State Capacity and Discrimination: WWII U.S. Army Enlistment (Incomplete)*

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Abstract

This paper investigates the effect of discrimination on volunteer military enlistment rates, which we interpret as a component of state capacity. We use weekly enlistment data to document that WWII African American enlistment rates immediately after the Pearl Harbor attack were negatively associated with the intensity of racial discrimination across U.S. counties. White enlistment rates were unassociated with discrimination. These patterns are robust to controlling for a large number of fixed effects and race-county-time-specific controls. The data show similar negative relationships between the degree of discrimination and enlistment rates for Japanese Americans. The empirical findings are evidence that discrimination reduced state capacity.

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1 Introduction

A new, important and rapidly growing branch of the political economy literature argues that state capacity is central for economic growth (e.g., Besley and Persson, 2009, 2010). These studies point out that state capacity is a multi-dimensional object that goes beyond the narrower definition of the ability to raise taxes originally provided by Tilly (1993). However, there is relatively little empirical evidence on the determinants of these other dimensions of state capacity. This study makes progress on this agenda by examining the effect of the political and social exclusion perpetuated by racial discrimination on African American volunteer enlistment rates during World War II. Political scientists have long argued that the ability for the state to motivate its citizens to fight during wars, which includes both voluntary and conscripted service, is an essential aspect of state capacity (Levi et al., 1997). Our focusing on discrimination as a possible determinant builds on the related, but distinct, argument that countries with inclusive institutions tend to invest more in building state capacity in the long run (Besley and Persson, 2009).

By the end of WWII, a higher share of African American men had enlisted than white men, and their valor were renowned. However, at the war's outset, participation was very controversial within the African American community, when there was little difference between the U.S. government and what was then known about the Axis regimes. Partly in response to this ambivalence, the U.S. government enacted a large campaign to recruit African American soldiers in the second half of 1942.¹ To cleanly identify the discouragement effect of discrimination, we focus on the period before this recruitment campaign. We will compare volunteer enlistmen rates in the eight weeks before and after the surprise attack by Japan on Pearl Harbor on December 7, 1941, which prompted the United States to immediately and fully enter WWII on the side of the Allied Forces.

We document several descriptive patterns in the data. To measure discrimination, we use a principal components index constructed with measures of formal, informal, political, and social discrimination that have emerged in the literature. This captures a person's own exposure to discrimination as well as the intergenerationally transmitted experiences of previous generations. First, we document that African American volunteer enlistment increased after the attack. However, the increase was

¹ See the Background section.

substantially lower in counties with higher levels of discrimination. These patterns are consistent with the hypothesis that discrimination discouraged African American volunteer enlistment. Second, we document that white volunteer enlistments rates also rose right after the Pearl Harbor attack. Yet, there was no difference in white volunteer enlistment between counties with high and low levels of discrimination against African Americans. This is consistent with the cross-county pattern for African Americans reflecting differences in discrimination rather than other factors that affect African American and white enlistment similarly. Examples of the latter include distance to Army recruitment offices, or differences in the penetration of news about the Pearl Harbor attack. Finally, we document that national volunteer enlistment rates for white men increased much more than for African American men after Pearl Harbor. This is consistent with the fact that African Americans suffered severe discrimination across the United States, even in counties with *relatively* low levels of discrimination, while white Americans did not.

To estimate the causal impact of discrimination on volunteer enlistment, we use a *triple-differences* (DDD) specification. We compare volunteer enlistment rates right before and after Pearl Harbor, across counties with different levels of discrimination, between African American and white men. Conceptually, the DDD is the comparison of double-difference (DD) estimates of the effect of discrimination on enlistment for each race (enlistment in counties with higher discrimination versus counties with lower discrimination, before and after the Pearl Harbor attack). The DDD removes confounding influences that are correlated with discrimination and vary over time in a way that affect the two races similarly. For instance, manufacturing employment opportunities may be more prevalent in counties with higher levels of discrimination, and also affect the decision to volunteer by increasing the opportunity cost of enlistment.

The granularity of the data and the short event window allow sharp identification, and avoid the confounding influences of other factors. Moreover, our preferred specification includes county-week fixed effects, which control for differences across counties over time; race-week fixed effects, which control for differences across races over time; and county-race fixed effects, which control for time invariant county-racespecific differences. We also include county-race-specific characteristics interacted with week fixed effects to control for time varying differences across races that also vary by county, such as education or occupation (e.g., war related job opportunities outside the military).² Extending the earlier example, one may be concerned that white men have more access to manufacturing employment in high discrimination counties than Black men. To address this, we calculate the county share of Black and white men employed in manufacturing prior to Pearl Harbor, and control for each variable interacted with week fixed effects.

Another important control is the race-specific weekly county *draft* enlistment rate, since local Army recruiters (i.e., local boards) often discriminated against African American soldiers at the onset of the war (Flynn, 1984). If this occurred more in counties with higher discrimination, then the DDD would capture both the effects of discrimination from Army recruiters (i.e., a demand-side effect) and the effects of discrimination on the decision of African American men to volunteer (i.e., a supply-side effect). We address this by controlling for county-race-week specific draft enlistment. This follows the logic that draft enlistment was fully under the control of the military and should therefore capture demand-side effects.

The triple difference estimate of discrimination, the dummy variable for African American, and the dummy variable for post Pearl Harbor on volunteer enlistment rate is negative, large in magnitude and statistically precise. Thus, the descriptive evidence that discrimination discouraged African American men from volunteering after Pearl Harbor is unlikely to be an artifact of omitted variables or spurious correlations. The magnitude of the effect is large. Comparing a county at the 75th percentile of the discrimination index to a county at the 25th percentile, the rise in African American volunteer enlistment during the eight weeks after Pearl Harbor is 95% higher in the latter than in the former.

We demonstrate that our results are robust to a large number of additional controls, such as the presence of institutions that may have influenced participation from the African American community (e.g., NAACP chapters and Black churches), distance from Pearl Harbor and from Germany, the number of years that the state had been part of the Union (a proxy for the strength of national and political identity), the presence of WWI African American veterans residing in the county (a proxy for the disappointment of not being better treated after fighting in WWI), and the volunteer behavior in counties connected through historical migration networks (a proxy

²For example, Aizer et al. (2020) and Ferrara (2018) document significant skill upgrading for African American men and a reduction in the racial wage gap. Fishback et al. (2020) document racial differences in access to New Deal work relief.

for potential "peer effects" and spillovers across places). These and additional results are described in Section 4.

The sign and the magnitude of our results is remarkably homogenous across counties. Not only, the effects of discrimination are similar for counties in and outside of the South. But also, they do not seem to vary with the local presence of Black institutions and organizations – such as Black churches and the presence of the NAACP – or years spent by a state in the Union. However, we do find that the effects of discrimination are stronger in places further away from Pearl Harbor. This suggests that the effect of discrimination was partly offset by the physical immediacy of danger. The discouragement effect was also somewhat larger in counties with more African American household heads who had served in WWI, even though this difference is not statistically significant at conventional levels.³

We supplement our main analysis by examining the effects of discrimination and the disenfranchisement of Japanese Americans, who were declared to be enemy citizens after Pearl Harbor and largely barred from military service until early 1943, when they were recruited conditional on their willingness to swear loyalty to the United States. This conditionality gave Japanese American men discretion in whether they were drafted. Japanese-American civilians on the U.S. mainland were forcibly interred, whereas those living in Hawaii were largely exempted. Thus, we compare the willingness of Japanese Americans to join the U.S. military before and after they were allowed back into service, between the mainland and Hawaii. We find a large increase in enlistment from Hawaii, and no increase from the mainland. This is consistent with discrimination and disenfranchisement discouraging military participation.

We interpret our results as novel and rigorous evidence that discrimination discourages military participation, and in this way, reduces state capacity. The reasons are multifold. See Section 6 for a detailed discussion. For policy makers, the results provide clear insights: citizens from whom the state expects equal contributions should receive equal value from the state. Reducing discrimination strengthens the state in times of war. We discuss this more in the Conclusions.

Our study adds to the literature on the origins and the determinants of state capacity, which typically views the threat of conflict as one of the key forces in shaping the demand for state capacity in the long run (e.g., Besley and Persson, 2009, 2010;

 $^{^{3}}$ This is consistent with historical accounts about the disappointment felt by African American WWI veterans when they returned to unrelenting discrimination.

Gennaioli and Voth, 2015). Besley and Persson (2009) additionally points out that countries with historically inclusive institutions are more likely to invest in state capacity. In this sense, we are closely related to the new empirical study by Becker et al. (2019), which uses historical German data to document that exposure to conflict increased political participation, which subsequently increased citizen consent for taxation. Our findings complement these works by showing the reverse relationship: that discrimination and disenfranchisement can have deleterious effects on state capacity in an important context. They support Besley and Persson (2009) and Besley and Persson (2010), as well as the theory of military participation by Levi et al. (1997). Our insights also complement several recent empirical papers on state capacity in Africa. In the D.R.C., Weigel (2020) finds an increase in citizens' demand for participation in government as a response to having to pay taxes, while Sánchez De La Sierra (2020) documents how armed bandits perform basic state functions. In Uganda, Deserranno et al. (2020) finds that foreign aid can undermine state capacity. More generally, our results are consistent with the argument that racial tension reduces state capacity (e.g., Alesina et al., 2020b,a; Alesina and Spolaore, 2005).⁴

There are several recent empirical studies of the determinants of military participation in the United States. We are most closely related to Fouka (2020), which documents that discrimination against German Americans after and during WWI reduced their participation in WWII; and Ferrara and Fishback (2020), which finds that German Americans moved away from counties with high WWI casualty rates to escape discrimination, leading to a decline in manufacturing in these places. Caprettini and Voth (2020) documents a positive relationship at the county level between New Deal spending and patriotism during WWII. Campante and Yanagizawa-Drott (2015) finds that attitudes towards military enlistment can be transmitted across generations, and that the enlistment and the father's military experience influence the behavior of their offspring. Finally, we add to the large literature on discrimination by highlighting state capacity as another social cost.⁵

This paper is organized as follows. Section 2 discusses the historical background. Section 3 describes the data. Section 4 presents the empirical strategy and main results. Section 5 examines Japanese Americans. Section 6 interprets the results. Section 7 concludes.

⁴See Alesina and Ferrara (2005) for a review.

⁵See Becker (2010) for a literature overview.

2 Background

2.1 WWII and Pearl Harbor

The Japanese conducted a surprise military strike against the U.S. naval base at Pearl Harbor in Honolulu, Hawaii, at 7:48am on Sunday morning, December 7, 1941. 2,403 Americans were killed and 1,178 others were wounded. 188 U.S. aircrafts were destroyed together with other physical military capital. The attack happened without a declaration of war and without explicit warning, amidst ongoing peace negotiations. Japan declared war on the United States later that day. The following day, Congress declared war and the U.S. formally entered WWII.

The attack was immediately reported by all American news outlets. Pearl Harbor transformed America's involvement in WWII from one that was relatively detached, about abstract values such as democracy and Fascism in distant foreign lands, into an immediate and urgent defense of the United States. Pearl Harbor became a rallying point for the war effort, and was used in American propaganda throughout the war. For instance, well-known battle cries included "... these dead shall not have died in vain..." and "Remember December 7th!". The Japanese conducted additional and highly damaging strikes against the U.S. Pacific fleet in the following days, adding to a sense of a nation under attack in the United States. Pearl Harbor was the only major attack on the U.S. territory during WWII.

2.2 The U.S. Military

2.2.1 Discrimination in the Military

Race relations within the U.S. military mirrored those of the nation. African American soldiers and Caucasian soldiers were segregated until 1948. During WWII, they had separate canteens, barracks, nurses and even blood banks. African American soldiers served under African American or Caucasian officers, whereas Caucasian soldiers served under Caucasian officers only. Enlisted African American men mostly served in non-combat units. The marines had no African American enlisted men in combat infantry, while the Navy Seabees and the United States Air Force had very few of them. One notable exception was the Tuskegee Airmen. The Army had only five African American officers.⁶ At the onset of the war, and during the period considered in our paper, only the Army allowed African Americans.

2.2.2 Enlistment

Our main analysis focuses on the weeks right before and after Pearl Harbor, when both volunteer and draft enlistment were in place, and when changes in the policies regarding military recruitment or its implementation were very limited. For brevity, this discussion focuses on the recruiting policies for draftees and volunteers within this narrow time frame.

The Selective Training and Service Act (STSA), signed by President Roosevelt on September 16, 1940, established the first peacetime draft in the United States. It required the registration of all men between the ages of 21 and 35, with selection for one year's service by a national lottery. By the summer of 1941, the STSA moved away from a national lottery to administrative selection, conducted by more than 6,000 local boards. After Pearl Harbor, on December 20, 1941, Congress passed Public Law No. 360, which allowed the STSA to extend the term of service to the duration of the war and an additional six months, and expanded eligible ages to 18 to 64. On December 5, 1942, an executive order banned volunteers so that the government could have full control over the labor force.

There are several key facts about volunteer enlistment to keep in mind for interpreting our results later in the paper. First, there was no change in the operations of Army recruitment or eligibility criteria, within the narrow window that we examine (eight weeks before and after Pearl Harbor). The one exception is the expansion of the age range. Second, many local boards, particularly in the South, were discriminated against African Americans. Anecdotal and historical accounts discuss how, during the early period that we study, African American volunteers were turned away (Flynn, 1984, 1993; Ferrara, 2018). Finally, the criteria for accepting volunteers (e.g., health test) were similar for draftees.⁷ Once inducted, an enlisted man's occupation in the military depended on factors such as education and occupation prior to enlistment, and on race. It did not depend on either volunteer status or the county where the

⁶For a detailed description of race relations and African American enlistment in WWII see Lee (2000), available at this link, and Flynn (1984).

⁷Acemoglu et al. (2004) discuss the most common individual characteristics typically considered by local boards for deferrals or exemptions, such as marital status, fatherhood, farm status, or German, Asian, and Italian ancestry.

soldier was coming from.⁸ The main determinants for assignment were prior occupation and the level of education. We will return to discuss and address these issues later when we discuss the empirical analysis.

2.3 Racial Discrimination at the Onset of WWII

When the U.S. entered WWII, African Americans had very limited civil and political liberties, due to both formal and informal discrimination that severely restricted their political, economic, and social opportunities relative to the white population. This had been true for decades. Starting from the late 1890s, many Southern states passed laws intended to disenfranchise the African American population (Woodward, 2002). The African American population faced restrictions such as the complete segregation of Caucasian men and non-Caucasian men in all facilities (e.g., restaurants, schools, water fountains, buses), with facilities provided to non-Caucasian men being of lower quality relative to those provided to Caucasian men. Many states practiced strict neighborhood segregation, where public services such as sewers and electricity ended at the boundaries of the Caucasian neighborhoods. Interracial marriages and sometimes even non-marital sexual relationships were made illegal (Packard, 2003).

Discrimination was often exercised informally by organizations such as the Ku Klux Klan, and more generally by coordinated actions of the white community. Between 1882 and 1968, approximately 3,446 African Americans were lynched (Tuskegee Institute, 2020). African Americans pupils had to attend – de jure or de facto – separate schools, which were severely under-funded and has been found to be responsible for the large racial gap in educational attainment Collins and Margo (2006). African American men and women were excluded from most non-menial jobs (Sharfstein, 2011).

There was substantial geographical variation in the degree of discrimination. Although discrimination and disenfranchisement were institutionalized in the South, discriminatory policies were in place everywhere. For example, between 1913 and 1948, 30 out of the then 48 states enforced anti-miscegenation (mixed-race marriage) laws (Vile, 2003). Many schools in Illinois, Ohio, Pennsylvania, and New Jersey were completely segregated, even though it was *de jure* illegal. Similarly, white residents

⁸There is evidence that volunteers had some degree of discretion in choosing between branches in the U.S. military (Ferrara, 2018; Flynn, 1993). Yet, there was no discretion for occupations or assignments within the Army, which is the focus of our empirical analysis.

de facto enforced racial residential segregation in most northern and western cities (Shertzer and Walsh, 2019).

2.4 Contemporary Discussions about African American Involvement in WWII

When WWII erupted, a heated debate emerged within the African American community. There was much disappointment in the lack of social progress following WWI, when 350,000 African American men enlisted and hoped that the white establishment would observe the value and patriotism of their compatriots and reduce racial discrimination.⁹ Based on what was known at the time, the discriminatory policies of the U.S. seemed little better than the those in Axis powers.¹⁰ The ostensible pointlessness of fighting is articulated in 1939 by African American writer, C. L. R. James, when he wrote "Why should I shed my blood for the whole Jim Crow, Negro-hating South, for the low-paid, dirty jobs for which Negroes have to fight, for the few dollars of relief and insults, discrimination, police brutality, and perpetual poverty to which Negroes are condemned even in the more liberal North?".

Soon after Pearl Harbor, in a poignant (and later famous) letter to the *Pittsburgh Courier* on January 31, 1942, 26-year-old African American, James G. Thompson, famously wrote "Should I sacrifice my life to live half American? … Will things be better for the next generation in the peace to follow?... Is the kind of America I know worth defending?" This letter became famous as both an articulation of the injustices which motivated the reluctance of African Americans to fight, and also, as the instigation of what he called the Double V campaign: "The first V for victory over

⁹An example of such disillusionment can be seen in Langston Hughes's "The Colored Soldier" in *The Collected Poems of Langston Hughes*, pp. 147-48 (Rampersad, 1995).: "..We were just two colored boys, brown and African American/ Who joined up to fight for the U.S.A.../And that our dark blood would wipe away the stain/ Of prejudice, and hate, and the false color line—/ And give us the rights that are yours and mine./ They told us America would know no African American or Caucasian:/ So we marched to the front, happy to fight".

¹⁰There were many explicit comparisons of the U.S. to the Nazis. For example, prior to Pearl Harbor, in 1937, *The New York Amsterdam* wrote "[Nazis' plan to segregate Jews on German railways was] taking a leaf from United States Jim Crow practices". In 1935, it wrote "If the Swastika is an emblem of racial oppression, the Stars and Stripes are equally so….". "Why should Negroes fight for democracy abroad when they are refused democracy in every American activity except tax paying?" wrote George Schuyler, columnist for the Pittsburgh Courier. Langston Hughes wrote "...You tell me that Hitler / Is a mighty bad man / I guess he took lessons from the Ku Klux Klan [...] I ask you this question / Cause I want to know / How long I got to fight / BOTH HITLER — AND JIM CROW" (Hughes, 1943).

our enemies from without, the second V for victory for our enemies from within".

The U.S. government embarked on an extensive recruitment campaign targeted towards African Americans starting in the Spring of 1942. This was in no small part a response to the low Black enlistment rates during the beginning of the war. Some also pushed for better treatment within the U.S. military. The latter efforts had very limited success. Nevertheless, African American volunteer enlistment dramatically increased in the second half of 1942, and remained high until the end of the year, when volunteer enlistment was abolished.

Our study examines the impact of discrimination on enlistment. Thus, we focus on the period right before and after Pearl Harbor, which predates the recruitment efforts described above.

3 Data

3.1 Data Construction

Enlistment is reported at the individual level by the World War II Army Enlistment Records (NARA-AAD), 1938-1946 (NARA, 2002). It includes 9,039,840 individual service records of American soldiers who served in the Army from 1938 to 1946, and were digitized by the National Archives. The individual-level data include information about the date of induction, birth year, education, occupation, marital status, race, citizenship, volunteer status, branch, and rank at the time of induction. The data were digitized from induction cards, and thus report the county where a man registered for Selective Service.¹¹ In most cases, this is from 1940, more than one year before Pearl Harbor, which mitigates concerns of endogenous location in response to Pearl Harbor.

Another important point to note is that the date of induction on the card does not necessarily reflect the date when a volunteer applied to Army recruiters or when a draftee received his "call-up" notice. During the early stages of the war, there were delays, as the military did not always have adequate facilities for housing and training following the rapid increase in the number of soldiers. We return to this point in more detail in the next section, when discussing our empirical specification.

¹¹This dataset has been used in several recent studies, such as Caprettini and Voth (2020) and Fouka (2020).

The main outcome of interest in our analysis is the number of enlisted men for each race in each county in each week for every 100,000 eligible men. Henceforth, enlistment "rate" refers to enlistment per 100,000 enlistable individuals. We use the 1940 full count U.S. Census to calculate the latter and adjust it to account for the change in eligible ages on December 20, 1941.¹² All descriptive statistics and regression estimates are weighed by the number of eligible individuals in a county-race-week cell so that they are similar to estimates using individual-level data. The Census also provides a number of control variables that we will describe later. Other datasets will be discussed as they become relevant.

The main analysis focuses on the 48 mainland states for which the data can be disaggregated to the county level.¹³ The observations are at the county-race-week level.

3.2 Descriptive Statistics

3.2.1 Characteristics of Counties and of Enlisted Men

Tables 1 and A.1 present descriptive statistics of the main variables for the full sample and for Black and white men separately. Appendix Tables A.2 and A.3 report the detailed description and the source of each variable.

Table 1 shows that, in 1940, 10.4% of the population was African American and 89% was white. Other races comprise only 0.6% of the sample. 11% of African Americans who were eligible to serve in WWII lived in a household with a WWI veteran.¹⁴ Slightly more than half of these individuals were living with a household head who had served during WWI. The average membership in African American Churches as of 1936 was 4.6%, whereas around 40% of individuals in our sample lived in a county which had at least one NAACP chapter in 1940.¹⁵ Table 1 also shows that

 $^{^{12}}$ Until that date, individuals of age 21 to 35 were eligible for service. Following the passage of Public Law No.360, this age range was expanded to 18 to 64.

¹³Service Command 7 are missing (NARA, 2002). Service Command 7 includes the following states: Colorado, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming. In our baseline analysis, we include all mainland states. In unreported robustness checks, we drop the observations from these states and find similar results.

 $^{^{14}}$ The U.S. Census asked about veteran status in WWI in 1930, but not in 1940. Thus, we use age in 1930 to calculate the number of men who would be eligible to serve in WWII . See also Appendix B for more details on the construction of this variable.

¹⁵Data on the local presence of NAACP chapters come from Gregory and Estrada (2019). Also, see Calderon et al. (2019) for a detailed description these data. Data on African American churches are

the average share of the population with ancestry from Germany, Italy, and Japan (the Axis powers) was, respectively, 1.7%, 3.2%, and .09%, and that approximately 50% of counties were farmland.

Table A.1 presents the descriptive statistics for African American and white men in columns 1-2 and columns 3-4 respectively. In 1940, African American men were less likely to work in manufacturing, more likely to be employed in agriculture, were less educated and earned lower income (as reflected in both wages and occupational scores) than white men.¹⁶ During the sixteen-week window of our analysis, both draft and volunteer enlistment were higher for white men. This is consistent with historical accounts of discrimination against enlisting Black men during this period. However, the racial gap is much larger in magnitude for volunteer than draft enlistment.¹⁷

To illustrate the geographic variation in enlistment across counties, we map enlistment per 100,000 eligible men for each race. Since the regression analysis we present later will exploit within-state variation, we also present enlistment rates demeaned by state fixed effects. See Appendix Figures A.1 and A.2.

3.2.2 Index of Historical Discrimination

To measure discrimination with one variable, we calculate the first principal component of political and social discrimination for the county of enlistment as in the economic history literature: the presence of the Ku Klux Klan from 1915 to 1940; the number of lynchings until 1939; the Democratic vote share in Congressional and Presidential elections between 1900 and 1930; and, the measures of racial residential segregation and isolation. Appendix Table A.5 lists the sources for each variable. Figure 1 maps the discrimination index across counties. To illustrate the variation that is similar to what will drive the regression estimates, we demean by state fixed effects. The map displays significant variation across and within states.

We interpret this measure as a proxy for the degree of discrimination experienced

taken from the Census of Religious Bodies. We measure NAACP presence as an indicator variable equal to one if a county had at least one NAACP chapter between 1919 and 1940. Membership in African American churches is the share of the county population that has membership in an African American church in 1936.

¹⁶Occupational income scores are a standard measure of lifetime earnings used in the economic history literature (Abramitzky et al., 2014). They assign to an individual the median income of his job category in 1950.

¹⁷Appendix Table A.4 presents the descriptive statistics from the enlistment records at the individuals level for the eight weeks before and the eight weeks after the Pearl Harbor attack.

by enlisted men. It also captures the experience of their forefathers, which was likely transmitted across generations.

Tables 2 presents the correlates of discrimination for the full sample by regressing the discrimination index against each variable listed in the row heading. All regressions control for state fixed effects. On average, counties with higher historical discrimination had a higher African American population share, higher population density (more urban), a lower share of farmland, and a higher immigrant population share from European Axis countries (Germany and Italy). Also, counties with higher historical discrimination were further from Japan and Pearl Harbor, received higher per capita WWII spending, had higher membership in African American Churches, and were more likely to have at least one NAACP chapter. Note that all of these correlates are measured prior to Pearl Harbor, except for per capita WWII spending, which is measured over the entire WWII period.¹⁸

3.3 Enlistment Patterns

Figure 2 plots average African American volunteer enlistment rates for each week. We divide the sample into counties with values of the discrimination index above (solid line) and below (dashed line) the sample median. The data show that enlistment rates were negligible before the Pearl Harbor attack for all counties, and did not differ between high and low discrimination counties. Starting from week one, which begins the Monday after the Pearl Harbor attack, we observe an increase in enlistment rates, with the increase being much smaller in magnitude in counties with higher discrimination.¹⁹

Figure 3 plots the analogous data for white men. The temporal pattern is similar to that for African American men: there is a dramatic increase in enlistment starting from week one. However, there is little difference between counties with high and low discrimination. Also, the magnitude of the increase in volunteer enlistment is much higher for white than for African American men overall.

These figures illustrate the variation driving the DDD estimates presented later in the paper. One can visualize the DDD as follows. In Figures 2 and 3, consider the

 $^{^{18}}$ Appendix Table 3 presents the correlates for Black and white men separately.

¹⁹So as to have a fully symmetric window around the attack on Pearl Harbor, we consider two 8-week periods: from week -7 to week 0; and from week 1 to week 8. Week 0 (resp. week 1) is defined as the week ending (resp. starting) on Sunday, December the 7th (resp. Monday, December the 8th).

average vertical distance between volunteer enlistment in the high and low discrimination counties. The DDD is the difference of the average vertical distance before and after Pearl Harbor for a) African American men in Figure 2 and b) white men in Figure 3.

These patterns have several important implications. The increase in volunteer enlistment after Pearl Harbor across races is consistent with news of the event being immediately broadcasted across the nation and an immediate surge in enlistment. The fact that African American enlistment increased less in places with higher discrimination is consistent with the hypothesis that discrimination discouraged volunteering behavior. The similarity in response for white men across counties is consistent with this interpretation, since white men did not suffer from racial discrimination anywhere. The finding that overall white volunteer enlistment was higher than African American enlistment is consistent with the fact that racial discrimination was everywhere.

The figures show clearly that there are no pre-trends. Until Pearl Harbor, volunteer enlistment rates for all races and in all counties were lower than after Pearl Harbor and evolved along parallel trends.

4 Results

4.1 Triple Difference Specification

The baseline is a *difference-in-difference-in-differences* (DDD) estimate. It examines the causal effect of discrimination in African Americans' volunteer enlistment rates. We compare volunteer enlistment rates for men who lived in counties with varying levels of historical discrimination, before and after the Pearl Harbor attack, between African American and white men.²⁰

The intuition is as follows. If discrimination discouraged African American enlistment, their volunteer rates should be lower in counties with higher levels of discrimination. To understand whether higher enlistment in counties with lower discrimination reflects differences in the willingness to contribute to the war effort or differences in other factors, such as outside job opportunities, we compare volunteering behavior

 $^{^{20}}$ We restrict attention to African American men and white men, who, taken together, account for more than 93% of all individuals in the enlistment data (see Section 3). We discuss other races in Appendix Section C below.

before and after Pearl Harbor. The attack transformed WWII from one about abstract ideas in distant lands into a full-fledged war to defend the United States over night. However, it did not change outside job opportunities in the short time window of our analysis. One may also be concerned that it was easier to volunteer in counties with low discrimination after Pearl Harbor. For example, Army recruiting offices may be more accessible there. To address this and related concerns, we compare Black and white enlistment.

As we discussed in the previous section, conceptually, the DDD is the difference between the *difference-in-differences* (DD) for African American men in high versus low discrimination counties before and after Pearl Harbor and the same DD for white men. The baseline specification is the following:

 $y_{ijt} = \alpha + \beta Discrimination_j \times PearlHarbor_t \times Black_{ij} + \Gamma x_{ijt} + \theta_{ij} + \lambda_{it} + \pi_{jt} + \varepsilon_{ijt}.$ (1)

The dependent variable, y_{ijt} , is the share of eligible men of race *i* in county *j* who were inducted as volunteers in the U.S. Army during week *t*. It is a function of the triple interaction of a measure of historical discrimination in county *j*, *Discrimination_j*, a dummy variable that equals one for the 8 weeks after the attack on Pearl Harbor, *PearlHarbor_t*, and a dummy variable that equals one if group *i* is African American, *Black_{ij}*. The specification is fully saturated, but the lower order interaction terms and the uninteracted terms are absorbed by the fixed effects: county-race fixed effects, county-week fixed effects and race-week fixed effects. X_{ijt} is a vector of county-race specific controls interacted with week fixed effects, which we discuss when we present the results. All regressions are weighed by the race-specific population of eligible men in each county-week. Standard errors are clustered at the county level.

Only the triple interaction term can be interpreted as plausibly exogenous. Countyrace fixed effects control for factors that vary by race and county such as occupation or educational attainment. County-week fixed effects control for all differences across counties that may vary over time, such as economic conditions. Race-week fixed effects control for differences across races that may vary over time, such as changes in war propaganda (at the national level) that targets a specific race. We describe and motivate the vector of county-race controls later when presenting our results.

The main caveat to our strategy is omitted variables. This seems unlikely given

the extensive fixed effects and race-time-county specific controls in the baseline. For an omitted variable to confound our estimate, it would have to differentially affect African American volunteer enlistment depending on the prevailing historical discrimination in the county, in a way that differs before and after Pearl Harbor, despite the baseline controls. Another way in which our empirical strategy minimizes omitted variables concern is by exploiting the sharp change after Pearl Harbor and a narrow window of time around the attack such that other factors (e.g., social norms, values, segregation within the U.S. military, WWII economic policy) did have time to change. We discuss these and other robustness issues after presenting the main results.

4.2 Baseline Estimates

Table 4 presents the baseline DDD estimates. In column 1, we start from a specification that includes the uninteracted African American dummy variable and the other lower order interaction terms in lieu of the fixed effects.²¹ The coefficient on the African American dummy is negative and highly statistically significant. It shows that, prior to Pearl Harbor, African American volunteer enlistment rates were lower than those for Caucasian men. The interaction of the African American and the post-Pearl Harbor dummy variables is also negative and statistically significant at the 1% level. This means that relative African American enlistment declined after Pearl Harbor. The interaction between discrimination and the African American dummy is negative, but small in magnitude and statistically insignificant. Finally, the coefficient on the triple interaction term, our main variable of interest, is negative and marginally statistically significant. After Pearl Harbor, the decline in relative enlistment was larger in counties with higher levels of historical discrimination. These estimated differences are consistent with the patterns shown earlier in in Figures 2 and 3.

In columns 2 to 5, we gradually introduce the fixed effects, which absorb the lower order interaction terms and state fixed effects. To understand the motivation behind the fixed effects, it is useful to consider the potential omitted variables in the estimate in column 1. First, one may be concerned about county-specific characteristics that differentially affected the decision to volunteer for white and African American men. For example, individuals who owned farms were exempted and discouraged from

 $^{^{21}}$ We always estimate fully saturated regressions. Not all lower order interactions are reported for the sake of brevity.

joining the military (Acemoglu et al., 2004); at the same time, farm ownership clearly differed between African American and Caucasian men. To address this and similar concerns, we control for county-race fixed effects.

Second, there may be differences across races that vary over time. For example, military participation may differ across races for reasons other than discrimination. African American men may on average live in areas that are less exposed to Army propaganda, and may thus be less informed about how to join and the benefits of joining. This type of concern is addressed by the inclusion of race-week fixed effects.

Third, there are important differences across counties that vary over time. For example, the emotional response to join after Pearl Harbor may have been stronger in counties that were geographically closer to the attack. Also, New Deal relief spending varied substantially across counties and has been shown to increase patriotism during WWII (Caprettini and Voth, 2020). We address such concerns by controlling for county-week fixed effects. Recall that Table 2 documents the correlates of discrimination across counties. Controlling for county-week fixed effects is similar to controlling for the interactions of each of these variables with week fixed effects since the former absorbs latter.

Column 5 presents the baseline specification, which additionally includes of countyrace variables interacted with week fixed effects. This is motivated by the possible presence of confounding factors that vary at the race, county, and week level. Fixed effects cannot address such factors, which vary at the same level as our main tripledifference right-hand-side regressor. In our context, the main concern is that differences in education and occupation between Black and white men could be larger in counties with higher discrimination, which could then lead to a differences in the opportunity cost of enlisting in the military after World War II. We regress the discrimination index on the Black-to-white ratio in the log of years of education (wages) measured in 1940 while controlling for state fixed effects. Consistent with African Americans having more limited opportunities in more discriminatory places (Margo, 1990; Naidu, 2012), we find that the coefficient for both education and wages is strongly negative and highly significant, with a point estimate of -1.23 and -0.71 (standard errors 0.17 and 0.06) respectively.

To address the concern that the correlation between historical discrimination and the racial gap in economic and social opportunities may influence volunteer rates of either rates in the weeks right after Pearl Harbor, we calculate the following variables for each race in each county in 1940: share in the labor force, employment rate, average years of education, average age, average wages, average occupational income scores, share of manufacturing and agricultural employment, share of farmers, log population.²² Then, we control for the interaction of each variable with week fixed effects.²³

Another concern is that pre-Pearl Harbor migration rates may have differed for Black and white men between counties with higher and lower discrimination. For example, if Black men were more likely to move out of counties with higher discrimination, and movers were less likely to enlist (e.g., because they were the most politically engaged and reactive to discrimination), then the DDD will again be biased downwards. To address this, we take the race-specific rate of cross-county net migration between 1930 and 1940 estimated in Gardner and Cohen (1992) and, as for the other county-race specific controls, interact it with week fixed effects.²⁴

The last main concern is motivated by historical accounts that local boards in the South resisted African American enlistment and the fact that there was sometimes a delay between when a man volunteered or was called up for the draft and the time he was inducted (Flynn, 1984), the date we observe in the NARA dataset. One may thus be worried that relatively low volunteer enlistment rates among African Americans in counties with more higher discrimination were driven by the behavior of local boards rather than by the discouragement effect of historical discrimination on volunteers. This is related to the concern that Pearl Harbor led to a sudden surge in enlistment for which the Army was unprepared, such that there was initially a shortage of facilities (e.g., barracks) (Ferrara, 2018). If this deficit was more pronounced for Black soldiers in areas with higher levels of discrimination, then the DDD estimate will be biased upwards.²⁵

 $^{^{22}}$ Labor force participation and employment rates are highly correlated, but conceptually different. The former refers to the number of men in the labor force; the latter measures the number of men who were employed (both measures are scaled by the number of men in working age). See Table A.3 for more details on how variables are constructed and the exact sample of individuals they refer to.

²³These controls are motivated by recent studies, such as those that find that for war industry and spending led to significant skill upgrading for African American men and a reduction in the racial wage gap Aizer et al. (2020) and Ferrara (2018). And also, Fishback et al. (2020), which documents that access to government subsidies, such as those from the New Deal varied by race. However, note that these studies do not show a correlation between the race-gap in the respective variables of interest and regional discrimination.

²⁴Recall that the location observed in the NARA dataset is usually the location in 1940.

 $^{^{25}\}mathrm{Recall}$ that the Army was segregated such that Black soldiers required separate barrack, canteens, etc.

To address these potential issues, we control for the draft enlistment race for each race, county and week. The local boards had the more control over the timing for draftees since they controlled the timing of the call up and the subsequent induction than for volunteers for whom they only control the timing of induction. Moreover, we know of no historical accounts of differential discrimination towards volunteers and draftees. Volunteers and drafted men were pooled together after induction, living and training in the same facilities. Thus, controlling for race-county-week specific draft rates addresses both concerns.

The baseline DDD coefficient reported in column 5 is -2.33, and is statistically significant at the 5% level.²⁶ This implies that, after Pearl Harbor, in a county where the index of discrimination was one standard deviation (1.5) lower, the volunteer enlistment of African American men was 3.5 per 100,000 eligible individuals higher. Reducing the level of historical discrimination by one standard deviation would have increased the volunteer enlistment of African American American men by a factor of thirty, relative to average of the pre-Pearl Harbor period (0.11 per 100,000 eligible individuals). Considering that the average African American volunteer enlistment rate during the entire window considered in our analysis is 4.2 per 100,000 eligible individuals and that the inter-quartile range of the index of discrimination is 1.7, African American men would have been 95% more willing to volunteer in a county at the 25th percentile of the index of discrimination, as compared to those living in a county at the 75th percentile.

For comparison, note that Fouka (2020) finds that exposure to anti-German language laws during WWI lowered Germans' propensity to volunteer during WWII by 2.6 percentage-points (11%) relative to cohorts of Germans who were not directly exposed to these laws. Caprettini and Voth (2020) documents that doubling New Deal expenditures in a county raised volunteering by 8%.

In column 6, we replace the controls of the race-county-specific draft enlistment rate that is measured contemporaneously with those that are lagged by one week. This addresses the possibility that draft and volunteer enlistment rates were simultaneously determined, such that including contemporaneous draft rates controls for an outcome and confounds the interpretation of results. This change in the controls has little

²⁶Interestingly, the coefficient becomes more precisely estimated and doubles in magnitude as more controls are included, suggesting that some of the forces described above may bias towards zero the point estimate on the DDD.

effect on the triple difference estimate. Next, in column 7, we address the concern that our effects may partly capture race misclassification. This could be an active choice for African American men who "passed for white" to escape discrimination, or an enumeration mistake on the part of the Army recruiter who may mistake mixed race men for white.²⁷ We address this potential issue by controlling for the county-specific rates of race change from African American to Caucasian in the 1930 and 1940 U.S. populations censuses estimated by Dahis et al. (2019) interacted with the African American and the post-Pearl Harbor dummy variable. Our triple interaction of interest is unchanged.²⁸

Finally in Table A.6, we consider the possibility of spatially correlated errors. First, we cluster standard errors at the commuting zone (CZ) level (column 2). Next, we adjust standard errors with the Conley procedure (columns 3 and 4). Reassuringly, although standard errors become somewhat larger, our results remain statistically significant at the 10% level, with p-values between 0.055 and 0.060.

4.3 Additional Controls

Table 5 examines the robustness of our baseline estimates to additional controls that may be correlated with discrimination. We include the triple interaction of each variable with the African American and the post Pearl Harbor dummy variables, as well as all lower order interactions.

We begin by considering two important organizations for the African American community. The first is the county-level membership rate in African American Churches in 1936, which represented an important platform for communication and organization within the Black community (Chay and Munshi, 2015). The second is the presence of the NAACP, which was very active in African American military recruitment, although this mostly happened after our study period, during the Double V campaign. Next, we consider the distance to Pearl Harbor and to Germany, which can affect the salience of the attack as well the immediacy of danger at onset of the war. Finally, we consider the number of years in the Union as a proxy for the strength of national identity, which may, in turn, influence volunteer enlistment. Columns 2-4

²⁷The U.S. legally defined Black to be a person with any degree of African extract. Thus, mixed race men were Black, and some of them had appearances similar to white men. See Dahis et al. (2019) for a detailed discussion.

²⁸Note that the number of observations in columns 6 and 7 is slightly different due to the limited availability of the additional controls.

introduce these variables individually. The coefficient for the presence of NAACP, interacted with the post Pearl Harbor and the African American dummy, is positive and statistically significant (column 2); a similar relationship appears for the triple interaction with years in the Union (column 4).

However, when augmenting our preferred specification (column 5, Table 4) by including all the interacted variables, none of them is statistically significant anymore. Also, and reassuringly, the DDD coefficient remains very similar to the baseline (also reported in column 1 of Table 5 to ease comparisons), even though becomes somewhat less precisely estimated. In columns 6 to 8 of Table 5, we also check that our results are robust to the inclusion of the triple interaction between the post-Pearl Harbor and African American dummy variables and different proxies for "peer effects". These are constructed by interacting county-to-county historical Black migration networks with the lagged volunteer rates in connected counties.²⁹ In column 6, we focus on all U.S. counties; in columns 7 and 8, we instead consider connected counties only within the same state and in all other states, respectively. Reassuringly, the main coefficient of interest always remains very close to that of the baseline specification, weighing against the possibility that our results are influenced by spillovers operating across counties, both within and between states.³⁰

Finally, in Table 6, we consider the influence of African American WWI veterans, as WWI participation may have had a positive or a negative influence on incentives to participate in WWII. On the one hand, historical accounts emphasize the disappointment in the African American community after WWI, which can reduce later enlistment. On the other hand, beliefs and values are transmitted inter-generationally (Campante and Yanagizawa-Drott, 2018), which suggests that WWI participation can increase enlistment during WWII. Given this, if WWI participation is correlated with discrimination, then the DDD estimate will be biased.

We examine four measures of exposure to WWI veterans. The first one is simply the number of African American WWI veterans in the county, relative to those who, given their age in 1930, would have been eligible to serve in WWI. The second is the

²⁹We exploit the fact that the 1940 Census of Population asked individuals their county of residence in 1935 to construct the total Black migration rate for each county pair. We multiply these with (one week) lagged volunteer rates in connected counties, and sum over all of them to recover the weighted average volunteer rates in connected places, for each county.

 $^{^{30}}$ Recall that the location in the data refers to 1940 – one year and half prior to Pearl Harbor – and is therefore unlikely to be endogenous.

share of African American individuals in each county that were eligible to enlist in WWII and who were living in a household with an African American WWI veteran. The third and the fourth measures further distinguish between individuals living in a household where the WWI veteran was and was not the head. Column 1 of Table 6 replicates the baseline. In column 2, we control for the first two measures. In column 3, we control for the third and the fourth variables. Finally, in columns 4 and 5, we add these controls to the baseline. All controls are interacted with the African American and the post-Pearl Harbor dummies.

The estimates show that the presence of WWI veterans did not affect the relative enlistment rates of African American men after Pearl Harbor. More importantly for our study, they show that the tripe interaction of interest is robust to the inclusion of these other variables. Indeed, the estimates in columns 4 and 5 are similar in magnitude to the one reported in column 1.

4.4 Heterogeneous Effects

Table 7 examines the heterogeneous effects of discrimination. We split the sample according to variables that may mediate the effects of discrimination. We begin by showing that the DDD coefficient is similar in Southern and non-Southern counties (column 1). At the bottom of the table, we also report the p-value from seemingly unrelated regressions (SURs).³¹

Columns 2 and 3 show that the discouragement effect of discrimination is similar between counties with and without an NAACP chapter, and between counties with African American Church membership rates above and below the sample median. Even though the level of precision varies, the coefficients in Panels A and B are relatively similar in magnitude for each column. Columns 4 and 5 document that the discouragement effect is larger for counties that are closer to (further from) Pearl Harbor (Germany). Since distance to Germany is negatively correlated with distance to Pearl Harbor, the estimates in both columns imply that the discouragement effect was stronger in places further away from the Pearl Harbor attack. In column 6, we show that the results are very similar for counties with above and below median years in the Union.

³¹Note that comparing the triple difference in two subsamples is statistically more demanding than estimating a standard quadruple interaction estimate in a pooled sample, since it is essentially a quadruple interaction estimate where the fixed effects are also interacted.

Next, column 7 provides evidence that the discouragement effect of discrimination is larger in counties with a higher share of eligible African American men living in households headed by WWI veterans. This is consistent with historical accounts that attribute part of the reluctance to fight in WWII to the disappointment from WWI. However, the p-value at the bottom of the table shows that the point estimates in the two subsamples are not statistically different from each other. Finally, column 8 documents that results are similar when splitting counties above and below the median of exposure to (migration induced) peer effects. As one may expect in the presence of "peer effects", the point estimate is slightly larger in counties with lower exposure to volunteering behavior in connected places. However, coefficients are not statistically different from each other.³²

4.5 Decomposing Discrimination

We conclude this section by exploring how different components of the discrimination index influence our results. First, in Table 8, we separately consider the "political" and the "social" dimensions of discrimination. We define the former as the principal component of the Democratic vote share in Congressional and Presidential elections, and the latter as the principal component of residential dissimilarity, isolation index, the presence of the Ku Klux Klan, and the number of lynchings. The estimates are all negative and statistically significant, even though the magnitude varies across columns. This categorization is imperfect given the conceptual overlap in the component variables (i.e., some factors are both political and social).

We also examine the effects of each variable included in the index. Table 9 presents the baseline specification, but replaces the discrimination index with each component variable. Interestingly, even though all of the triple interactions are negative, only the presence of the Ku Klux Klan (column 3) and the Democratic vote share in Congressional elections (column 5) are statistically significant at conventional levels. In column 7, we conduct a horse race, including all of the triple interactions of the individual component variables in one regression. We find that, again, both the presence of the Ku Klux Klan and the Democratic vote share in Congressional elections remain

³²These results are produced using volunteering behavior of African Americans in all connected counties. They remain unchanged (not reported for brevity), when considering either connected counties within the same state or connected counties from all states other than that of the specific county.

statistically significant.

5 Japanese Americans

Another notably disenfranchised group asked to fight for the United States during WWII was that of Japanese Americans. To be comprehensive in our exploration of the relationship between severe discrimination and volunteer rates, this section examines this second group. At the time of Pearl Harbor, 5,000 Japanese Americans had been inducted into the U.S. Army (McNaughton, 2003). Most of them were removed from active duty immediately after the attack. Individual commanders were given the option of discharging Japanese American soldiers or assigning them to "harmless duties". Some 600 Japanese Americans were given honorable discharges; others were given less than honorable discharges. Most of those already in the Army were sent to Camp Robinson in Arkansas, where their guns were taken away, and they were made to perform menial tasks. Selective Service stopped accepting Japanese Americans in early 1942.³³

Japanese Americans not already in the military were deemed to be an "enemy race". Executive Order 9066, signed on February 19, 1942, authorized the forced internment of Japanese Americans. Army-directed "evacuations" began on March 24, 1942. People had six days' notice to dispose of their property other than what they could carry, leading to enormous economic losses. Anyone who was at least 1/16th Japanese was forcibly relocated. Between 110,000 and 120,000 people of Japanese ancestry were subject to forced internment, including approximately 80,000 second generation and third generation Americans, 17,000 children under ten years of age, as well as several thousand elderly and handicapped.³⁴ Internment was implemented much more rigorously on the U.S. mainland. In Hawaii, only 1,500 individuals of Japanese descent (approximately 0.9% of the Japanese American population in Hawaii) were sent to the mainland for internment. Broader internment of Japanese Americans, which comprised approximately 30% of total Hawaiian population, was seen as practically infeasible.

³³See, among others, Castelnuovo (2008) and McNaughton (2003).

 $^{^{34}}$ The internment camps ended in 1945 following the Supreme Court decision, Endo v. the United States. It was ruled that the War Relocation Authority "has no authority to subject citizens who are concededly loyal to its leave procedure". The Supreme Court allowed Franklin Roosevelt to end internment one day before they publicly announced the decision (see this *link*).

To increase U.S. fighting capacity, on February 1, 1943, President Roosevelt announced the creation of a segregated battalion composed of Japanese American soldiers and commanded by Caucasian officers. With few exceptions, they were allowed to join only the Army and fought primarily in Europe. As with African American combat troops, Japanese American soldiers came to be known for exceptional bravery.³⁵

We exploit the recruitment of Japanese American men for the military in 1943 together with variation in internment as another quasi-natural experiment for testing the role of disenfranchisement in a similar, albeit distinct setting to the one considered above for Pearl Harbor. The first cohort to be affected was inducted in March 1, 1943. We compare Japanese American enlistment before and after March 1, 1943, between Hawaii and the mainland. The War Department aimed to create an all Japanese-American combat unit with at least 2,000 initial volunteers. To be eligible for selective service, loyalty questions were administered to all Japanese American men.³⁶ Only those who provided acceptable answers were inducted into the military. Since Japanese American men had discretion over whether they were drafted, historians often refer to Japanese-American draftees during WWII as "volunteers".³⁷ For consistency with our previous analysis, we restrict attention to the eight weeks before and after March 1, 1943.

Figure 4 shows that Japanese-American enlistment was almost zero prior to March 1st, consistent with the fact that, with very few exceptions, Japanese Americans had been banned from service. After the reform, there was a large spike in enlistment in

³⁵The most well-known is probably the 100th Infantry Division of the 442nd Infantry Regimental Combat Team. Because of the high rate of casualties the 100th Infantry Battalion sustained, it became known as the "Purple Heart Battalion". For its service during WWII, the 442nd (including the 100th prior to becoming part of it) received 21 Medals of Honor – America's highest military honor; in addition, it received 9,486 Purple Hearts, 8 Presidential Unit Citations, 559 Silver Stars, and 52 Distinguished Service Crosses among many other decorations. In 2012, the surviving members of the 442nd were made chevaliers of the French Légion d'Honneur for their actions, which contributed to the liberation of France during WWII and their heroic rescue of the Lost Battalion outside of Biffontaine (e.g. Congress, 1982; Kashima, 1997).

³⁶The two most controversial "loyalty" questions were numbers 27 and 28. Question number 27 asked if second generation Japanese Americans (i.e. those born in the United States) were willing to serve in combat duty wherever they were ordered. Question number 28 asked if individuals would swear unqualified allegiance to the United States and forswear any form of allegiance to the Emperor of Japan. 17% of all registrants and approximately 20% of all second-generation Japanese Americans answered "No" to loyalty questions 27 and 28 (see, for instance, Lyon, 2012, and the following *link*).

 $^{^{37}}$ For a more detailed discussion, see also Hayashi (2010), Muller (2007), Omori (1999), Weglyn (1996).

Hawaii, but no noticeable change from the mainland. These patterns are consistent with less disenfranchised Japanese Americans living in Hawaii being more willing to volunteer. The reduction in enlistment in the last few weeks of the figure corresponds to the War Department's temporary pause in Japanese-American recruitment, which was introduced to assess the causes of low mainland enlistment rates (Castelnuovo, 2008).

For comparison, Figure 5 plots the analogous patterns for Chinese-Americans, who faced broadly similar degrees of formal and informal racial discrimination as Japanese-Americans prior to WWII but who were not the target of additional discrimination after Pearl Harbor. Chinese-Americans exhibit no change in the mainland-Hawaii enlistment gap before and after March 1, 1943.

We are unable to fully replicate the analysis for African American enlisted men with the sample of Japanese enlisted men because of the lack of regional discrimination data for the latter. Nevertheless, the patterns in this section are consistent with the main result that disenfranchisement and discrimination discouraged volunteer enlistment.³⁸

6 Interpretation

The empirical results show that during the onset of WWII, the discrimination experienced by African Americans lowered their volunteer enlistment relative to white men. We discuss several explanations in this section.

First, we consider the role of trust in the state as proposed by political scientists. The long history of discrimination and the hostile reception for returning veterans from WWI reduced trust among African Americans in the U.S. government. Such trust is critical for eliciting voluntary participation in military service (Levi et al., 1997).

Second, we consider why African American men may have been less motivated to participate in the initial war effort. Motivation is complementary, but conceptually distinct, from trust. Motivation may reflect the effect of historical discrimination on the value that African Americans attached to the war. Military enlistment is a national public good. Discrimination can reduce an individual's willingness to provide

 $^{^{38}}$ For completeness, we also examine the patterns of volunteer enlistment for other races around the eight weeks before and after Pearl Harbor. We discuss these results in Appendix C.

such a public good, since it lowers the direct economic benefit that African Americans obtained from the public good. African Americans were disenfranchised, had limited access to public schools or health care (which were of lower quality than what was given to Caucasian Americans), and received much lower levels of protection from the government (e.g., police).

Moreover, discrimination may lower the emotional value associated with the public good. This can, in turn, weaken national identity. America in 1940 was explicitly a nation ruled by and intended to serve the interests of white Americans. The establishment openly followed Eugenics theory and believed in the genetic and moral superiority of those with European ancestry over all others (Guterl, 2009; Spiro, 2009). Related to the idea that discrimination weakened national identity is the "activation" mechanism from the social psychology literature. Discrimination could have acted as cultural priming for African Americans, such that the Pearl Harbor attack increased did not activate the salience of national identity as much for Black men as for white men.³⁹ As a result, the surge in volunteer enlistment rates would have been lower amongst African American men relative to Caucasian men.

Motivation to enlist can also reflect Black men's expectations of how they would be treated in the Army. The effect of discrimination through this channel is ambiguous. On the one hand, a man who has experienced more discrimination may expect worse treatment from the Army than a man who has experienced relatively less discrimination. On the other hand, a many who lives in a place with more discrimination will have lower opportunity cost for joining the Army (e.g., he may be see the Army as more desirable since it is a way to move away from home). Recall that in practice, the county of origin, is not a key factor in determining assignment or treatment in the Army.

Finally, another relevant mechanism that has featured prominently in the political psychology literature comes from the view that discrimination reduces a person's sense of self-efficacy (Oskooii, 2016, 2018). This, in turn, lowers civic and political engagement (Komisarchik et al., 2019). If enlistment during the war is a form of civic engagement, this will lead to discrimination reducing Black volunteer enlistment.

The discussion in this section highlights several complementary but distinct chan-

³⁹There is a large body of evidence on cultural priming in social and cultural psychology. For example, studies document that an individual can have very different interpretations of the same event if she is primed with different cultural knowledge (Kitayama and Cohen, 2010).

nels through which discrimination can discourage enlistment. There are likely other factors. Better understanding these mechanisms is an important avenue for future research.

7 Conclusion

The findings of this paper show that discrimination can be socially costly by reducing the motivation of men during war. In the context of volunteer enlistment that we examine, reduced motivation is reflected by reduced fighting capacity. However, motivation is also important when the government is able to conscript (draft), since it is believed to affects the effectiveness of the troops.

Our study focuses on a narrow window of time during WWII. To contextualize our results in the larger landscape of war and think more broadly about the relationship between discrimination and state capacity during war, we refer to Levi et al. (1997). "The government policy maker moves first to demand voluntary contributions. Citizens respond to produce either enough voluntary contributions or too few to meet government's goals. The government policymaker then decides whether or not to introduce legal requirements. If citizens continue to evade or resist in large numbers, the government policymaker, given his demand for contributions and the amount of resistance, then decides how many resisters to persecute". Our study focuses on the first part of the story. In later parts of 1942, the U.S. government recognized the critical problem of low African American enlistment and focused significant recruitment efforts on the African American community, working together with groups such as the NAACP to promote the Double V campaign. Consistent with Levi et al. (1997), in December 1942, the U.S. government banned voluntary conscription and moved to mandatory and universal conscription by draft.⁴⁰

For policymakers, the implications of our results are clear: a state that requires equal contributions from its citizens should treat its citizens equally. This is hardly a novel insight for America, a nation founded on the basis of the *social contract* and the principal of "no taxation without representation". Our results are simply a sober reminder that the principle needs to be applied to all citizens, if for no other reason, than to maximize state capacity and for self (national) preservation.

 $^{^{40}{\}rm This}$ move was also partly dictated by the need to control labor supply for war production (Chambers, 1987).

This study suggests several topics for future research. The first is the effect of WWII on civil rights for African Americans.⁴¹ The second is to better understand the intermediary channels of discrimination and the willingness to enlist. The answers will help us better understand the dynamic interplay of discrimination, and more generally, political inclusion, and state capacity.

⁴¹These investigations will complement recent studies about the relationship between participation in war and later consequences. Mazumder (2019) finds that European immigrants who fought in WWI were more likely to assimilate into the American society after the war. Schindler and Westcott (2017) and Indacochea (2019) document that inter-racial interactions in the Army during WWII and the Korean War had a positive, long-lasting impact on race relations in the United Kingdom and the United States, respectively. Ferrara (2018) finds that the WWII-induced labor shortage was an important factor behind the decline in the racial income gap during the 1940s and 1950s.

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Figures and Tables



Figure 1: Discrimination Index

 $\it Notes:$ The map shows the distribution of the county-level Discrimination index after partialling out state fixed effects.



Figure 2: Volunteer Enlistment, African Americans

Notes: The y-axis reports the rate of enlisted African American volunteer enlistment rate per 100,000 enlistable individuals (by week). The x-axis reports the week since the Pearl Harbor attack (coded as week 0). Black solid (resp. dashed) line refers to African American volunteers in high (resp. low) discrimination counties, i.e. counties with a discrimination index above (resp. below) the sample median.





Notes: The y-axis reports the rate of enlisted Caucasian volunteer enlistment rate per 100,000 enlistable individuals (by week). The x-axis reports the week since the Pearl Harbor attack (coded as week 0). Grey solid (resp. dashed) line refers to Caucasian volunteers in high (resp. low) discrimination counties, i.e. counties with a discrimination index above (resp. below) the sample median.



Figure 4: Japanese American Enlistment: Mainland vs Hawaii

Notes: The y-axis reports the draft rate per 100,000 enlistable individuals (by race and week). The x-axis reports the week since the March 1st, 1943 enlistment (coded as week 0). Solid (resp. dashed) line refers to the rate of draftees in Hawaii (resp. mainland U.S.).



Figure 5: Chinese American Enlistment: Mainland vs Hawaii

Notes: The y-axis reports the draft rate per 100,000 enlistable individuals (by race and week). The x-axis reports the week since the March 1st, 1943 enlistment (coded as week 0). Solid (resp. dashed) line refers to the rate of draftees in Hawaii (resp. mainland U.S.).

Variable	Mean	Std. Dev.	Obs.
	(1)	(2)	(3)
African American Share of County Population	0.104	0.152	2,291
White Share of County Population	0.890	0.157	$2,\!291$
Share of African American WWI Veterans	0.161	0.166	2,280
Share Living with African American WWI Veteran	0.111	0.135	2,232
Share Living with African American WWI Vet head	0.064	0.098	2,232
Share Living with African American WWI Vet non-head	0.052	0.102	2,232
Church Membership 1936	0.046	0.077	1,900
Presence of NAACP Chapter 1940	0.415	0.493	$2,\!291$
Share of Farmland	50.55	29.18	$2,\!291$
German Share of County Population	1.713	1.740	$2,\!291$
Italian Share of County Population	3.172	4.147	$2,\!291$
Japanese Share of County Population	0.088	0.340	$2,\!291$
Discrimination Index	0.042	1.536	$2,\!291$
At Least 1 African American Volunteer after PH	0.210	0.338	2,291
At Least 1 African American Volunteer after PH - South	0.074	0.171	1,211
At Least 1 African American Volunteer after PH - Non-South	0.269	0.375	1,080
At Least 1 White Volunteer after PH	0.789	0.335	$2,\!291$
At Least 1 White Volunteer after PH - South	0.538	0.399	1,211
At Least 1 White Volunteer after PH - Non-South	0.900	0.227	1,080
WWII Spending per capita	0.590	0.664	2,291
New Deal Agricultural grants per capita	2.338	3.962	2,291
New Deal (NON-repayable) per capita	21.309	12.115	2,291
Distance from Japan (km)	10.338	0.716	$2,\!279$
Distance from PH (km)	6.973	1.076	$2,\!279$
Distance from Germany (km)	7.179	0.864	$2,\!279$
Log Population Density	-1.183	2.208	$2,\!291$

Table 1:	Summary	Statistics,	Full	Sample
	10 0000000			

Notes: the table displays the mean, standard deviation and number of observations for a set of county-level variables. The observations are weighed by enlistable men in 1940 and the sample restricts to the observations included in our analysis.

Variable	Discrimination index				
	Coefficient	Std. Err.	Beta Coeffs	Obs.	R-Squared
	(1)	(2)	(3)	(4)	(5)
African American Share of County Population	3.825	0.155	0.471	2,291	0.803
White Share of County Population	-3.09	0.144	-0.404	2,291	0.792
Share of African American WWI Veterans	-0.283	0.183	-0.029	2,280	0.749
Share Living with African American WWI Veteran	-0.121	0.209	-0.010	2,232	0.748
Share Living with African American WWI Vet head	0.255	0.279	0.015	2,232	0.748
Share Living with African American WWI Vet non-head	-0.374	0.278	-0.024	2,232	0.748
Church Membership 1936	3.703	0.245	0.216	1,900	0.809
Presence of NAACP Chapter 1940	0.359	0.032	0.047	2,291	0.811
Share of Farmland	-0.009	0.001	-0.144	2,291	0.765
German Share of County Population	0.111	0.080	0.111	2,291	0.764
Italian Share of County Population	0.142	0.015	0.084	2,291	0.760
Japanese Share of County Population	0.54	0.129	0.019	2,291	0.753
WWII Spending per capita	0.063	0.026	0.033	2,291	0.750
New Deal Agricultural per capita	-0.041	0.005	-0.189	2,291	0.756
New Deal (NON-repayable) per capita	0.021	0.002	0.151	2,291	0.767
Distance from Japan	0.577	0.118	0.266	2,279	0.753
Distance from PH	0.463	0.122	0.266	2,279	0.752
Distance from Germany	-0.012	0.145	-0.005	2,279	0.751
Log Population Density	0.213	0.009	0.162	2,291	0.801

 Table 2: Discrimination Index and Its Correlates

Notes: the table displays, in columns 1 and 2, the coefficient and standard error for a set of simple regressions of the discrimination index against each of the variables listed. Column 3 reports the standardized coefficient. All regressions control for state fixed effects, and are weighed by enlistable men of each race in 1940. Standard errors are clustered at the county level. The sample restricts to the observations included in our analysis.

Variable	Discrimination index					
	Coefficient	Std. Err.	Beta Coeffs	Obs.	R-Squared	
	(1)	(2)	(3)	(4)	(5)	
Panel A. African American Men						
Log Population 1940	0.373	0.014	0.602	2,291	0.770	
Share in Labor Force	1.368	0.285	0.101	$2,\!291$	0.704	
Employed	0.327	0.267	0.028	2,291	0.701	
Share in Manufacture	0.300	0.240	0.023	2,291	0.701	
Share of Farmers	-0.70	0.143	-0.078	$2,\!291$	0.704	
Average Years of Education	0.220	0.021	0.276	2,291	0.715	
Age	0.111	0.012	0.323	2,291	0.712	
Log Wages	-0.011	0.017	-0.057	2,291	0.701	
Log Occupational Score	1.281	0.151	0.165	2,291	0.710	
Volunteers (per 100,000) - Before PH	-0.011	0.08	-0.011	2,291	0.701	
Draftees (per 100,000) - Before PH	-0.001	0.002	-0.024	$2,\!291$	0.701	
Panel B. White Men						
Log Population 1940	0.255	0.010	0.412	2,291	0.777	
Share in Labor Force	1.508	0.460	0.111	2,291	0.720	
Employed	-0.98	0.400	-0.085	2,291	0.719	
Share in Manufacture	1.129	0.161	0.085	2,291	0.725	
Share of Farmers	-2.35	0.135	-0.261	$2,\!291$	0.752	
Average Years of Education	0.249	0.016	0.312	2,291	0.747	
Age	0.103	0.009	0.302	2,291	0.734	
Log Wages	0.121	0.018	-0.19	2,291	0.724	
Log Occupational Score	2.519	0.120	0.324	2,291	0.765	
Volunteers (per 100,000) - Before PH	-0.001	0.016	-0.001	2,291	0.719	
Draftees (per 100,000) - Before PH	0.008	0.002	0.242	$2,\!291$	0.720	

 Table 3: Discrimination Index and Its Correlates, by Race

Notes: the table displays, in columns 1 and 2, the coefficient and standard error for a set of simple regressions of the discrimination index against each of the variables listed. Column 3 reports the standardized coefficient. Regressions are weighed by enlistable men of each race in 1940. The sample restricts to the observations included in in our analysis.

		Depen	dent Vari	able: Volu	nteers (per	r 100,000)	
					Baseline		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mean Dep. Var.			27.03			28.18	26.82
Discrimination x Black x Post	-1.309 (0.695)	-1.309 (0.695)	-1.309 (0.695)	-2.547 (0.675)	-2.334 (1.170)	-2.228 (1.146)	-2.346 (1.169)
Discrimination x Black	-0.313 (0.421)	-1.418 (0.574)	-1.418 (0.574)				
Black x Post	-18.878 (1.320)	-18.878 (1.320)	-18.878 (1.320)				
Black	-11.538 (0.706)	-10.401 (0.832)	-10.401 (0.832)				
Pass Rate x Black x Post							-45.699 (114.422)
Controls: State FE County FE Week FE County-Week FE Race-Week FE Race-County FE County-Race Controls x Week FE	Y N N N N	N Y N N N N	N Y N N N N	N N Y Y N	N N Y Y Y Y	N N Y Y Y Y	N N Y Y Y Y
Conley Spatial Adjustment County-Race-Week Lagged Draft	N N	N N	N N	N N	N N	N Y	N N
Observations R-Squared	$73,312 \\ 0.249$	$73,312 \\ 0.309$	$73,312 \\ 0.413$	$73,312 \\ 0.623$	$73,312 \\ 0.626$	$68,730 \\ 0.617$	$ \begin{array}{c} 65,632\\ 0.610 \end{array} $
PCA 25th percentile PCA 75th percentile			-1 0	.025 .644			-1.007 0.644

Table 4: DDD Estimates: Main Results

Notes: Observations are at the race, county and week level. See Section 3.2.2 for details on the construction of the discrimination index and Table A.5 for the list of variables included. Column 1 includes state fixed effects. Column 2 includes county fixed effects. Column 3 replicates the specification in column 2 adding week fixed effects. Column 4 includes county by week fixed effects and race by county fixed effects. Column 5 replicates the specification in column 4 adding county-race controls by week fixed effects. Column 6 replicates column 5 inserting lagged share of draftees instead of current one. Finally, column 7 augments the specification in column 5 by inserting the interaction with county-specific passing rate interacted with a link rate of 8.6%. County-race controls are constructed at the county-race level for 1940, and include: logarithm of population, share in the labor force, share of people in manufacture, share of farmers, share of draftees and net migration rate between 1930 and 1940. All the regressions include lower order interactions. Regressions are weighed by enlistable men of each race in 1940. Standard errors are clustered at the county level. *** p<0.01, ** p<0.05, * p<0.1.

		Depe	ndent Va	riable: Vo	olunteers (per 100,000))	
	Baseline							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean Dep. Var.	27.03	25.52	25.52	25.52	25.52	27.03	27.03	27.03
Discrimination x Black x Post	-2.334 (1.170)				-2.244 (1.173)	-2.336 (1.169)	-2.291 (1.175)	-2.291 (1.175)
NAACP x Black x Post		5.874 (2.864)			3.644 (3.323)			
Church x Black x Post		-4.866 (13.831)			-6.190 (14.373)			
Dist. PH x Black x Post			-0.002 (0.004)		$0.000 \\ (0.004)$			
Dist. GER x Black x Post			-0.006 (0.004)		$\begin{array}{c} 0.001 \\ (0.005) \end{array}$			
Years Union x Black x Post				$\begin{array}{c} 0.096 \\ (0.050) \end{array}$	$\begin{array}{c} 0.091 \\ (0.066) \end{array}$			
Black x POST x (Peer Effects)						-0.088 (0.0670)		
Black x POST x (Peer Effects - within State)							$\begin{array}{c} 0.135 \\ (0.093) \end{array}$	
Black x POST x (Peer Effects - other States)								-837.7 (575.8)
Observations R-Squared	$73,312 \\ 0.626$	$58,528 \\ 0.590$	$58,528 \\ 0.590$	$58,528 \\ 0.590$	$58,528 \\ 0.590$	$73,312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.626$

Table 5:Robustness

Notes: Observations are at the race, county and week level. See Section 3.2.2 for details on the construction of the discrimination index and Table A.5 for the list of variables included. NAACP in column 2 refers to the presence of a chapter from NAACP in the county between 1919 and 1940. Church in column 2 is the membership in African American churches in the county in 1936. Distance from PH and Germany in column 3 refer, respectively, to the geographical distance from Pearl Harbor and Germany. Years Union in column 4 refers to the number of years in a union. Column 6 interacts Black and Post with the weighted average of (lagged) volunteer rates, with weights the share of total black migrants, relative to the black population of that county. Column 7 considers the mean of the weighted average of (lagged) volunteer rates for other counties within the same state and column 8, instead, includes only counties in other states. Each column reports the results including county by week fixed effects, race by week fixed effects, race by week fixed effects, race ontrols by week fixed effects. County-race controls are constructed at the county-race level for 1940, and include: logrithm of population, share in the labor force, share of employed, average years of education, average logarithm of wages, average (log of) occupational score, share of people in manufacture, share of draftees and net migration rate between 1930 and 1940. Regressions are weighted by enlistable men of each race in 1940. Standard errors are clustered at the county level. *** p < 0.01, *** p < 0.05, * p < 0.1.

	Depend	lent Variab	le: Volunte	eers (per 10	00,000)
	Baseline				
	(1)	(2)	(3)	(4)	(5)
Mean Dep. Var	27.03	26.99	26.99	26.99	26.99
Discrimination x Black x Post	-2.334 (1.170)			-2.369 (1.172)	-2.431 (1.163)
Share of African American WWI Veterans x Black x Post		$0.306 \\ (33.212)$		10.976 (32.400)	
Share Living with African American WWI Veteran x Black x Post		3.964 (31.107)		-10.058 (30.631)	
Share Living with African American WWI Veteran head x Black x Post			45.602 (53.026)		$51.399 \\ (53.641)$
Share Living with African American WWI Veteran non-head x Black x Post			-28.772 (39.413)		-43.288 (38.838)
Observations R-Squared	$73,312 \\ 0.626$	71,424 0.622	71,424 0.622	71,424 0.622	71,424 0.622

Table 6: Veterans

Notes: Observations are at the race, county and week level. See Section 3.2.2 for details on the construction of the discrimination index and Table A.5 for the list of variables included. Each column reports the results including county by week fixed effects, race by week fixed effects, race by county fixed effects and county-race controls by week fixed effects. County-race controls are constructed at the county-race level for 1940, and include: logarithm of population, share in the labor force, share of employed, average years of education, average age, average logarithm of wages, average (log of) occupational score, share of people in manufacture, share of farmers, share of draftees and net migration rate between 1930 and 1940. All the regressions include lower order interactions. Regressions are weighed by enlistable men of each race in 1940. Standard errors are clustered at the county level. *** p<0.01, ** p<0.05, * p<0.1.

			Dep	endent Variable: Volunt	eers (per 100,000)			
Panel A	Non-Southern States	NAACP - Not present			Below Me	edian		
	(1)	(2)	Church (3)	Distance Pearl Harbor (4)	Distance Germany (5)	Year in Union (6)	Veteran HH Head (7)	Peer Effects (8)
Mean Dep. Var	28.73	27.57	28.79	31.40	26.56	33.25	24.56	19.62
Discrimination x Black x Post [1]	-1.673 (2.560)	-2.042 (1.293)	-2.600 (2.989)	1.322 (1.491)	-5.125 (1.777)	-1.794 (1.696)	-1.145 (1.720)	-1.678 (1.986)
Observations R-Squared	$34,560 \\ 0.586$	66,816 0.555	27,456 0.540	28,864 0.700	$37,792 \\ 0.590$	29,616 0.676	$33,984 \\ 0.391$	39,696 0.408
Panel B	Southern States	NAACP - Present			Above M	edian		
Mean Dep. Var	23.17	25.39	22.99	25.06	28.10	23.17	27.70	32.48
Discrimination x Black x Post [2]	-1.463 (1.358)	-1.643 (2.811)	-2.306 (1.245)	-2.727 (1.352)	-0.801 (1.485)	-1.710 (1.477)	-2.599 (1.411)	-1.493 (1.279)
Observations R-Squared	38,784 0.693	6,528 0.870	$33,344 \\ 0.691$	44,096 0.566	35,168 0.667	$\frac{41,776}{0.527}$	37,440 0.734	$33,550 \\ 0.710$
[1] - [2] p-value	0.956	0.975	0.928	0.035	0.089	0.969	0.515	0.906
<i>Notes:</i> Observations are at the race, cour of the regressions run splitting the sample heading of each column for columns 3-8. <i>A</i> fixed effects, new by county fixed effects an share of employed, average years of educati 1930 and 1940. All the regressions include	ity and week level. See Se according to non-Southern At the bottom of table, thu nd county-race controls by ion, average age, average l lower order interactions. I	ction 3.2.2 for details on the a state or Southern state in c 2 p-value for equality of coeff week fixed effects. County logarithm of wages, average [0, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,	construction construction ficients in Pa ace controls log of) occup nlistable mer	of the discrimination index u-presence or presence of a N nels A and B is reported. E are constructed at the count ational score, share of poopli of each race in 1940. Stand	and Table A.5 for the l NAACP chapter in colum vance of column reports the y-race level for 1940, and e in manufacture, share c ard errors are clustered	ist of variables inclu nn 2; below or abow results including con d include: logarithm of farmers, share of a at the county level.	ded. The table displays e median of the variable unty by week fixed effec to of population, share in draftees and net migrati *** $p<0.01$, ** $p<0.05$,	the coefficients reported in the ts, race by week the labor force, on rate between * p < 0.1.

Table 7: Heterogeneity

Dependent Variable: Volunteers (per 100,000)						
	Baseline (1)	Political (2)	Social (3)			
Dep. variable mean	27.03	27.03	27.03			
Discrimination x Black x Post	-2.334 (1.170)	-3.175 (1.331)	-1.818 (0.718)			
Observations R-Squared	$73,312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.626$			

 Table 8: Discrimination Index Decomposition

Notes: Observations are at the race, county and week level. See Section 3.2.2 for details on the construction of the discrimination index and Table A.5 for the list of variables included. The heading of each column indicates the component that is taken into consideration in the construction of the Discrimination index variable. The baseline version includes the county component. The standardized beta coefficient is reported in squared brackets. Each column inludes county by week fixed effects, race by week fixed effects, race by county fixed effects and county-race controls by week fixed effects. County-race controls are constructed at the county-race level for 1940, and include: logarithm of population, share in the labor force, share of employed, average years of education, average age, average logarithm of wages, average (log of) occupational score, share of people in manufacture, share of farmers, share of draftees and net migration rate between 1930 and 1940. Regressions are weighed by enlistable men of each race in 1940. Standard errors are clustered at the county level. *** $p{<}0.01$, ** $p{<}0.05$, * $p{<}0.1$.

		Depende	ent Varial	ole: Volur	iteers (pe	r 100,000)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. variable mean				27.03			
Black x Post x Dissimilarity Index 1940	-12.156 (6.498)						0.264 (14.566)
Black x Post x Isolation Index 1940		-10.839 (4.832)					-10.985 (10.454)
Black x Post x Presence of KKK			-7.382 (2.234)				-5.343 (2.059)
Black x Post x Number of Lynching up to 1939				-0.122 (0.233)			0.073 (0.224)
Black x Post x Congress Vote Share Democrat 1900-1930					-0.194 (0.067)		-0.239 (0.110)
Black x Post x President Vote Share Democrat 1900-1930						-0.15 (0.089)	0.026 (0.150)
Observations R-Squared	$73,312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.625$	$73,312 \\ 0.626$	$73,312 \\ 0.625$	$73,312 \\ 0.626$

Table 9: Discrimination Components

Notes: Observations are at the race, county and week level. The table reports the results considering, separately, the interactions with each component used for the construction of the disscrimantion index. Each column inlcudes county by week fixed effects, race by week fixed effects, race by county fixed effects and county-race controls by week fixed effects. The standardized beta coefficient is reported in squared brackets. County-race controls are constructed at the county-race level for 1940, and include: logarithm of population, share in the labor force, share of employed, average years of draftees and net migration rate between 1930 and 1940. Regressions are weighed by enlistable men of each race in 1940. Standard errors are clustered at the county level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Appendix

A Additional Figures and Tables





Notes: The map shows the distribution of the African American volunteer enlistment rate per 100,000 enlistable individuals, for the 8 weeks subsequent the Pearl Harbor attack.





Notes: The map shows the distribution of the Caucasian volunteer enlistment rate per 100,000 enlistable individuals, for the 8 weeks subsequent the Pearl Harbor attack.

	Africa	n American	Caucasian		
Variable	Mean (1)	Std. Dev. (2)	Mean (3)	Std. Dev. (4)	$\begin{array}{c} \mathbf{Obs} \\ (5) \end{array}$
Log Population 1940	9.950	1.427	11.948	1.732	2,291
Share in Labor Force	0.890	0.074	0.895	0.035	$2,\!291$
Employed	0.807	0.100	0.817	0.048	2,291
Share in manufacture	0.158	0.096	0.241	0.125	$2,\!291$
Share of Farmers	0.187	0.201	0.105	0.137	2,291
Average Years of Education	7.382	1.643	10.69	1.184	2,291
Age	27.49	2.765	31.47	2.610	2,291
Log Wages	5.006	1.363	5.573	0.986	2,291
Log Occupational Score	2.833	0.173	3.198	0.139	2,291
Volunteers (per 100,000)	0.133	2.500	13.93	10.97	2,291
Draftees (per 100,000)	114.8	157.6	143.3	112.5	$2,\!291$

Table A.1: Summary Statistics, by Race

Notes: the table displays the mean, standard deviation and number of observations for a set of county-level variables, by race. The observations are weighed by enlistable men of each race in 1940 and the sample restricts to the observations included in our analysis.

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Variable	Description	Source
African American Share of County Population	African American Share of County Population 1940	Authors' calculation from 1940 Census Haines et al. (2010)
Caucasian Share of County Population	Caucasian Share of County Population 1940	Authors' calculation from 1940 Census Haines et al. (2010)
Share African American WWI Veterans	Share of WWI African American veterans living in the county in 1930. See Appendix B for more details.	Authors' calculation from the 1930 U.S. Census of Population Ruggles et al. (2020)
Share Living with African American WWI Veteran	Share of African American individuals eligible to serve in WWII, according to their age in 1930. See Appendix B for more details.	Authors' calculation from the 1930 U.S. Census of Population Ruggles et al. (2020)
Share with African American WWI Vet head	Share of African American individuals eligible to serve in WWII, according to their age in 1930, who were living in a household with a WWI veteran in 1930, who is the household head. See Appendix B for more details.	Authors' calculation from the 1930 U.S. Cen- sus of Population Ruggles et al. (2020)
Share with African American WWI Vet non-head	Share of African American individuals eligible to serve in WWII, according to their age in 1930, who were living in a household with a WWI veteran in 1930, who is not the household head. See Appendix B for more details.	Authors' calculation from the 1930 U.S. Cen- sus of Population Ruggles et al. (2020)
Church Membership 1936	Number of members of African American churches relative to county popula- tion in 1936	Census of Religious Bodies
Presence of NAACP Chapter 1940	Presence of NAACP Chapter in 1940	Gregory and Estrada (2019)
Share of Farmland	Share of Farm Area	Authors' calculation from 1940 Census Rug- gles et al. (2020)
German Share of County Population	Share of German Population	Authors' calculation from 1940 Census Rug- gles et al. (2020)
Italian Share of County Population	Share of Italian Population	Authors' calculation from 1940 Census Rug- gles et al. (2020)
Japanese Share of County Population	Share of Japanese Population	Authors' calculation from 1940 Census Rug- gles et al. (2020)
Discrimination Index	Principal Component Analysis for Discrimination Index, at the County Level. See Section 3.2.2 for more details.	Authors calculation from multiple sources
At Least 1 African American Volunteer after PH	Share of Counties with At Least 1 African American Volunteer after the Pearl Harbor attack	World War II Army Enlistment Records (NARA-AAD), 1938-1946
At Least 1 African American Volunteer after PH - South	Share of Counties with At Least 1 African American Volunteer after the Pearl Harbor attack, restricted to Southern States	World War II Army Enlistment Records (NARA-AAD), 1938-1947
At Least 1 African American Volunteer after PH - Non-South	Share of Counties with At Least 1 African American Volunteer after the Pearl Harbor attack, restricted to non-Southern States	World War II Army Enlistment Records (NARA-AAD), 1938-1948
At Least 1 Caucasian Volunteer after PH	Share of Counties with At Least 1 Caucasian Volumteer after the Pearl Harbor attack	World War II Army Enlistment Records (NARA-AAD), 1938-1949
At Least 1 Cancasian Volunteer after PH - South	Share of Counties with At Least 1 Caucasian Volumteer after the Pearl Harbor attack, restricted to Southern States	World War II Army Enlistment Records (NARA-AAD), 1938-1950
Share At Least 1 Caucasian Volunteer after PH - Non-South	Share of Counties with At Least 1 Caucasian Volumteer after the Pearl Harbor attack, restricted to non-Southern States	World War II Army Enlistment Records (NARA-AAD), 1938-1951
WWII Spending per capita	Total Government Spending for WWII in US, percapita	County and City Data Books (ICPSR Study 7735)
New Deal Agricultural grants per capita	Total per capita amount of New Deal Relief loans and grants provided by the Agricultural Adjustment Administration, the Farm Credit Administration, the Farm Security Administration, and the Rural Electrification Administration .	Fishback et al. (2003)
New Deal (NON-repayable) per capita	Total per capita amount of New Deal Relief grants and public works grants; loans provided by the Reconstruction Finance Corporation, the Home Owners Loan Corporation, the Farm Housing Administration (insured loans), and the US Housing Administration	Fishback et al. (2003)
Distance from Japan (km)	Distance to Japan in km. from county centroids	Authors' calculation
Distance from PH (km)	Distance to Pearl Harbor in km from county centroids	Authors' calculation
Distance from Germany (km)	Distance to Germany in km from county centroids	Authors' calculation
Log Population Density	Logarithm of the Population Density, in 1940	Authors' calculation from 1940 Census Rug- oles et al (2020)

Variable	Description	Source
Log Population 1940	Logarithm of the 1940 population	Authors' calculation from 1940 Census Ruggles et al. (2020)
Share in Labor Force	Average share of individuals in the labor force, re- stricting to the population of men between 18 and 65 years old	Authors' calculation from 1940 Census Ruggles et al. (2020)
Employed	Average share of employed individuals, restricting to the population of men between 18 and 65 years old, for only individuals who report a gainful oc- cupation	Authors' calculation from 1940 Census Ruggles et al. (2020)
Share in manufacture	Average share of individuals employed in manu- facturing, restricting to the population of men be- tween 18 and 65 years old	Authors' calculation from 1940 Census Ruggles et al. (2020)
Share of Farmers	Average share of individuals employed as farmers, restricting to the population of men between 18 and 65 years old, for only individuals who report a gainful occupation	Authors' calculation from 1940 Census Ruggles et al. (2020)
Years of Education	Average years of education for individuals who are no longer in school	Authors' calculation from 1940 Census Ruggles et al. (2020)
Age	Avearge age	Authors' calculation from 1940 Census Ruggles et al. (2020)
Log Wages	Average logarithm of wage for men between 18 and 65 years old	Authors' calculation from 1940 Census Ruggles et al. (2020)
Log Occupational Score	Logarithm of the average occupational income score for men between 18 and 65 years old, for only individuals who report a gainful occupation	Authors' calculation from 1940 Census Ruggles et al. (2020)
Volunteers (100,000)	Volunteers per 100,000 individuals eligible to serve in the county-week	World War II Army Enlistment Records (NARA-AAD), 1938-1951
Draftees (100,000)	Draftees per 100,000 individuals eligible to serve in the county-week	World War II Army Enlistment Records (NARA-AAD), 1938-1951
Net Migration rate '30-'40	Net Migration Rate in $\%$ between 1930 and 1940	Authors' calculation from 1940 Census Ruggles et al. (2020)

Table A.3: Variables Description, County-Race variables

	All Counties		High Discrimination			Low Discrimination			
	Mean	St. Dev	Obs	Mean	St. Dev	Obs	Mean	St. Dev	Obs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A. Full Sample									
Volunteers	0.406	0.491	339,595	0.375	0.484	196,466	0.449	0.497	143,129
Draftees	0.594	0.491	339,595	0.625	0.484	196,466	0.551	0.497	143,129
African American Men	0.070	0.255	339,595	0.106	0.308	196,466	0.021	0.144	$143,\!129$
Caucasian Men	0.930	0.255	339,595	0.894	0.308	196,466	0.979	0.144	$143,\!129$
At Least High School Degree	0.510	0.500	339,591	0.480	0.500	$196,\!462$	0.552	0.497	$143,\!129$
In Agriculture	0.101	0.302	$339,\!595$	0.112	0.315	196,466	0.087	0.281	$143,\!129$
In Manufacturing	0.551	0.497	$339,\!595$	0.521	0.500	196,466	0.593	0.491	$143,\!129$
In Service and Clerical Occupations	0.220	0.414	339,595	0.238	0.426	196,466	0.196	0.397	$143,\!129$
At Least Some High School	0.767	0.423	339,591	0.743	0.437	196462	0.799	0.401	$143,\!129$
In Private Grade	0.940	0.238	339,595	0.937	0.244	196,466	0.944	0.230	$143,\!129$
Age	23.62	3.109	339,452	23.65	3.130	196,378	23.59	3.079	143,074
Panel B. African American Men	l								
Volunteers	0.106	0.308	23,792	0.099	0.299	20,776	0.155	0.361	3,016
Draftees	0.894	0.308	23,792	0.901	0.299	20,776	0.845	0.361	3,016
At Least High School Degree	0.198	0.399	23,791	0.184	0.388	20,775	0.293	0.455	3,016
In Agriculture	0.148	0.356	23,792	0.165	0.371	20,776	0.035	0.185	3,016
In Manufacturing	0.576	0.494	23,792	0.562	0.496	20,776	0.679	0.467	3,016
In Service and Clerical Occupations	0.224	0.417	23,792	0.223	0.416	20,776	0.233	0.423	3,016
At Least Some High School	0.475	0.499	23,791	0.449	0.497	20,775	0.649	0.477	3,016
In Private Grade	0.988	0.111	23,792	0.987	0.114	20,776	0.992	0.089	3,016
Age	23.59	2.974	23,782	23.54	2.970	20,766	23.92	2.980	3,016
Panel C. Caucasian Men									
Volunteers	0.429	0.495	315,803	0.407	0.491	175,690	0.455	0.498	140,113
Draftees	0.571	0.495	$315,\!803$	0.593	0.491	$175,\!690$	0.545	0.498	$140,\!113$
At Least High School Degree	0.534	0.499	315,800	0.515	0.500	$175,\!687$	0.557	0.497	$140,\!113$
In Agriculture	0.098	0.297	$315,\!803$	0.106	0.307	$175,\!690$	0.088	0.283	140,113
In Manufacturing	0.549	0.498	$315,\!803$	0.516	0.500	$175,\!690$	0.591	0.492	140, 113
In Service and Clerical Occupations	0.220	0.414	$315,\!803$	0.240	0.427	$175,\!690$	0.196	0.397	$140,\!113$
At Least Some High School	0.789	0.408	$315,\!800$	0.778	0.415	$175,\!687$	0.802	0.399	$140,\!113$
In Private Grade	0.936	0.245	$315,\!803$	0.931	0.254	$175,\!690$	0.943	0.232	$140,\!113$
Age	23.63	3.119	$315,\!670$	23.66	3.149	$175,\!612$	23.59	3.081	$140,\!058$

 Table A.4:
 Summary Statistics - Individual Level

Notes: the table displays the mean, standard deviation and number of observations for a set of individual-level variables. Panel A includes the full sample, Panel B restricts to African Americans and Panel C to Caucasians. Columns 2 to 4 considers the full sample of counties; columns 5 to 6 (resp. 7 to 9) restricts to counties with a discrimination index that is higher (resp. lower) than the sample median.

Variable Name	So	urce		Construction	PCA count	v PCA social	PCA political
Dissimilarity Index 1940	Logan and P	arman (2	(210)	Dissimilarity index at the county level constructed by LP.	Yes	$\mathbf{Y}_{\mathbf{es}}$	No
Isolation Index 1940	Logan and P	arman (2	(210)	Isolation index at the county level constructed by LP.	Yes	Yes	No
Presence of KKK	Kneebone (2015)	and	Torres	Dummy for presence of KKK in any year between 1915 and 1940, in each county.	Yes	Yes	No
Number of Lynching cases up to 1939	Monroe ¹ (MWT)	Work	Today	Total number of lynching episodes in a county against African American be- tween 1803 and 1939.	Yes	Yes	No
Congress Vote Share Demo- crat 1900-1930	Clubb et al.	(1990)		Average vote share in Congressional elections at the county level, for each election between 1900 and 1930.	Yes	No	Yes
President Vote Share Demo- crat 1900-1930	Clubb et al.	(1990)		Average vote share in Presidential elec- tions at the county level, for each elec- tion between 1900 and 1930.	Yes	No	Yes

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Notes: the table lists the components included in the construction of the Discrimination index, specifying the source, the description of how they are constructed and if they are inserted in the county, social and/or political version of the index.

	Dependent Variable: Volunteers (per 100,000)						
	Baseline (1)	(2)	(3)	(4)			
Mean Dep. Var.	27.03						
Discrimination x Black x Post	-2.334 (1.170)	-2.334 (1.233)	-2.334 (1.215)	-2.334 (1.232)			
Cluster	County	Commuting Zone	County	County			
Conley Adjustment	Ν	Ν	Υ	Υ			
Observations R-Squared	$73,\!312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.626$	$73,312 \\ 0.626$			

Table A.6: DDD Estimates: Different Clustering

Notes: Observations are at the race, county and week level. See Section 3.2.2 for details on the construction of the discrimination index and Table A.5 for the list of variables included. Column 1 replicates our baseline specification, i.e. column 5 of Table 4. Column 2 replicates the baseline specification clustering standard errors at the commuting zone level. Column 3 and 4 replicate the specification in column 1 correcting standard errors for potential spatial correlation. Each column reports the results including county by week fixed effects, race by week fixed effects, race by county fixed effects and county-race controls by week fixed effects. County-race controls are constructed at the county-race level for 1940, and include: logrithm of population, share in the labor force, share of employed, average years of education, average age, average logarithm of wages, average (log of) occupational score, share of people in manufacture, share of farmers, share of draftees and net migration rate between 1930 and 1940. All the regressions include lower order interactions. Regressions are weighed by enlistable men of each race in 1940. *** p<0.01, ** p<0.05, * p<0.1.

B WWI Veterans

As discussed in the paper, we construct different proxies for the presence of African American WWI veterans – both in the county and in the household. To compute these variables we rely on the 1930 U.S. Census (rather than on the 1940 one), because only in this year WWI veteran status was asked.⁴² Similar to Mazumder (2019), we proceed in steps. First, we calculate, for each African American man in the U.S. Census of 1930, his age in 1917. We then count the number of African American men according to two eligibility groups: (1) age 21-31 in 1917, and (2) age 18-45 in 1917.⁴³ Second, we count the number of WWI African American veterans by county. We generate the share of WWI African American veterans in 1930 by scaling the number of veterans by the number of "enlistable" individuals, according to both eligibility criteria (i.e. 21-31 and 18-45). We use the wider (18-45) age range eligibility criterion, but results are similar when using the more stringent (21-31) one. We also construct the share of African American men who, given their age in 1930, would have been eligible to serve in WWII and were living in a household with a WWI veteran. In addition, we split the latter variable for individuals who were living with a WWI veteran who was household head and who was not the household head, respectively.

Note that our proxy for WWI African American veterans is built under the assumption that African American individuals living in a given county in 1930 were still residing in that same county at the time of the Pearl Harbor attack. While this assumption may not hold in practice, African Americans' geographic mobility should add noise to our results, unless it was systematically correlated with both WWI veteran shares and patterns of African Americans' volunteering behavior during WWII – something that seems unlikely to us.

 $^{^{42}\}mathrm{The}$ 1940 Census asked a generic question about veteran status without, however, specifying the conflict.

⁴³The choice of these two eligibility groups is motivated by the draft requirements. The first draft (June 5, 1917) included all men between the ages of 21 and 30. The second draft (June 5, 1918) registered men who attained age 21 after June 5, 1917. A supplemental registration, included in the second registration, was held on August 24, 1918, for men turning 21 after June 5, 1918. Finally, a third registration was held on September 12, 1918, for men age 18 through 45. See Mazumder (2019) and Campante and Yanagizawa-Drott (2018) for more details on the WWI draft.

C Other Races after Pearl Harbor

Minority groups in the United States faced varying degrees of discrimination. Figure C.1 plots volunteer enlistment rates for all races that our data allow us to identify – Caucasian, African American, Native American, Japanese, and Chinese – during the eight weeks before and the eight weeks after the Pearl Harbor attack.⁴⁴ It shows that enlistment rates were similar between Native American, Japanese American and Caucasian men. They were lower for Chinese men, and the lowest for African American men. As we discuss below, this is broadly consistent with the incentives faced by each group.

The U.S. government had a long history of discriminatory and often violent policies against Native Americans. By the eve of WWII, 92% of Native Americans lived in rural areas – most of them in reservations, where conditions and opportunities were much poorer than other parts of the country.⁴⁵ Native Americans had lower outside opportunities than Caucasian men, with median income being only 25% of those of Caucasian men at the time (Sorkin, 1974). At the same time, there were few formal discriminatory policies against Native Americans outside reservations. The U.S. military treated Native American men in the same way as Caucasian men and the image of Native American soldiers was very popular across the country (Bernstein, 1986). Military service during WWII might have offered to Native Americans the opportunity to achieve a more equal status relative to Caucasian men.

Chinese Americans faced significant discrimination too. The Chinese Exclusion Act (1882) was the first immigration law that excluded an entire ethnic group from the United States. The Scott Act (1888) further prohibited reentry of U.S. citizens who were ethnically Chinese back to the country. The National Origins Act of 1924 effectively banned all Asian immigration.⁴⁶ These restrictions were in place throughout WWII. In addition to these national laws, local racist efforts to limit U.S. citizens and civil rights of Asian Americans were widespread.⁴⁷ During WWII, Chinese and Japanese served in segregated units. However, since the attack was conducted by

 $^{^{44}}$ For consistency, we use the same sample as in Section 4: the 48 mainland states.

⁴⁵No precise figure on the share of Native Americans living in reservations around 1940 is available. We thus take the share of individuals in rural areas as a (admittedly crude) proxy for the share of Native Americans living in reservations.

⁴⁶Japanese immigration was restricted in 1908 with the introduction of the Gentleman's Agreement (Abramitzky and Boustan, 2017).

 $^{^{47}}$ See Soennichsen (2011) for a detailed discussion.

Japan, some Japanese-Americans may have felt that volunteering was a proof of loyalty, or as a way to signal their American identity.⁴⁸ The segregation of Chinese soldiers was not as extreme as that for African American soldiers or Japanese soldiers. For example, as many as 75% of Chinese Americans served with Caucasian units, whereas all African American and Japanese American men served in separate units.⁴⁹

⁴⁸For instance, Saavedra (2018) shows that Japanese-Americans born right after Pearl Harbor had more American sounding names, relative to kids born just a few days before, as Japanese-American parents responded to concerns about heightened anti-Japanese sentiments. Also, note that the ban of Japanese-Americans from the military and forced internment discussed in the previous section had not yet taken place.

⁴⁹See, for instance, the discussion available from the U.S. Department of Defense at this *link*.



Figure C.1: Volunteer Enlistment, other ethnicities

Notes: The y-axis reports the rate of enlisted volunteers per 100,000 enlistable individuals (by race and week). The x-axis reports the week since the Pearl Harbor attack (coded as week 0).