

# The Rise of Communism in China\*

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## Abstract

We show that the Chinese Communist Party (CCP) experienced significantly faster growth in counties occupied by the Japanese Army than those garrisoned by the Kuomintang (KMT) during the Sino-Japanese War (c. 1940-45), using the density of middle-to-upper rank Communist cadres (5.4%) and the size of the guerilla base (10.3%) as proxies. The *struggle for survival* and *humiliation* caused by wartime sex crimes are the channels through which the CCP ascended to power. We also find that people who live in former Japanese-occupied counties today are significantly more nationalistic and exhibit greater trust in the government than those who reside elsewhere.

**Keywords:** Communist Revolution, Peasant Nationalism, Struggle for Survival, Humiliation and Hatred, Puppet Troops, China

**JEL Classification Nos.:** D74, F51, F52, N45

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# 1 Introduction

*“Precisely because of the Japanese Imperial Army, which had occupied a large part of China, making Chinese people nowhere to go; once they understood, they began taking up arm-struggle, resulting in the establishment of many counter-Japanese military bases, thereby creating favorable conditions for the coming war of liberation. Japanese capitalist and warlords have done a good deed for us (the Communists), if ever we need to say thank you, I would like to say Thank you to the Japanese warlords.” — Mao Zedong, 1961. Mao Zedong Waijiao Wenxuan (Mao Zedong on Diplomacy), pp.460-461.*

During the 20<sup>th</sup> century, foreign military aggression was often associated with the rise of populist revolution in many weakly democratized countries (Hobsbawm, 1987).<sup>1</sup> The above sarcastic, half-joking statement made by Chairman Mao in front of a Japanese visitor in 1961 unwittingly hinted at the importance of foreign military aggression (Japan in this case) on the unexpected rise of the Chinese Communist Party (hereafter CCP). While today the CCP is taking center stage in the arena of international politics, colliding head-to-head with the United States, eight decades ago it struggled in an extremely adverse environment fighting two powerful enemies—the *Kuomintang* (hereafter KMT) and the Japanese Army—both vastly more sizeable and militarily stronger than it was.

In retrospect, the rise of the CCP was by no means inevitable. There were at least three apparent impediments to the growth of communism on Chinese soil. The first pertains to institutions and culture. While despotic in governance, throughout the dynasties the Chinese had always favored private ownership. Land, the key asset in an agrarian economy, had always been privately owned throughout history; moreover, sophisticated land rental contracts had developed over time to the extent that it enabled both landlords and tenants to share rents.<sup>2</sup>

Nor can we attribute China’s Communist revolution to rising class consciousness arising from nascent industrialization. Even when the KMT defeated the warlords and unified China in 1928, China remained predominantly agrarian. Out of a population of 400 million, the industrial workforce was 1.77 million, of which unionized workers accounted for just 0.37%—a percentage too small to be associated with the fomentation of class consciousness.

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<sup>1</sup>For example, the military aggression of Nazi Germany during World War II allegedly led to the largest communist movements in Eastern Europe—Albania, Hungary, Greece, Yugoslavia etc. (Brown, 2010; Hammond, 1975). China was among the list of victims.

<sup>2</sup>By the Qing dynasty (c. 1644-1911), land productivity in the most advanced regions (the lower Yangtze Delta) was so high that it was not uncommon for land to be subcontracted between tenants (Zelin et al., 2004).

Furthermore, even if class consciousness was high in the several thousand of factories of the time, these workers were disproportionately located in the coastal cities; the vast majority of the Chinese people lived in the countryside and were barely touched by Communist ideology before the outbreak of the Second Sino-Japanese War (c. 1937-45).

Third, and perhaps most important, is that the CCP was nearly wiped out by the KMT in 1934, forcing it to flee from the revolutionary bases that they initially established in the southcentral province of Jiangxi, to travel to the west on highly difficult terrain to Sichuan, and then retreating all the way to the barren land in the northwest, with barely a tenth of its members (around only 40,000) surviving the deadly “Long March” (see Figure A1 in Appendix A). Finally, although it was the KMT Army who bore the brunt of head-on collision with the Japanese Army, the effectiveness of the Communist guerrilla war tactics and the eventual capitulation of the Japanese Army were not an outcome that could have been predicted easily. For the CCP to overcome these adversities and even increase its membership by a hefty 29 times within just a few years (c. 1937-45) is an outcome that requires explanation (the solid line in Figure 1).

[Figure 1 about here]

In the light of the historical context just introduced, our goal is to examine the causal impact of Japanese invasion on the rise of the CCP in wartime China. Our empirical strategy is to identify the causal effect by making use of the boundary between the areas occupied by the Japanese Army in 1940 and those controlled by the KMT (Section 4). In this spatial regression discontinuity design (RDD), the exogeneity of the boundary is ensured by the fact that it was 1) shaped by battles fought primarily between the Japanese and KMT armies during 1938-40; 2) orthogonal to a number of geographic and socioeconomic factors such as elevation, slope, distance to China’s main rivers, average temperature, precipitation, agricultural suitability, and population density (balance checks); and 3) uncorrelated with many other explanations proposed to account for the early (prewar) rise of the CCP; which include: the “modernization theory” (Lipset, 1959), “class consciousness” (Marx and Engels, 1848; Perry, 1993), “exploitation of the peasantry” (Moore, 1966; Selden, 1971); and social organization (Feng and Goodman, 2000; Thaxton, 1997).

By comparing the counties located within the Japanese occupied area with those outside it, we find that the “treated” counties experienced a significant increase of 5.4% in the density of middle-to-upper rank Communist cadres at the level of colonel and above (the number is normalized by a county’s population), and an expansion of the guerrilla base—as measured by the population therein—of 10.3%. Our results are robust to a number of checks using the cadre-density measure before 1937 as a falsification test, controlling for the

potentially endogenous effect of proximity to railway and telegraph lines—infrastructure of strategic importance to the Japanese Army during the war, and using a lagged measure of the boundary (t-1) in a panel setting with county- and year- fixed effects.

In addition, we also find heterogeneous effects within the Japanese occupied area (Section 4.3). This check was motivated by the attempt of the Japanese Army to set up a “puppet regime” to garrison non-strategic occupied areas with troops made up of captive KMT soldiers, remnants of the defeated warlords, and so forth (Goodman, 2013; Johnson, 1962) after having been dealt a severe blow by the unexpected attack of the *Hundred Regiments Offensive* (*baituan dazhan*) launched by the Communists in late 1940. The Communists thus took advantage of the lesser combat capabilities of the puppet troops by focusing their subsequent attacks in these areas. Compared to areas garrisoned by the Japanese Army, the middle-to-upper rank Communist cadres experienced a distinctly faster growth of 6.8%-10.2% in areas garrisoned by puppet troops, and expanded the guerilla bases in the same areas by 9.4%-16.5%.

To account for the causal relationship between the Japanese invasion and the rise of the CCP we examine two channels in Section 5. The first relates to a heightened interest of the Chinese peasantry in struggling for their own survival (and in doing so contributing to national defense). Plunder by the Japanese Army gave rise to a sudden awareness that China’s peril led to their own peril, and that effective organization and leadership from a committed and competent political force was crucial to resistance. Between the KMT and CCP, it was the latter who, by parsimoniously engaging in a guerrilla warfare within the Japanese occupied area, provided the protection and leadership desperately needed by the Chinese peasantry. It was this commitment by the CCP to stand by the peasantry in their resistance to an unrelenting onslaught by the Japanese Army that won the peasants’ support. We attribute the second channel to sentiments of humiliation and hatred provoked by the Japanese Army’s sex crimes in the form of rape and the subjugation of Chinese women to serve as sex slaves in “comfort women” centers in 216 counties; in which between 0.2-0.4 million of women were forced into sexual slavery. Together, it was this “peasant nationalism”—a term coined by Chalmers Johnson (1962) that compelled the Chinese peasants to join the CCP and support their cause in countering the Japanese invasion.

To examine the validity of these channels, we employ the number of civilians killed by the Japanese and a dummy variable to indicate whether a county had experienced consecutive massacres as proxies for the *survival* channel, while the number of reported rape cases and a dummy variable to indicate whether a county hosted a comfort women (*weian fu*) center as proxies for *humiliation and hatred*, respectively.<sup>3</sup> Our analysis finds that both channels have

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<sup>3</sup>As Johnson (1962) observes, the alliance between the Communists and the peasantry was partly driven

a significant positive effect on both the density of middle-to-upper rank Communist cadres and the size of guerilla base.

To verify the claim that nationalism was the underlying ideology of the two channels, we examined whether there were long-term effects in the occupied areas lasting until the present by using a number of proxies in Section 6. Indeed, we find that several measures indicate that nationalistic sentiments are significantly stronger among residents living in these areas, including their support for the political slogan “Chinese Dream” championed by the paramount leader Xi Jinping, consumption behavior that exhibits patriotism (as proxied by consuming fewer Japanese imports and foods), and greater trust in the Chinese government.

Our study contributes to a small but rapidly growing literature about the instantaneous and long-term effects of external warfare on political and military insurgency (Dell and Querubin, 2018; Ferwerda and Miller, 2014; Kocher and Monteiro, 2015; Ochsner and Roesel, 2016). The example provided by Dell and Querubin (2018) is perhaps most notable. By exploiting discontinuities in the US military strategies during the Vietnam War, these authors found that bombing increased the political activity of communist insurgents and consequently reduced non-communist civic engagement (see also Kocher et al., 2011).

To some extent our study is also related to the literature on the political consequences of conflict as measured by political attitudes and ideological divergence. For instance, Grosjean (2014) found that civil wars in Europe and Central Asia are associated with the erosion of social and political trust, whereas Miguel et al. (2011) found that football players from countries recently exposed to civil wars behave more violently (as measured by yellow and red cards).<sup>4</sup>

Third, our work is also related to a large literature concerning the persistence of political attitudes and cultural traits. For instance, Acharya et al. (2016) showed that differences in political attitudes between counties in the southern United States can be traced to the local prevalence of slavery in the 1860s. Similarly, Voigtlander and Voth (2012) found that anti-Semitism in Germany persisted strongly for more than five centuries, whereas Fouka and Voth (2013) found suggestive evidence for the cultural persistence of the Nazi occupation in Greece; sales of German cars during the recent Greek financial crisis fell significantly more in areas in which German troops had committed war crimes against civilians.<sup>5</sup> In the Chinese

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by the latter’s hatred of the invaders, but “to a large extent it was purely a matter of survival” (p. 59). As a conceptual framework we combine the two separate but inter-related mechanisms.

<sup>4</sup>In Africa, the effect of civil wars on reinforcing ethnic division/identities and political participation are recurring themes in this literature (Bellows and Miguel, 2009; Blattman, 2009).

<sup>5</sup>Similar studies include Avdeenko and Siedler (2017), who documented the intergenerational transmission of political extremism from fathers to sons; and Lupu and Peisakhin (2017), who found that the descendants of those who were affected by the deportation of Crimean Tatars in 1944 were more hostile

context, Che et al. (2015) similarly found that the Chinese provinces that suffered greater civilian casualties during the Second Sino-Japanese War had significantly less trade with and also received less foreign direct investments from Japan today. More generally, using Shandong Province as a case study, Koss (2018) found that the CCP was able to enforce its policies more effectively in the occupied area during the Sino-Japanese War. For instance, the Communist cadres in the frontlines were not only able to procure more grain during the Great Leap Forward (c. 1958-61), they also demonstrated greater efficacy in implementing the one-child policy in the post-reform era.

## 2 Historical Background

### 2.1 A Brief Pre-war History of Communism in China

The Chinese Communist Party was founded in 1921 by Chen Duxiu as a small reading group (with only 57 members) whose explicit aim was to spread Marxism among students and industrial workers. In 1924, the substantially larger Nationalist Party or Kuomintang (KMT)—which had a membership of 50,000—agreed to ally with the CCP (which still had less than 1,000 members), as part of the aid conditions stipulated by the Soviet Union. A year later came the unexpected death of the Nationalist leader Sun Yat-sen; his successor, the right-wing Chiang Kai-Shek, decided to cease cooperation with the CCP. With Chiang’s victorious return from his conquest of the warlords in the “Northern Expedition”, he purged the CCP, whose membership now rapidly grew to 58,000, through hundreds of arrests and executions in the famous “Shanghai Massacre of 1927”. Unable to counter the KMT, the CCP fled to the rural areas of Jiangxi Province in southcentral China and founded the “Red Army”, together with some defecting KMT army units who were sympathetic to communism and eager peasants.

In spite of such adversity, CCP cadre membership continued to grow to a staggering 411,000 (the solid line in Figure 1), and established many revolutionary bases across south-central China in the provinces of Jiangxi and Anhui. But the ideological clash between the two parties soon erupted into fully-fledged civil war (the First Civil War). In 1934, Chiang launched a full-scale attack on the CCP, forcing it to embark on the deadly “Long March”; which essentially was a reluctant retreat from Jiangxi Province all the way to the north covering some 9,000 kilometers in over 370 days of brutal traveling, to settle eventually in northwest Shaanxi Province, with only a tenth of its 411,000 members surviving.

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toward Russia and participated more actively in politics.

## 2.2 Japanese Invasion in 1937

### 2.2.1 Power Vacuum and the Growth of Guerrilla Bases

By 1937 Japan had already occupied Manchuria (now Northeast China) for six years. On July 7, on the pretext of a lost soldier near the Marco Polo Bridge (*Lugou Qiao*) in the southwest of Beiping (now Beijing), the Japanese Army invaded China Proper.<sup>6</sup> For the next eight years, a full-blown war was fought between Japan and the Nationalist Government primarily. The KMT Army lost many of its battles with the Japanese and retreated, with the Japanese Army taking over the abandoned villages as occupied areas in 1938 (Panel A of Figure 2).<sup>7</sup> In many invaded villages, the civilians were killed, the local elite fled, and anarchy was the outcome, with many surviving villagers taking up arms for self-defense (Kataoka, 1974). It was anarchic because the Japanese was unable to provide garrisons everywhere their troops conquered, let alone put in place an *ad hoc* government to provide day-to-day governance, leading to a “power vacuum” (Goodman, 2013; Johnson, 1962).<sup>8</sup> For instance, in the two north China provinces of Hebei and Shanxi, the Japanese Army only managed to station their troops in approximately two-thirds of the counties, and where they were able to do so their presence was confined to the counties and towns—“the countryside was Communist territory” (Johnson, 1962, p. 52).<sup>9</sup> This remained the case in 1939, even after the Japanese Army conducted the “Pacification Campaign” (*qingxiang*) to consolidate control in the occupied area in north China—the countryside was still wide open and exposed (Kataoka, 1974).

[Figure 2 about here]

This provided exceptional opportunities for the Communists to take up the slack. The Communists moved into the unattended villages swiftly and provided helpful assistance to the needy villagers who were desperate for leadership and organization for self-defense and survival, for fear of repeated attack by the Japanese Army. Further, they gave timely provision of a wide array of public goods such as education and agricultural cooperation, among other public services.

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<sup>6</sup>Japan had long been preoccupied by its expansionist policy to secure raw materials, food and labor supplies from its Asian neighbors, especially China. Historians saw the incident as an alibi for Japan to invade China further.

<sup>7</sup>At the onset of the war in 1937 the Japanese forces single-mindedly pursued the retreating KMT Army into the interior, leaving much of the plains of the invaded northern provinces of Hebei and Shandong empty (Kataoka, 1974, p. 5).

<sup>8</sup>As Johnson (1962) points out, the Japanese Army was “finding it difficult elsewhere to govern the large territory that had proved so easy to invade” (p. 39).

<sup>9</sup>Although Japan had deployed up to 1.18 million of its military to China, and occupied up to 6 million kilometers of China’s territory, at its greatest extent it only covered slightly over 60% of the territory.

But the Communists were ambitious far beyond merely providing the Chinese peasants with the help that they badly needed. By moving into the anarchic villages, the Communists were hoping to establish guerrilla bases from which to launch attacks into the areas occupied by the Japanese Army. To do so they needed to fulfill two conditions. First, they needed to be close to the Japanese bases, which in the Chinese context were areas located behind the Japanese lines of occupation—areas in which up to one-fifth of the population congregated during wartime (Johnson, 1962). But sheer geographic proximity was hardly a sufficient condition. To pose a real threat to the Japanese Army, the Communists must equip themselves with better ammunition and expand the size of their military by drafting armed villagers and defected KMT soldiers into the guerrilla force.<sup>10</sup> In his attempt to establish a guerrilla base in the mountainous border region between the provinces of Hebei and Shanxi (the Jin-Char-Shan Border Area), Nie Rongzhen, the Vice-Commander of the 115<sup>th</sup> Division of the Eighth Route Army, invited the KMT Colonel, Lu Chengcao, with a local militia (the “people’s self-defense corps”), to join. This successful case was allegedly repeated many times throughout the occupied area of north China (Johnson, 1962; Kataoka, 1974).

The guerrilla strategy was a massive success. Within a short time the Communists both increased their membership and expanded the size of their guerrilla base. For example, in less than four years’ time Communist membership doubled from 40,000 to 800,000 (c. 1937-40, the solid line in Figure 1). And while the Japanese retaliated against the Communists after they launched their first all-out attack in the famous “Hundred Regiments Offensive” or *baituan dazhan* in late 1940 and killed many villagers and cadres,<sup>11</sup> they only intensified the revolution further, as the Eighth Route Army and the peasantry became ever more determined to stand by one other to fight the war, making it irreversible. By the Japanese

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<sup>10</sup>However, we must not assume that the process of assimilating the various parties into the guerrilla force was always smooth and easy. For example, Chen (1986) finds that, in one instance it took fully six months for the villagers in the Mao Mountains (in Jiangsu Province) to become fully committed to the anti-Japanese cause and only took place after the Communists had demonstrated the viability of guerrilla resistance. Kataoka (1974) also observes that transforming the armed peasants into Communist organizers “was a long and painful process” (p. 136). The difficulties notwithstanding, Wei (1993) finds that the number of angry villagers volunteering to join the guerrilla force increased six-fold on the heels of a series of massacres that took place in eight counties in Hebei Province. James M. Bertram, a foreign journalist, similarly observed that more than a hundred volunteer forces were actively involved in resisting the Japanese on the North China Plain by the end of 1937. While some were small, involving as they did a mere few dozens of people, others were as large as several thousands. These local militia were all subsequently recruited by the Communists into guerilla forces.

<sup>11</sup>Having killed 2,010 Japanese soldiers and injured 3,359, The Hundred Regiments Offensive inflicted by far the greatest casualties on the Japanese Army by the CCP. The guerrilla armed forces also caused severe damage to railway and communications lines and disrupted material supplies. After that, the Japanese Army singled out north China as the area to be consolidated. Still, the Japanese allocated fewer troops per square kilometer in this part of China than elsewhere, especially the strategic city of Wuhan in central China (Kataoka, 1974, p. 266).

capitulation (c. 1945), Communist membership further increased by 50% to reach 1.2 million (the solid line in Figure 1).

### 2.2.2 Peasant Nationalism

Nationalism had existed in China since at least the late Qing dynasty, especially after the Middle Kingdom suffered an unexpected, humiliating defeat by Japan in the First Sino-Japanese War (c. 1894-95). But at that time nationalism only appealed to a small fraction of the population, namely the “unassimilated intelligentsia and the small middle classes that grew up in the treaty ports”, as the Chinese peasantry were far too removed to feel the humiliation and territorial losses suffered (Johnson, 1962, p. 23).<sup>12</sup> According to Johnson (1962), before the Japanese invasion the Chinese peasantry was largely “absorbed in local matters and had only the dimmest sense of China (as a nation)” (p. 69).

Nor were the myriad pre-war pressures—economic and otherwise—sufficiently widespread or intense to give rise to a peasant-based mass movement with politically transformative consequences. While rural economic distress—be it exploitation by landlords or local taxation—were clearly present, they failed to give rise to a unified nationalistic sentiment. Neither did the relentless civil wars fought between various warlords during the brief period of 1915-28, and the numerous natural calamities that weighed heavily on the peasantry from time to time.

But the Japanese invasion changed the rural conditions in China in a fundamental way. The loss of life (of family members and fellow villagers) and property, the disruption of a peaceful social order, the fear of recurring invasions, and the humiliations and anxieties suffered in the course of all these misfortunes gave rise to a strong sense of unity and created demand for effective leadership to resist the invaders. In one fell swoop, the Chinese peasant realized that “his own peril was also China’s peril”; “(t)he peasants of the occupied area were socially mobilized by war and resistance organization, and thereby became a national population” (Johnson, 1962, p. 26). For Johnson, this sense of nationalism was entirely novel, as it only arose as a result of the Japanese Army’s unrelenting attempts to subjugate the Chinese countryside by force: “From 1938 until the very end of the war, the Japanese Army mobilized massive forces and sent them into areas believed to contain Communists, where they carried out extensive mopping-up campaigns” (p. 49).<sup>13</sup> The new-founded nationalism is thus peasant nationalism—a “species” of nationalism (Johnson, 1962, p. 20), with its

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<sup>12</sup>Even the patriotic Boxers who killed many foreign consulates, merchants and missionaries in the Boxer Rebellion were allegedly “nativistic and pre-political” (Johnson, 1962, p. 26); i.e., they were not aiming for political transformation.

<sup>13</sup>This is consistent with Mao’s appeal to the people to stand united in staging the war against foreign imperialism in the name of national liberation (Meisner, 2006).

roots deeply steeped in the concern for survival and hatred of an enemy for the sufferings and humiliations they brought upon them.

### 3 Estimation Strategy

#### 3.1 Variables and Data Sources

We employ two measures as proxies for the growing influence of the CCP in wartime China. Ideally, the most straightforward would be to enumerate the civilians who joined the Party during this period (c. 1937-45), but those data are not available at the county level. As an alternative, we make use of a compendium of the biographies of Communist officials (*Zhonguo Kangrizhazheng Junshi Shiliao Congshu*) whose rank was at the level of colonel (*tuan*) or above in the Red Army in 1949—the year when the People’s Republic of China was founded. Moreover, we use the biographical information for the exact year in which these cadres joined the CCP, and the specific county in which they joined to construct our key explanatory variable. Figure 3 depicts the geographic distribution of these cadres in the prewar (1921-36, Panel A) and wartime (1937-45, Panel B) periods. Examining the panel shows that the increase in cadre membership came predominantly from the occupied areas in north China. Given that not everyone who joined the Party could rise through the ranks to eventually become a colonel or higher, our estimate represents a lower bound on the total number of members who joined the CCP during the war. Moreover, to ensure that this particular measure and the overall measure of CCP membership are highly correlated with each other, we plot the trend of cadres with the dash line in Figure 1 and show that the two curves exhibit a remarkably similar trend and are correlated with each other with a coefficient of 0.837.

[Figure 3 about here]

To further ensure that our measure of Communist membership is a sufficiently robust proxy for the growing influence of Communist activity in the occupied areas, we employ the size of the guerrilla base established by the CCP in 1940 as our second dependent variable. For counties having a guerrilla base, we obtained its location and size—the latter measured by its population derived by digitizing a military map of 1940 from the Japanese Wartime Intelligence Archive of the same year (see Figure A2 in Appendix A for an illustration).

Altogether our data covers a total of 1,924 counties in 25 provinces in today’s China. The three northeastern provinces of Liaoning, Jilin, and Heilongjiang are excluded as they were already occupied by the Japanese in 1931. We also exclude Inner Mongolia, Xinjiang,

and Tibet because of missing data. Table 1 provides the summary statistics for our variables of interest.

[Table 1 about here]

### 3.2 A Spatial Regression Discontinuity Design (RDD)

To identify the exogenous causes of the CCP’s political ascendance, we exploit the effect of a county’s discontinuous exposure to occupation by the Japanese Army, using a boundary that demarcated the occupied area in 1940 on our two dependent variables. The RDD regression assumes the following specification:

$$CCP_i = \alpha + \beta JapaneseOccupiedArea_i + f(GeographicLocation_i) + \sum_{j=1}^n seg_i^j + \pi_i \quad (1)$$

where  $CCP_i$  are the two outcome variables of interest in county  $i$  and  $JapaneseOccupiedArea_i$  is an indicator variable set to 1 if county  $i$  falls within the Japanese occupied area in 1940, and zero if it is not.  $f(GeographicLocation_i)$  is the RD polynomial controlling for the smooth functions of geographic location. Following Dell (2010), we employ a two-dimensional RD in latitude-longitude space by controlling for polynomials in latitude and longitude. Moreover, to ensure that the specification compares only counties lying in the same segment of the boundary, we control for segment fixed effects by splitting the boundary into segments of 100 km each  $seg_i^j$ , and assign the value of 1 if county  $i$  is closest to segment  $j$ , and zero otherwise. The boundary of an occupied area in 1940 is obtained from *Gexian Luxian Shijian* (*Chronicles of Events in Various Counties*) archived by the KMT, which contains details of the exact date and process by which a county succumbed to the Japanese Army and became an occupied area. We also verify the validity of our data by cross-checking against military maps archived in the Japanese Wartime Intelligence Archive of 1940, in which the areas under Japanese control—be they administered directly by the Japanese Army or indirectly by puppet troops—were clearly delineated. Panel B of Figure 2 shows the locations of the occupied areas in 1940 after we digitized and geocoded the data, and projected them onto the 1949 county maps of China.

To exploit fully the exogenous variation caused by the  $JapaneseOccupiedArea_i$ , we use 1) a full sample that includes the entire 1,824 counties, 2) a subsample that includes only those counties within 100 kilometers of the boundary of the occupied areas, and 3) a subsample of counties within the optimal bandwidth from the same boundary estimated according to Gelman and Imbens (2019). Following the standard procedure, we use a local linear

RD polynomial as our baseline specification and document robustness to a wide range of bandwidths and RD polynomials.

### 3.3 Validity of the Spatial RD Design

The identification of the spatial RD relies on three assumptions: 1) the formation of the boundary was exogenous to the guerilla activities of the CCP, 2) the Japanese invasion varied discontinuously across the boundary, with faster growth of Communism within the occupied area, and 3) except for the treated variable, all other confounding factors vary smoothly at the boundary (balance checks).

We begin with assumption (1). The boundary that we use for identification was essentially shaped by battles fought between the Japanese and the KMT armies during the initial war years (c. 1937-40). As a case in point, in an attempt to stop the Japanese Army from marching southward along the *Pinghan* Railway to occupy the city of Wuhan in central China in 1938, the KMT Army bombed the Yellow River's dikes at the *Huayuankou* embankment in order to erect a defensive barricade (Figure 4).<sup>14</sup> Indeed, in its initial instructions of September 23, 1937, the Japanese did not even mention Communism, let alone specifying any specific measure to combat it. More precisely, the Japanese considered the CCP to be just "roving bandits" and not major military opponents to be reckoned with (*Secret Operation Diary of the Japanese Army, 1938-1945*). However, in less than a year's time, the Communists began to show their hand by raiding occupied areas in Hebei Province, and by mid-1939 guerrilla activities became increasingly rampant, to the extent that they were occupying "more and more of the attention of the Japanese staffs" (Johnson, 1962, p. 39).

[Figure 4 about here]

The escalating guerrilla activities notwithstanding, it was not until the Hundred Regiments Offensive launched by the Communists in August 1940 inevitably led the Japanese to reexamine the military capacity of the Red Army.<sup>15</sup> Between August and November of that year, the Offensive killed 2,010 Japanese soldiers and injured 3,359 others, which was by far the greatest casualties the CCP inflicted on the Japanese Army. In retaliation, the Japanese Army organized several mopping-up campaigns to wipe out the guerrilla bases and terrorize peasants for their support for the CCP. In doing so, they reduced the population

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<sup>14</sup>The Japanese Army had already occupied *Lanfeng* and *Kaifeng* after the *Xuzhou* Battle in the north, and was planning to move further south to capture *Zhengzhou* (see Figure 4).

<sup>15</sup>The Communists did so out of the fear that the KMT and the Japanese might reach a peace settlement and stop the war. Launched with the aim of destroying the railway lines and disrupting the supply of such necessities as coal, the 400,000 troops in 115 regiments of the Eighth Route Army simultaneously attacked the Japanese forces in five north Chinese provinces.

of the Communist areas in north China by a massive 57% (from 44 million to 25 million), and the Eighth Route Army by 25% (from 400,000 to 300,000).<sup>16</sup> Moreover, to help govern the previously ungarrisoned part of the occupied areas, the Japanese established a puppet regime headed by Wang Jingwei—a defected KMT senior official (earlier a contender with Chiang Kai-Shek for the KMT leadership), and garrisoned the area with troops made up of captured KMT soldiers, remnants of warlord bands and local bandits. All of these testify that the 1940 boundary was exogenous to CCP activities up until the very end of that year.

To further prove that the 1940 boundary is not endogenous, Figure A3 in Appendix A shows that it does not overlap with provincial boundaries and hence does not coincide with any pre-existing political, social and economic boundaries associated with unobserved provincial characteristics.

Another reason for choosing 1940 as the year for demarcating the boundary is that the number of civilians killed was highest in the first four years of the Japanese invasion, even after taking into account the retaliation launched in response to the Hundred Regiments Offensive (Figure 5). In particular, mass massacre illustrates the point well. Of the 169 wartime massacres documented, 69% (116 cases) were committed in this earlier period. Figure 5, which juxtaposes the number of civilians killed by the Japanese Army and changes in Communist membership, clearly exhibits the opposed trends of the two variables. While the number of civilians killed by the Japanese declined gradually over time, Communist membership increased.<sup>17</sup>

[Figure 5 about here]

To satisfy assumption (2), we simply fit the values from a local linear regression of the two outcome variables of interest in Figure 6, and confirm a distinct pattern of discontinuity between the counties located on either side of the boundary.

[Figure 6 about here]

### 3.4 Balance Checks

Finally, we turn to assumption (3), which can be verified using a balance check of a number of observables that may be correlated with the growing influence of the CCP in wartime China. To ensure that these control variables vary smoothly between the counties on either

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<sup>16</sup>The savageness of this counter-attack cannot be better described than by Johnson (1962): “There was now hardly a village in Hebei and Shanxi that was not half-burned or worse” (p. 59).

<sup>17</sup>The slight blip that occurred in 1941 was the result of the retaliation launched by the Japanese Army in response to the Hundred Regiments Offensive.

side of the boundary, we regress them on the Japanese occupied area based on Equation (1) and report the results in Panel A of Table 2. We begin with a set of geographic variables such as elevation, slope, and density of major rivers (columns (1) through (3)), then move on to examine climatic variables such as temperature and precipitation (columns (3) and (4)), before turning to natural resource endowment using the agricultural suitability of China’s two main staple crops—rice and wheat—as proxies (columns (5) and (6)). Last, we control for economic prosperity using population density in 1935 as proxy (column (7)). Together, the results show that the point estimate of these variables is small relative to the mean and is insignificantly different from zero, confirming that the two sets of counties—occupied and unoccupied—have no significant discontinuous differences across this wide gamut of controls.

[Table 2A about here]

### 3.5 Alternative Explanations of the Early Rise of the CCP

In addition, we conduct a number of additional checks to which historians and social scientists have alluded in accounting for the rise of the CCP before the Sino-Japanese War broke out. These alternative explanations include “modernization theory”, “class consciousness”, “exploitation by landlords and/or the local state”, “social organization”, and a “nationalist revolution”. Although our task is to explain the rise of CCP in a subsequent period, i.e., wartime China, to rule out the potential path dependent effects of these possible confounding factors we will show that our story is orthogonal to these pre-existing factors that were allegedly associated with the early rise of the CCP.

#### 3.5.1 Modernization and Revolution

According to proponents of modernization theory, economic development in general and education in particular, are important determinants of democracy or revolution (Barro, 1999; Lipset, 1959).<sup>18</sup> In the historical context of China, modernization began in the mid-19<sup>th</sup> century with the forced opening of various treaty ports for trade and other purposes, and the subsequent comprehensive reform of its education system, which entailed the wholesale replacement of its millennia-long Confucian-based civil exam system by a Western curriculum. We employ three measures as proxies for the effects of modernization. The first is a dummy variable indicating whether a county was a designated treaty port,<sup>19</sup> and the second is the

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<sup>18</sup>For instance, using a large panel data set, Barro (1999) found a significant positive relationship between primary school attainment and measures of democracy.

<sup>19</sup>Altogether 112 treaty ports were established between 1842 and 1930 (Kung, forthcoming).

number of modern firms established during 1840-1937.<sup>20</sup> Last, but not least, we employ the number of primary and middle schools in a county on the cusp of the Japanese invasion (c. 1935). Panel B of Table 2, columns (1) through (3) clearly show that the two areas separated by the 1940 boundary are balanced in terms of all three measures of modernization.

[Table 2B about here]

### 3.5.2 Class Consciousness

From a Marxist perspective, revolution is an outcome when the working class collectively awakes to a “consciousness” that the time has come to overthrow the ruling class—specifically “how a class in itself is transformed into a class for itself”. While there were incidences of workers’ protests in factories located in the treaty ports and industrialized towns (Perry, 1993), it should be borne in mind that in China, industrialization in the 1930s was still in an incipient stage. Nevertheless, we examine this hypothesis by employing the share of unionized workers in the overall universe of industrial workers in 1933 as proxy. The data is obtained from *Ershiernian Gedi Gonghui Diaocha Zongbaogao* (General Investigative Report on Trade Unions in 1933), published by the KMT’s Central People’s Movement Steering Committee. As column (4) shows, there is similarly no significant difference in our proxy for class consciousness between the counties on the two sides of the boundary.

### 3.5.3 Exploitation by Landlords and Local State

Given the predominance of China’s rural economy and the alleged unequal distribution of land, exploitation of landless peasants by their landlords through either exorbitant land rents or hired labor is considered by many to be a key determinant of the Communist revolution in China (Moore, 1966; Hofheinz Jr., 1977; Selden, 1971; and Skocpol, 1979). However, this hypothesis remains empirically uncontested because of the lack of data. To overcome this problem, we employ a farm survey conducted by the Republican (KMT) Government in 1934, in which the socioeconomic categories of tenant farmers, semi-owner-cultivators, and owner-cultivators, respectively, were enumerated. Intuitively, the greater the proportion of tenant farmers in a county, the more exploitative social relations tend to be in that county.<sup>21</sup>

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<sup>20</sup>According to Chang (1989), who compiled the pertinent data, modern firms were (a) powered by steam engine or electricity, (b) relatively large, (c) had a registered capital of at least 10,000 silver *yuan* or approximately 1,094 pound sterling, (d) employed at least 30 workers, (e) produced an annual output of at least 50,000 silver *yuan* in value, and (f) adopted modern (hierarchical) management practices.

<sup>21</sup>Tenancy rates are by no means the only indicator of exploitation. Consider the two southcentral provinces of Jiangxi and Anhui. While both had high tenancy rates, Jiangxi turned out to be a staunch supporter of Communism (as manifested in the early revolutionary base of *Jinggangshan*), while Anhui was never a major seedbed of the Communist revolution (Hofheinz Jr., 1969).

Also, landlords were not the only source of peasant burdens. Other scholars have identified other burdens such as exorbitant taxes and unregulated fees and levies imposed by local governments (Selden, 1971; Duara, 1991; Chen, 1992; Keating, 1997). To test this particular hypothesis, we use land tax per capita in 1934 as proxy. Reported in columns (5) and (6), we find no significant difference in either tenancy rates or land tax between the two sets of counties separated by the 1940 boundary.

#### **3.5.4 Social Organization and Violent Culture**

If social organization and the attendant social capital embedded therein was instrumental in mobilizing public support for the Nazi Party in the 1930s (Satyanath et al., 2017), then rural social networks and communities such as farmers’ associations and other rural cooperatives might be expected to play a similar role in mobilizing peasants’ support for the CCP (Feng and Goodman, 2000; Li, 2009). Evidence suggests that, in mobilizing the peasantry the CCP did indeed draw upon the respective networks of the “Red Gun Society” and the salt smugglers (Perry, 1980; Thaxton, 1997). Consistent with this concept is Rowe’s (2007) finding that a seven-century-long “violent culture” in the two counties (*Huanggan* and *Macheng*) of Hubei Province provided an important impetus for the subsequent Communist revolution. To verify the alleged effects of social organization, we enumerate the editions of genealogical books a county had revised; presumably the more frequently a county revised its genealogical books the stronger the tradition of clans and lineages (Chen et al., 2020). As a proxy for a violent culture, we enumerate the number of secret societies operating in a county and the corresponding number of conflicts occurring therein, both during the Qing dynasty. As reported in columns (7) through (9), none of these proxies differs significantly between the two sets of counties across the 1940 boundary.

#### **3.5.5 Effect of the 1911 Nationalist Revolution**

Given that the CCP and KMT cooperated in the 1920s under the rubric of the “First United Front”, this raises the concern that the Communist revolution might have been influenced by the KMT. This would be the case especially in terms of military training, as the *Huangpu Military Academy*, which trained many of the CCP’s future leaders, was established jointly by the two parties. To rule out the possible influence of the KMT, and in light of the fact that many KMT leaders were previously heavily involved in the 1911 Nationalist Revolution that brought the 2,000-year-old imperial regime to an end, we trace its possible effect by identifying the hometowns of members of *Tongmenhui*—the revolutionary alliance that preceded the KMT—to check whether our sampled counties across the discontinued

boundary are also balanced. Reporting the result in column (10), we find no discontinuity between the counties on either side of the boundary.

## 4 Japanese Invasion and the Rise of Communism

We now turn to examine the impact of the Japanese invasion on the political ascendance of the CCP during 1937-1945. We begin by estimating the effect of the boundary on the number of middle-to-upper rank cadres (colonel or above) in 1949 and the size of the guerrilla base in 1940 in Section 4.1, followed by several robustness checks in Section 4.2. In Section 4.3 we examine the underlying channels accounting for the rise of the CCP. The first concerns “struggle for survival” and the second pertains to “humiliation and hatred” caused by the sex crimes committed by the Japanese Army.

### 4.1 Effect on CCP’s Wartime Ascendance

We examine the impact of Japanese invasion on the rise of the CCP using a spatial regression discontinuity design (RDD) as specified in Equation (1). The results are reported in Table 3. Irrespective of which measure we use, counties within the occupied areas have a significantly higher number of middle-to-upper rank cadres by 5.2% - 9% than their counterparts outside (columns (1) - (3)), and a larger guerilla base by 9.3% - 14.1% (columns (4) - (6)). In columns (1) and (4), we use the full sample of 1,824 counties, while in columns (2) and (5) we restrict our sample to only those located within 100 kilometers of the boundary, and in columns (3) and (6) a sample selected by the optimal bandwidth according to Gelman and Imbens (2019). All regression results include a full set of local polynomials in latitude, longitude and distance to the boundary, and robust standard errors are reported. In addition, we also control for segment fixed effects. To ensure that our estimations are robust, we also cluster standard errors at the (higher) prefectural and provincial levels and find the results remain unchanged. The results also remain unchanged after adjusting for spatial correlations.

[Table 3 about here]

### 4.2 Robustness Checks

#### 4.2.1 Falsification Tests using the Pre-war Period

If our hypothesis that the Japanese invasion had a causal effect on the rise of the CCP holds, the effect should be significant only *after* the invasion but not before it. To investigate this, we conduct a falsification test by regressing the same two dependent variables on the 1940

boundary but for the period 1927-36. We report the results of these checks in columns (1) - (3) of Table 4 for the number of middle-to-upper rank cadres and in columns (10) - (12) for the dummy variable of whether a county supported a guerilla base.<sup>22</sup> Unlike the results for the wartime period, none of the coefficients exhibits a significant difference, confirming that the 1940 boundary was not correlated with the determinants of the spatial distribution of CCP's influence before the war.

[Table 4 about here]

We also examine whether the Japanese invasion continued to have a significant lasting effect on the rise of the CCP even after the war, this time by regressing the number of middle-to-upper rank cadres who joined the Communist Party in the post-war period of 1946-49 on the boundary. Columns (7) through (9) of Table 4 report these results.<sup>23</sup> The results show that there was indeed a lasting (path-dependent) effect even after the war with the Japanese; places where the CCP wielded growing influence during the anti-Japanese war continued to attract more people to join the Party, as the KMT replaced the Japanese as the new enemy.

#### 4.2.2 Endogenous Formation of Boundary

If the Japanese troops chose to occupy areas they considered strategic, it raises concerns about the boundary being endogenous. In wartime China, proximity to the railway and the telegraph allowed the timely replenishment of supplies such as coal and expedient communications. Figure A4 in Appendix A shows that before 1940 (c. 1938), the occupied area was indeed close to telegraph and railway lines. To the extent that the areas occupied by the Japanese Army in 1940 continued to be affected by proximity to this infrastructure, and that the CCP followed suit by developing their guerrilla bases behind the Japanese lines, our RD estimates would suffer from an omitted variable bias. To ensure that our estimates would not be contaminated by possible infrastructure effects, we control for the shortest distance of each county to railway and telegraph lines in our regressions.

Table 5 reports the results, which show that neither of the two distance variables has a significant effect on our two dependent variables, while the boundary continues to have a significant effect on the dependent variables and with similar magnitudes.

[Table 5 about here]

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<sup>22</sup>Information on guerilla bases before 1937 is restricted to only whether a county had such a base but not its size.

<sup>23</sup>Data on guerilla bases during the Chinese Civil War of 1946-49 are lacking.

### 4.2.3 Panel Regression Discontinuity Estimation

There is also a possible concern for reverse causality. Although we have shown that the CCP was not the Japanese Army’s main military concern prior to the Hundred Regiments Offensive, we need to rule out the possibility that the Japanese Army could have targeted those areas in which the Communists flourished with stronger forces. To rule out reverse causality, we re-estimate our results using a panel of data constructed on the basis of the time (year) a county was occupied. Based on the Japanese Intelligence Archive, Figure A5 in Appendix A depicts the changing boundaries of the occupied area between 1938 and 1945. It shows that the Japanese occupied area expanded rapidly between 1938 and 1940. By the end of 1940, almost the entire North China Plain was under the control of the Japanese Army, who continued to expand until 1942, when the trend began to reverse.<sup>24</sup>

We then match this panel data on the boundary with our two dependent variables, which is easy as we know the exact year a middle-to-upper rank cadre joined the Communist Party, and whether a county had a designated guerrilla base in a particular year—the latter information is available from *Shengzhi Dashiji* or Provincial Chronicles of Events in the Sino-Japanese War. Using this panel structure we can now examine the same hypothesis but using a dynamic RDD model of the following specification:

$$\begin{aligned}
 CCP_{it} = & \alpha + \beta JapaneseOccupiedArea_{it-1} \\
 & + f(GeographicLocation_i) * \epsilon_{t-1} + \sum_{j=1}^n seg_i^j * \epsilon_{t-1} + \epsilon_t + \varepsilon_i + \pi_{it}
 \end{aligned} \tag{2}$$

where  $CCP_{it}$  refers to the same two measures of Communist influence for county  $i$  at year  $t$ , and  $JapaneseOccupiedArea_{it-1}$  is a lagged dummy variable indicating whether county  $i$  was located within the Japanese occupied area at year  $t - 1$ .  $f(GeographicLocation_i) * \epsilon_{t-1}$  is the RD polynomial interacting with the year dummy at  $t - 1$ , while  $seg_i^j * \epsilon_{t-1}$  is the boundary segment fixed effect interacting with the same year dummy at  $t - 1$ .  $\varepsilon_i$  and  $\epsilon_t$  are respectively the county- and year- fixed effects, included for the purpose of excluding place-and-time-invariant factors that might bear upon the boundary’s formation.

Table 6 reports the results of the panel RDD estimates. Columns (1) and (4) use the full sample, while columns (2) and (5) employ only those counties within 100 kilometers of the boundary, and columns (3) and (6) the optimal bandwidth from the boundary. The results show that counties located within the occupied area experienced an increase in middle-to-

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<sup>24</sup>This may have to do with the Japanese’s decision to attack the Pearl Harbor in 1941, which diverted military resources.

upper rank cadres that was 3.3%-7.5% higher than the counties outside it and were 6.9%-11.9% more likely to have a guerrilla base. These results are similar to those of the cross-sectional estimates.

[Table 6 about here]

### **4.3 Heterogeneous Effect of Occupation by Different Troops**

China is too large a country for the Japanese to station its troops adequately throughout its territory. Thus, the Japanese would garrison areas deemed less important with puppet troops under the “Puppet Manchuria Regime” (Goodman, 2013, Johnson, 1962). While sizeable, the “puppet troops” were clearly less motivated to fight for the Japanese, not to mention that militarily they were not as effective as their Japanese counterpart. The CCP took advantage of the weaker military capabilities of the puppet troops and strengthened their influence in areas which they garrisoned. To test whether there was indeed a heterogeneous effect such as that proposed, we geocoded the occupied areas garrisoned by puppet troops as distinguished from those stationed by the Japanese Army based on maps in the Japanese Wartime Intelligence Archive. While our dependent variables remain the same, our explanatory variable of the 1940 boundary is now subdivided into two dummy variables—one representing the puppet troops and the other the Japanese Army (non-puppet troops). Table 7 reports the result of this heterogeneous test, which confirms that the areas in which the CCP made its greatest progress were precisely those garrisoned by the puppet troops—a result that strongly confirms the hypothesis that the CCP took strategic advantage of the weaker military capacity of the puppet troops. In terms of magnitude, middle-to-upper rank cadres grew by 6.8% -10.2% more in these areas in 1940, while the size of the guerilla base increased by 9.4% - 16.5%.

[Table 7 about here]

## **5 Channels of Japanese Invasion: The Struggle for Survival and Humiliation**

What were the probable causal channels through which the Japanese invasion affected the rise of communism in China? On the premise of the historical context alluded to earlier, we examine the hypothesis of peasant nationalism, which consists of two parts. The first is the “struggle for survival”, while the second relates to “humiliation and hatred” caused by the sex crimes committed by the Japanese Army.

As rehearsed earlier, the Japanese Army brutally massacred many villagers during the first four years of the war in the two northern provinces of Shanxi and Hebei, where a good majority were indiscriminately killed in the process (Peattie et al., 2011). Those who escaped developed a strong yearning for survival, and they looked to the Communists for leadership, organization, and protection. We use the number of civilians killed by the Japanese Army as a proxy for the sentiment that underlies the “struggle for survival”. The data are drawn from a survey conducted by the KMT government in 1946 and subsequently made available in *Kangrizhazheng Shiqi Renkoushangwang Ji Caichanshunshi* (Collection of Provincial Archives on Population Casualty and Asset Loss during the Sino-Japanese War), edited by the CCP History Research Office of the Provincial Party Committee (2016). To check for robustness, we employ a dummy variable that indicates whether a county experienced mass killing with a weekly minimum casualty number of 800 civilians. There were altogether 169 such massacres documented during the Sino-Japanese War. We collected this data from *Kangrizhazheng Shiqi Quanguo Zhongda Can’an* (Collection of Major Massacre of Civilians during the Sino-Japanese War), published by the Party History Research Center of the Chinese Communist Party’s Central Committee in 2014.

Subjugating the Chinese countryside by force and indiscriminately killing people was not the only war crime the Japanese Army committed, however. In the course of its invasion, the Japanese Army also committed sex crimes such as outright rape or forcibly demanding sexual services to be provided by Chinese women at the “comfort women centers” that they established. While these crimes do not present an immediate threat to life, they arouse a strong sense of humiliation and thus hatred towards the offender. To distinguish the sentiments of “*humiliation and hatred*” from “*struggle for survival*”, we use the number of rape cases and a dummy variable indicating whether a comfort women center had been established in a county as proxies. At the county level, the data on the number of rape cases are obtained from the chapter entitled “Chronicles of Major Events” in the county gazetteers, while the data on comfort women centers are obtained from Su, Yao, and Chen’s (2016) *Qinhuarijun Weianfu Wenti Yanjiu* (A Study of Comfort Women during the Sino-Japanese War).

In identifying the channels, we also use the boundary as an instrumental variable to verify the “first-stage” relationship between counties located on either side of the boundary and the key measures of our two channels, by plotting the fitted values from a local linear regression of respectively the number of civilians killed (our key proxy for the “*struggle for survival*” channel) and rape cases (our key proxy for “*humiliation and hatred*”) in Figure 7. What Figure 7 clearly shows is a sharp discontinuity in the magnitude of both types of war crimes between counties on either side of the boundary in 1940, confirming the first-stage

relationship of our RDD estimations.

[Figure 7 about here]

We now examine the first channel by regressing the number of middle-to-upper rank Communist cadres who joined the CCP in wartime China on respectively the number of civilians killed and the incidence of massacre in Panel A of Table 8. As before, we separate our estimates into three periods—prewar (columns (1) - (2)), wartime (columns (3) - (4)) and postwar (columns (5) - (6)). Consistent with our expectations, the two measures have no significant effect on the rise of the CCP before the war, but turn significantly positive both during and after the war. During the war, a 1% increase in the number of civilians killed leads to a 1.47% increase in the number of middle-to-upper rank cadres joining the Party. The effect of a massacre is a much larger 9.1%! While the effects remained significant after the war, the corresponding magnitude becomes smaller; the pertinent numbers are now 0.78% in terms of civilians' casualty and a still substantial 6.6% for a massacre.

[Table 8 about here]

We report the results of the second channel in Panel B of Table 8. In these regressions, we also control for the number of civilians killed to identify the effects of “humiliation and hatred” more accurately and independently from those of survival. Once again, neither measure of sex crime has had a significant effect on the CCP's ascendance before the war but they become significant after the war's outbreak. A 1% increase in the number of rape cases and a county with a comfort-women center now lead respectively to a 1.78% and 6.5% increase in the number of middle-to-upper rank cadres during the war, and a consistently smaller 0.65% and 3% increase in the postwar period.

## 6 Persistent Effect of Japanese Invasion on Nationalism

To verify the validity of our two channels, we examine whether war-induced nationalism has had long-term effects. There are various ways in which a national (group) identity—including political attitudes and preferences—can be established; education is one (Alesina et al., 2019), the social construction of a narrative based on the collective memory of epic historical events a social group has experienced, is another (Anderson, 1991; Halbwachs and Coser, 1992; Smith, 1999). Moreover, to foster patriotism and strengthen regime support over the long run, political leaders can endeavor to transmit the collective memories of the “chosen traumas and glories” to succeeding generations by indoctrinating ideas through

school curricula and social propaganda, at ritualistic ceremonies, and so forth (Smith, 1999; Wang, 2012; Volkan, 1998). For example, in an attempt to eliminate the legacy of dictatorship and strengthen support for democracy, Spain passed the “Historical Memory Law” (*Ley de Memoria Historica*) in 2007 to eliminate every single Francoist symbol from the public spaces of buildings, street names, etc. From time to time, the CCP has similarly reminded the people of the collective (painful) memory inflicted by the Japanese during the Second Sino-Japanese War whenever it attempts to rally mass support—a phenomenon referred to by political scientists as “state-led nationalism” (Zhao, 2004; Wang, 2012; Weiss, 2014).<sup>25</sup>

To verify whether war-induced nationalism has persistent effects, we begin by calculating the scores of the surveyed respondents on questions designed to probe their attitudes toward nationalism from an online survey entitled “China Political Compass Survey”.<sup>26</sup> There are altogether five questions related to: (1) national unification and territorial interest, (2) state capacity and the legitimacy of using military force, (3) attitudes toward reunification with Taiwan, (4) perceptions of the Western hegemony on China’s rise, and (5) the promotion of international competition (such as sports) and national glory (see Appendix B for details). The pertinent data were obtained from the 2014 survey with a sample of 171,830 respondents. As the respondents’ IP addresses are included in the survey, we could trace their residential location to the prefecture level. Based on scores calculated according to the respondents’ answers to these questions, we generate a variable that measures the strength of nationalist sentiment of these respondents using principal component analysis.

Our second test is premised on the term “Chinese Dream” (*Zhongguomeng*), promulgated by the paramount CCP leader, Xi Jinping. Soon after he became the national leader in 2012, Xi appealed to the people collectively to endeavor to restore China’s lost national greatness from the “humiliating” history of the late 19<sup>th</sup> and early 20<sup>th</sup> centuries; the slogan “Chinese Dream” (*Zhongguomeng*) was construed to portray a powerful imagery of the national greatness of China’s glorious past. Since then, the term has appeared frequently in official announcements, news propaganda and even school texts, and prompted many to search for its nuanced elaboration on the internet before it was removed in 2016. Assuming that a more intensive search for the term probably implies greater support for the regime, we enumerate, prefecture by prefecture, the frequencies with which the slogan “Chinese Dream” appeared on the Chinese search engine *Baidu* between 2012 and 2015.<sup>27</sup>

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<sup>25</sup>For example, the CCP has since 1991 revised the history syllabus of primary schools, emphasized the importance of nation building by appealing to the collective memory of humiliation caused by foreign military invasions, launched a patriotic education campaign, and prohibited the use of languages of ethnic minorities and local dialects in schools (Wang, 2012).

<sup>26</sup>The survey was initiated by a group of graduate students and researchers at Peking University in 2007 on the website [zuobiao.me](http://zuobiao.me).

<sup>27</sup>While crude, this assumption is not unreasonable. Research has found a strong, positive correlation

Third, we draw inspiration from a study that shows that those who suffered more during the Sino-Japanese War (as measured by civilian casualties) hold a more negative view of Japan today as well as importing less from it (Che et al., 2015). From this perspective, we examine the question “what is your perception toward Japan?” from the Asian Barometer survey conducted in 2014 by the Hu Fu Center for East Asia Democratic Studies. In addition, we also examine whether collective war memory had real consequences on actual consumer behavior, using the total value of goods imported from Japan between 2000 and 2011, and the total number of sushi restaurants in China in 2014, as proxies. These analyses are similarly conducted at the prefectural level.

Finally, we examine whether memories of the Japanese invasion is closely associated with greater support for the regime, by using the question “to what extent do you trust the government in China?” taken from the China General Social Survey (CGSS) of 2006, a national representative survey conducted by the People’s University of China.

The results of this analysis are reported in Table 9. First, respondents who are currently residents of formerly occupied areas exhibit significantly stronger support for nationalism (column (1)). Consistently, internet searches for “Chinese Dream” were significantly more frequent in the former occupied areas (column (2)).<sup>28</sup> Third, respondents in the formerly occupied area also exhibit a significantly more negative attitude towards Japan today (column (3)). Putting the money where their mouths were, these respondents imported a significantly lower value of goods from Japan during 2000-2011; as well, there were significantly fewer Japanese restaurants in these prefectures today (columns (4) to (5)). Last, the same respondents have significantly greater trust in the government (column (6)). Together, these results coalesce with the hypothesis that the Japanese invasion has produced a strong, persistent effect on nationalism and regime support that lasts to this day.

[Table 9 about here]

## 7 Conclusion

70 years since coming into existence, the Chinese Communist Party has finally taken center stage in the arena of international politics, as it has now collided head-to-head with the United States. Its historic rise to power was not inevitable, however, given the institutional and cultural preferences of the Chinese for private property rights, and the uneven military

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between search frequencies on popular search engines and consumption of a wide range of consumables such as automobile, real estate, tourism, and so on (Choi and Varian, 2009), as well as political support and electoral outcomes (Stephens-Davidowitz, 2017).

<sup>28</sup>To ensure that we have enough observations for the search, we only use the full sample in the regression.

strengths that existed between the KMT and CCP at the time. Mao's sarcastic remarks thanking the Japanese for their untoward invasion may be taken to imply that, had it not been for their war crimes, China would have been ruled by the KMT, and that the great majority of the Chinese civilians would not have woken to the urgent call of acting together for a unified cause in fighting a powerful enemy.

By constructing a unique historical data set from a rich variety of sources, including the recently released Japanese Wartime Intelligence archives, we confirmed a causal relationship between Japanese military aggression and the CCP's ascendance to political power. In particular, we showed that the CCP took particular advantage of the weaker military strength in areas which the Japanese Army failed to garrison, thanks to the vast expanse of China's territory. Given the torment of civilians caused by the Japanese invasion, we confirmed that the desperate yearning for survival and the humiliation suffered represented two distinct channels accounting for the causal relationship. To further account for the importance of nationalism as the lynchpin of CCP's mobilizing effort, we confirmed that it was important not only for mobilizing the support of Communism in wartime China, but also has long-term effects.

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## Figures and Tables

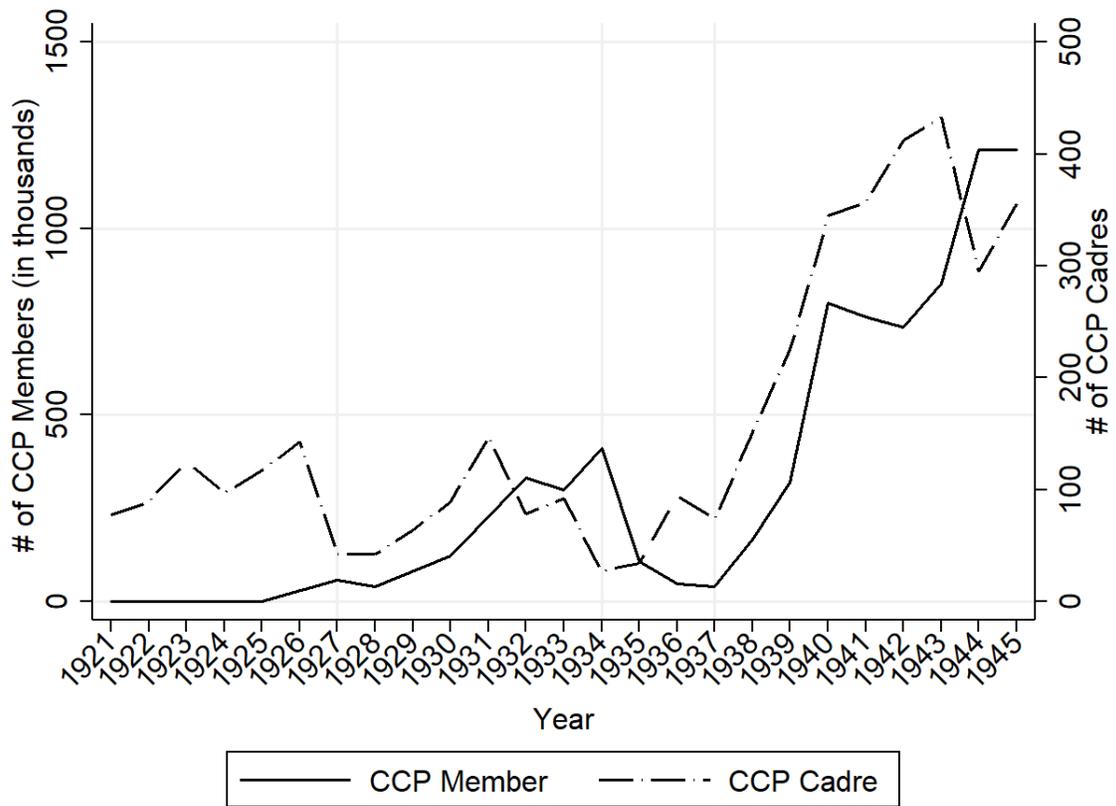
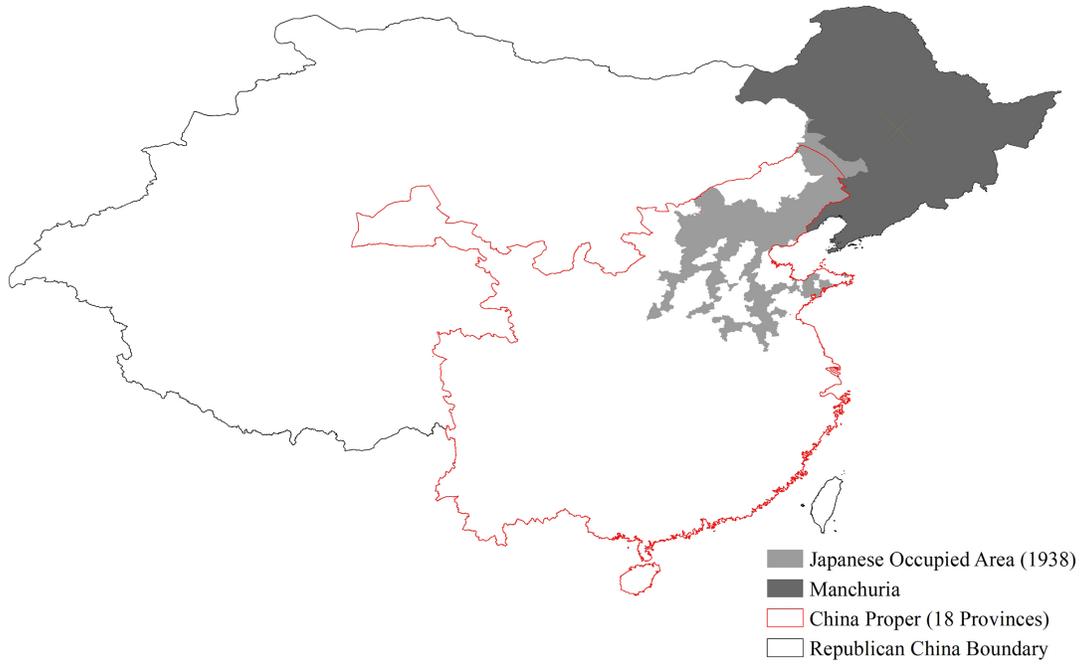
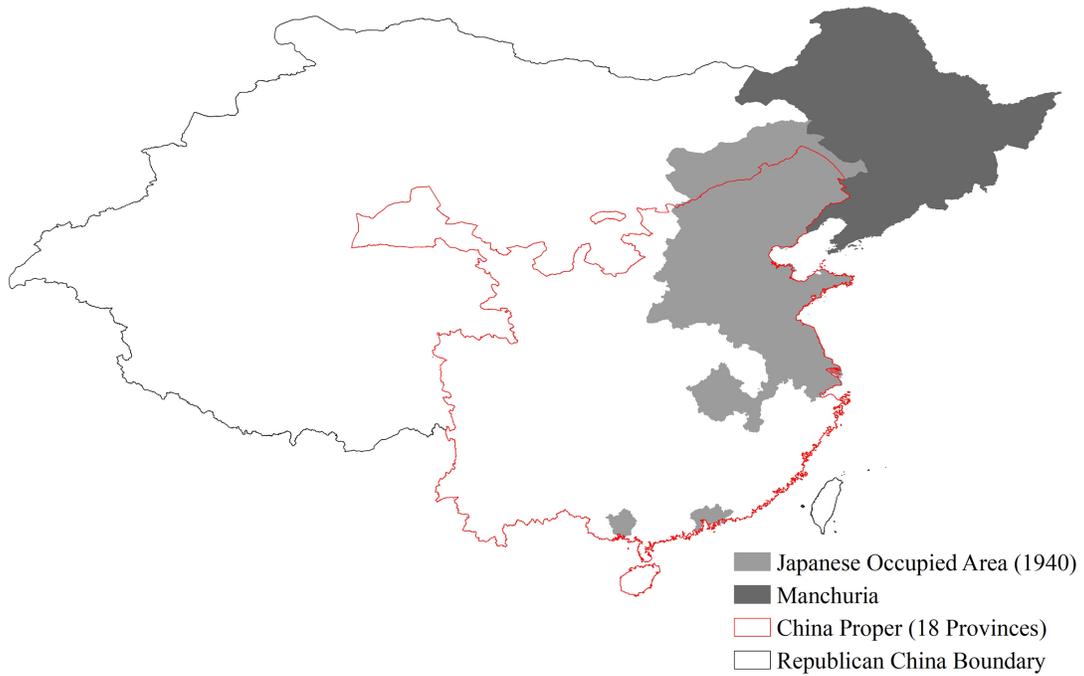


Figure 1. Number of CCP Members and Middle-to-upper-Rank Communist Party Cadres, 1921-1945



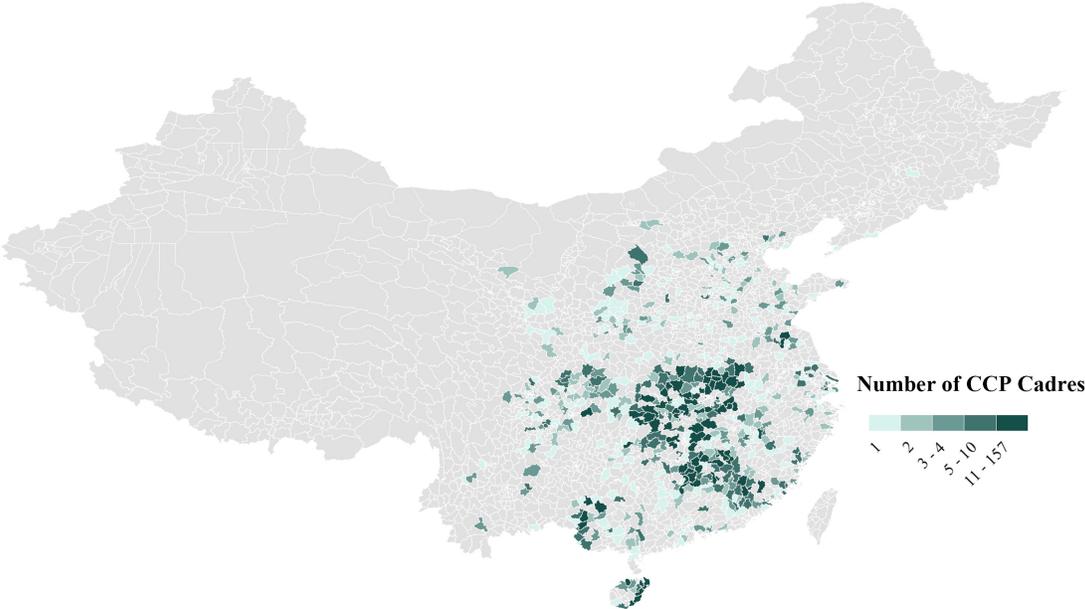
Panel A. Japanese Occupied Area (1938)



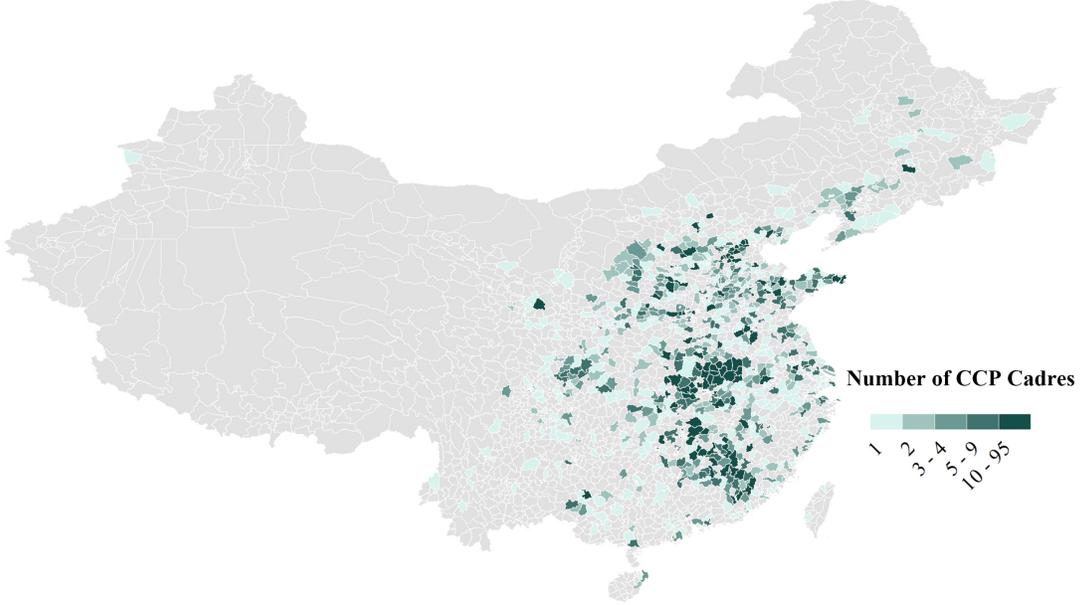
Panel B. Japanese Occupied Area (1940)

Figure 2. The Japanese Occupied Areas in China, 1938 and 1940

Figure 3. Geographic Distribution of Middle-to-upper-Rank Communist Cadres, 1921-45



Panel A. Prewar Period (1921-1936)



Panel B. Wartime Period (1937-1945)

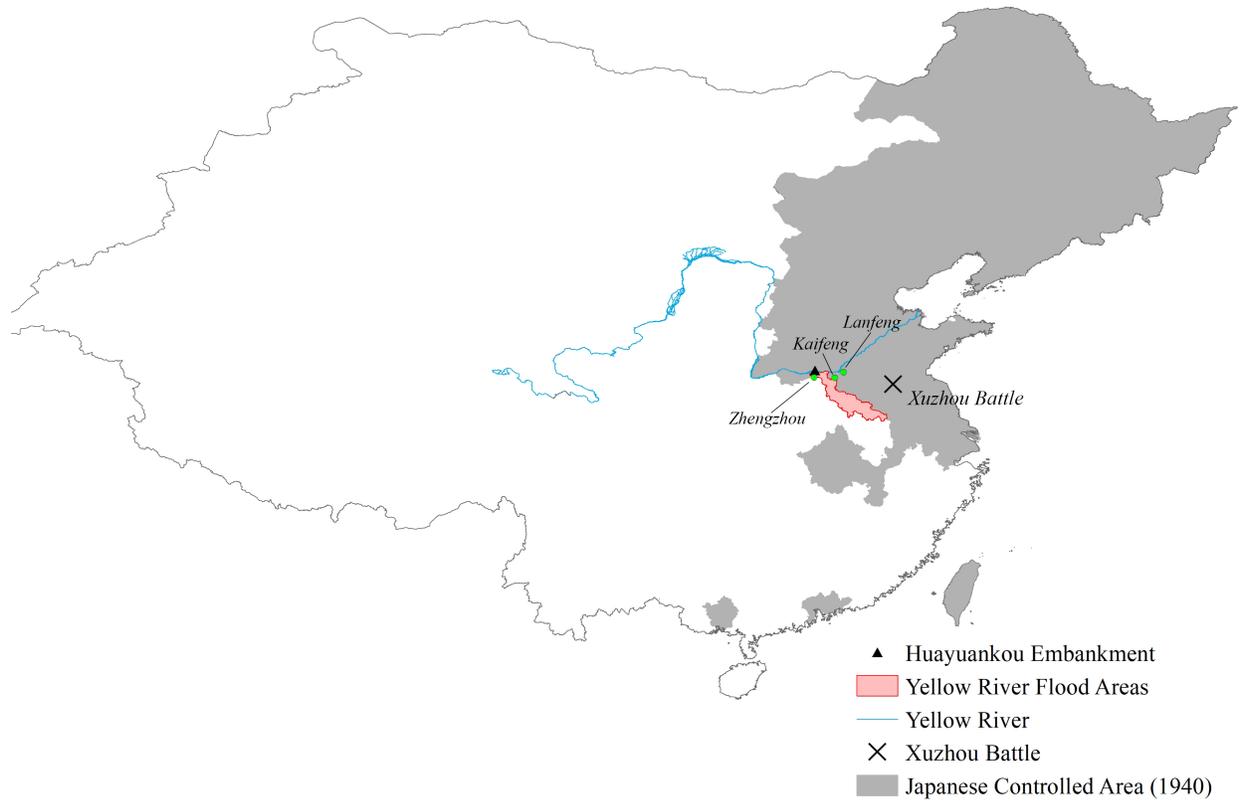


Figure 4. The Yellow River Flooded Areas in the Japanese Occupied Area, 1940

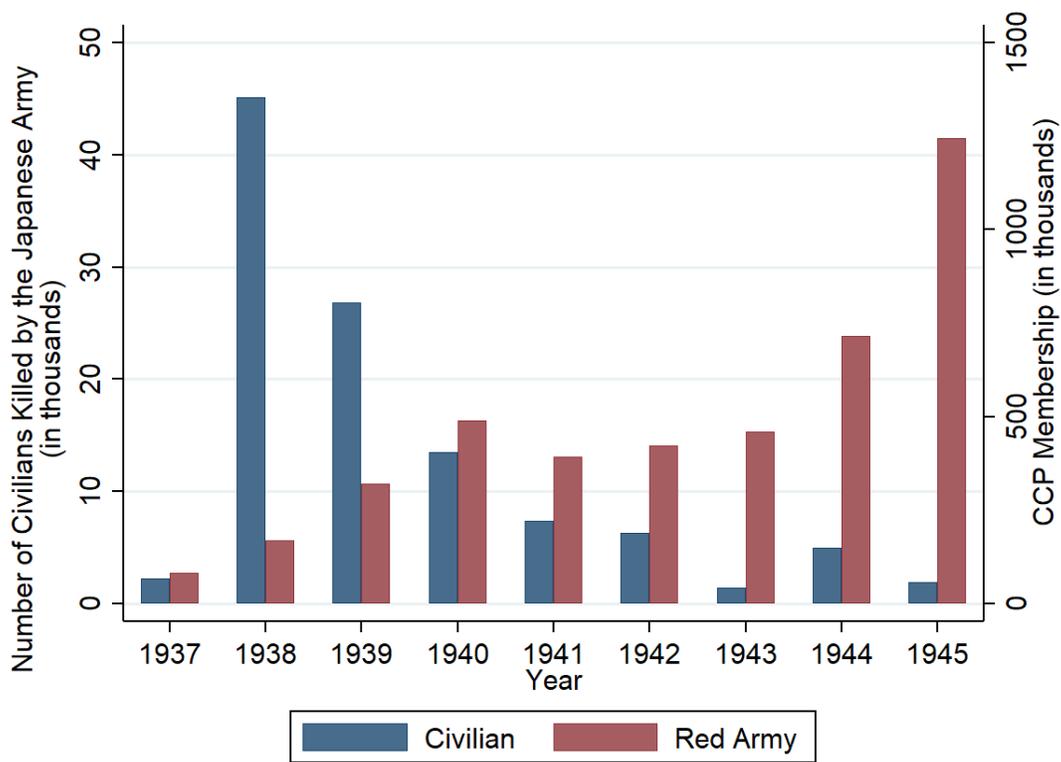


Figure 5. Number of Civilians Killed by the Japanese Army and CCP Cadre Membership

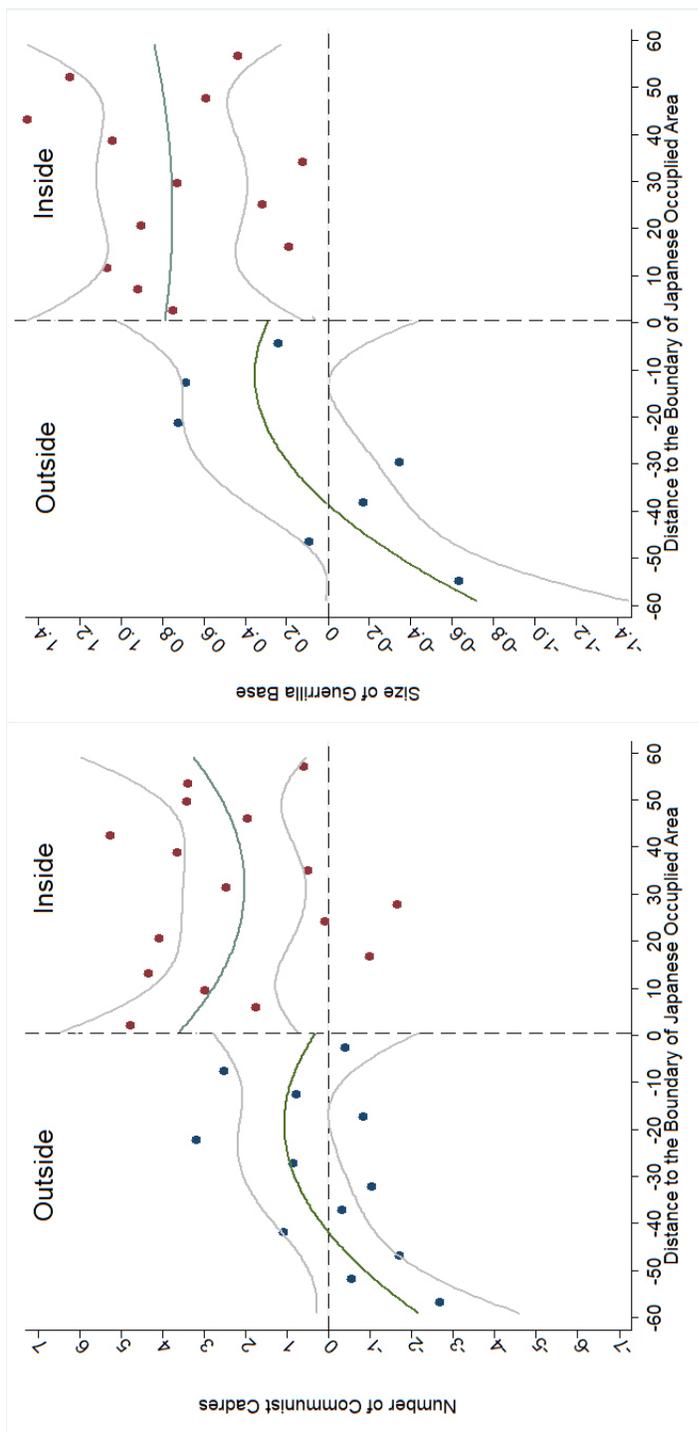


Figure 6. Fitted Values from a Local Linear Regression of Numbers of Communist Cadres and Size of Guerrilla Base

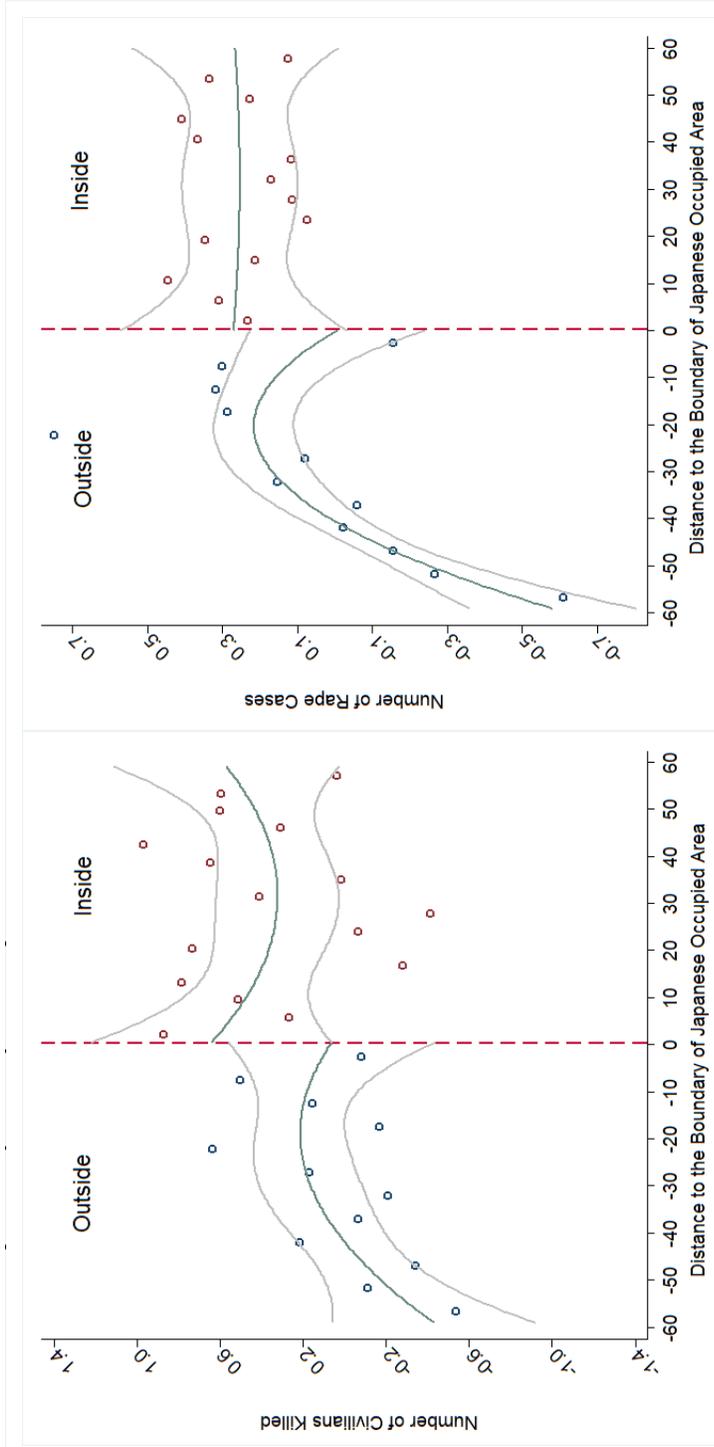


Figure 7. Fitted Values from a Local Linear Regression of Number of Civilians Killed and Rape Cases

Table 1. Summary Statistics of Variables of Interest

Variables	Number of Obs.	Mean	Std. Dev.	Min	Max
Number of Communist Cadres	1924	1.516	0.501	0	284
Size of Guerrilla Base	1924	1.592	1.813	0	800
Japanese Occupied Area	1924	0.375	0.498	0	1
Number of Rape Cases	1924	250.35	174.197	0	1230
Comfort Women Center	1924	0.051	0.165	0	1
Number of Civilians Killed	1924	1780.215	7630.034	0	139363

Table 2A. Balance Checks of Geographic, Climatic, and Resource Characteristics

	Elevation	Slope	Temperature	Precipitation	Rice Suitability	Rice Suitability	Wheat Suitability	Population Density	Rivers Density
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Japanese Occupied Area	1.485 (3.123)	0.418 (0.679)	0.012 (0.032)	1.239 (3.123)	-0.093 (0.140)	-0.143 (0.394)	0.323 (0.534)	1.024 (2.435)	
Observations	1924	1924	1924	1924	1924	1924	1924	1924	
R-squared	0.231	0.129	0.124	0.145	0.242	0.294	0.153	0.213	

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ; Constant terms are not reported.

Table 2B Balance Checks of Alternative Explanations of the Rise of the Chinese Communist Party

	Number of Modern Firms (1840-1937)	Number of Primary and Middle Schools (1937)	Dummy of Treaty Ports	Share of Unionized Workers	Share of Tenancy (1934)	Land Tax Per Capita (1934)	Number of Strong Clans (with Genealogies)	Number of Secret Societies (Qing)	Number of Conflicts in Qing Dynasty	Number of <i>Tongmenghui</i> Member
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Japanese Occupied Area	0.058 (0.208)	0.026 (0.003)	-0.125 (0.215)	-0.011 (0.016)	0.064 (0.212)	-0.034 (0.201)	-0.078 (0.052)	0.058 (0.061)	0.004 (0.011)	-0.043 (0.081)
Number of Observations	1924	1912	1924	1924	1658	1812	1924	1924	1924	1924
Adj. R-squared	0.231	0.303	0.306	0.126	0.063	0.121	0.303	0.144	0.204	0.089

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.10, \*\* p<0.05, \*\*\* p<0.01; Constant terms are not reported.

Table 3. Effect of Japanese Army's Destruction on the Rise of the Chinese Communist Party, Spatial RD Estimation

	War Period (1937-45)					
	Number of Communist Cadres			Size of Guerrilla Base		
	All	<=100km	Optimal Bandwidth	All	<=100km	Optimal Bandwidth
	(1)	(2)	(3)	(4)	(5)	(6)
Japanese Occupied Area	0.090*** (0.010)	0.052*** (0.013)	0.054*** (0.012)	0.141*** (0.025)	0.093*** (0.016)	0.103*** (0.008)
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	1924	832	634	1924	832	634
Adj. R-squared	0.261	0.369		0.32	0.14	

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 4. Robustness Checks I: Decomposing the Effects by Periods

	Number of Communist Cadres									
	Prewar Period (1927-36)			War Period (1937-45)			Postwar Period (1946-49)			
	All	<=100km	Optimal Bandwidth	All	<=100km	Optimal Bandwidth	All	<=100km	Optimal Bandwidth	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
Japanese Occupied Area	-0.016 (0.012)	-0.002 (0.020)	-0.004 (0.041)	0.090*** (0.010)	0.052*** (0.013)	0.054*** (0.012)	0.080** (0.038)	0.044*** (0.005)	0.048** (0.021)	
RD polynomial	Yes 1924 0.157	Yes 832 0.162	Yes 634	Yes 1924 0.261	Yes 832 0.369	Yes 634	Yes 1924 0.201	Yes 832 0.194	Yes 634	Yes 634
	Whether A Guerrilla Base (=1)									
	Whether A Guerrilla Base (=1)			Size of Guerrilla Base						
	All	<=100km	Optimal Bandwidth	All	<=100km	Optimal Bandwidth				
	(10)	(11)	(12)	(13)	(14)	(15)				
Japanese Occupied Area	-0.076 (0.060)	-0.078 (0.052)	-0.084 (0.057)	0.141*** (0.025)	0.093*** (0.016)	0.103*** (0.008)				
RD polynomial	Yes 1924	Yes 832	Yes 634	Yes 1924	Yes 832	Yes 634				
Adj. R-squared	0.223	0.219		0.32	0.14					

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 5. Robustness Checks II: Controlling for the Proximity of Railway and Telegraph

	War Period (1937-45)					
	Number of Communist Cadres		Size of Guerrilla Base		Size of Guerrilla Base	
	All	<=100km	Optimal	All	<=100km	Optimal
	(1)	(2)	(3)	(4)	(5)	(6)
Japanese Occupied Area	0.075** (0.026)	0.047*** (0.008)	0.048** (0.014)	0.094*** (0.016)	0.072*** (0.016)	0.132*** (0.030)
Distance to Railway	0.120 (0.063)	0.091 (0.054)	0.101 (0.055)	0.041 (0.037)	0.036 (0.023)	0.054 (0.034)
Distance to Telegraph	-0.077 (0.235)	-0.080 (0.235)	-0.084 (0.235)	0.036 (0.023)	-0.028 (0.027)	-0.026 (0.029)
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	1924	832	634	1924	832	634
Adj. R-squared	0.752	0.752		0.679	0.663	

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 6. Robustness Checks III: Panel Regressions

	War Period (1937-45)					
	Number of Communist Cadres		Whether A Guerrilla Base (=1)		Optimal Bandwidth	
All	<=100km	Optimal Bandwidth	All	<=100km	Optimal Bandwidth	
(1)	(2)	(3)	(4)	(5)	(6)	
Japanese Occupied Area <sub>t-1</sub>	0.075*** (0.009)	0.048*** (0.017)	0.033** (0.014)	0.119* (0.061)	0.061*** (0.011)	0.069*** (0.010)
County Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	11544	4992	3804	11544	4992	3804
Adj. R-squared	0.526	0.623		0.703	0.706	

Note: All regressions include interaction terms between linear RD polynomial in latitude/longitude and year dummy, and control for the interaction term between distance to the controlled area boundary and year dummy. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 7. Heterogeneous Effect of Puppet Troops

	War Period (1937-45)					
	Number of Communist Cadres			Size of Guerrilla Base		
All	<=100km	Optimal	All	<=100km	Optimal	Bandwidth
(1)	(2)	(3)	(4)	(5)	(6)	(6)
Non Puppet Troops Area	0.069 (0.065)	0.053 (0.060)	0.051 (0.057)	0.078 (0.061)	0.063 (0.059)	0.069 (0.060)
Puppet Troops Area	0.102*** (0.034)	0.075** (0.026)	0.068** (0.022)	0.165*** (0.043)	0.094** (0.039)	0.114** (0.041)
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	1924	832	634	1924	832	634
Adj. R-squared	0.198	0.188		0.332	0.249	

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 8. Channels: War and Sex Crimes, IV-RD estimates

	Number of Communist Cadres					
	Prewar Period (1927-36)		War Period (1937-45)		Postwar Period (1946-49)	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A						
Number of Civilians Killed	0.062 (0.048)		0.037*** (0.011)		0.014*** (0.005)	
Massacre		0.098 (0.205)		0.091*** (0.010)		0.066*** (0.009)
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	634	634	634	634	634	634
Panel B						
Number of Rape Cases	-0.064 (0.151)		0.066*** (0.012)		0.024** (0.011)	
Comfort Women Center		-0.096 (0.132)		0.065*** (0.012)		0.030*** (0.008)
Number of Civilians Killed	0.035 (0.028)	0.078 (0.099)	0.018** (0.009)	0.012*** (0.004)	0.010** (0.004)	0.012*** (0.004)
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	634	634	634	634	634	634

Note: All regressions include a linear RD polynomial in latitude and longitude and control for the distance to the controlled area boundary. Robust standard errors in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; Constant terms are not reported.

Table 9. Persistent Effects of Japanese Invasion on Regime Support, Spatial RD Estimates

	RD Estimates (All)					
	Nationalism	Search for "Chinese Dream"	Perception towards Japan	Total Import from Japan	Number of Sushi Restaurants	Trust Central Government
	(1)	(2)	(3)	(4)	(5)	(6)
Japanese Occupied Area	0.312*** (0.069)	0.450*** (0.078)	-0.295*** (0.106)	-0.056*** (0.012)	-0.183*** (0.092)	0.322*** (0.097)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
RD polynomial	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	215642	326	3457	326	326	4217
Adj. R-squared	0.135	0.211	0.388	0.254	0.157	0.108

Note: All regressions include a linear RD polynomial in latitude and longitude and control for per capita GDP, size of population, per capita fiscal expenditure, per capita FDI, years of schooling in 2010, revolutionary county, ethnic minority county, and poverty county. Robust standard errors in parentheses; \* p<0.10, \*\* p<0.05, \*\*\* p<0.01; Constant terms are not reported.





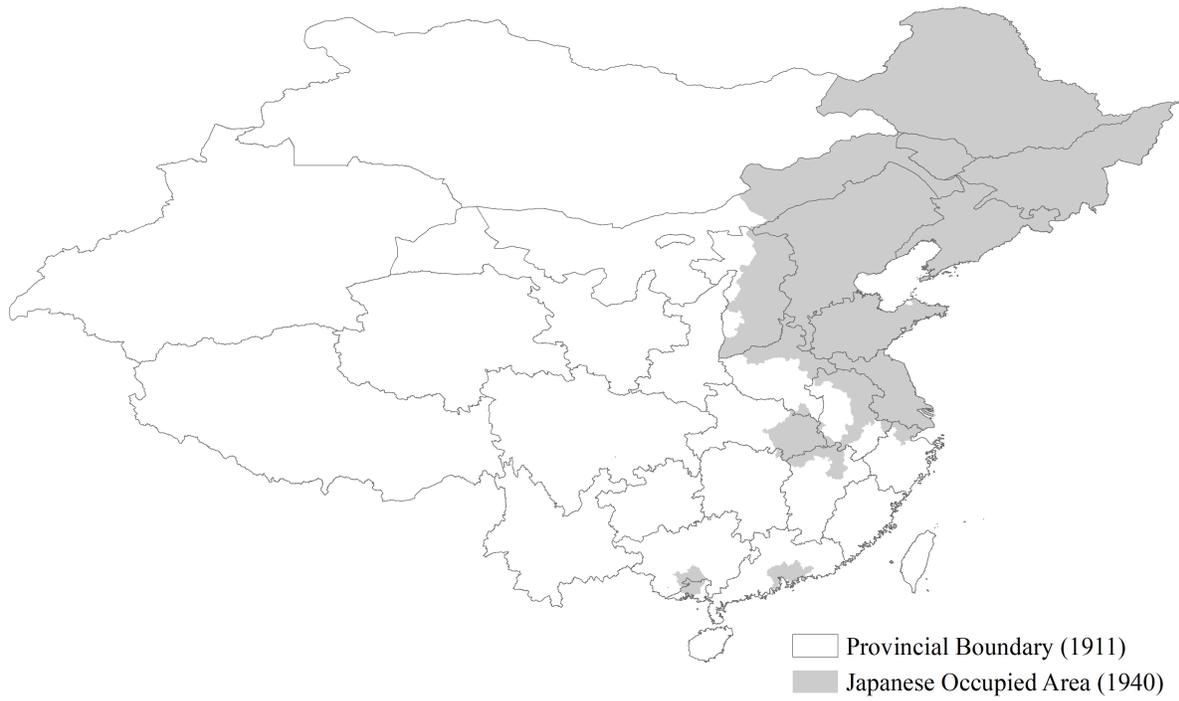


Figure A3. The Japanese Occupied Area and Provincial Boundaries, 1940

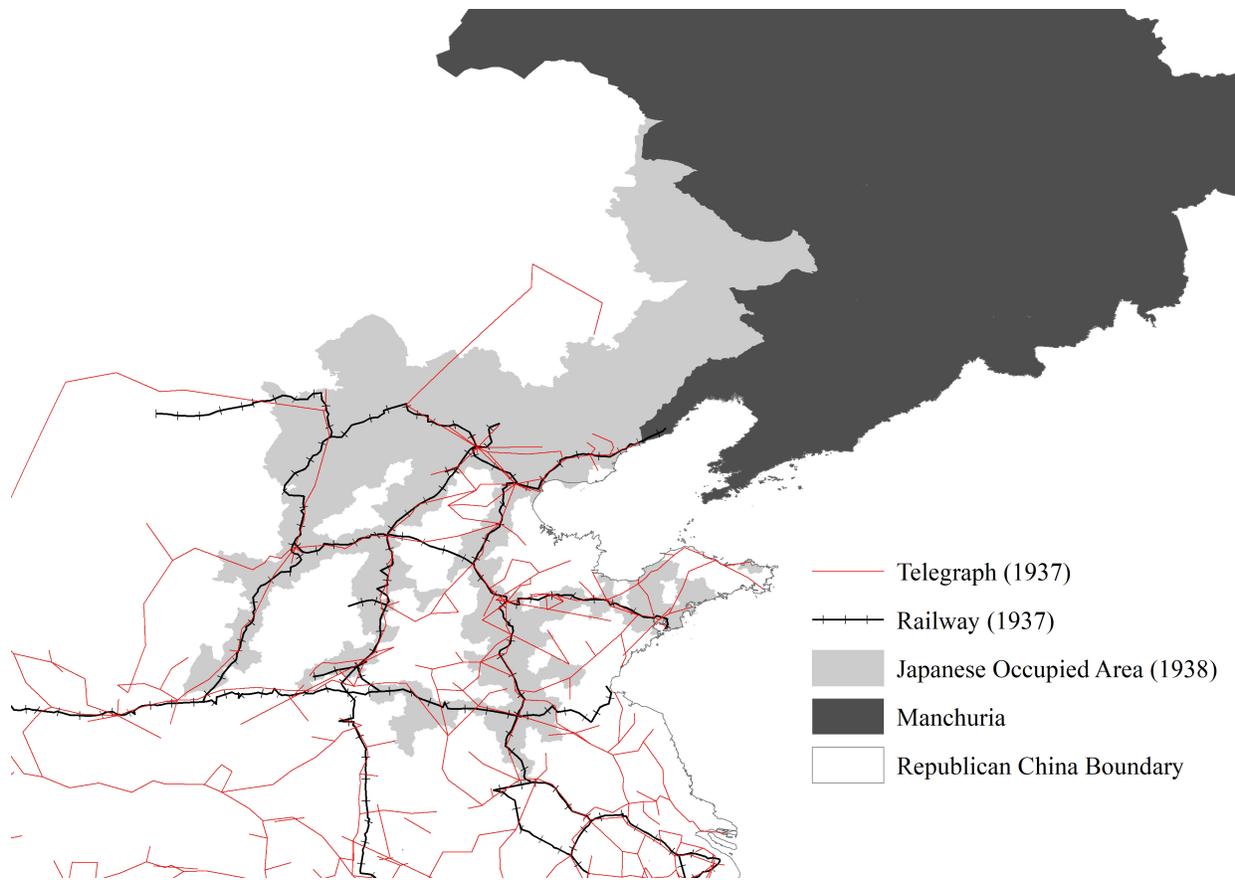


Figure A4. Telegraph Lines, Railway Networks, and the Japanese Occupied Area, 1938

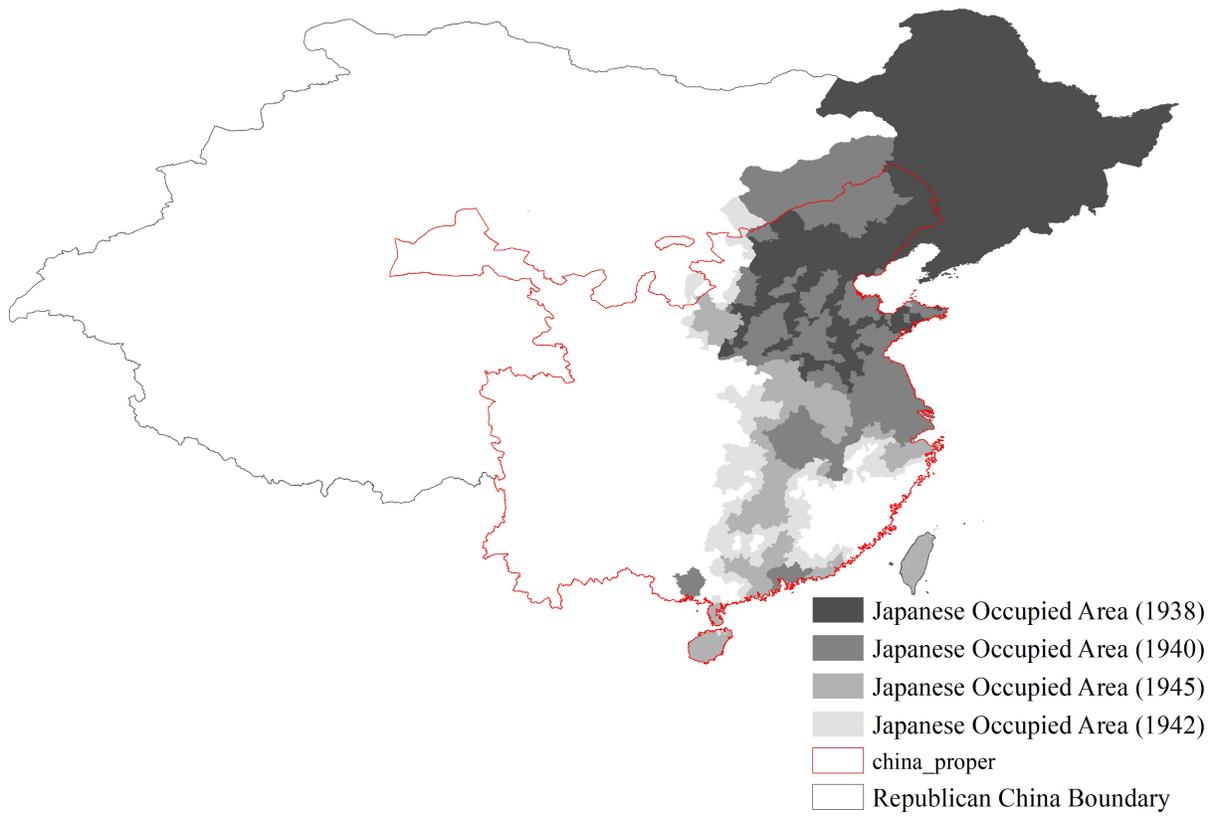


Figure A5. Changing Boundaries of the Japanese Occupied Areas in Wartime China, 1938-1945

## Appendix B. Questions of China Political Compass Survey

The China Political Compass Survey contains 50 questions. The ordering of these questions is randomized for each respondent who takes the survey. We select and classify those questions related to beliefs in nationalism. Respondents are asked to rate their agreement from “most agreeable” to “most disagreeable” on a five-point Likert scale on following statements:

- 1) “National unification and territorial unity are of the highest interest to a society.” “国家的统一和领土完整是社会的最高利益。”
- 2) “As long as it is allowed by state capacity, China has the right to take any action to defend its national interests.” “如果国家综合实力许可，那么中国有权为了维护自己的利益而采取任何行动。”
- 3) “Military force should be applied to unify Taiwan should conditions permit.” “条件许可的话应当武力统一台湾。”
- 4) “It is unrealistic to expect the Western hegemon led by the United States to truly tolerate China’s rise to become a major power.” “以美国为首的西方国家不可能真正容许中国崛起成为一流强国。”
- 5) “The state should take measures to groom and support athletes to compete in various international competitions for national glory.” “国家应当采取措施培养和支持体育健儿在各种国际比赛场合为国争光。”