Иванович, р. 1893 в с. Карниловка Роменского у. Прапорщик. Участник Белого движения. Взят в плен. На особом учете на Украине с 1923. /800/

Бабак Иван Прокофьевич. Чиновник. Во ВСЮР и Русской Армии в инженерных частях до эвакуации Крыма. На 18 дек. 1920 во 2-й роте Саперного батальона Технического полка в Галлиполи. /4-84,86/

Бабак Иван Романович, р. 1895 в ст. Майдан Житомирского у. Юнкер. В армии УНР. Взят в плен. На особом учете на Украине с 1923. /800/

Бабак Иван Федорович, р. 1885 в х. Бабаков Сумсу. у. Прапорщик. В Вооруженных Силах Юга России. Взят в плен. На особом учете на Украине. /800/

Figure A2.4: Sample page from the white guard record list

Census data on Demographic Characteristics of the Russian Empire in 1897

The first country-wide Census of the population of the Russian Empire in 1897. Edited by Nikolai Alexandrovich Troinitsky. - [St. Petersburg]: Publication of the Central Statistical Committee of the Ministry of Internal Affairs, 1899-1905.

(Pervaya Vseobshaya Perepis Naseleniya Rossiyskoy Imperii 1897. Pod redaktsiey N. A. Troynitskogo. - [Sankt-Peterburg]: Izdanie Tsentralnogo Statisticheskogo Komiteta Ministerstva Vnutrennix Del, 1899-1905.)

The compendium includes the following separate statistics books:

1. **Akmolinskaya oblast:** Akmolin oblast: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Akmolin oblast / Bechasnov P.A. [Akmolinskaya oblast: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Akmolinskoy oblasti / Bechasnov P.A.]

2. **Amurskaya oblast:** Amur oblast: Notebook 1. -1899. II, Troinitsky N.A. [Amurskaya oblast: Tetrad I. -1899. II, Troinitsky N.A.]

3. **Amurskaya oblast:** Amur oblast: Notebook 2. -1905. -[4], XX, Troinitsky N.A., Shirovskiy G.F. Also in the book: short summary of digital data on Amur oblast / Shirovskiy G.F. [Amurskaya oblast: Tetrad II. -1905. -[4], XX, Troinitsky N.A., Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Amurskoy oblasti / Shirovskiy G.F.]

4. **Arkhangelogorodskaya gubernia:** Arkhangelsk province: Notebook 1. -1899. -[2], IV, Troinitsky N.A. [Arkhangelskaya guberniya: Tetrad I. -1899. -[2], IV, Troinitsky N.A.]

5. **Arkhangelogorodskaya gubernia:** Arkhangelsk province: Notebook 2. -1899. -[3], pp. 48-236, Troinitsky N.A. [Arkhangelskaya guberniya: Tetrad II. -1899. -[3], st. 48-236, Troinitsky N.A.]

6. **Arkhangelogorodskaya gubernia:** Arkhangelsk province: Notebook 3. -1904. -[4], XII, Troinitsky N.A., Grebenshikov V.I. Also in the book: short summary of digital data on Arkhangelsk province / Grebenshikov V.I. [Arkhangelskaya guberniya: Tetrad III. -1904. -[4], XII, Troinitsky N.A., Grebenshikov V.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Arkhangelskoy gubernii / V.I. Grebenshikov.]

7. **Astrakhanskaya gubernia:** Astrakhan province: Notebook 1. -1899. -[2], Troinitsky N.A. [Astrakhanskaya guberniya: Tetrad I. -1899. -[2], Troinitsky N.A.]

8. **Astrakhanskaya gubernia:** Astrakhan province: Notebook 2. -1904. -[4], XIV, Troinitsky N.A., Dubrovskiy N.A. Also in the book: short summary of digital data on Astrakhan province / Dubrovskiy N.A. [Astrakhanskaya guberniya: Tetrad II. -1904. -[4], XIV, Troinitsky N.A., Dubrovskiy N.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Astrakhanskoy gubernii / N. Dubrovskiy.]

9. **Bakinskaya gubernia:** Baku province: -1905. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Baku province / Bechasnov P.A. [Bakinskaya guberniya: -1905. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Bakinskoy gubernii / Bechasnov P.A.]

10. **Batumskaya oblast:** Kutais province: -1905. -[4], XVI, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Kutais province / Antonovich I.T. [Kutaisskaya guberniya: -1905. -[4], XVI, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kutaisskoy gubernii / Antonovich I.T.]

11. **Bessarabskaya gubernia:** Bessarabiya province: -1905. XXIV, Troinitsky N.A., Shirovskiy G.F. Also in the book: short summary of digital data on Bessarabiya province / Shirovskiy G.F. [Bessarabskaya guberniya: -1905. XXIV, Troinitsky N.A., Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Bessarabskoy gubernii / Shirovskiy G.F.]

12. **Bukharskiy Emirat:**

13. **Varshavskaya gubernia:** Warsaw province: -1904. -[6], XII, Troinitsky N.A., Solntsev V.F. Also in the book: short summary of digital data on Warsaw province / Solntsev V.F. [Varshavskaya guberniya: -1904. -[6], XII, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Varshavskoy gubernii / Solntsev V.F.]

14. **Vilenskaya gubernia:** Vilen province: Notebook 1. -1900. -[2], IV, Troinitsky N.A. [Vilenskaya guberniya: Tetrad I. -1900. -[2], IV, Troinitsky N.A.]

15. **Vilenskaya gubernia:** Vilen province: Notebook 2. -1901. -[4], pp. 57-105, Troinitsky N.A. [Vilenskaya guberniya: Tetrad II. -1901. -[4], st. 57-105.]

16. **Vilenskaya gubernia:** Vilen province: Notebook 3. -1904. -[4], XII, Troinitsky N.A. [Vilenskaya guberniya: Tetrad III. -1904. -[4], XII, Troinitsky N.A.]

17. **Vitebskaya gubernia:** Viteb province: Notebook 1. -1899. II, Troinitsky N.A. [Vitebskaya guberniya: Tetrad I. -1899. II, Troinitsky N.A.]

18. **Vitebskaya gubernia:** Viteb province: Notebook 2. -1901. -[3], pp. 54-110, Troinitsky N.A. [Vitebskaya guberniya: Tetrad II. -1901. -[3], pp. 54-110, Troinitsky N.A.]

19. **Vitebskaya gubernia:** Viteb province: Notebook 3. -1903. -[4], XIV, Troinitsky N.A, Pleshko S.P. Also in the book: short summary of digital data on Viteb province / Pleshko S.P. [Vitebskaya guberniya: Tetrad III. -1903. -[4], XIV, Troinitsky N.A, Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Vitebskoy gubernii / Pleshko S.P.]

20. **Vladimirskaya gubernia:** Vladimir province: Notebook 1. -1900. II, Troinitsky N.A. [Vladimirskaya guberniya: Tetrad I. -1900. II, Troinitsky N.A.]

21. **Vladimirskaya gubernia:** Vladimir province: Notebook 2. -1904. -[4], XIV, Troinitsky N.A, Mosevich A.Y. Also in the book: short summary of digital data on Vladimir province / Mosevich A.Y. [Vladimirskaya guberniya: Tetrad II. -1904. -[4], XIV, Troinitsky N.A, Mosevich A.Y. V knige takje: Kratkiy obzor tsifrovikh dannikh po Vladimirskoy gubernii / Mosevich A.Y.]

22. **Vologodskaya gubernia:** Vologodsk province: Notebook 1. -1901. -[2], Troinitsky N.A. [Vologodskaya guberniya: Tetrad I. -1901. -[2], Troinitsky N.A.]

23. **Vologodskaya gubernia:** Vologodsk province: Notebook 2. -1904. -[4], XII, Troinitsky N.A, Solntsev V.F. Also in the book: short summary of digital data on Vologodsk province / Solntsev V.F. [Vologodskaya guberniya: Tetrad II. -1904. -[4], XII, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Vologodskoy gubernii / Solntsev V.F.]]

24. **Volinskaya gubernia:** Volyn province: -1904. -[6], XX, Troinitsky N.A., Patkanov S.K. Also in the book: short summary of digital data on Volyn province / Patkanov S.K. [Volinskaya guberniya: -1904. -[6], XX, Troinitsky N.A., Patkanov S.K. V knige takje: Kratkiy obzor tsifrovikh dannikh po Volinskoy gubernii / Patkanov S.K.]

25. **Voronozhskaya gubernia:** Voronezh province: Notebook 1. -1901. -[2], Troinitsky N.A. [Voronezhskaya guberniya: Tetrad I. -1901. -[2], Troinitsky N.A.]

26. **Voronozhskaya gubernia:** Voronezh province: Notebook 2. -1904. -[4], X, Troinitsky N.A, Solntsev V.F. Also in the book: short summary of digital data on Voronezh province / Solntsev V.F. [Voronezhskaya guberniya: Tetrad II. -1904. -[4], X, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Voronezhskoy gubernii / Solntsev V.F.]]

27. **Vyatskaya gubernia:** Vyat province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Vyat province / Bechasnov P.A. [Vyatskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Vyatskoy gubernii / Bechasnov P.A.]

28. **Grodnenskaya gubernia:** Grodnen province: -1904. -[4], XVI, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Grodnen province / Antonovich I.T. [Grodnenskaya guberniya: -1904. -[4], XVI, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Grodnenskoy gubernii / Antonovich I.T.]

29. **Dagestanskaya oblast:** Dagestan oblast: -1905. -[6], XIII, Troinitsky N.A., Lvov A.D. Also in the book: short summary of digital data on Dagestan oblast / Lvov A.D. [Dagenstanskaya oblast: -1905. -[6], XIII, Troinitsky N.A., Lvov A.D. V knige takje: Kratkiy obzor tsifrovikh dannikh po Dagestanskoy oblasti / Lvov A.D.]

30. **Ekaterinoslavskaya gubernia:** Ekaterinoslav province: -1904. -[6], XIV, Troinitsky N.A., Le Dantyu L.E. Also in the book: short summary of digital data on Ekaterinoslav province / Le Dantyu L.E. [Ekaterinoslavskaya guberniya: -1904. -[6], XIV, Troinitsky N.A., Le Dantyu L.E. V knige takje: Kratkiy obzor tsifrovikh dannikh po Ekaterinoslavskoy gubernii / Le Dantyu L.E.]

31. **Elizavetpolskaya gubernia:** Elisavetpol province: -1904. -[4], XII, Troinitsky N.A., Tutorskiy V.P. Also in the book: short summary of digital data on Elisavetpol province / Tutorskiy V.P. [Elisavetpolskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Tutorskiy V.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Elisavetpolskoy gubernii / Tutorskiy V.P.]

32. **Eniseyskaya gubernia:** Enisey province: -1904. -[4], X, Troinitsky N.A., Tutorskiy V.P. Also in the book: short summary of digital data on Enisey province / Tutorskiy V.P. [Eniseyskaya guberniya: -1904. -[4], X, Troinitsky N.A., Tutorskiy V.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Eniseyskoy gubernii / Tutorskiy V.P.]

33. **Zabaykalskaya oblast:** Zabaykal oblast: -1904. -[4], X, Troinitsky N.A., Greben-shikov V.I. Also in the book: short summary of digital data on Zabaykal oblast / Grebenshikov V.I. [Zabaykalskaya oblast: -1904. -[4], X, Troinitsky N.A., Greben-shikov V.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Zabaykalskoy oblasti / Grebenshikov V.I.]

34. **Zakaspiyskaya oblast:** Zakaspiy oblast: -1904. -[4], XVI, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Zakaspiy oblast / Antonovich I.T. [Zakaspiyskaya oblast: -1904. -[4], XVI, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Zakaspiyskoy oblasti / Antonovich I.T.]

35. **Irkutskaya gubernia:** Irkutsk province: -1904. -[4], XVI, Troinitsky N.A., Neu-dachin V.V. Also in the book: short summary of digital data on Irkutsk province / Neudachin V.V. [Irkutskaya guberniya: -1904. -[4], XVI, Troinitsky N.A., Neu-dachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Irkutskoy gubernii / Neudachin V.V.]

36. **Kazanskaya gubernia:** Kazan province: -1904 (1903). -[4], XVI, Troinitsky N.A., Mosevich A.Y. Also in the book: short summary of digital data on Kazan province / Mosevich A.Y. [Kazanskaya guberniya: -1904 (1903). -[4], XVI, Troinitsky N.A., Mo-sevich A.Y. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kazanskoy gubernii / Mosevich A.Y.]

37. **Kalishskaya gubernia:** Kalish province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Kalish province / Bechasnov P.A. [Kalishskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kalishskoy gubernii / Bechasnov P.A.]

38. **Kalujskaya gubernia:** Kaluj province: Notebook 1. -1901. II, Troinitsky N.A. [Kalu-jskaya guberniya: Tetrad I. -1901. II, Troinitsky N.A.]

39. **Kalujskaya gubernia:** Kaluj province: Notebook 2. -1903. -[4], XII, Troinitsky N.A, Pleshko S.P. Also in the book: short summary of digital data on Kaluj province / Pleshko S.P. [Kalujskaya guberniya: Tetrad II. -1903. -[4], XII, Troinitsky N.A., Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kalujskoy gubernii / Pleshko S.P.]

40. **Karsskaya gubernia:** Kars oblast: Notebook 1. -1900. II, Troinitsky N.A. [Karsskaya oblast: Tetrad I. -1900. II, Troinitsky N.A.]

41. **Karsskaya gubernia:** Kars oblast: Notebook 2. -1904. -[4], X, Troinitsky N.A., Grebenshikov V.I. Also in the book: short summary of digital data on Karss oblast / Grebenshikov V.I. [Karsskaya oblast: Tetrad II. -1904. -[4], X, Troinitsky N.A., Grebenshikov V.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Karsskoy oblasti / Grebenshikov V.I.]

42. **Keletskaya gubernia:** Kelets province: -1904. -[4], XIV, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Kelets province / Gilsher A.I. [Keletskaya guberniya: -1904. -[4], XIV, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Keletskoy gubernii / Gilsher A.I.]

43. **Kievskaya gubernia:** Kyiv province: -1904. -[6], XII, Troinitsky N.A., Lvov A.D. Also in the book: short summary of digital data on Kyiv province / Lvov A.D. [Kievskaya guberniya: -1904. -[6], XII, Troinitsky N.A., Lvov A.D. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kievskoy gubernii / Lvov A.D.]

44. **Kovenskaya gubernia:** Koven province: -1904 (1903). -[4], XII, Troinitsky N.A., Le Dantyu L.E. Also in the book: short summary of digital data on Koven province / Le Dantyu L.E. [Kovenskaya guberniya: -1904 (1903). -[4], XII, Troinitsky N.A., Le Dantyu L.E. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kovenskoy gubernii / Le Dantyu L.E.]

45. **Kostromskaya gubernia:** Kostrom province: -1903. -[4], XII, Troinitsky N.A., Mosevich A.Y. Also in the book: short summary of digital data on Kostrom province / Mosevich A.Y. [Kostromskaya guberniya: -1903. -[4], XII, Troinitsky N.A., Mosevich A.Y. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kostromskoy gubernii / Mosevich A.Y.]

46. **Kubanskaya oblast:** Kuban oblast: -1905. -[4], XII, Troinitsky N.A., Shveykin N.P. Also in the book: short summary of digital data on Kuban oblast / Shveykin N.P. [Kubanskaya oblast: -1905. -[4], XII, Troinitsky N.A., Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kubanskoy oblasti / Shveykin N.P.]

47. **Kurlyandskaya gubernia:** Kurlyand province: -1905. -[4], XVIII, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Kurlyand province / Gilsher A.I. [Kurlyandskaya guberniya: -1905. -[4], XVIII, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kurlyandskoy gubernii / Gilsher A.I.]

48. **Kurskaya gubernia:** Kursk province: -1904. -[6], XVIII, Troinitsky N.A., Shveykin N.P. Also in the book: short summary of digital data on Kursk province / Shveykin N.P. [Kurskaya guberniya: -1904. -[6], XVIII, Troinitsky N.A., Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kurskoy gubernii / Shveykin N.P.]

49. **Kutaisskaya gubernia:** Kutais province: -1905. -[4], XVI, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Kutais province / Antonovich I.T. [Kutaisskaya guberniya: -1905. -[4], XVI, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kutaisskoy gubernii / Antonovich I.T.]

50. **Liflyandskaya gubernia:** Liflyand province: -1905. -[6], XVI, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Liflyand province / Gilsher A.I. [Liflyandskaya guberniya: -1905. -[6], XVI, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Liflyandskoy gubernii / Gilsher A.I.]

51. **Lomjinskaya gubernia:** Lomjin province: -1904. -[4], XII, Troinitsky N.A., Pleshko S.P. Also in the book: short summary of digital data on Lomjin province / Pleshko S.P. [Lomjinskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Lomjinskoy gubernii / Pleshko S.P.]

52. **Lyublinskaya gubernia:** Lyublin province: -1904. -[4], XII, Troinitsky N.A., Shirovskiy G.F. Also in the book: short summary of digital data on Lyublin province / Shirovskiy G.F. [Lyublinskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Lyublinskoy gubernii / Shirovskiy G.F.]

53. **Minskaya gubernia:** Minsk province: -1904. -[4], XVI, Troinitsky N.A., Solntsev V.F. Also in the book: short summary of digital data on Minsk province / Solntsev V.F. [Minskaya guberniya: -1904. -[4], XVI, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Minskoy gubernii / Solntsev V.F.]

54. **Mogilevskaya gubernia:** Mogilev province: -1903. -[4], XVI, Troinitsky N.A., Solntsev V.F. Also in the book: short summary of digital data on Mogilev province / Solntsev V.F. [Mogilevskaya guberniya: -1903. -[4], XVI, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Mogilevskoy gubernii / Solntsev V.F.]

55. **Moskovskaya gubernia:** Moscow province: -1905. XXXVII, Troinitsky N.A., Brunneman Y.V. Also in the book: short summary of digital data on Moscow province /

Brunneman Y.V. [Moskovskaya guberniya: -1905. XXXVII, Troinitsky N.A., Brunneman Y.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Moskovskoy gubernii / Brunneman Y.V.]

56. **Nijegorodskaya gubernia:** Nijegorod province: Notebook 1. -1901. Troinitsky N.A. [Nijegorodskaya guberniya: Tetrad I. -1901. Troinitsky N.A.]

57. **Nijegorodskaya gubernia:** Nijegorod province: Notebook 2. -1904. -[4], XVI, Troinitsky N.A., Mosevich A.Y. Also in the book: short summary of digital data on Nijegorod province / Mosevich A.Y. [Nijegorodskaya guberniya: Tetrad II. -1904. -[4], XVI, Troinitsky N.A., Mosevich A.Y. V knige takje: Kratkiy obzor tsifrovikh dannikh po Nijegorodskoy gubernii / Mosevich A.Y.]

58. **Novgorodskaya gubernia:** Novgorod province: Notebook 1. -1901. II, Troinitsky N.A. [Novgorodskaya guberniya: Tetrad I. -1901. II, Troinitsky N.A.]

59. **Novgorodskaya gubernia:** Novgorod province: Notebook 2. -1903. -[4], XIV, Troinitsky N.A., Pleshko S.P. Also in the book: short summary of digital data on Novgorod province / Pleshko S.P. [Novgorodskaya guberniya: Tetrad II. -1903. -[4], XIV, Troinitsky N.A., Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Novgorodskoy gubernii / Pleshko S.P.]

60. **Oblast Voyska Donskogo:** Oblast of Don Cossacks: -1905. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Oblast of Don Cossacks / Bechasnov P.A. [Oblast Voyska Donskogo: -1905. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Oblasti Voyska Donskogo / Bechasnov P.A.]

61. **Olonetskaya gubernia:** Olonets province: Notebook 1. -1899. II, Troinitsky N.A. [Olonetskaya guberniya: Tetrad I. -1899. II, Troinitsky N.A.]

62. **Olonetskaya gubernia:** Olonets province: Notebook 2. -1900. pp. 37-172, Troinitsky N.A. [Olonetskaya guberniya: Tetrad II. -1900. st. 37-172.]

63. **Olonetskaya gubernia:** Olonets province: Notebook 3. -1904. -[4], XII, Troinitsky N.A, Pleshko S.P. Also in the book: short summary of digital data on Olonets province / Pleshko S.P. [Olonetskaya guberniya: Tetrad III. -1904. -[4], XII, Troinitsky N.A, Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Olonetskoy gubernii / Pleshko S.P.]

64. **Orenburgskaya gubernia:** Orenburg province: -1904. XX, Troinitsky N.A., Stepanov V.V. Also in the book: short summary of digital data on Orenburg province / Stepanov V.V. [Orenburgskaya guberniya: -1904. XX, Troinitsky N.A., Stepanov V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Orenburgskoy gubernii / Stepanov V.V.]

65. **Orlovskaya gubernia:** Orlov province: -1904. -[4], XVI, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Orlov province / Gilsher A.I. [Orlovskaya guberniya: -1904. -[4], XVI, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Orlovskoy gubernii / Gilsher A.I.]

66. **Penzenskaya gubernia:** Penzen province: -1903. XIX, Troinitsky N.A. [Penzenskaya guberniya: -1903. XIX, Troinitsky N.A.]

67. **Permskaya gubernia:** Perm province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Perm province / Bechasnov P.A. [Permskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Permskoy gubernii / Bechasnov P.A.]

68. **Petrokovskaya gubernia:** Petrokov province: -1903. -[4], XVI, Troinitsky N.A., Solntsev V.F. Also in the book: short summary of digital data on Petrokov province / Solntsev V.F. [Petrokovskaya guberniya: -1903. -[4], XVI, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Petrokovskoy gubernii / Solntsev V.F.]

69. **Plotskaya gubernia:** Plots province: -1904. -[4], XII, Troinitsky N.A., Pleshko S.P. Also in the book: short summary of digital data on Plots province / Pleshko S.P. [Plotskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Pleshko S.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Plotskoy gubernii / Pleshko S.P.]

70. **Podolskaya gubernia:** Podol province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Podol province / Bechasnov P.A. [Podolskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Podolskoy gubernii / Bechasnov P.A.]

71. **Poltavskaya gubernia:** Poltav province: -1904. XXXVI, Troinitsky N.A., Brunneman Y.V. Also in the book: short summary of digital data on Poltav province / Brunneman Y.V. [Poltavskaya guberniya: -1904. XXXVI, Troinitsky N.A., Brunneman Y.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Poltavskoy gubernii / Brunneman Y.V.]

72. **Primorskaya oblast and Kamchatka:** Primor oblast: Notebook 1. -1899. II, Troinitsky N.A. [Primorskaya oblast: Tetrad I. -1899. II, Troinitsky N.A.]

73. **Primorskaya oblast and Kamchatka:** Primor oblast: Notebook 2. -1900. pp. 45-100, Troinitsky N.A. [Primorskaya oblast: Tetrad II. -1900. pp. 45-100,, Troinitsky N.A.]

74. **Primorskaya oblast and Kamchatka:** Primor oblast: Notebook 3. -1905. -[4], XXVI, Troinitsky N.A, Shirovskiy G.F. Also in the book: short summary of digital data on Primor oblast / Shirovskiy G.F. [Primorskaya oblast: Tetrad III. -1905. -[4], XXVI, Troinitsky N.A, Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Primorskoy oblasti / Shirovskiy G.F.]

75. **Pskovskaya gubernia:** Pskov province: Notebook 1. -1902. II, Troinitsky N.A. [Pskovskaya guberniya: Tetrad I. -1902. II, Troinitsky N.A.]

76. **Pskovskaya gubernia:** Pskov province: Notebook 2. -1904. -[4], XVIII, Troinitsky N.A, Shveykin N.P. Also in the book: short summary of digital data on Pskov province / Shveykin N.P. [Pskovskaya guberniya: Tetrad II. -1904. -[4], XVIII, Troinitsky N.A, Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Pskovskoy gubernii / Shveykin N.P.]

77. **Radomskaya gubernia:** Radom province: -1904. -[4], X, Troinitsky N.A. [Radomskaya guberniya: -1904. -[4], X, Troinitsky N.A.]

78. **Ryazanskaya gubernia:** Ryazan province: -1903. -[4], XIV, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Ryazan province / Bechasnov P.A. [Ryazanskaya guberniya: -1903. -[4], XIV, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Ryazanskoy gubernii / Bechasnov P.A.]

79. **Samarkandskaya oblast:** Samarkand oblast: -1905. -[4], XII, Troinitsky N.A., Lvov A.D. Also in the book: short summary of digital data on Samarkand oblast / Lvov A.D. [Samarkandskaya oblast: -1905. -[4], XII, Troinitsky N.A., Lvov A.D. V knige takje: Kratkiy obzor tsifrovikh dannikh po Samarkandskoy oblasti / Lvov A.D.]

80. **Samarskaya gubernia:** Samar province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Samar province / Bechasnov P.A. [Samarskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Samarskoy gubernii / Bechasnov P.A.]

81. **Sankt-Peterburgskaya (Peterburgskaya) gubernia:** Saint-Petersburg province: -1903. X, Troinitsky N.A. [Sankt-Peterburgskaya guberniya: -1903. X, Troinitsky N.A.]

82. **Saratovskaya gubernia:** Saratov province: -1904. -[4], XII, Troinitsky N.A., Solntsev V.F. Also in the book: short summary of digital data on Saratov province / Solntsev V.F. [Saratovskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Solntsev V.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Saratovskoy gubernii / Solntsev V.F.]

83. **Sakhalinskaya oblast:** Sakhalin island: Notebook 1. -1899. II, Troinitsky N.A. [Ostrov Sakhalin: Tetrad I. -1899. II, Troinitsky N.A.]

84. **Sakhalinskaya oblast:** Sakhalin island: Notebook 2. -1904. -[4], VIII, Troinitsky N.A, Shirovskiy G.F. Also in the book: short summary of digital data on Sakhalin island / Shirovskiy G.F. [Ostrov Sakhalin: Tetrad II. -1904. -[4], VIII, Troinitsky N.A, Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Ostrovu Sakhalin / Shirovskiy G.F.]

85. **Sedletskaya gubernia:** Siedlce province: -1904. XXX, Troinitsky N.A., Brunneman Y.V. Also in the book: short summary of digital data on Siedlce province / Brunneman Y.V. [Sedletskaya guberniya: -1904. XXX, Troinitsky N.A., Brunneman Y.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Sedletskoy gubernii / Brunneman Y.V.]

86. **Semipalatinskaya oblast:** Semipalatin oblast: -1905. -[4], XIV, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Semipalatin oblast / Antonovich I.T. [Semipalatinskaya oblast: -1905. -[4], XIV, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Semipalatinskoy oblasti / Antonovich I.T.]

87. **Semirechenskaya oblast:** Semirechen oblast: -1905. -[4], XII, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Semirechen oblast / Gilsher A.I. [Semirechenskaya oblast: -1905. -[4], XII, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Semirechenskoy oblasti / Gilsher A.I.]

88. **Simbirskaya gubernia:** Simbir province: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Simbir province / Bechasnov P.A. [Simbirskaya guberniya: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Simbirskoy gubernii / Bechasnov P.A.]

89. **Smolenskaya gubernia:** Smolensk province: -1904. -[4], XX, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Smolensk province / Neudachin V.V. [Smolenskaya guberniya: -1904. -[4], XX, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Smolenskoy gubernii / Neudachin V.V.]

90. **Stavropolskaya gubernia:** Stavropol province: -1905. -[4], XII, Troinitsky N.A., Shveykin N.P. Also in the book: short summary of digital data on Stavropol province / Shveykin N.P. [Stavropolskaya guberniya: -1905. -[4], XII, Troinitsky N.A., Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Stavropolskoy gubernii / Shveykin N.P.]

91. **Suvalkskaya gubernia:** Suvalk province: -1904. -[4], XVI, Troinitsky N.A., Bratukhin M.V. Also in the book: short summary of digital data on Suvalk province / Bratukhin M.V. [Suvalkskaya guberniya: -1904. -[4], XVI, Troinitsky N.A., Bratukhin M.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Suvalkskoy gubernii / Bratukhin M.V.]

92. **Sir-Daryinskaya oblast:** Sir-Darya oblast: -1905. -[4], XVI, Troinitsky N.A., Shirovskiy G.F. Also in the book: short summary of digital data on Sir-Darya oblast / Shirovskiy G.F. [Sir-Daryinskaya oblast: -1905. -[4], XVI, Troinitsky N.A., Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Sir-Daryinskoy oblasti / Shirovskiy G.F.]

93. **Tavricheskaya gubernia:** Tavrich province: -1904. -[6], XXVI, Troinitsky N.A., Mosevich A.Y. Also in the book: short summary of digital data on Tavrich province / Mosevich A.Y. [Tavricheskaya guberniya: -1904. -[6], XXVI, Troinitsky N.A., Mosevich A.Y. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tavricheskoy gubernii / Mosevich A.Y.]

94. **Tambovskaya gubernia:** Tambov province: -1904. -[6], XVIII, Troinitsky N.A., Gilsher A.I. Also in the book: short summary of digital data on Tambov province / Gilsher A.I. [Tambovskaya guberniya: -1904. -[6], XVIII, Troinitsky N.A., Gilsher A.I. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tambovskoy gubernii / Gilsher A.I.]

95. **Tverskaya gubernia:** Tver province: -1904. -[6], XIV, Troinitsky N.A., Shveykin N.P. Also in the book: short summary of digital data on Tver province / Shveykin N.P.

[Tverskaya guberniya: -1904. -[6], XIV, Troinitsky N.A., Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tverskoy gubernii / Shveykin N.P.]

96. **Terskaya oblast:** Ter oblast: -1905. -[4], XVI, Troinitsky N.A., Shveykin N.P. Also in the book: short summary of digital data on Ter oblast / Shveykin N.P. [Terskaya oblast: -1905. -[4], XVI, Troinitsky N.A., Shveykin N.P. V knige takje: Kratkiy obzor tsifrovikh dannikh po Terskoy oblasti / Shveykin N.P.]

97. **Tiflisskaya gubernia:** Tblisi province: -1905. -[6], XVIII, Troinitsky N.A., Shirovskiy G.F. Also in the book: short summary of digital data on Tblisi province / Shirovskiy G.F. [Tiflisskaya guberniya: -1905. -[6], XVIII, Troinitsky N.A., Shirovskiy G.F. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tiflisskoy gubernii / Shirovskiy G.F.]

98. **Tobolskaya gubernia:** Tobol province: -1905. -[4], XLVI, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Tobol province / Neudachin V.V. [Tobolskaya guberniya: -1905. -[4], XLVI, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tobolskoy gubernii / Neudachin V.V.]

99. **Tomskaya gubernia:** Tomsk province: -1904. -[4], XXVI, Troinitsky N.A., Patkanov S.K. Also in the book: short summary of digital data on Tomsk province / Patkanov S.K. [Tomskaya guberniya: -1904. -[4], XSVI, Troinitsky N.A., Patkanov S.K. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tomskoy gubernii / Patkanov S.K.]

100. **Tulskaya gubernia:** Tulsk province: -1904. -[4], XII, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Tulsk province / Neudachin V.V. [Tulskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Tulskoy gubernii / Neudachin V.V.]

101. **Turgayskaya oblast:** Turgay oblast: -1904. -[4], XII, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Turgay oblast / Neudachin V.V. [Turgayskaya oblast: -1904. -[4], XII, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Turgayskoy oblasti / Neudachin V.V.]

102. **Uralskaya oblast:** Ural oblast: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Ural oblast / Bechasnov P.A. [Uralskaya oblast: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Uralskoy oblasti / Bechasnov P.A.]

103. **Ufimskaya gubernia:** Ufa province: Notebook 1. -1901. -[2], Troinitsky N.A. [Ufim-skaya guberniya: Tetrad I. -1901. -[2], Troinitsky N.A.]

104. **Ufimskaya gubernia:** Ufa province: Notebook 2. -1904. -[3], XI, Troinitsky N.A. [Ufimskaya guberniya: Tetrad II. -1904. -[3], XI, Troinitsky N.A.]

105. **Ferganskaya oblast:** Fergana oblast: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Fergana oblast / Bechasnov P.A. [Ferganskaya oblast: -1904. -[4], X, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Ferganskoy oblasti / Bechasnov P.A.]

106. **Kharkovskaya gubernia:** Kharkiv province: -1904. -[8], XVIII, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Kharkiv province / Neudachin V.V. [Kharkovskaya guberniya: -1904. -[8], XVIII, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Kharkovskoy gubernii / Neudachin V.V.]

107. **Khersonskaya gubernia:** Kherson province: -1904. -[6], XVI, Troinitsky N.A., Antonovich I.T. Also in the book: short summary of digital data on Kherson province / Antonovich I.T. [Khersonskaya guberniya: -1904. -[6], XVI, Troinitsky N.A., Antonovich I.T. V knige takje: Kratkiy obzor tsifrovikh dannikh po Khersonskoy gubernii / Antonovich I.T.]

108. **Chernigovskaya gubernia:** Chernigov province: -1905. -[4], XXVI, Troinitsky N.A., Brunneman Y.V. Also in the book: short summary of digital data on Chernigov province / Brunneman Y.V. [Chernigovskaya guberniya: -1905. -[4], XXVI, Troinit-sky N.A., Brunneman Y.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Chernigov-skoy gubernii / Brunneman Y.V.]

109. **Chernomorskaya gubernia:** Chernomor province: Notebook 1. -1900. -[2], Troinit-sky N.A. [Chernomorskaya guberniya: Tetrad I. -1900. -[2], Troinitsky N.A.]

110. **Chernomorskaya gubernia:** Chernomor province: Notebook 2. -1901. pp. 23-64, Troinitsky N.A. [Chernomorskaya guberniya: Tetrad II. -1901. st. 23-64, Troinitsky N.A.]

111. **Chernomorskaya gubernia:** Chernomor province: Notebook 3. -1903. -[4], XIV, Troinitsky N.A, Stepanov V.V. Also in the book: short summary of digital data on Chernomor province / Stepanov V.V. [Chernomorskaya guberniya: Tetrad III. -1903.

-[4], XIV, Troinitsky N.A, Stepanov V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Chernomorskoy gubernii / Stepanov V.V.]

112. **Erivanskaya gubernia:** Yerevan province: -1905. -[4], XXIV, Troinitsky N.A., Brunneman Y.V. Also in the book: short summary of digital data on Yerevan province / Brunneman Y.V. [Yerevanskaya guberniya: -1905. -[4], XXIV, Troinitsky N.A., Brunneman Y.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Yerevanskoy gubernii / Brunneman Y.V.]

113. **Estlyandskaya gubernia:** Estlyand province: -1905. -[4], XVIII, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Estlyand province / Neudachin V.V. [Estlyandskaya guberniya: -1905. -[4], XVIII, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Estlyandskoy gubernii / Neudachin V.V.]

114. **Yakutskaya oblast:** Yakut oblast: -1905. -[4], XIV, Troinitsky N.A., Neudachin V.V. Also in the book: short summary of digital data on Yakut oblast / Neudachin V.V. [Yakutskaya oblast: -1905. -[4], XIV, Troinitsky N.A., Neudachin V.V. V knige takje: Kratkiy obzor tsifrovikh dannikh po Yakutskoy oblasti / Neudachin V.V.]

115. **Yaroslavskaya gubernia:** Yaroslav province: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. Also in the book: short summary of digital data on Yaroslav province / Bechasnov P.A. [Yaroslavskaya guberniya: -1904. -[4], XII, Troinitsky N.A., Bechasnov P.A. V knige takje: Kratkiy obzor tsifrovikh dannikh po Yaroslavskoy gubernii / Bechasnov P.A.]

Note: The 1897 Census was not conducted in the in Khiva Khanate [Khivinskoe Khanstvo] and Bukhara Emirate [Bukharskiy Emirat] due to their special administrative status. A variety of alternative sources were used to obtain estimates for these two areas. The 1897 Census did not include statistics from any of the territories that belonged to the Grand Dutchy of Finland.

Figure A2.5: Sample census book - Nijegorod province: I volume

XXV. НИЖЕГОРОДСКАЯ ГУБЕРНІЯ.

ТЕТРАДЬ II.

(послѣдняя)

1904.

Figure A2.6: Sample book for - Nijegorod province: II volume

Figure A2.7: Sample page from census book

A3. Territorial Administrative Changes

Several provinces of the Russian Empire were either completely dissolved and their territories were given to other provinces, or reshuffled to exchange districts throughout the late 19th and early 20th century. Because the study traces the lives of individuals between the period 1897-1922, the linking of birthlocation data presents problems given these administrative and semantic changes. The list below includes all major territorial alterations that occurred in this period. These changes were taken into account when individuals were identified across multiple datasets.

- The *"Siedlce"* province was creted in 1867 by dividing the *"Lublin"* province. In 1912, it was abolished and its districts were divided between *"Lyublin,"* *"Lomja,"* and *"Kholm"* gubernias. *"Gavrolin,"* *"Sokolov,"* *"Siedlce,"* *"Lukov,"* and *"Radin"* districts became the districts of the *"Lyublin"* province. *"Konstantinov,"* *"Bel,"* and *"Vlodav"* districts were given to the *"Kholm"* province. *"Vengrov"* district was given to the *"Lomjin"* province.

- In addition to the districts that were given to the *"Kholm"* province as a result of the dissolution of *"Siedlce"* province, the *"Kholm"* province also received a number of districts and territories from the *"Lyublin"* province, including: *"Grubeshov,"* *"Tomashev"*, and some territories of *"Kholm,"* *"Zamost,"* *"Belgoray,"* *"Lyubartov,"* and *"Krasnostav"* districts.

- The *"Batum"* oblast existed independently in two different periods: 1878-1883 and 1903-1918. When initially created in 1878, it had 3 districts: *"Adjar,"* *"Artvin,"* and *"Batum."* In 1883, the province was abolished and its territories were given to the *"Kutais"* province. The province was re-created in 1903 to only include two districts: *"Batum"* and *"Artvin."*

- The *"Viteb"* province was created in 1802 with 12 districts. However, in 1866, one of the districts – *"Suraj"* district – was abolished and split between *"Gorodok,"* *"Velij,"* and *"Viteb"* districts. The district was re-created wtihin the *"Viteb"* province in 1920. In 1893, the *"Dinaburg"* district of *"Viteb"* province was renamed to *"Dvin"* district.

- The *"Yenisey"* province was established in 1822 when the territory of *"Tom"* province was divided. The province included five okrugs: *"Achin,"* *"Kan,"* *"Krasnoyar,"* *"Minusin,"* and *"Yenisey"* (including Turukhan Krai). In 1914, *"Uryankhai Krai"* was added to the *"Yenisey"* province. In 1921, the *"Uryankhai Krai"* was incorporated as the Tuvan People's Republic independent of Russia. In 1923, parts of *"Minusin"* and *"Achin"* districts were merged with the *"Tom"* province to form a new district.

- The *"Kamchatka"* province was part of the *"Irkutsk"* province until 1803. In 1849, the *"Kamchatka"* province was re-established from the *"Kamchatka"* Maritime Administration and the *"Gijigin"* district of the Okhotsk Maritime Administration. In 1856, the *"Kamchatka"* province was completely abolished, and its territory became part of the *"Primorsk"* province. In 1909, the *"Kamtchatka"* province was re-created for the final time. It included *"Petropavlov,"* *"Okhot,"* *"Gijigin,"* *"Anadyr"* and *"Chukotka"* districts and the *"Commander Islands."*

- In 1847, the *"Caucasian"* province was renamed into the *"Stavropol"* province without any change to the borders. By early 19th century, it included four districts: *"Stavropol,"* *"Pyatigor,"* *"Aleksandrov,"* and *"Novogrigoryev."* In 1900, the *"Novogrigoryev"* district was abolished, and two new districts were formed on its territory: *"Blagodarnen"* and *"Praskoev"* districts. In 1910, *"Praskoev"* district was renamed to *"Svyatokrestov"* district. In 1921, the *"Svyatokrestov"* district was given to the *"Ter"* province.

- In 1860, with the purpose of simplifying the management of the territories occupied by the Cossack troops, the Emperor issued a decree on the seperation of the right wing of the Caucasian line from the *"Stavropol"* province and renaming of it as the *"Kuban"* province. Initially, the Cossack settlements of the region included 3 districts *"Yey,"* *"Yekaterinodar,"* and *"Taman."* In 1869, a massive restructuring led to the abolishment of all districts and recreation of five new districts: *"Yey,"* *"Yekaterinodar,"* *"Maykop,"* *"Batalpashin,"* and *"Temryuk."* In 1876, two additional districts – *"Zakuban"* and *"Caucasian"* districts were formed. In 1888, the *"Chernomor"* province, which had previously been independent, became a district of the *"Kuban"* province. In 1896, it became a separate *"Chernomor"* province again.

- In 1920, the *"Izyum"* and *"Starobel"* districts of the *"Kharkov"* province were transferred to the *"Donetsk"* province, which was newly created at the time. In 1919, the *"Zmiev"* district was divided into *"Zmiev"* and *"Chuguev"* districts.

All districts and their respective provinces (as mapped in the geospatial file) are delineated and listed in the Codebook.

A4. Linking and Geocoding

A4.1. Red Army soldiers

The identification and labeling of individual soldiers across archival lists of the Red Army soldiers was carried out manually, due to the impossibility of using OCR technology on poorly digitized sources. The fields that were used for unique identification were first, middle, and last names, unique birth address (province, district, locality and village), and, occassionally, discharge records.

An individual is considered a full match, if the full names and full birth addresses match across the two sources. Administrative territorial changes that occurred in the period between the birth of a soldier and drafting to army were taken into account when matching. Soldiers who died in WWI were excluded from the matching process, as they could not have participated in the Russian Civil War.

In cases when the address was partially missing in the civil war records (village information, for example), I relied on additional data (such as the proximity of locations and the commonality of the full name in the records) to identify an accurate match. For example, if there was no address for "Ivanov Aleksey Ivanovich," I did not indicate a match in the WWI data, even if a person with a similar full name existed in the WWI data.

A4.2. White Army soldiers

The White Army soldiers were matched using measures of proximity in two sequential steps.

1. For every name in the White Army soldier list, I first deterministically match the first letter of the first, the middle, and the last names with the records from WWI.

2. I then use the remaining truncated sample to look for matches, using full names and years of birth (where available). Because the White Army list contains rich textual information about each soldier's fate, I use the textual information to verify a match, if the birth date is missing from the records.

The White Army data does not include specific information about the birth location of a soldier. However, it contains a detailed description of the combat locations in civil war and post-civil war life-path, from which birth locations can be inferred. For a small subset of records, where birth years were unavailable, I leverage the existing contextual information and additional archival sources to identify a birth district.

A4.3.   Census data

I assign a unique identifier to all districts in the 1897 Census data that correspond to the identifiers in the geospatial maps. I also incorporate the unique district identifiers into the 2.39 million individual records of WWI at the geocoding stage. The final WWI soldiers database, which contain indicator variables for the Revolutionary Red Army and the Imperial White Army participation, is then linked to the Census data and the geospatial maps based on the unique district identifier.

A4.4.   Geolocations

Geocoding is carried out in five interlinked steps:

1. I manually geocode all 858,230 known unique birth locations in the cleaned administrative records to relevant districts. In this stage, the birth addresses are geocoded to the centroid of each district (second-tier administrative unit).

2. To ensure geocoding at a more fine-grained level, I use the GeoNames Gazeteer to geocode each birth location to its precise point location geocoordinates (fourth-tier administrative unit).

3. To check the accuracy of the automated geocoding process and improve its quality, I test whether the district polygon borders around the manually coded district centroid geocoordinates (second-tier administrative unit) contain the point location of the precise village geocoordinates from the automated process (fourth-tier administrative unit).

4. For inaccurate matches, I return to the manual geocoding step, whereby I identify and code the correct locality location (third-tier administrative unit). In this stage, the corrected locations are geocoded to the centeroid of each locality (third-tier administrative unit).

5. I then use district and locality location features for dynamic filtering to constrain precise village/town location predictions associated with the respective district boundaries (fourth-tier administrative unit).

   As a result, the geocoding API returns detailed address results restricted to a specific area – the bounding box that approximates the area of the district – to exploit the accuracy of originally hand-coded information.

I cross-validate the accuracy of the results following the final fifth step. I iteratively extract random sample of 100 birth addresses from the data and manually check the accuracy of each point location, in terms of its containment within the correct locality. The results of 10 cross-validation checks, listed in Table A4.6, show that less than 5% of each random sample contains false matches.

Table A4.6: **Cross-Validation of Geocoding**

ID	Sample size	False matches
1	100	3
2	100	0
3	100	4
4	100	1
5	100	0
6	100	2
7	100	0
8	100	0
9	100	1
10	100	1

A5. ROBUSTNESS CHECKS

A5.1. Regression Discontinuity: Covariate Balance Test

One of the main identifying assumptions in the paper is the smooth variation of all relevant factors besides treatment at the district boundaries. To assess the plausibility of this assumption, I test for the presence of discontinuities at the district borders in a range of pre-treatment characteristics. To do this, I evaluate whether the treatment predicts pre-treatment covariates. As Table A5.7 shows, I find balance on all covariates, except for population density, which exhibits a negative jump. To account for the imbalance in population density, I include it as a control in the baseline specification and confirm that controlling for it does not change the results.

Table A5.7: **Covariate Balance Test**

Covariate	Coefficient	95% CI	P-value	Bandwidth
Share of Military Age Men	−0.013	[−0.028, 0.002]	0.080	50 km
Share of Married Men	0.004	[−0.007, 0.016]	0.430	50 km
Share of Literate Men	0.017	[−0.079, 0.113]	0.727	50 km
Share of Urban Population	−0.025	[−0.110, 0.061]	0.570	50 km
Share of Peasants	−0.026	[−0.088, 0.037]	0.422	50 km
Share of Nobles	−0.005	[−0.012, 0.002]	0.190	50 km
Share of Meshchane	−35.3	[−0.025, 0.080]	0.307	50 km
Elevation	−0.025	[−70.70, 0.077]	0.052	50 km
Population Density	−20.2	[−31.80, −8.71]	0.001	50 km
Learned Societies	−0.121	[−0.378, 0.135]	0.354	50 km
Share of Men in Armed Forces	−0.001	[−0.007, 0.006]	0.884	50 km
Share of Men in Civil Service	0.000	[−0.001, 0.001]	0.933	50 km

The two-dimensional baseline RDD specification includes a cubic polynomial, which controls for smooth functions of latitude and longitude ($x+y+x^2+y^2+xy++x^3+y^3+x^2y+xy^2$) and a smooth function of the distance to border (3rd order polynomial). I address concerns about over-fitting at the discontinuity by examining robustness to alternative orders of RD polynomials: linear, quadratic, and quartic. Table A5.8 reports estimates from specifications with alternative polynomials in latitude and longitude. Table A5.9 reports results from specifications with alternative functional forms of the distance to the border.

Table A5.8: FRDD approach: Alternative Functional Forms for Coordinate Polynomials

| | Revolutionary Red Army | | | | | |
| | 50 km | | | 60 km | | |
	Linear	Quadratic	Quartic	Linear	Quadratic	Quartic
Coefficient	8.575 (1.190)***	8.866 (1.889)***	8.169 (1.503)***	8.943 (1.806)***	9.416 (1.865)***	8.640 (1.441)***
Mean Y	0.489	0.489	0.489	0.488	0.488	0.488
$\mathcal{F}$	84.02	71.19	57.33	84.1	71.35	55.71
Districts	207	207	207	207	207	207
Birthplaces	55,561	55,561	55,561	55,814	55,814	55,814
Soldiers	147,333	147,333	147,333	147,866	147,866	147,866

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use alternative functional forms for the longitude and latitude (linear, quadratic, and quartic). Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 60km from district borders. All models include covariates. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Table A5.9: FRDD approach: Alternative Functional Forms for Distance Polynomials

| | Revolutionary Red Army | | | | | |
| | 50 km | | | 60 km | | |
	Linear	Quadratic	Quartic	Linear	Quadratic	Quartic
Coefficient	9.971 (1.561)***	10.416 (1.750)***	9.753 (1.690)***	9.968 (1.536)***	10.426 (1.760)***	10.076 (1.677)***
Mean Y	0.489	0.489	0.489	0.488	0.488	0.488
$\mathcal{F}$	59.56	57.91	56.11	59.67	57.91	56.21
Districts	207	207	207	207	207	207
Birthplaces	55,561	55,561	55,561	55,814	55,814	55,814
Soldiers	147,333	147,333	147,333	147,866	147,866	147,866

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use alternative functional forms for the distance to border (linear, quadratic, and quartic). Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 60km from district borders. All models include covariates. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

In the main results, I use 50, 60, 70 km bandwidths. Below, I also test whether the RD estimates are robust to alternative bandwidths. I choose a series of bandwidths much narrower and slightly wider than the bandwidths used in the main results: 5, 10, 20, 30, 40, and 80 kilometers. As results in Table A5.10 demonstrate, the estimates remain significant across a range of bandwidths.

Table A5.10: FRDD approach: Alternative Bandwidths

| | Revolutionary Red Army | | | | | |
	5 km	10 km	20 km	30 km	40 km	80 km
Coefficient	9.803 (2.307)***	8.030 (2.174)***	8.160 (1.982)***	8.580 (1.806)***	8.849 (1.763)***	9.686 (1.719)***
Mean Y	0.458	0.563	0.501	0.491	0.490	0.487
$\mathcal{F}$	19.91	44.5	50.19	55.85	56.02	56.27
Districts	159	175	207	207	207	211
Birthplaces	25,073	36,873	52,705	55,153	55,520	56,016
Soldiers	68,574	96,885	136,858	145,873	146,998	148,190

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use alternative bandwidths of 5km, 10km, 20km, 30km, 40km, and 80km bandwidths, respectively. Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 80km from district borders. All models include cubic spatial splines and covariates. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

A5.4. Regression Discontinuity: Alternative Sample

To exclude the possibility that that the results are driven by the overlap between boundaries and infrastructural or other administrative characteristics of the districts included in the main RD sample, I re-run the main RD regressions on a more focused sub-sample of districts within the respective bandwidths. This alternative sample is a subset of the main sample with 14 provinces deep within European Russia. The included provinces are listed in Table A5.11. Figure A5.8 displays the difference between the original sample used in the main analysis and the alternative sample used in the robustness tests.

Table A5.11: **Alternative Sample: Included Provinces**

| Province Names	
Suvalk Province	Vilen Province
Lomjin Province	Plots Province
Warsaw Province	Kalish Province
Petrokov Province	Kelets Province
Radom Province	Lyublin Province
Kholm Province	Grodnen Province
Minsk Province	Volyn Province

Table A5.12: FRDD approach: Alternative Sample

	Revolutionary Red Army		
	50 km	60 km	70 km
Coefficient	14.179 (3.295)***	12.111 (3.211)***	11.656 (3.127)***
Mean Y	0.709	0.708	0.707
$\mathcal{F}$	25.59	25.36	25.34
Districts	121	121	121
Birthplaces	31,557	31,629	31,648
Soldiers	78,003	78,138	78,175

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use 50km, 60km, and 70km bandwidths, respectively. Included observations are from a limited sample of 14 provinces located deep inside the European section of the Russian Empire. Excluded are observations with missing locations and those > 70km from district borders. All models include cubic spatial splines and covariates. Significance levels: $^{\dagger}p < 0.1$; *p $< .05$; **p $< .01$; ***p $< .001$

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Figure A5.8: RDD samples
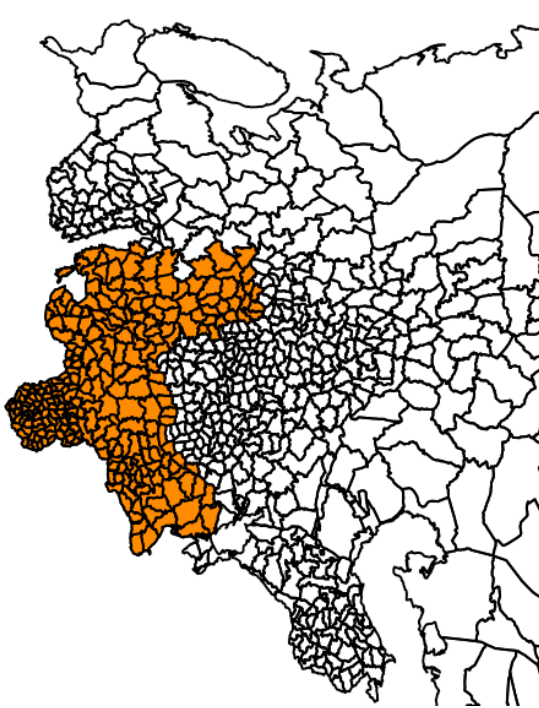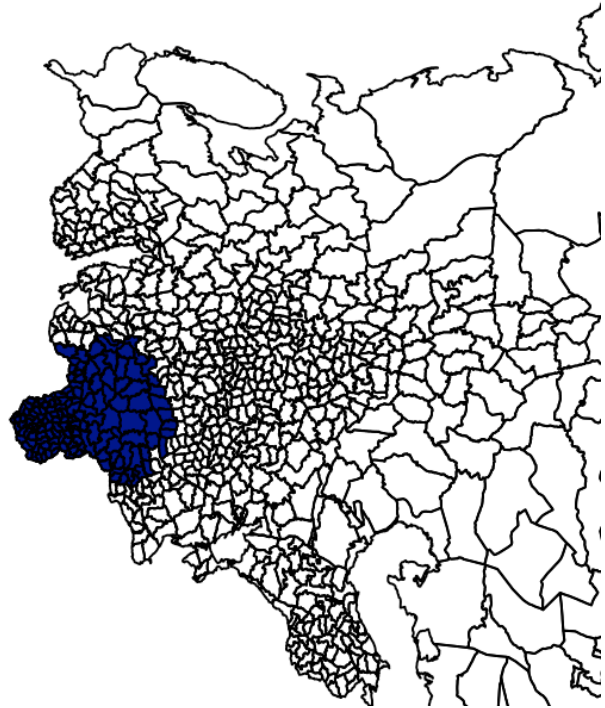
(a) Original sample (b) Alternative (reduced) sample

A5.5.   Regression Discontinuity: Placebo Exercises

I conduct a placebo exercise to ensure that the effects of pre-war ethnic marginalization are not driven by an unobserved spatial variation. In particular, I estimate discontinuities at hypothetical borders created by shifting the district borders by 10, 20, 30, and 40 km in two opposite directions. For each RD regression, I estimate 8 placebo regressions that repeat the RD analysis presented in the main paper replacing real historical borders by the placebo borders. Table A5.13 summarizes the results. I found only one placebo regression result to be significant at 1% level and one at 5% level.

Table A5.13: FRDD approach: Spatial Shifts

	Revolutionary Red Army							
	-10 km	10 km	-20 km	20 km	-30 km	30 km	-40 km	40 km
Coefficient	19.570 (20.436)	15.475 (8.961)	6.415 (4.717)	-10.176 (31.749)	16.360** (6.289)	7.022 (6.018)	16.771* (7.428)	1.986 (11.276)
$\mathcal{F}$	53.21	53.66	53.79	53.16	53.51	53.86	53.39	53.76

Note: Outcome = joining revolutionary movement, measured on percentage scale (0 to 100). Robust standard errors, clustered by district, are reported in parentheses. Models use alternative cutoffs, ranging from -10km to 40 km. Included observations are from a limited sample of 25 provinces located along the European section of the Russian Empire. Excluded are observations with missing locations and those > 50km from district borders. All models include cubic spatial splines and covariates. Significance levels: $^{\dagger}p < 0.1$; *p $< .05$; **p $< .01$; ***p $< .001$

To test whether the state purposefully assigned minority soldiers to non-strategic, dirtier tasks with no direct relevance to combat skills acquisition, I look at the difference in a wide range of task assignments between ethnic minority and Russian soldiers. Table A5.14 below shows that the number of minorities assigned to non-strategic tasks was not significantly different from ethnic Russians.

Table A5.14: **Statistics for Non-strategic Assignments**

	Count		Percentage	
Assignment	**Russians**	**Minorities**	**Russians**	**Minorities**
Sanitary services	3351	2806	0.20	0.24
Disinfection services	260	205	0.02	0.02
Culinary services	4038	3294	0.24	0.28
Flour-mill & Bread-making services	5224	4182	0.31	0.36
Postal services	712	531	0.04	0.05
Epidemiological services	286	215	0.02	0.02
Pharmacy services	76	100	0.01	0.01
Warehouse services	1449	1039	0.09	0.09
Veterinary services	310	261	0.02	0.02
Livestock services	997	788	0.06	0.07
Road-check services	3527	2590	0.21	0.22
Hydro-technical services	334	269	0.02	0.02
Store grocery services	1054	904	0.06	0.08
Horse-care services	157	128	0.01	0.01
Hospital services	5918	4755	0.35	0.41
Railroad services	3832	2915	0.23	0.25
Telegram services	2189	1485	0.13	0.15
Correspondence services	28	24	0.00	0.00
Laboratory services	15	13	0.00	0.00
Infirmary services	1950	1488	0.12	0.13
Manual work services	7268	6760	0.43	0.58
Repair services	101	63	0.01	0.01
Transportation services	11340	9211	0.67	0.79
Uniform clothing services	478	335	0.03	0.03
Gendarme services	96	68	0.01	0.01

A5.7. Missing Discharge Records

My main sample includes soldiers with missing discharge records from WWI. The full data on WWI soldiers contains no discharge information on 243,962 individual soldiers. My analyses assumed that soldiers without discharge records survived WWI and were considered as not having joined the revolutionary movement, if a match was not found in the civil war records. In Table A5.15, I replicate the main analyses after excluding individuals whose fates were unknown after WWI to account for potential biases related to the missingness. The estimates remain statistically significant and in the same direction as in the baseline specifications.

Table A5.15: OLS results: Excluding Missing Discharge Records

	Dependent variable:			
	Revolutionary Red Army			
	(1)	(2)	(3)	(4)
Ethnicity (matching)	0.955***			
	(0.040)			
Ethnicity (classification)		1.109***		
		(0.019)		
Ethnic diversity			4.580***	
			(0.186)	
Religious diversity				0.166***
				(0.013)
	Imperial White Army			
Ethnicity (matching)	−0.762***			
	(0.026)			
Ethnicity (classification)		−0.658***		
		(0.019)		
Ethnic diversity			−0.446***	
			(0.082)	
Religious diversity				−0.063***
				(0.008)
Controls	✓	✓	✓	✓
Fixed effects	✓	✓	✓	✓
Splines	✓	✓	✓	✓
Observations	1,707,804	1,707,804	1,707,804	1,707,804

Note: Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and ethnicity information. The dependent variable is a dummy variable that takes the value of 1 if an individual joined either side of the civil war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; *p < .05; **p < .01; ***p < .001.

To check whether the district-level effects are driven by the measurement error in Ethnic Diversity Index, I use an alternative, decomposed measures of diversity that separately captures a) the heterogeneity of non-Russian ethnic groups in each district and b) share of the non-Russians in the total population (Charnysh, 2019).

The measure of ethnic diversity I use as a substitute is:

$$\sum_{j=1}^{J}[s_j * (1 - s_j)]$$

where s_j is the share of non-Russians from district j out of the total population of non-Russians and $j = 1, ..., J$. Because the first measure is calculated independent of the overall share of ethnic groups, the second measure – the share of non-Russians – is included as a control variable (Alesina, Harnoss and Rapoport, 2016). I replace the composite ethnic diversity measure with the two decomposed measures and replicate the main models. Table A5.16 shows that the direction of the relationship for both ethnic share and ethnic heterogeneity is positive for the pro-Revolutionary outcomes and negative for pro-state outcomes.

To ensure that the aggregate district results do not reflect the overwhelming numbers of ethnic non-Russians residing in heterogeneous districts, I limit my sample of WWI soldiers to include only ethnic-Russians. I then replicate district-level analysis on the limited sample to identify whether ethnic Russians were more likely to join the revolutionary movement if their birth districts were ethnically diverse. I use to alternative measures of ethnic diversity. First, I include the Ethnic Diversity Index used in the main analysis. Then, I re-run the regression using just the overall share of ethnic minorities in each district. Table A5.17 shows that ethnic Russians were more likely to join the Revolutionary Red Army, if they were born in ethnically diverse districts, specified across two distinct measures.

Table A5.16: OLS results: Ethnicity and the Russian Civil War

	Dependent variable:	
	Revolutionary Red Army	
	(1)	(2)
Ethnic diversity	3.285***	
	(0.089)	
Ethnic share		2.731***
		(0.096)
	Imperial White Army	
Ethnic diversity	−1.232***	
	(0.081)	
Ethnic share		−0.927***
		(0.021)

Note: Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and ethnicity information. The dependent variable is a dummy variable that takes the value of 1 if an individual joined either side of the civil war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Table A5.17: Spillover Effects: Russians in Heterogeneous Districts

	Revolutionary Red Army	Imperial White Army
EDI	1.296 (0.277)***	-0.249 (0.079)***
Ethnic Share	0.746 (0.173)***	-0.231 (0.055)***
Districts	760	760
Soldiers	1,228,996	1,228,996

Robust standard errors, clustered by birth district, are reported in parentheses. Included observations reflect disaggregated individual records, with non-missing location and ethnicity information. The dependent variable in the first column is a dummy variable that takes the value of 1 if an individual received a military decoration, and 0 otherwise. The dependent variable in the second column is a dummy variable that takes the value of 1 if an ethnic minority veteran joined the Revolutionary Red Army during the civil war, and 0 otherwise. All models include province fixed effects, cubic spatial splines, and birth district-level covariates. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$ Because data in the second specification is subsample of WWI soldiers from ethnic minority backgrounds, sample size is much smaller. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$.

As an additional robustness check, I use two-stage least squares approach, leveraging detailed information on the geographical locations of orthodox churches across the Russian Empire. In particular, I construct a variable that measures the minimum Euclidean distance from a birth location to the nearest orthodox church in kilometers. The expectation is that the locations with Russian orthodox churches were exempt from mass-level marginalization due to the number of ethnic Russians residing nearby. The sites of the towns with orthodox churches were created using the atlas produced by the Russian Imperial military-topographical cartographer, Vasilii Petrovich Piadyshev (Paidyshev, 1821). Figure A5.9 shows the locations of Russian Orthodox Churches built prior to the start of WWI.
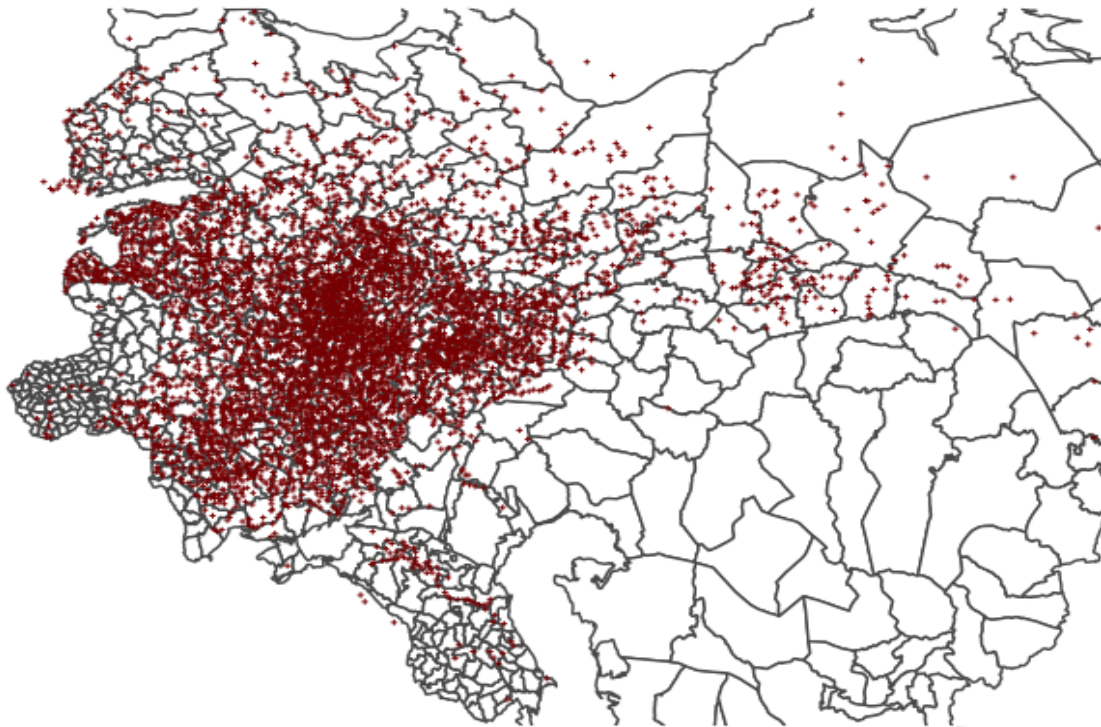

Figure A5.9: Locations of Pre-WWI Russian Orthodox Churches

In many ways, Tsarist Russia considered orthodoxy as a more pertinent symbol of Russian identity and political loyalty than ethnicity. Most of the minority ethnicities of the Russian Empire belonged to religious institutions other than the Russian Orthodox Church. The European Christian populations of the Empire were either Catholics or pProtestants or had their own orthodox churches separate from the Russian Orthodox Church (such as the Armenian and Greek Orthodox Churches).

For this measure to be considered a valid instrument, it needs to have a single (first-stage) channel of influence on the revolutionary outcomes conditional on the covariates. The exclusion restriction would be violated if there were alternative channels between the construction of churches and revolutionary movements. Given the limited geographical mobility in the Russian Empire, most revolutionaries fought within close proximity to their birth locations. The presence of the Russian Orthodox Churches nearby meant a sizable community of ethnic Russians lived in the immediate neighborhood. The civil war literature has argued that the spatial proximity of diverse groups leads to a higher likelihood of conflict. In this case, the violation of the exclusion restriction should bias the results toward zero. Yet, it is also possible that the presence of Russian Orthodox Churches represented the state's outreach capacity, which should have made plotting and staging an armed insurrection significantly more challenging in these areas. Historical evidence does not support this claim: in the earlier Russian uprisings of 1905, waves of social unrest initiated in areas with significant state force presence. Moreover, ethnographic accounts of the emergence of the Russian Orthodox Church network suggest that church locations followed local demands and relied on bottom-up material and financial support rather than a concentrated state effort. Therefore, many churches were located in remote towns with relatively small state infrastructural and information network outreach.

Because churches were built before the start of WWI and prior to the heaviest period of repressions,[1] the instrument can be considered plausibly exogenous to revolutionary outcomes. Most of the state-led church constructions or demolitions took place after the collapse of the tsarist government when the Soviet government declared the separation of church and state and nationalized all church-held lands.

Another key assumption is that the proximity of Russian orthodox churches influenced the level of marginalization, but the state's exclusionary policies did not affect church locations. Although there might have been additional church constructions between 1820 and the start of WWI, historical evidence suggests that the numbers could not have been significantly more than those used in the study. Church construction required a lot of time: the average total construction time to build Russian orthodox churches of any type was eighty-seven years, with those including a monastery and cemetery reaching 180 and 207 years, respectively (Sidorov, 2000). The construction of orthodox churches in the territory of the empire was not limited to the center. The density of churches in the peripheries with other dominant religions indicated the presence of ethnic Russian residents.

To evaluate whether individuals from birthplaces with closer access to Russian Ortho-

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[1]The churches used in the analysis were all built prior to 1830s.

dox churches were less likely to be marginalized, I use the following first-stage regression:

$$\text{Marginalization}_{i,d,p} = \gamma \cdot Church_i + \boldsymbol{\beta}' \boldsymbol{X}_{id} + s\left(\text{lon}_{d[i]}, \text{lat}_{d[i]}\right) + \varphi_{p[i]} + \epsilon_{d[i]}, \qquad (1)$$

where i, d, p represents birth location of soldier i in district d and province p, $Church_i$ is distance from location i to the nearest church. The model includes province-level fixed effects, district-level covariates, and a spatial spline. All estimations include population density and wealth variables to account for the possibility that churches may have been constructed in more densely-populated and economically prosperous areas. I restrict the sample to birth locations within 100 km of churches.

The second stage model specification is:

$$Y_{i,d,p} = \psi \cdot \text{Marginalization}_{i,d,p} + \boldsymbol{\delta}' \boldsymbol{X}_{id} + s\left(\text{lon}_{d[i]}, \text{lat}_{d[i]}\right) + \eta_{p[i]} + u_{d[i]}, \qquad (2)$$

where the second-stage dependent variable is the outcome variable for WWI veteran i in historical district d and historical province p who joined the civil war. Marginalization$_{i,d,p}$ is the explanatory variable, indicating the level of marginalization in district d.

Table A5.18 reports instrumental variable estimates across three models, including the first measure of individual ethnicity and ethnic and religious diversity indices. First-stage coefficients for the instrument are negative across all models, suggesting that the level of ethnic heterogeneity was increasing in distance to church locations. The weak instrument test statistic is also significant, indicating a strong correlation with ethnic heterogeneity. Figure **??** shows that the distance from Russian Orthodox Churches is associated with an increase in the level of ethnic heterogeneity.

The second-stage estimates are also positive and significant, suggesting that soldiers from birth locations with more ethnic heterogeneity were more likely to join the Red Army, while those from ethnically homogenous districts continued to fight for the state.

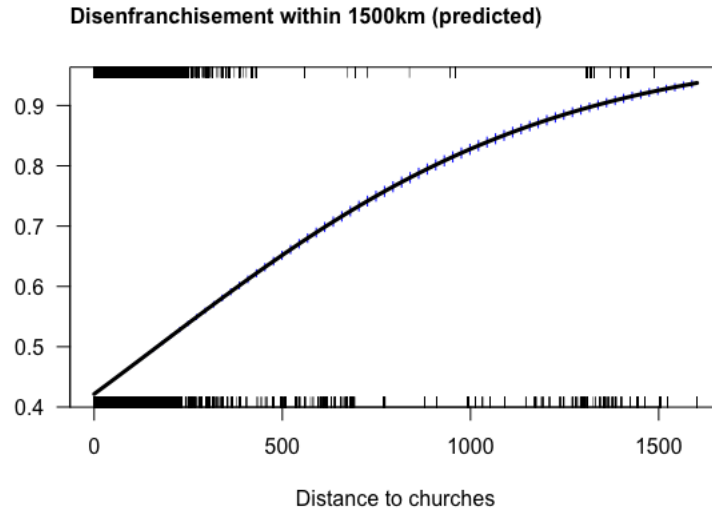Figure A5.10: Ethnic diversity within 20 km of district borders

Disenfranchisement within 1500km (predicted)

Distance to churches

Table A5.18: Instrumental variable estimates of effect of marginalization on revolution

Second stage results			*Dependent variable:*			
	Revolutionary Red Army			**Imperial White Army**		
	(1)	(2)	(3)	(4)	(5)	(6)
Ethnicity	1.859***			−0.882***		
	(0.175)			(0.126)		
Ethnic diversity		2.701***			−1.265***	
		(0.265)			(0.186)	
Religious diversity			2.664***			−1.066***
			(0.226)			(0.166)
Controls	Y	Y	Y	Y	Y	Y
Fixed Effects	Y	Y	Y	Y	Y	Y
Splines	N	Y	Y	N	Y	Y
Observations	1,520,334	1,520,334	1,520,334	1,520,334	1,520,334	1,520,334

Note: Robust standard errors, clustered by birth district, are reported in parantheses. Significance levels: $^{\dagger}p < 0.1$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

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