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# Population Resettlement in War: Theory and Evidence from Soviet Archives

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**Abstract**

Why do combatants intentionally uproot civilians? The forcible relocation of families and communities to concentration camps, "protected villages," and other special settlements is a regular feature of irregular war, occurring in almost a third of all counterinsurgency campaigns since 1816. Despite the historical regularity of these practices, most research has focused on individual decisions to flee, rather than the brute-force resettlement of civilians by combatants. Using a dynamic model of popular support and new micro-level data from Soviet secret police archives, I show that civilian resettlement is not simply a by-product of war but is a rational response to informational asymmetry. Combatants who cannot identify and selectively punish their opponents face incentives to control the population rather than earn its support. For strong governments with limited coercive leverage, civilian resettlement offers a way to reduce rebel activity without having to win hearts and minds.

**Keywords**

insurgency, coercion, resettlement, mathematical model, archival data

Between 1920 and 1952, the Soviet Union forcibly relocated 11,890,000 of its own citizens. (Pobol' and Polyan (2005, 12)). Most were residents of the Union of Soviet Socialist Republics' (USSR's) western borderlands and North Caucasus, where

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central power was weak and an armed insurrection was either ongoing or anticipated. Although its scale varies widely, resettlement is a regular feature of counterinsurgency warfare. Of 307 counterinsurgency campaigns since the Napoleonic Era, incumbents used resettlement in at least 90.[1] Resettlement flourished after World War II, implemented by democratic and autocratic actors alike. British campaigns in Kenya and Malaya, the Algerian War of Independence, the US–Vietnamese War, and more recent violence in the Balkans, Mali, and southeastern Turkey have all seen the systematic resettlement of civilians.

Why do combatants intentionally uproot civilian populations? Are such methods effective in containing rebellion? Despite the persistence of this practice and the sheer number of people it affects, resettlement has mostly eluded rigorous study. Part of the problem is theoretical. The growing literature on conflict-induced displacement tends to view forced displacement either as a by-product of war (Weiner 1992; Morrison and May 1994; Schmeidl 1997) or as an outcome of civilian flight (Davenport, Moore, and Poe 2003; Moore and Shellman 2004; Adhikari 2012). As Steele (2007, 2) notes, "scholars have focused primarily on the conditions that lead civilians to flee their communities, as opposed to when and why armed groups displace." A no lesser challenge is empirical. Until recently, micro-level data on these sensitive operations have been difficult to obtain, impeding our ability to test theoretical models and draw meaningful inferences.

The following article addresses both gaps. I propose a dynamic model of asymmetric irregular war and derive several propositions about the strategic logic of resettlement. I show that such decisions are the rational outcomes of informational and mobilizational asymmetry. Incentives to resettle are strongest where a government is unable to identify and selectively punish her opponents, while rebels manage to deter civilians from cooperating with the government. In such cases, counterinsurgents will favor strategies that control the population rather than earn its support.

I examine the merits of these propositions empirically, using declassified data on 17,171 rebel attacks and government operations during Soviet counterinsurgency operations in Ukraine, 1943-55. The Ukrainian nationalist uprising was the USSR's most protracted and costly, resulting in the resettlement of more than 266,000 individuals and the deaths of almost 130,000.[2] Consistent with the model's predictions, I find that Soviet authorities used resettlement they had difficulty distinguishing individual rebels from civilians. Where information problems limited coercive leverage, resettlement substantially reduced rebel activity.

The article proceeds as follows: I first offer an overview of existing research on forcible displacement and identify my primary contributions. Second, I introduce a mathematical model of resettlement and derive several empirically testable propositions. Third, I provide background on the Ukrainian conflict and introduce new data gathered from Soviet secret police archives. Fourth, I report two sets of empirical results on the determinants of Soviet decisions to resettle (treatment selection) and on the effectiveness of resettlement in suppressing subsequent rebel attacks (treatment effect). Finally, I discuss the broader implications of my findings.

## Resettlement in Theory and Practice

In a civil war, a group's ability to establish a monopoly on the use of force depends on the support it receives from the civilian population (*Counterinsurgency Field Manual* 2006, 5.20-21).[3] A steady flow of revenues, manpower, supplies, and intelligence is essential to maintaining military operations and establishing a viable state (Tilly 1985). Yet such cooperation is costly for civilians to provide. Combatants punish those who support their opponents, and civilians will not cooperate if it is unsafe for them to do so (Kalyvas 2006). Where a combatant cannot earn popular support, she may opt to control the population and at least prevent it from supporting the other side. Forcible resettlement is one means to achieve this end.

Resettlement is a historically widespread practice, occurring in 90 of 307 counterinsurgencies since 1816, and in 55 since World War II (Appendix O-1). These operations have gripped every region of the globe, with practitioners about evenly split between democracies and autocracies.[4] Most of these efforts involved the compulsory relocation of civilians to special settlements or camps, either as retaliatory measures against suspected rebels' families and co-villagers (e.g., Spanish and British concentration camps in Cuba and South Africa) or as preventative measures for at-risk communities (e.g., New Villages in Malaya, *aldeamentos* in Mozambique, Strategic Hamlets in Vietnam) and potentially restive social groups (e.g., Seminoles in the 1840s, Chechens in 1944, Bosniaks in 1992). Resettlement operates by a simple logic. By removing civilians away from a conflict zone, a government separates them from rebels and cuts off the latter's base of support.

Resettlement is also a war crime, according to Protocol II of the Geneva Convention. Yet this status has not prevented resettlement in at least 25 civil conflicts since the Protocol's adoption in 1977. To take one example, some 960 detention camps were reportedly established in former Yugoslavia in 1991-94, primarily for the internment of noncombatants.

Before proceeding, it is important to clarify a few interrelated concepts. The term *forced displacement* denotes any population movement, in which people either choose to uproot themselves or are physically uprooted by a third party, in the absence of an original motivation to settle elsewhere (Kunz 1973, 130). Such displacement comes in two forms: *flight* and *resettlement*. In the first, combatants create an environment in which civilians face strong incentives to leave—usually in response to high levels of physical and economic insecurity. In the second, combatants physically remove civilians from one location and relocate them to another—as occurs during evacuations, deportations, or the expropriation of private land.

The primary difference between flight and resettlement is the relative scope for civilian choice. In flight, the choice may be constrained and dreadful, but it is ultimately up to the civilian whether or not to leave. In resettlement, a combatant dictates the origin, destination, and timing of a population movement and imposes her choice on civilians. Petersen (1958, 261) likens this difference to that "between the Nazis' policy (roughly 1933-38) of encouraging Jewish emigration by various

anti-Semitic acts and laws, and the later policy (roughly 1938-45) of herding Jews into cattle-trains and transporting them to camps.''

The shift of agency from civilians to combatants gives rise to a second distinction: destination. In resettlement, a combatant typically moves civilians to areas where they can be more easily monitored and controlled—such as shelters, detention facilities, and internment camps. In the case of flight, where a combatant provokes civilian ''self-deportation'' without overseeing the logistics, destinations are more uncertain.

Although the academic literature on conflict-induced displacement is rapidly expanding, it has had surprisingly little to say about population resettlement as military strategy. With some notable exceptions, scholars have generally seen forced displacement either as an externality of war (Weiner 1992; Morrison and May 1994; Schmeidl 1997) or as the rational behavior of security-seeking civilians (Davenport, Moore, and Poe 2003; Moore and Shellman 2004; Adhikari 2012). Even the international legal definition of a displaced person—one who ''owing to a well-founded fear of being persecuted . . . is outside the country of his nationality, and is unable [or] unwilling to avail himself of the protection of that country''—implies some civilian choice (United Nations 1951, Article 1).

Political science has mostly overlooked the strategic calculus of combatants in this process. The few studies examining armed group behavior have maintained a theoretical and empirical focus on civilian flight. Steele (2011) and Balcells and Steele (2012) show that armed groups use threats and intimidation to coerce civilians into fleeing their communities, particularly where group-level information about civilian loyalty is readily available. Azam and Hoeffler (2002) show that displacing civilians can be a substitute for fighting, but limit their scope to refugee populations, rather than those forcibly removed and detained by governments.

A second gap in the literature pertains to the consequences of displacement. While several studies have sought to identify the effect of civilian flight on conflict (Urdal 2005; Salehyan and Gleditsch 2006; Salehyan 2008), they have mainly focused on the destabilizing impact of refugee inflows. Beyond a handful of qualitative policy studies (Jundanian 1974; Greenhill and Staniland 2007; Hack 2009), there has been almost no empirical evaluation of how civilian outflows—particularly those due to resettlement—shape violence in migrants' communities of origin.

A third gap is that—due to its compulsory nature—resettlement falls outside the scope of leading theories of civil war violence. The conceptual distinction between flight and resettlement mirrors that between *coercion* and *brute force* (Schelling 1966, 4-5). In the first instance, one threatens pain if the target does not take action, thereby giving the target a choice. In the second, one physically forces the target to take the action, denying him or her any choice. In his seminal work, Kalyvas limits his focus to coercion and argues that brute-force measures like mass deportation—and indiscriminate violence generally—should be off the equilibrium path unless either the combatant does not intend to govern the population or the opponent is very weak (Kalyvas 2006, 26, 30-31, 167). The empirical puzzle—as the Soviet case

illustrates— is that resettlement regularly occurs where perpetrators fully intend to govern and where opponents are quite strong.

## The Logic of Resettlement

I introduce a model of asymmetric civil war, where combatants compete for the support of a security-seeking population. The model explains the treatment selection mechanism—why governments resettle in some contexts but not in others—and how this treatment affects the establishment of a monopoly on the use of force. I begin with a simple case where combatants rely exclusively on coercion to extract support. This benchmark yields a strong conclusion: where the government cannot selectively punish its opponents, its violence must be overwhelming to deter civilians from supporting the rebellion. Such a strategy may be infeasible due to restraints on the use of force and is risky due to the inflammatory effects of collateral damage.

### *The Limits of Coercion in Irregular War*

Imagine a conflict zone populated by two combatants—government and rebels—and a third group of neutral civilians. Each combatant seeks a monopoly on the use of force and pursues this goal by extracting the resources needed to maintain military operations and establish a viable state—taxes, intelligence, manpower—while denying these same resources to the opponent. The civilians—whose cooperation combatants need to collect these resources—are interested in security above all else and will cooperate with whichever side can offer more protection.[5]

I assume that the armed conflict is asymmetric (Kress and Szechtman 2009)—the government has an advantage in resources, but rebels have an advantage in information. Drawing on a preexisting external revenue base and standing army, the government can call up conscripts, mobilize reserves, and send reinforcements. By contrast, rebels rely almost exclusively on the local population. Because rebels are embedded in the population and government forces are relative outsiders, the rebels have better information on their opponents' identities and locations.

Let $G_t$ and $R_t$ denote the sizes of government and rebel forces at time $t$. Let $C_t$ denote the size of the neutral civilian population at time $t$. Let $\pi_G(\mathbf{s}) = \frac{G_{\text{eq}}}{G_{\text{eq}}+R_{\text{eq}}} \in [0,1]$ denote the government's payoff from strategy set $\mathbf{s} = \{s_G, s_R, s_C\}$, and let $\pi_R(\mathbf{s}) = \frac{R_{\text{eq}}}{G_{\text{eq}}+R_{\text{eq}}} \in [0,1]$ denote the rebels' payoff. An equilibrium outcome with $\pi_G = 1,\ \pi_R = 0$ is a *government victory*, in which the rebel population converges to zero and the government has a monopoly on the use of force. An outcome with $\pi_G = 0, \pi_R = 1$ is a *rebel victory* similarly defined. Let $\pi_C\{\mathbf{s}\} = -\kappa \in (-\infty, 0]$ be the costs civilians accrue due to fighting between the combatants.

The combatants $i \in \{G, R\}$ maximize popular support ($\pi_i$) through coercion. Let $s_R : \rho_R > 0$ denote rebel punishment of government supporters and $s_G : \rho_G > 0$

denote government punishment of rebels. As the relative intensity of punishment inflicted against a group increases, cooperation with that group becomes more costly.

Let $\theta_i \in (0, 1)$ denote the selectivity of a combatant's coercive force, such that $\rho_i\theta_i$ is the proportion of punishment that $i$ correctly inflicts against his or her opponent, and $\rho_i(1 - \theta_i)$ is the share that erroneously befalls neutral civilians. Where selectivity is high, punishment is based on individual criteria (e.g., "target is a known rebel"). Where selectivity is low, punishment relies on collective criteria (e.g., "targets live where rebels are thought to be active"). The availability of individual-level information depends on exogenous barriers to intelligence collection, like ethnolinguistic differences and rough terrain, as well as the population's willingness to denounce supporters of the other side (Kalyvas 2006). I assume that $\theta_i$ is constant and that rebels have an informational advantage ($\theta_R > \theta_G$).[6]

As selectivity decreases, coercion becomes increasingly inefficient, inflicting fewer costs on the opponents and greater harm on innocent bystanders. Civilians minimize these costs by choosing whether to stay neutral or join one of the two combatants. If civilians join $G$ or $R$, they will accrue costs at rates proportional to levels of selective violence inflicted against that group. If civilians stay neutral, they will accrue costs in proportion to the overall violence directed at civilians.

**Lemma 1:** The costs of being a neutral civilian are always greater than the costs of cooperating with one of the combatants.

**Proof:** Appendix. □

Assuming for the moment that civilians cannot leave the conflict zone, indiscriminate violence may partially solve the combatants' collective action problem, rendering neutrality more costly than cooperation (Kalyvas and Kocher 2007). Because civilians absorb damage from both government and rebel violence, neutrality will always be strictly costlier than cooperating with the combatants—each of whom only absorbs damage inflicted by one side. Let $s_C : \mu_i \in [0, \infty)$ be the rate of civilian cooperation with group $i$. If civilians are security seeking, they will cooperate with $G$ and $R$ at levels proportional to the rates of survival in each group,

$$\mu_i = 1 - \frac{\rho_{-i}\theta_{-i}}{\rho_{-i} + \rho_i}, \tag{1}$$

where $\rho_{-i}\theta_{-i}$ is selective violence directed at combatant $i$. Taken together, these dynamics comprise a system of ordinary differential equations:

$$\frac{\delta C}{\delta t} = k - (\mu_R R_t + \mu_G G_t - \rho_R(1 - \theta_R) - \rho_G(1 - \theta_G) - u)C_t, \tag{2}$$

$$\frac{\delta G}{\delta t} = (\mu_G C_t - \rho_R\theta_R - u)G_t, \tag{3}$$

$$\frac{\delta R}{\delta t} = (\mu_R C_t - \rho_G\theta_G - u)R_t, \tag{4}$$

where $\frac{\delta i}{\delta t}$ is the rate of change in the size of group $i$, $k$ is an immigration parameter, and $u$ is a natural death rate interpreted as losses due to disease and other exogenous factors that afflict civilians and combatants equally.[7]

As the fighting unfolds, the system (2–4) converges to one of two equilibria: government victory or rebel victory.[8] The stability of these equilibria depends on the balance of punishment ($\rho_i$) and selectivity ($\theta_i$).[9]

**Proposition 1:** ("Victory without resettlement"). A victory equilibrium is stable if and only if one's rate of selective violence is greater than that of her opponent.

**Proof:** Appendix. □

If combatants rely exclusively on coercion to attract support, victory is sustainable only if civilians expect cooperation with the opponent's side to be more costly. The equilibrium balance of public support depends on the *selective violence ratio* or $\frac{\rho_G\theta_G}{\rho_R\theta_R}$. When this ratio is greater than 1, government forces are able to inflict costs on the rebels at a higher rate than the rebels can against them, causing civilians to cooperate in greater numbers with the government. When the ratio is less than 1, the opposite is true.

Each side's best response is then to match the other's intensity of punishment scaled by relative selectivity: $b_i(\rho_{-i}) : \rho_i^* = \rho_{-i}\frac{\theta_{-i}}{\theta_i}$. Absent any restraints on the use of force, equilibrium behavior becomes one of mutual escalation. If combatant $i$ punishes at level $\rho_i > \rho_{-i}\frac{\theta_{-i}}{\theta_i}$, the opponent will escalate $\rho_{-i}$ to a level that meets or exceeds $\rho_i\frac{\theta_i}{\theta_{-i}}$, with the two strategies eventually converging to stalemate level $\frac{\rho_i\theta_i}{\rho_{-i}\theta_{-i}} = 1$. This dynamic prevents either side from maintaining an advantage in selective violence, which in turn prolongs the fighting and prevents it from reaching a steady state.

The difficulty of asymmetric conflict, however, is that the two sides do not escalate equally. Where rebels enjoy an advantage in selectivity ($\theta_R > \theta_G$), the government will employ a higher level of force to break even. Where the rebel advantage is overwhelming ($\theta_R \gg \theta_G$), government violence must also be overwhelming ($\rho_G \gg \rho_R$). Such an approach is perilous for two reasons. First, if constraints—societal norms, restrictive rules of engagement, a lack of ammunition—do exist on government violence, such that $\rho_G \in (0, \rho_G^{\max}]$ and $\rho_G^* > \rho_G^{\max}$, the government will be unable to achieve a favorable selective violence ratio, thereby losing the war. Second, escalation makes it increasingly costly for civilians to remain neutral, since $\rho_G(1-\theta_G) > \rho_G\theta_G$ as long as $\theta_G < \theta_R$. If the government fails to exceed the threshold $\frac{\rho_G\theta_G}{\rho_R\theta_R} = 1$, this increased flow of support will go overwhelmingly to the rebels. In conflict zones where rebels are difficult to identify, government coercion is inefficient and risky.

## Resettlement as a Brute-Force Solution

Rather than persuade civilians that cooperating with the rebels is too costly, a government may opt to simply interdict this cooperation by physical means. Let $d \in (0, 1)$ be the proportion of civilians displaced from the conflict zone. I assume that the net displacement rate $d = f(\sum_i \rho_i) + r$ is a combination of flight ($f$) and resettlement ($r$), where $f() \geq 0$ is a continuous, monotonically increasing function of violence (Azam and Hoeffler 2002; Adhikari 2012), while $s_{G2} : r \geq 0$ is determined by the government.

To stack the model against resettlement, I assume that displaced persons are potential supporters of either combatant—not just the rebels (Azam and Hoeffler 2002)—and that their departure reduces the flow of local recruits available to *both* sides, such that $\mu_i = (1 - d)\left(1 - \frac{\rho_{-i}\theta_{-i}}{\rho_{i1}+\rho_i}\right)$. Because it hurts both sides equally, resettlement is of dubious benefit unless the government can offset this loss with an inherent mobilizational advantage. Let $\alpha_i \in (0, \infty)$ denote combatant $i$'s ability to directly mobilize support through an external revenue base, reserves, expropriation, or military conscription. I assume that the government has an advantage in mobilizational capacity, $\alpha_G > \alpha_R$. This modification yields new cooperation rates, $\mu_i = (1 - d)\left(1 - \frac{\rho_{-i}\theta_{-i}}{\rho_{-i}+\rho_i}\right) + \alpha_i$, and new equilibrium stability conditions.

**Proposition 2:** ("Victory with resettlement"). A government victory equilibrium is stable if (a) the government's rate of selective violence is greater than that of the rebels, *or* (b) resettlement is sufficiently high.

**Proof:** Appendix. □

Given the option of resettlement, the government has more than one path to victory. It may seek, as before, to escalate selective violence to the point where joining the rebels becomes more costly than supporting the government. Alternatively, it may use resettlement to physically prevent civilians from cooperating with rebels. Rebels, meanwhile, now have a more limited path to victory. To achieve a sustainable monopoly on the use of force, not only must rebels have a selective violence advantage, but government resettlement must be sufficiently low.

Why would rebels' ability to establish a monopoly on force depend on the proportion of civilians expelled? While both sides depend on popular support, the government's external resource advantage ($\alpha_G > \alpha_R$) allows it to be less reliant than the rebels on local support. If the rebels need local support more, then resettling the local population will hurt them more. Note that resettlement does nothing to deter civilians from cooperating with rebels, which remains a dominant strategy as long as $\frac{\rho_G\theta_G}{\rho_R\theta_R} < 1$. Incentives to resettle, however, arise precisely where this ratio is unfavorable.

**Proposition 3:** (Comparative statics). Equilibrium use of resettlement is

1. decreasing in the government's selectivity ($\theta_G$),
2. increasing in the rebels' selectivity ($\theta_R$),
3. decreasing in the government's mobilizational capacity ($\alpha_G$),
4. decreasing in government punishment ($\rho_G$),
5. increasing in rebel punishment ($\rho_R$), and
6. decreasing in civilian flight ($f$).

**Proof:** Appendix. □

Resettlement is a brute-force substitute for coercion. Incentives to resettle subside where the government is better able to distinguish individual rebels from civilians, and where the intensity of counterinsurgency operations is high. In such areas, the government can outproduce the rebels in selective violence and does not need to offset the mobilizational impact of collateral damage by displacing civilians. Where rebels have the advantage in selectivity or punishment, the government will resettle at a higher rate.

The government's ability to mobilize resources has a similar but slightly more complicated effect on resettlement. If the government has access to no resources other than those offered by local supporters, resettlement has no effect on relative rates of cooperation. It can, at most, buy time by slowing down the absolute rates of civilian cooperation. When external resources are available, but in limited quantities, strong incentives for resettlement emerge, since local civilian support for the rebels cannot be fully offset by an influx of revenues and loyalists from elsewhere. As mobilizational capacity increases, these incentives recede.

Finally, incentives to resettle are strongest where civilian flight is too costly to provoke. Since the rate of flight depends in part on overall levels of violence, the government can avoid resettlement by simply escalating punishment and driving civilians to flee from harm. Yet if rebels have a selectivity advantage, they will have little incentive to punish at a higher rate, and most of the punishment needed to displace civilians will need to come from the government. Provoking civilian flight might also fail if a government faces normative or logistical constraints on lethal force ($\rho_G \in (0, \rho_G^{\max}]$), or if geographical and political circumstances limit opportunities for civilian flight ($f \in (0, f^{\max}]$).

These results yield several useful empirical implications. They tell us where resettlement is likely to be most intense (where government selectivity is low, where mobilizational capacity is modest, and where civilians cannot flee), how resettlement interacts with alternative government strategies (as a substitute for coercion), and why resettlement sometimes does not work (where its levels are insufficient to offset rebel recruitment and where the government lacks mobilizational capacity).

These predictions depart from existing work in several ways. Although Kalyvas (2006) argues that combatants will use indiscriminate violence only where the opponent is too weak to offer protection, the model shows the opposite: such incentives emerge where the opponent has a coercive advantage and a superior ability to

ascertain individual-level loyalties. This model advances on prior studies of strategic displacement (Steele 2011; Balcells and Steele 2012) by formalizing the logic by which armed groups displace and generalizing it to accommodate both civilian flight and resettlement. The assumptions behind this model are also more conservative than in previous formal work. In their model of displacement, Azam and Hoeffler (2002) assume no government reliance on civilian support and perfect accuracy in fighting—two assumptions that I relax here. To stack the model against resettlement, I assume that the rebel population is capable of avoiding resettlement altogether. All of the displaced are unaffiliated civilians who by definition are potential supporters of either side. If incentives for resettlement can emerge in this extreme case, we should expect them to persist where resettlement is less indiscriminate.

## Soviet Counterinsurgency in Ukraine

The anti-Soviet insurrection by the Organization of Ukrainian Nationalists–Bandera (OUN-B) and its military arm, the Ukrainian Insurgent Army (UPA), offers a unique opportunity to test these propositions, for several reasons. First, more civilians were killed or resettled in the Soviet Union than in any other political entity in recorded history. The unprecedented scale of civilian suffering warrants investigation into why these actions occurred in some places but not in others.[10]

Second, the Ukrainian nationalist uprising was the most protracted and costly domestic conflict the Soviet Union faced. Its combat phase (1943-55) lasted three years longer than the Soviet occupation of Afghanistan. Conservative estimates place the toll at 266,206 resettled and 127,454 killed.[11]

Third, Soviet and Russian systems of training, doctrine, logistics, and command-and-control remain widespread in much of Asia, Eastern Europe, Africa, and the Middle East. States like Syria have looked to Moscow's experience as a model of counterinsurgency practice.

Fourth, newly declassified archival data offer a rare glimpse into local Soviet decision making. By revealing the information commanders were seeing at the time, the archives allow us to empirically estimate the theoretical model's parameters and rigorously test its propositions.

The OUN originated in Poland in 1929 as an activist group seeking an independent Ukrainian state. Following the Soviet annexation of eastern Poland in 1939 and the German invasion of the USSR in June 1941, the OUN began building a shadow government in northwestern Ukraine and established a tenuous working relationship with occupying German authorities. Moscow's main local agents during this period were partisans who launched their first raids in the region during the autumn of 1942. Seeing the partisans as more dangerous political rivals than the Germans, nationalist forces loyal to Stepan Bandera (OUN-B) organized an armed militia (UPA) in late 1942 and began a campaign of violence and intimidation against Soviet collaborators. This confrontation escalated in 1943 as the Red Army pushed German forces to the west and began to reassert control. Suffering heavy losses in conventional

battles, the UPA dispersed into smaller units and adopted guerrilla tactics, using assassinations, ambushes, and sabotage to paralyze Soviet state building and reconstruction.

The UPA went to great lengths to make cooperation with the Soviets as costly as possible. UPA supreme commander Roman Shukhevych reportedly proclaimed, "[we] should destroy all those who recognize Soviet authority. Not intimidate but destroy. We should not be concerned that people might damn us for brutality" (Statiev 2010, 131). Groups selected for punishment included "Komsomol [communist youth] members, Red Army officers, policemen . . . those who evade service in UPA, along with their families," peasants who conceded to Soviet grain requisitions, and civilians who paid government duties, voted in local elections or were even slightly suspected of treason (Statiev 2010, 124). The OUN-B routinely dumped the bodies of its victims in public places, with written warnings that other collaborators will suffer the same fate (Plotnikov 1991).

The Soviet agency overseeing counterinsurgency in Ukraine—the People's Commissariat of Internal Affairs (NKVD) —struggled to protect its informants. Starved of reliable human intelligence, the NKVD adopted increasingly indiscriminate tactics. A January 1945 decree by the Politburo of the Ukrainian Communist Party (KP(b)U) describes the problem:

> The informant network used to fight the OUN is small [and lacks] informants capable of penetrating the nationalist underground. . . . Individual troops and NKVD officers, without discrimination, use repression—burn huts and kill citizens with absolutely no connection to the bandits, discrediting themselves and organs of Soviet power.[12]

Archival records suggest that up to 75.7 percent of the 107,792 persons the NKVD killed or captured in 1944 were unarmed (Gogun 2012, 271-72). Such indiscrimination limited the NKVD's ability to attract support in the early stages of the conflict. In the words of a UPA defector from Rivne in January 1945, "it is safer to hang yourself than to turn yourself over to the Goshchanskiy rayon precinct of the NKVD."[13] While civilians took heavy losses, the UPA's underground network remained largely intact.

From the conflict's outset, the Soviets relied heavily on forcible resettlement, removing more than 266,000 civilians between 1944 and 1955 and relocating them to distant regions of the USSR, primarily Siberia, the Far East, and Central Asia.[14] NKVD and party leadership in Moscow set the overall policy, while delegating operational details to district-level commanders with the NKVD and, after 1946, Ministry of Internal Affairs (MVD) and Ministry of State Security (MGB). NKVD chief Lavrentiy Beria described the intended targets of resettlement in March 1944 as "families of OUN members in hiding . . . and residents of populated places where a large proportion of male residents are [OUN] members."[15]

The scale of resettlement was often predetermined by quota. Party officials in Moscow based these quotas on levels of rebel activity in places of origin and on the

carrying capacity and labor needs of potential destinations. Regional commanders then compiled district- and village-level lists of specific families subject to resettlement, usually exceeding the quotas by a comfortable margin. For instance, in September 1947, the Soviet Council of Ministers ordered the resettlement of 20,000 Ukrainian families to coal-producing regions in the Far East, and the MVD resettled 26,644.[16]

In practice, identifying guerrilla supporters was no simple task. During a series of operations in October 1947, suspected rebels' families accounted for 32 to 59 percent of resettled households.[17] Since the NKVD often assigned "rebel" status to families unable to account for missing militaryage male members, this figure likely inflates how selective the resettlement was. To fill quotas, officials often expanded the definition of "supporter" to those who failed to report the presence of guerrillas, and a "reserve" of individuals unconnected to rebels, but who were nevertheless subject to resettlement if "rebel families" could not be located.[18] Many families—including ones with relatives in the Red Army—were resettled by mistake.[19] An engineer at a Drogobych power station confided in a coworker (and MVD informant), that "I've never seen a government like this. These aren't people, but barbarians. Without discrimination, they grab children, women, the elderly and, despite the winter, send them to Siberia."[20]

The overwhelming majority of persons displaced by the conflict attained this status through resettlement rather than civilian flight. Since 1932, Soviet citizens were bound to "permanent places of residence" through internal passports and *propiski*—residency permits issued on a limited basis by local police. Individuals were forbidden from seeking housing, employment, and education where they had no such permit, under penalty of a fine and up to two years in prison. The criminalization of internal migration constrained civilians' options during conflict. As of 1948, 12,877 Ukrainians had attempted to escape their designated places of settlement, and all but 4,282 were subsequently caught by the authorities.[21]

The conflict's external refugee population is difficult to ascertain, but estimates of total Ukrainian emigration during and after World War II are in the range of 250,000 to 300,000. This number includes 177,000 prisoners of war and "Ostarbeiters" (German slave workers)—mainly from Central and Eastern Ukraine—who managed to avoid repatriation in 1945-46 (Voronovich and Samatyya 2004, 69; Latysh 2011, 14). Even in the unlikely case that the remaining 73,000 to 123,000 emigres were *all* refugees of the fighting, resettlement would still account for 68 to 78 percent of displaced persons.

Was resettlement coercion or brute force? Formally, relocation was conditional on a family's behavior, which usually meant turning over a missing relative. In practice, avoiding resettlement was difficult. A 1945 KP(b)U decree ordered that "The relatives of those who cannot be located are to be warned in writing that if the [missing] persons do not report to Soviet organs, they will be considered members of bands and their relatives will be subject to repression, up to and including firing squad and deportation."[22] How a family might produce a missing member—particularly

if they had gone underground, fled the country, or died—was not clear. Residents of Gorodenkovskiy rayon expressed their predicament in an open appeal to the MGB, "We are criminals in the eyes of Soviet authorities, but we have no ties to the bandits and want to faithfully serve Soviet power."[23]

The covert nature of most resettlement operations further limited civilian agency. Whereas deterrence requires a public statement of demands and an opportunity for compliance, the Soviets sought to prevent public and even internal knowledge of locations, dates, and targets. MGB commanders kept their plans secret from rayon-level KP(b)U leadership until five days prior, local MGB personnel until one to three days prior, and local party activists until several hours prior to execution.[24] The operations generally commenced in the middle of the night, and a village's general population learned of them several hours after their start.[25] This compartmentalization was driven by norms of operational secrecy, fears of leaks by OUN sympathizers, and concerns over potential civilian evasion. The quota system reinforced these incentives—each civilian who had a chance to comply with the government's demands made the quota harder to fill.

Despite this indiscrimination, many scholars consider resettlement to have been among the most decisive tools in the Soviet counterinsurgency arsenal (Vladimirtsev and Kokurin 2008; Kudelia 2013). It is difficult to identify the "resettlement effect," however, without first explaining why the NKVD used resettlement in some cases but not in others. New data opportunities make this kind of analysis possible.

## The Data

I employ a new data set of declassified incident reports from central, regional and local organs of the NKVD and KP(b)U and collections of OUN-B/UPA documents captured by the Soviets or independently released.[26] The raw data include information on the locations, dates, casualties, and tactics used in 17,171 violent events recorded between 1943 and 1955, including 6,190 rebel attacks and 10,981 government operations. In all, 997 of the government events involved the resettlement of individuals and families to Siberia, the Far East, and other distant provinces. The remainder were more conventional operations like raids, sweeps, ambushes, and pursuits.

These data represent the information commanders used in real time over the full course of the conflict, offering the most comprehensive empirical record of Soviet counterinsurgency yet fielded in social science, and a first-ever opportunity for multivariate statistical analysis at a disaggregated level.[27] Figure 1 shows the distribution of violence.

I aggregated the events to the level of a rayon (district) week.[28] Rayons are second-tier administrative units, comprising 22 villages on average, politically relevant as the geographic units of organization of the NKVD's District Departments of Internal Affairs (ROVD). This level of aggregation yields 5,208 observations in which the Soviets used force at least once.

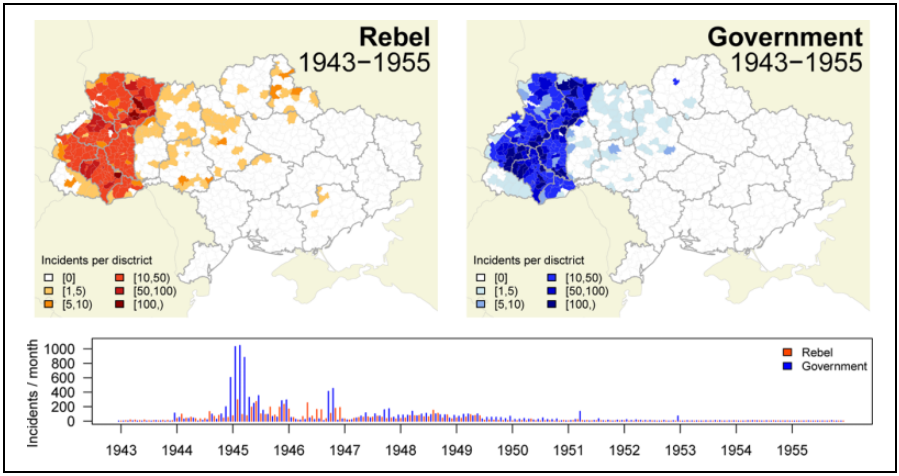


**Figure 1.** Rebellion and counterinsurgency in Ukraine, 1943-55.

## Empirical Analysis

The data analysis proceeds in two stages. First, I build an empirical model to ascertain why the Soviets used resettlement during some counterinsurgency operations but not others. The purpose of this analysis is to test Proposition 3, which holds that resettlement is most likely where the government is unable to selectivity punish her opponents. Second, I use these results to identify the effect of resettlement on subsequent rebel activity. The purpose here is to test Proposition 2, which claims that, ceteris paribus, resettlement should make government victory (i.e., a monopoly on the use of force) more likely. This proposition would find support in the data if—following resettlement—we observe a decline in violent rebel activity.

The overall research design is matched sampling, which separates the data into two groups.[29] The first is a treatment group of cases (i.e., rayon week level observations) where the Soviets used resettlement. The second is a comparison group of otherwise very similar cases where counterinsurgency operations did not involve resettlement. The rayon week level of aggregation yields 957 treatment cases and 4,251 comparison cases. In part one, I use the formal model's comparative statics (Proposition 3) to specify a theory-driven model of treatment selection. In part 2, I trim the sample to ensure that treatment and comparison units are as similar as possible on all observable pretreatment characteristics and estimate differences in posttreatment rebel activity within and across the two groups.

### *Variable Measurement*

If the model is correct, we should see more resettlement ($r$) where the government had a disadvantage in selective violence $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} < 1\right)$. Where resettlement was used,

we should see an eventual decline in rebel activity ($\rho_R$). For each rayon $j$ where a counterinsurgency operation occurred in week $t$, I measure these parameters as follows:

*Resettlement* (treatment):

$$\hat{r} = \begin{cases} 1 \text{ if resettlement was used in } j,t \\ 0 \text{ otherwise} \end{cases}; \tag{5}$$

*Punishment* (pretreatment):

$$\hat{\rho}_G^{\text{pre}} = \#\text{ of government-initiated operations in } j, \Delta t^-; \tag{6}$$

$$\hat{\rho}_R^{\text{pre}} = \#\text{ of rebel-initiated operations in } j, \Delta t^-; \tag{7}$$

*Selectivity* (pretreatment):

$$\hat{\theta}_G^{\text{pre}} = \frac{\#\text{ rebels killed by government in } j, \Delta t^-}{\#\text{ rebels} + \#\text{ civilians killed by government in } j, \Delta t^-}; \tag{8}$$

$$\hat{\theta}_R^{\text{pre}} = \frac{\#\text{ government forces killed by rebels in } j, \Delta t^-}{\#\text{ government forces} + \#\text{ civilians killed by rebels in } j, \Delta t^-}; \tag{9}$$

*Rebel activity* (posttreatment):

$$\hat{\rho}_R^{\text{post}} = \#\text{ of rebel-initiated operations in } j, \Delta t^+, \tag{10}$$

where $\Delta t$ is a time window preceding ($\Delta t^-$) and following ($\Delta t^+$) the counterinsurgency operation. I chose a twelve-week window due to the time needed to authorize, plan, and implement a resettlement operation, and the need to capture the effect of resettlement on both immediate retaliatory attacks and longer-term changes in rebel fighting capacity.[30]

The variables in equations (6) through (9) permit an empirical estimate of the *selective violence ratio*, which I measured using a three-tiered ordinal scale, indicating whether the government had a pretreatment disadvantage $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} < 1\right)$, parity $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} = 1\right)$, or advantage $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} > 1\right)$ in selective violence.[31] Recall that ratio values less than one indicate that it is safer for civilians to join the rebels than the government and vice versa.

Beyond selectivity, the model expects resettlement where the government lacks mobilizational capacity ($\alpha_G$). Extracting resources without local support requires access to an existing revenue base, security infrastructure, and transport network. I measure this concept with five variables.

First is the the *number of rural party councils* established in each rayon.[32] These councils (*selsoviets*) were the lowest echelons of the USSR's Congress of People's

Deputies responsible for local administration, tax collection, census, education, labor organization, and law enforcement.

Second is an indicator of whether a rayon was under *partisan control* in late 1942.[33] Following wholesale German dismantlement of local Soviet administration in 1941, partisans represented the most visible element of Moscow's wartime presence in the region.[34]

Third is an indicator of whether a rayon was among the *new territories* annexed from Poland after September 1939.[35] NKVD directorates were established in most of these areas between November 1939 and late 1940—decades after similar structures in the east—and Soviet rule was never fully consolidated before the German invasion.[36]

Fourth is the *distance to oblast capital* from the rayon's administrative center, in kilometers.[37] Force projection capabilities decay with distance from hubs of political and military power, due to a shift in resources from intelligence and combat to supply and logistics (Boulding 1962).

Fifth, I account for the distance from a rayon's administrative center to the *nearest railroad*, in kilometers.[38] In areas far from the rail network, the government is less able to deploy and resupply its units.

Taken together, mobilizational capacity should be weakest—and resettlement most pervasive—where rural councils were few and partisan control was limited, in newly acquired territories, far from oblast capitals and railroads. I consider the impact of each of these variables separately subsequently and provide additional analyses with a composite index in Appendix O-5.

The theoretical model describes a partial data generating process, whose predictions rest on the assumption that important aspects of the real world are fixed. In empirically modeling decisions to resettle, I attempt to control for as many potentially confounding factors as the data permit. To screen out long-term trends (e.g., gradual improvements in intelligence) and seasonal fluctuations (e.g., limited mobility during rainy seasons), I match treatment and comparison cases on their *year* and *month*. I also account for the contemporaneous interdependence of Soviet operations with a spatial lag: the proportion of *neighboring rayons where a resettlement operation took place* in the same week, weighted by the number of road connections.

Finally, I include an economic variable, *crop land*.[39] One of Moscow's local policy objectives was the collectivization of agriculture, a system that was either abolished under German occupation or—in the case of new territories in the west—never fully established. As a result, areas with soil suitable for crop cultivation became a high priority for pacification, and authorities saw the wealthy farmers (*kulaks*) who lived there as potential supporters of the UPA (Kudelia 2013; Statiev 2010, 17).

## When and Where Did Resettlement Occur?

Consistent with Proposition 3, resettlement was most likely where the Soviets had difficulty selectively targeting their opponents, while rebels had no trouble targeting

theirs. Figure 2A shows the predicted probability of resettlement ($y$-axis) at different values of the selective violence ratio ($x$-axis).[40] As predicted, the probability of resettlement was highest when and where the government had a disadvantage in selective violence $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} < 1\right)$. In such contexts, it was safer for civilians to cooperate with the rebels than with the government. The empirical results confirm that this dynamic created strong incentives to resettle the population, interdicting its cooperation with rebels rather than attempting to deter it. Where the government had an advantage in selective violence $\left(\frac{\theta_G \rho_G}{\theta_R \rho_R} > 1\right)$, the probability of resettlement fell by 61 percent from .43 (95% confidence interval [CI]: .35, .50) to .17 (.13, .21).

The same narrative holds if we disaggregate the selective violence ratio (Figures 2B, C).[41] Where government selectivity approached zero ($\theta_G = 0$)—meaning that civilians were the sole targets of the government's punishment—the probability of resettlement was .30 (.25, .36). Where government selectivity was perfect ($\theta_G = 1$)—and only rebels were punished—this probability fell by 41 percent to .17 (.14, .23). An analogous change in rebel selectivity ($\theta_R = 0$ to $\theta_R = 1$) led to a 39 percent increase in the chances of resettlement, from .23 (.18, .28) to .31 (.23, .39). As predicted by Proposition 3 (statics 1 and 2), resettlement was most likely where the government had difficulty identifying her individual opponents, but rebels did not.

As Figure 2C shows, resettlement followed a relative lull in counterinsurgency and a relative spike in rebel activity. This finding, consistent with Proposition 3 (statics 4 and 5), reflects both a competition for military resources and the use of resettlement primarily in restive areas, where other approaches proved ineffective.

Consistent with Proposition 3 (static 3), resettlement was most pervasive where mobilizational capacity was limited. As I report in Appendix O-4, the probability of resettlement was decreasing in the number of rural party councils and in the levels of wartime partisan control. As expected, the propensity for resettlement was far higher in the new territories annexed after 1939 than in those previously part of the Soviet Union. The relationship between resettlement and access to a railroad was concave, with the propensity highest at intermediate distances where Soviets retained some mobilizational capability but not the overwhelming resource advantage they exercised in directly accessible areas. Finally, the data support qualitative accounts linking resettlement to collectivization in areas suitable for crop cultivation—a factor that falls outside the scope of the formal model, but whose inclusion here does not change the primary results.

The empirical determinants of resettlement align with the model's predictions. Such efforts were most likely where government selectivity was limited—making it difficult to attract potential supporters—and mobilizational capacity was modest. The question now turns to whether—in these difficult areas—resettlement was an effective tool of counterinsurgency.

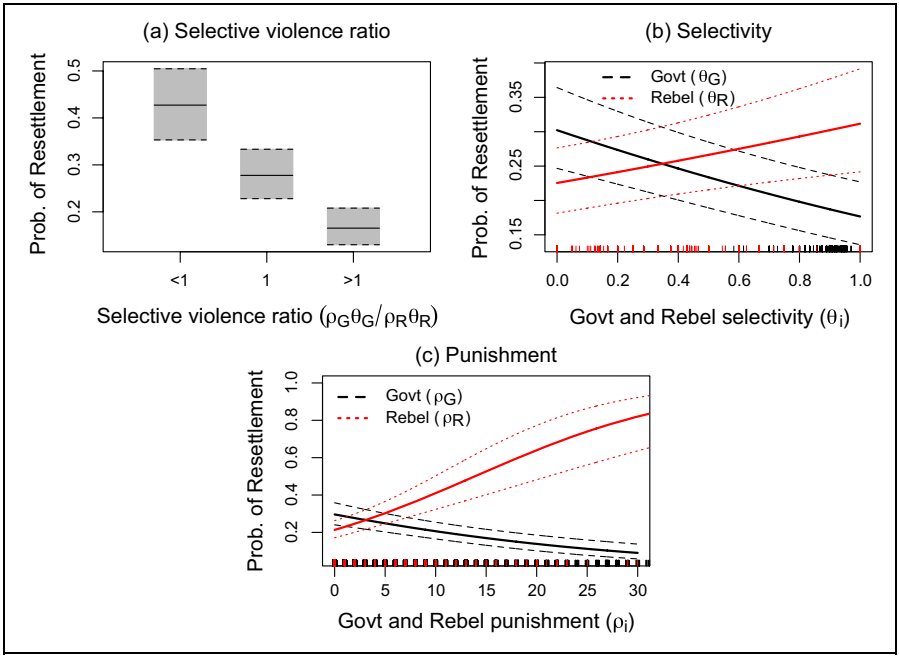


**Figure 2.** Selective violence and resettlement.
*Note*: Values reported are predicted probabilities of resettlement in a district/week (*y*-axis), given the value of each pretreatment variable (*x*-axis). All other variables are held constant at their means. Solid lines are the means of 10,000 simulations. Dashed lines are 95 percent confidence intervals.

## *Did Resettlement Work?*

Consistent with Proposition 2, resettlement had a significant suppressive effect on rebel violence. The larger the scale of resettlement, the stronger this effect was. I show this result in three ways. First, I create a matched sample of counterinsurgency operations in which resettlement was (treatment) or was not used (comparison) and report a simple difference-in-difference estimate. Second, I present model-based estimates of the resettlement effect, controlling for a range of potentially confounding variables. Third, I take a closer look at the resettlement operations themselves, to see whether the number of civilians displaced per operation mattered.

One of the challenges in identifying the "resettlement effect"—as the previous section makes clear—is that governments do not choose military strategies at random. Resettlement occurred in settings where the government had difficulty identifying and punishing opponents, and differences in subsequent rebel activity may be artefacts of this selection process.

To alleviate some of these potential biases, I used propensity score matching to create a sample of counterinsurgency operations in which resettlement was about equally likely to be used.[42] The matched data set includes 160 treatment and 160 comparison units, although Appendix O-6 reports robustness checks with a variety of alternative matching solutions.

Table 1 shows three sets of balance statistics before and after matching. The first is standardized bias, or the difference in means between treated and control units, divided by the standard deviation of the treated group. The second is a paired *t* test for difference in means. The third is a nonparametric Kolmogorov-Smirnov (KS) test for a significant difference across the entire distribution of a continuous variable. Table 1 suggests that matching led to a substantial balance improvement in all three categories.

Did resettlement suppress rebel violence? Table 2 reports difference-in-difference estimates of changes in rebel activity *between* localities exposed to the two types of counterinsurgency operations (resettlement and no resettlement) and *within* them (before and after the operation).[43] The average number of rebel attacks increased by 7 percent after a conventional counterinsurgency operation but declined by 38.9 percent after resettlement. By switching from punishment to resettlement, Soviet forces achieved a 46 percent improvement in counterinsurgency effectiveness.

The strong suppressive effect of resettlement is confirmed by model-based estimates that control for a range of potentially confounding pretreatment covariates. The incidence rate ratios in Table 3 indicate that resettlement decreased the expected number of attacks by 47 percent on average (−63.05, −23.84), relative to what we would expect without resettlement.[44]

While resettlement was evidently more effective than coercive counterinsurgency, we may wonder whether all resettlement was equally potent. The scale varied over time and space, ranging from a minimum of 3 exiles from a single rayon in a single week, to a mean of 123 and a maximum of 555. As a proportion of the local population, a single resettlement operation could displace up to 8 percent of a rayon's inhabitants. Proposition 2 predicts that the rebels' ability to maintain violence decreases in the proportion of local civilians resettled. This proposition would be empirically valid if higher levels of resettlement were followed by a lower frequency of attacks.

Figure 3A shows the expected number of local rebel attacks in the twelve weeks after resettlement, conditional on the number of people resettled (per 1,000 rayon inhabitants).[45] As the proportion of persons resettled increased, subsequent rebel attacks decreased. On average, 1.5 attacks followed a resettlement operation of a below-average scale (less than 9 people relocated per 1,000). The same statistic for larger resettlements (more than 9) was .75. Following any operation that resettled at least 1 percent of the population, the model predicts less than one attack on average.[46]

If resettlement indeed facilitates a government monopoly, we may expect it to also change the way that rebels fight. As territorial control shifts and rebels become increasingly unable to deter civilians from cooperating with the government, the selectivity of their violence is likely to fall. This prediction—although not formally derived—is implicit in the logic of the theoretical model and is consistent with the

**Table 1.** Balance Statistics for Propensity Score Matching.

| Prematching | | | | | |
|---|---|---|---|---|---|
| $N = 5{,}208$ ($T: = 957$, $C$: 4,251) | | | | | |
| Variable | Mean $T$ | Mean $C$ | Std. Bias | $t$ Test | KS Test |
| Govt selectivity (pretreatment) | 0.282 | 0.473 | −0.444 | −12.16*** | 0.2*** |
| Rebel selectivity (pretreatment) | 0.231 | 0.198 | 0.089 | 2.52* | 0.05 |
| Govt violence (pretreatment) | 3.286 | 6.347 | −0.393 | −9.91*** | 0.25*** |
| Rebel violence (pretreatment) | 2.226 | 1.582 | 0.186 | 5.44*** | 0.1*** |
| Distance to railroad (km) | 6.936 | 6.566 | 0.033 | 0.92 | 0.06* |
| Distance to oblast capital (km) | 59.518 | 61.411 | −0.054 | −1.48 | 0.03 |
| New territory | 0.999 | 0.979 | 0.630 | 8.3*** | |
| Number of rural councils | 24.649 | 25.769 | −0.145 | −4.02*** | 0.08*** |
| Crop land | 0.870 | 0.814 | 0.167 | 4.54*** | |
| Partisan control in WWII | 0.136 | 0.160 | −0.070 | −1.92 | |
| Resettlement in neighboring rayons | 0.357 | 0.007 | 1.024 | 31.6*** | 0.63*** |
| Year | 1946.912 | 1947.227 | −0.138 | −3.88*** | 0.15*** |
| Month | 4.865 | 6.412 | −0.515 | −14.13*** | 0.25*** |
| Post-matching | | | | | |
| $N = 320$ ($T$ : 160, $C$ : 160) | | | | | |
| Variable | Mean $T$ | Mean $C$ | Std. Bias | T Test | KS Test |
| Govt selectivity (pretreatment) | 0.375 | 0.374 | 0.003 | 0.03 | 0.07 |
| Rebel selectivity (pretreatment) | 0.258 | 0.209 | 0.125 | 1.19 | 0.08 |
| Govt violence (pretreatment) | 5.300 | 4.919 | 0.037 | 0.39 | 0.16* |
| Rebel violence (pretreatment) | 1.719 | 1.606 | 0.054 | 0.49 | 0.11 |
| Distance to railroad (km) | 5.037 | 4.994 | 0.004 | 0.04 | 0.08 |
| Distance to oblast capital (km) | 51.969 | 57.413 | −0.148 | −1.39 | 0.12 |
| New territory | 0.994 | 1.000 | −0.079 | −1 | |
| Number of rural councils | 23.669 | 24.113 | −0.059 | −0.53 | 0.07 |
| Crop land | 0.800 | 0.794 | 0.016 | 0.14 | |
| Partisan control in WWII | 0.156 | 0.225 | −0.189 | −1.65 | |
| Resettlement in neighboring rayons | 0.169 | 0.171 | −0.005 | −0.41 | 0.06 |
| Year | 1946.950 | 1946.850 | 0.044 | 0.4 | 0.09 |
| Month | 5.400 | 5.588 | −0.059 | −0.62 | 0.12 |

*$p < .05$. **$p < .01$. ***$p < .001$.

expectations of Kalyvas (2006). Figure 3B confirms this expectation.[47] In the weeks following an operation that resettled just one person per 1,000, government forces constituted 14 percent of those killed by rebels (11, 17). If resettlement increased to 80 per 1,000, rebel selectivity fell to 3 percent (0, 7).

**Table 2.** Difference-in-difference Results.[a]

| Quantity | No resettlement | Resettlement | Diff-in-Diff |
|---|---|---|---|
| $E[Y_{t=0}]$ | 1.61 | 1.72 | 0.11 |
| $E[Y_{t=1}]$ | 1.72 | 1.05 | −0.67 |
| $E[Y_{t=1} - Y_{t=0}]$ | 0.11 | −0.67 | −0.78 |
| Percentage change | 7.00% | −38.91% | −45.91% |

[a]$E[Y_t]$ is the average number of rebel attacks observed in the twelve weeks before ($t = 0$) and after ($t = 1$) a counterinsurgency operation.

**Table 3.** Incidence Rate Ratios from Negative Binomial Regression.[a]

| Quantity | Resettlement only | Including all variables |
|---|---|---|
| Incidence rate ratio | 0.61 (0.42, 0.89) | 0.53 (0.37, 0.76) |
| Percentage change | −38.91% (−58.21%, −10.69%) | −46.95% (−63.05%, −23.84%) |
| *n* | 320 | 320 |
| AIC | 1003.9 | 979.02 |

*Note*: AIC = Akaike Information Criterion.

[a]An incidence rate ratio $\left(\frac{E[Y|D=1]}{E[Y|D=0]}\right)$ compares the expected number of rebel attacks following counterinsurgency operations with ($D = 1$) and without ($D = 0$) resettlement.

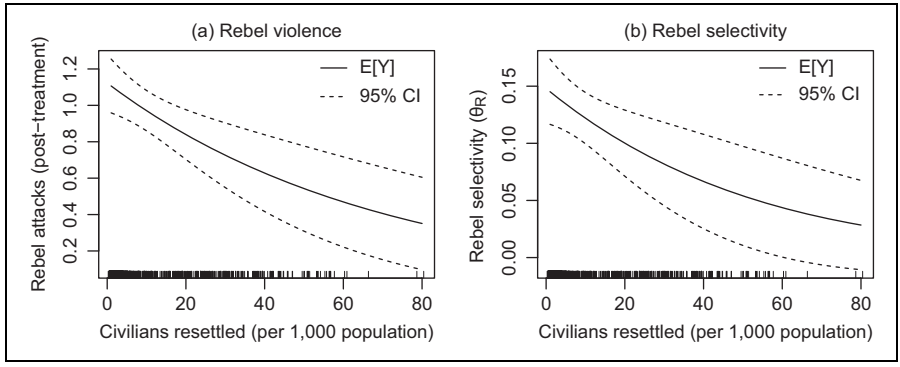


**Figure 3.** Scale of resettlement and subsequent rebel activity.
*Note*: Values reported are the (a) expected number of rebel attacks and (b) expected rebel selectivity in the twelve weeks following resettlement.

## Conclusion

Resettlement suppresses rebel activity by isolating rebels from civilians. Its use, however, betrays a certain weakness. Counterinsurgency success hangs on the ability to either control a population, or earn its support. A reliance on the first of these is

rarely needed if the government is able to protect its supporters from retaliation. Where this is not the case, the government will lack the information needed to distinguish individual rebels from civilians, making war more costly for those who remain neutral. A population that lives in relative security is unlikely to seek protection from rebels or accept the risks of supporting an armed insurrection. A government that can avoid inflaming these incentives is unlikely to resort to extreme countermeasures. A government that alienates its population through the systematic use of indiscriminate force may find little recourse.

These results have several implications for civil war research. First, they illustrate that resettlement and other brute-force technologies of violence can be potent alternatives to coercion, particularly where information problems limit one's ability to selectively punish. These substitution effects may help explain why indiscriminate violence occurs where theories of civil war say it should not—where both sides depend on popular support (Azam and Hoeffler 2002) and where the opponent enjoys a coercive advantage (Kalyvas 2006).

Second, this study formalizes and generalizes the insight that combatants displace when and where they cannot obtain information on individual loyalties and must rely instead on group-level indicators (Steele 2011; Balcells and Steele 2012). Empirically, I show that this logic extends to cases, like Ukraine, where combatants cannot use election results to ascertain group-level preferences. Theoretically, I disaggregate displacement into civilian flight and resettlement and show that resettlement occurs where flight is too costly to provoke—due to information problems or physical and legal constraints on emigration.

The Soviet experience offers a clear illustration of these pathologies at work. Facing a nationalist insurgency in post–World War II Ukraine, the Soviets relied on resettlement when and where they lacked the information needed to selectively target rebels. In these instances, they generated violence on a massive scale, much of it misdirected at civilians. As a strong government with acute local disadvantages, the Soviets faced clear incentives to prevent a terrorized population from joining the insurgency. They acted on these incentives, and the gamble paid off. In areas where resettlement was most likely to be used, it proved considerably more effective at suppressing rebel attacks than conventional counterinsurgency. The larger the scale of the resettlement, the more attacks it prevented.

Some may question the need to rationalize practices of such wanton cruelty and destructiveness. The forcible uprooting of a community—like many other acts of government repression—seems so cynical and shortsighted as to defy explanation. It is tempting to dismiss the Soviet Union's many vicious social experiments by citing the idiosyncrasies of communist ideology, errors of judgement, or the personal whims of Josef Stalin. Yet history has shown that the world's most prolific practitioner of strategic resettlement was hardly its only one. The fact that resettlement has recurred in conflicts as diverse as Malaya, Algeria, and Vietnam and has not been limited to autocratic or—in the case of Yugoslavia—even particularly powerful regimes, obliges us to explain these matters more fully.

As long as indiscriminate violence remains an endemic feature of irregular war, combatants will seek ways to manage its backlash. The preceding analysis has shown that such damage control can be at least as brutal as the original sin it endeavors to address. One perverse lesson of the Soviet experience is that—to achieve victory—more repression may be better than less. Insofar as other embattled leaders—from Omar al-Bashir to Bashar al-Assad—might draw the same conclusions, it is essential to understand why, when, and where such dangerous ideas will be put to practice.

## Appendix

### Abbreviations

GARF: State Archives of the Russian Federation, Moscow; RGVA: Russian State Military Archive, Moscow; TsDAGOU: Central State Archive of Public Organizations of Ukraine, Kyiv; GA SBU: State Archive of the Security Service of Ukraine, Kyiv; F: file (*fond*); Op: catalog (*opis'*/*opys*); D/Spr: case (*delo*/*sprava*); L/Ark: page (*list*/*arkush*).

### Proof of Lemma 1

**Proof:** Let $\kappa(i)$ denote the expected costs associated with membership in group $i \in \{G, R, C\}$, with $\kappa(G) = \rho_R\theta_R, \kappa(R) = \rho_G\theta_G$, and $\kappa(C) = \rho_R(1-\theta_R) + \rho_G(1-\theta_G)$. The statement $[\kappa(C) < \kappa(G)] \wedge [\kappa(C) < \kappa(R)]$ ("staying neutral is less costly than joining either combatant") is never true for any $\rho_G \in (0,\infty), \rho_R \in (0,\infty), \theta_G \in [0,1], \theta_R \in [0,1]$ and $\theta_G + \theta_R = 1$. The statement $[\kappa(C) < \kappa(G)] \wedge [\kappa(C) > \kappa(R)]$ ("staying neutral is less costly than joining $G$ but more costly than joining $R$") is true if and only if $[\rho_G < \rho_R] \wedge \left[0 \leq \theta_G < \frac{\rho_R - \rho_G}{2\rho_R - \rho_G}\right]$, and $[\kappa(C) > \kappa(G)] \wedge [\kappa(C) < \kappa(R)]$ ("staying neutral is more costly than joining $G$ but less costly than joining $R$") is true if and only if $[\rho_G > \rho_R] \wedge \left[\frac{\rho_G}{2\rho_G - \rho_R} < \theta_G \leq 1\right]$. The statement $[\kappa(C) > \kappa(G)] \wedge [\kappa(C) > \kappa(R)]$ ("staying neutral is more costly than joining $G$ or $R$") is true in all other cases: equation (1) $[\rho_G > \rho_R] \wedge \left[0 \leq \theta_G < \frac{\rho_G}{2\rho_G - \rho_R}\right]$, equation (2) $[\rho_G < \rho_R] \wedge \left[\frac{\rho_R - \rho_G}{2\rho_R - \rho_G} < \theta_G \leq 1\right]$.

### Proof of Proposition 1

**Proof:** Define an equilibrium of equations (2) through (4) as a fixed point satisfying $\frac{\delta C}{\delta t} = 0, \frac{\delta G}{\delta t} = 0, \frac{\delta R}{\delta t} = 0$. These conditions are satisfied at

$$C_{eq} = \frac{\rho_R \theta_R + u}{\mu_G}, \quad G_{\text{eq}} = \frac{k}{\rho_R \theta_R + u} - \frac{\rho_G(1-\theta_G) + \rho_R(1-\theta_R) + u}{\mu_G}, \quad R_{\text{eq}} = 0 \tag{11}$$

$$C_{\text{eq}} = \frac{\rho_G \theta_G + u}{\mu_R}, \quad G_{\text{eq}} = 0, \quad R_{\text{eq}} = \frac{k}{\rho_G \theta_G + u} - \frac{\rho_G(1-\theta_G) + \rho_R(1-\theta_R) + u}{\mu_R}, \tag{12}$$

$$C_{\text{eq}} = \frac{k}{\rho_G(1-\theta_G) + \rho_R(1-\theta_R) + u}, \quad G_{\text{eq}} = 0, \quad R_{\text{eq}} = 0. \tag{13}$$

Where equation (11) is a government victory equilibrium with $\pi_G(\mathbf{s}) = 1, \pi_R(\mathbf{s}) = 0$, equation (12) is a rebel victory equilibrium satisfying $\pi_G(\mathbf{s}) = 0, \pi_R(\mathbf{s}) = 1$, and equation (13) is a trivial equilibrium with $\pi_G(\mathbf{s}) = \pi_R(\mathbf{s}) = 0$. Due to space constraints and the symmetry of equation (11) and (12), I limit the following analysis to government victory (equation 11).

This equilibrium exists (i.e., yields nonnegative group sizes) for all $\rho_G \in (0, \infty), \rho_R \in (0, \infty), \theta_G \in [0, 1], \theta_R \in [0, 1], k \in (\underline{k}, \infty), u \in (0, \infty)$, with a lower bound on $k$, $\underline{k} = \frac{(\rho_G(1-\theta_G)+\rho_R(1-\theta_R)+u)(\rho_R\theta_R+u)}{\mu_G}$, and $\mu_i$ as defined in equation (1). The stability of this equilibrium can be shown through linearization. Let $\mathbf{J}$ be the Jacobian of the system in equations (2) through (4) evaluated at fixed point (equation 11).

$$\mathbf{J} = \begin{bmatrix} -\frac{k\mu_G}{\rho_R\theta_R+u} & -\rho_R\theta_R - u & -\frac{\mu_R(\rho_R\theta_R+u)}{\mu_G} \\ 0 & 0 & \frac{\mu_R(\rho_R\theta_R+u)}{\mu_G} - \rho_G\theta_G - u \\ \frac{k\mu_G}{\rho_R\theta_R+u} - (\rho_G(1-\theta_G) + \rho_R(1-\theta_R) + u) & 0 & 0 \end{bmatrix}. \tag{14}$$

The determinant and trace of $\mathbf{J}$ are

$$\det(\mathbf{J}) = \left(\rho_G\theta_G + u - \frac{\mu_R(\rho_R\theta_R+u)}{\mu_{\mathbf{G}}}\right)(k\mu_G - (\rho_R\theta_R+u)(\rho_G(1-\theta_G) + \rho_R(1-\theta_R) + u)), \tag{15}$$

$$\text{tr}(\mathbf{J}) = -\frac{k\mu_G}{\rho_R\theta_R+u}. \tag{16}$$

The equilibrium point in equation (11) is stable if all the eigenvalues of $\mathbf{J}$ have negative real parts or $\det(\mathbf{J}) > 0, \text{tr}(\mathbf{J}) < 0$. These conditions hold for all $\rho_G \in (0, \infty), \rho_R \in (0, \infty), \theta_G \in [0, 1], \theta_R \in [0, 1], k \in (0, \infty), u \in (0, \infty)$ if and only if $\frac{\rho_G\theta_G}{\rho_R\theta_R} > 1$. □

## Proof of Proposition 2

**Proof:** Given the fixed point in equation (11) and the Jacobian in equation (14), we substitute $(1-d)\left(1-\frac{\rho_{-i}\theta_{-i}}{\rho_i+\rho_{-i}}\right)+\alpha_i$ for $\mu_i$, with $d=r+f(\sum_i \rho_i)$. To ensure nonnegative population values, we impose a lower bound on immigration $\underline{k}=\frac{(\rho_G(1-\theta_G)+\rho_R(1-\theta_R)+u)(\rho_R\theta_R+u)}{\mu_G}$. A government victory equilibrium is stable ($\det(\mathbf{J})>0, \mathrm{tr}(\mathbf{J})<0$) for all $\rho_i\in(0,\infty), \theta_i\in[0,1], k\in(\underline{k},\infty), u\in(0,\infty)$, $d\in(0,1), \alpha_i\in(0,\infty), \alpha_G>\alpha_R$ if either of the following statements is true: (a) $\left[\frac{\rho_G\theta_G}{\rho_R\theta_R}>1, \alpha_R<\overline{\alpha}_R\right]$, or (b) $\left[\frac{\rho_G\theta_G}{\rho_R\theta_R}<1, \alpha_R<\overline{\alpha}_R\right] \wedge [r>\underline{r}]$, where $\overline{\alpha}_R=\frac{\alpha_G(\rho_G+\rho_R)(\theta_G\rho_G+u)-(\rho_G+\rho_R+u)(1-r-f(\rho_G+\rho_R))(\theta_R\rho_R-\theta_G\rho_G)}{(\rho_G+\rho_R)(\theta_R\rho_R+u)}$, is an upper bound on $\alpha_R$ and $\underline{r}=1-\frac{\alpha_G(\rho_G\theta_G+u)(\rho_G+\rho_R)-\alpha_R(\rho_R\theta_R+u)(\rho_G+\rho_R)}{(\rho_G+\rho_R+u)(\rho_R\theta_R-\rho_G\theta_G)}-f(\rho_G+\rho_R)$ is a lower bound on $r$. □

## Proof of Proposition 3

**Proof:** To see how the threshold value of

$$\underline{r}=1-\frac{\alpha_G(\rho_G\theta_G+u)(\rho_G+\rho_R)-\alpha_R(\rho_R\theta_R+u)(\rho_G+\rho_R)}{(\rho_G+\rho_R+u)(\rho_R\theta_R-\rho_G\theta_G)}-f(\rho_G+\rho_R)$$

varies with the other model parameters, we differentiate and obtain

$$\frac{\delta r}{\delta\theta_G}=-\frac{\rho_G(\alpha_G-\alpha_R)(\rho_G+\rho_R)(\theta_R\rho_R+u)}{(\rho_G+\rho_R+u)(\theta_G\rho_G-\theta_R\rho_R)^2}, \tag{17}$$

$$\frac{\delta r}{\delta\theta_R}=\frac{\rho_R(\alpha_G-\alpha_R)(\rho_G+\rho_R)(\theta_G\rho_G+u)}{(\rho_G+\rho_R+u)(\theta_G\rho_G-\theta_R\rho_R)^2}, \tag{18}$$

$$\frac{\delta r}{\delta\alpha_G}=\frac{(\rho_G+\rho_R)(\theta_G\rho_G+u)}{(\rho_G+\rho_R+u)(\theta_G\rho_G-\theta_R\rho_R)} \tag{19}$$

$$\frac{\delta r}{\delta\alpha_R}=\frac{(\rho_G+\rho_R)(\theta_R\rho_R+u)}{(\rho_G+\rho_R+u)(\theta_R\rho_R-\theta_G\rho_G)} \tag{20}$$

$$\frac{\delta r}{\delta \rho_G} = -f - \frac{\rho_R(\alpha_G - \alpha_R)\left(\theta_G\theta_R(\rho_G + \rho_R)^2 + u^2(\theta_G + \theta_R)\right)}{(\rho_G + \rho_R + u)^2(\theta_G\rho_G - \theta_R\rho_R)^2} + \frac{u\left(\rho_R^2\left(\alpha_R\left(\theta_G\theta_R + \theta_G + \theta_R^2\right) - \alpha_G\theta_G(\theta_R + 1)\right)\right.}{\left.-2\theta_G\rho_G\rho_R(\alpha_G\theta_R + \alpha_G - \alpha_R) + \theta_G\rho_G^2(\alpha_G(\theta_G - 1) + \alpha_R)\right)}{(\rho_G + \rho_R + u)^2(\theta_G\rho_G - \theta_R\rho_R)^2}, \tag{21}$$

$$\frac{\delta r}{\delta \rho_R} = -f + \frac{(\alpha_G - \alpha_R)\left(\theta_G\theta_R\rho_G(\rho_G + \rho_R)^2 + \rho_G u^2(\theta_G + \theta_R)\right)}{(\rho_G + \rho_R + u)^2(\theta_G\rho_G - \theta_R\rho_R)^2} + \frac{u\left(\rho_G^2\left((\theta_G + 1)\theta_R(\alpha_G - \alpha_R) + \alpha_G\theta_G^2\right) + 2\theta_R\rho_G\rho_R(\alpha_G - \alpha_R(\theta_G + 1))\right.}{\left.+\theta_R\rho_R^2(\alpha_G - \alpha_R(1 - \theta_R))\right)}{(\rho_G + \rho_R + u)^2(\theta_G\rho_G - \theta_R\rho_R)^2}, \tag{22}$$

$$\frac{\delta r}{\delta f} = -\rho_G - \rho_R, \tag{23}$$

with $\frac{\delta r}{\delta \theta_G} < 0, \frac{\delta r}{\delta \theta_R} > 0, \frac{\delta r}{\delta \alpha_G} < 0, \frac{\delta r}{\delta \alpha_R} > 0, \frac{\delta r}{\delta \rho_G} < 0, \frac{\delta r}{\delta \rho_R} > 0, \frac{\delta r}{\delta f} < 0$ for all $\rho_i \in (0, \infty)$, $\theta_i \in [0, 1], k \in (0, \infty), u \in (0, \infty), d \in (0, 1), \alpha_i \in (0, \infty), \alpha_G > \alpha_R, \theta_R > \theta_G$.

We can also show that resettlement is more cost-efficient than punishing (i.e., more civilians displaced per unit of effort) when government selectivity is low and rebel selectivity is high. Recall that $d = r + f(\sum_i \rho_i)$. Assume $f()$ is linear. Suppose that in equilibrium $R$ plays best response $\rho_R = \rho_G \frac{\theta_G}{\theta_R}$, such that $\frac{\delta d}{\delta r} = 1$ and $\frac{\delta d}{\delta \rho_G} = f\left(1 + \frac{\theta_G}{\theta_R}\right)$. Then $\frac{\delta d}{\delta r} > \frac{\delta d}{\delta \rho_G}$ if $f < \frac{\theta_R}{\theta_G + \theta_R}$. The greater $\theta_R$ is relative to $\theta_G$, the more likely this inequality is to be true.

## Authors' Note

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## Notes

1. Sample based on Lyall and Wilson's (2009) data set of counterinsurgency campaigns (full enumeration in Appendix O-1).
2. GA SBU, F.13, D. 373, T. 103, L. 9-11.
3. I define a *civil war* as an armed contestation of sovereignty between two or more parties initially subject to a common state authority (Kalyvas 2006, 17-19).
4. The five most prolific practitioners of resettlement are the United States (13 conflicts), Russia/USSR (11), the United Kingdom (5), China (5) and Germany (4).
5. Appendix O-2 includes an extension of this model, where civilians are "greedy" and combatants use a mix of punishment and rewards to attract support.
6. Appendix O-2 includes an extension of the model, with $\theta_i$ reparameterized as an endogenous, time-varying function of relative levels of support.
7. The immigration-death process is traditionally used in mathematical modeling to ensure a stable, nonnegative population (May and Nowak 1995).
8. There also exists a trivial equilibrium in which both combatant populations are zero.
9. An equilibrium solution is considered asymptotically stable if it remains unchanged after small perturbations in initial conditions and parameter values.
10. An estimated 62 million people were killed (Rummel 1994, 4; Pinker 2011) and 12 million resettled (Pobol' and Polyan 2005, 12) by the Soviet government between 1917 and 1989—more than in the People's Republic of China and Nazi Germany combined. The 62 million include deaths in labor camps (39.5), and those attributable to terror (8.3), collectivization (7.8), resettlement (4.3), and other causes (2) (Rummel 1994, 83).
11. GA SBU, F.13, D. 373, T. 103, L. 9-11.
12. TsDAGO, F. 1, op. 16, spr. 29, ark. 1-12.
13. TsDAGOU, F. 1, Op. 23, Spr. 1700, Ark. 69-78
14. The top three destinations were Kemerovo Oblast (28,000), Khabarovsk Krai (26,000), and Krasnoyarsk Krai (14,000). GARF, F. 9479, Op. 1, D. 597, L. 178-180.
15. GARF, F. R-9401, Op. 2, D. 64, L. 170-172.

16. GARF, F. R-9401, Op. 2, D. 199, L. 232-236
17. TsDAGO, F. 1, op. 23, spr. 4969, ark. 133-38; TsDAGO, F. 1, op. 23, spr. 4963, ark. 61-72.
18. TsDAGO, F. 1, op. 23, spr. 4963, ark. 31-35.
19. TsDAGO, F. 1, op. 23, spr. 4976, ark. 2-14.
20. TsDAGO, F. 1, op. 23, spr. 4963, ark. 28-30.
21. GARF, F. R-9401, Op. 1, D. 3144, L. 20.
22. TsDAGO, F. 1, op. 16, spr. 29, ark. 1-12
23. TsDAGO, F. 1, op. 23, spr. 4963, ark. 61-72
24. TsDAGO, F. 1, op. 23, spr. 4963, ark. 39-41.
25. TsDAGO, F. 1, op. 23, spr. 4976, ark. 2-14.
26. Key archival data sources include GARF R-9401, Op. 1-2; GARF, F. R-9478, Op. 1; GARF, F. R-9479, Op. 1; RGVA, F. 38650, Op. 1; and TsDAGOU, F. 1, Op. 23.
27. Previous work has relied on aggregate statistics and qualitative methods (Darden in press; Kudelia 2013).
28. I was able to geocode 94.93 percent of events to the village level, 97.96 percent to the rayon (district) level, and 98.65 percent to the oblast (province) level, using declassified Soviet military maps and annual geographic reference volumes from 1941 to 1955 (Appendix O-3).
29. Appendix O-6 shows that results are robust to an array of alternative estimators.
30. Archival records suggest the NKVD carried out resettlement in response to events as recent as one week and as distant as three months. GARF, F. 9479, Op. 1, D. 62, L. 72-73. Appendix O-6 provides a sensitivity analysis with a variety of alternative treatment windows and estimators.
31. I used an ordinal scale because the ratio is undefined when rebel selectivity is zero.
32. Presidium of Supreme Soviet of USSR, Information-Statistical Division (1941/1946/1954).
33. Main Topographic Directorate of USSR General Staff; Sokhan' and Potichnyj (2002/2003)
34. As of November 15, 1942, thirty-eight of the fifty-five partisan units based in occupied Ukraine (69 percent) were in regular communication with the partisan movement's central Ukrainian staff (UShPD). TSDAGOU, F. 57, Op. 4, spr. 190, ark. 193.
35. These areas included Drogobychskaya, Lvovskaya, Rovenskaya, Stanislavskaya, Tarnopol'skaya, and Volynskaya oblasts (incorporated December 1939) as well as Chernovitskaya (from Bessarabia and Bukovina, August 1940) and Zakarpatskaya oblast (from Slovakia, January 1946). Source: Presidium of Supreme Soviet of USSR, Information-Statistical Division (1941/1946/1954).
36. GARF, F. R-9401, Op. 1a, D. 36, L. 225-228, 234-237.
37. Presidium of Supreme Soviet of USSR, Information-Statistical Division (1941/1946/1954).
38. Presidium of Supreme Soviet of USSR, Information-Statistical Division (1941/1946/1954).
39. Main Geodesy and Cartography Department of USSR Council of Ministers.

40. These results are from 10,000 simulations based on a generalized additive logit model (model 2 in Appendix O-4), in which the dependent variable was the use/nonuse of resettlement, regressed on all of the covariates described in the previous section.
41. Predicted probabilities based on model 1 in Appendix O-4.
42. Propensity scores are probabilities of treatment (resettlement) given a set of observed pretreatment conditions. Predicted probabilities for the 5,208 operations in the full sample were fitted values from the generalized additive logit model shown in Figure 2 (model 1 in Appendix O-4). For each operation involving resettlement, the algorithm selected a comparison case (no resettlement) with the closest propensity score, using a tolerance level (caliper) of $< 0.0001$ standard deviations on the maximum propensity score distance.
43. Formally, the estimator is $\delta = (E[Y_{t=1}|D = 1] - E[Y_{t=0}|D = 1]) - (E[Y_{t=1}|\ D = 0] - E[Y_{t=0}|D = 0])$, where $Y_t$ is the number of rebel attacks at $t = 0$ (before treatment) and $t = 1$ (after treatment), and $D$ is treatment assignment (1 if resettlement, 0 otherwise).
44. Predictions in Table 3 are based on a negative binomial regression with heteroscedastic and autocorrelation consistent (HAC) robust standard errors (models 5 and 6 in Appendix O-4). The dependent variable here is the number of rebel attacks observed in the twelve weeks following a counterinsurgency operation.
45. Predictions based on a negative binomial model estimated on just the 957 treated cases (model 8 in Appendix O-4). The dependent variable is the number of post-resettlement rebel attacks regressed on the proportion of civilians resettled.
46. Appendix O-4 shows that these results hold when the independent variable is the absolute number resettled, rather than the prsoportion.
47. Predicted probabilities based on model 10 in Appendix O-4.

## Supplementary Material

The online appendix is available at http://jcr.sagepub.com/supplemental.

## References

Adhikari, Prakash. 2012. "Conflict-induced Displacement, Understanding the Causes of Flight." *American Journal of Political Science* 57 (1): 82-89.

Azam, Jean-Paul, and Anke Hoeffler. 2002. "Violence against Civilians in Civil Wars: Looting or Terror?" *Journal of Peace Research* 39 (4): 461-85.

Balcells, Laia, and Abbey Steele. 2012. "Warfare, Political Identities, and Displacement in Spain and Colombia." HiCN Working Paper 124, The Institute of Development Studies - at the University of Sussex, Falmer, Brighton, October.

Bassiouni, M. C. "Final Report of the United Nations Commission of Experts Established Pursuant to Security Council Resolution 780 (1992). Annex VIII - part 1/10. Prison Camps," United Nations, S/1994/674/Add.2 (Vol. IV), May 27, 1994.

Boulding, Kenneth. 1962. *Conflict and Defense*. Harper, Oxford, England.

Darden, Keith A. in press. "Resisting Occupation in Eurasia: Mass Schooling and the Creation of Durable National Loyalties." Cambridge University Press.

Davenport, Christian A., Will H. Moore, and Steven C. Poe. 2003. "Sometimes You Just Have to Leave: Domestic Threats and Forced Migration, 1964-1989." *International Interaction* 29:27-55.

*Counterinsurgency Field Manual*. Field Manual No. 3-24. 2006. Washington, DC: Heaquarters, Department of the Army.

Gogun, A. 2012. *Mezhdu Gitlerom i Stalinom: Ukrainskie Povstantsy* [Between Hitler and Stalin: Ukrainian Insurgents]. Moscow: OLMA Media Grupp.

Greenhill, Kelly M., and Paul Staniland. 2007. "Ten Ways to Lose at Counterinsurgency." *Civil Wars* 9 (4): 402-19.

Hack, Karl. 2009. "The Malayan Emergency as Counter-insurgency Paradigm." *Journal of Strategic Studies* 32 (3): 383-414.

Jundanian, Brendan F. 1974. "Resettlement Programs: Counterinsurgency in Mozambique." *Comparative Politics* 6 (4): 519-40.

Kalyvas, Stathis N. 2006. *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.

Kalyvas, Stathis N., and Matthew Adam Kocher. 2007. "How 'Free' Is Free-riding in Civil War? Violence, Insurgency, and the Collective Action Problem." *World Politics* 59 (2). 177-216.

Kress, Moshe, and Roberto Szechtman. 2009. "Why Defeating Insurgencies is Hard: The Effect of Intelligence in Counterinsurgency Operations—A Best-case Scenario." *Operations Research* 57 (3): 578-85.

Kudelia, Serhiy. 2013. "Choosing Violence in Irregular Wars: The Case of Anti-Soviet Insurgency in Western Ukraine." *East European Politics & Societies* 27 (1): 1149-181.

Kunz, Egon. 1973. "The Refugee in Flight: Kinetic Models and Forms of Displacement." *International Migration Review* 7:125-46.

Latysh, Yuri. 2011. *Ukraina v gody poslevoennogo vosstanovleniya (1944-1953)* [Ukraine in the Years of Postwar Reconstruction (1944-1953)]. Kiev: Logos. "70 let sovetskogo passporta [70 years of the Soviet passport]," *Demoskop Weekly* (93-94), December 16-31, 2002.

Lyall, Jason, and Isaiah Wilson. 2009. "Rage against the Machines: Explaining Outcomes in Counterinsurgency Wars." *International Organization* 63 (1): 67-106.

May, Robert M., and Martin A. Nowak. 1995. "Coinfection and the Evolution of Parasite Virulence." *Proceedings: Biological Sciences* 261 (1361): 209-15.

Moore, Will H., and Stephen M. Shellman. 2004. "Fear of Persecution: Forced Migration, 1952-1995." *Journal of Conflict Resolution* 48 (5): 723-45.

Morrison, Andrew R., and Rachel A. May. 1994. "Escape from Terror: Violence and Migration in Post-revolutionary Guatemala." *Latin American Research Review* 29:111-33.

Petersen, William. 1958. "A General Typology of Migration." *American Sociological Review* 23 (3): 256-66.

Pinker, Steven. 2011. *The Better Angels of Our Nature: Why Violence Has Declined*. New York: Penguin Group.

Plotnikov, N. D. 1991. "Smertonostsy [Carriers of Death]." *Viz* 3:52-61.

Pobol', N. L., and P. M. Polyan, eds. 2005. *Stalinskie Deportatsii, 1928-1953* [Stalin's Deportations, 1929-1953]. Moscow: Materik.

Presidium of Supreme Soviet of USSR, Information-Statistical Division, ed. 1941/1946/1954. *SSSR: Administrativno-territorial'noye delenie soyuznykh respublik* [USSR: Administrative Division of Union Republics]. Moscow: Izd. "Izvestiya Sovetov Deputatov Trudyashchikhsya SSSR."

Rummel, Rudolph J. 1994. *Death by Government*. New Brunswick, NJ: Transaction.

Salehyan, Idean. 2008. "The Externalities of Civil Strife: Refugees as a Source of International Conflict." *American Journal of Political Science* 52 (4): 787-801.

Salehyan, Idean, and Kristian Skrede Gleditsch. 2006. "Refugees and the Spread of Civil War." *International Organization* 60 (2): 335-66.

Schelling, Thomas C. 1966. *Arms and Influence*. New Haven, CT: Yale University Press.

Schmeidl, Susanne. 1997. "Exploring the Causes of Forced Migration: A Pooled Time-series Analysis, 1971-1990." *Social Science Quarterly* 78 (2): 284-308.

Sokhan', P., and P. Potichnyj, eds. 2002/2003. *Litopys UPA*, New Series, vol. 4-7. Kyiv: State Committee for Archives of Ukraine, Central State Archive of Public Associations of Ukraine.

Statiev, Alexander. 2010. *The Soviet Counterinsurgency in the Western Borderlands*. Cambridge: Cambridge University Press.

Steele, Abbey. 2007. *Massive Civilian Displacement in Civil War: Assessing Variation in Colombia*. Technical Report Households in Conflict Network. Brighton, England: The Institute of Development Studies, University of Sussex.

Steele, Abbey. 2011. "Electing Displacement: Political Cleansing in Apartadó, Colombia." *Journal of Conflict Resolution* 55 (3): 423-45.

Tilly, Charles. 1985. "War Making and State Making as Organized Crime." In *Bringing the State Back In*, edited by P. Evans, T. Skocpol, and D. Rueschemeyer, 169-91. Cambridge: Cambridge University Press.

United Nations. 1951. "Convention Relating to the Status of Refugees." Accessed January 15, 2014. http://www.unhcr.org/3b66c2aa10.pdf.

Urdal, Henrik. 2005. "People vs Malthus: Population Pressure, Environmental Degradation, and Armed Conflict Revisited." *Journal of Peace Research* 42 (4): 417-34.

Vladimirtsev, N., and A. Kokurin. 2008. *NKVD-MVD SSSR v bor'be s banditizmom i vooruzhennym natsionalisticheskim podpol'yem na Zapadnoy Ukraine, v Zapadnoy Belorussii i Pribaltike 1939-1956* [NKVD-MVD in the Struggle against Banditry and Armed Nationalist Guerillas in Western Ukraine, Western Belarus and the Baltics]. Moscow: MVD.

Voronovich, Vitaliy, and Vadim Samatyya. 2004. "Problema bezhentsev i peremeshchennykh lits iz SSSR v period vtoroy mirovoy voyny i poslevoennye gody (1939-1951gg.)." *Belarusian Journal of International Law and International Relations* 3:67-74.

Weiner, Myron. 1992. "Security, Stability, and International Migration." *International Security* 17 (3): 91-126.