

Racial Inequities Among World War II Veterans in the Labor Market

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Abstract

We link the 1940 Census to World War II (WWII) enlistment records from the National Archives and tax return data to evaluate how WWII service differentially impacted the future income and mobility of white, Black, Hispanic, Asian, and Native American veterans relative to same race non-veterans. We examine effects related to wage and investment income, as well as geographic mobility. Serving in WWII led to higher income for Black veterans, while WWII service led to lower income for white and Asian veterans. WWII service led to a lower likelihood of moving to a different county, state, and Census Region for white and Hispanic veterans, and a higher likelihood of moving counties and states for Black veterans compared to same race nonveterans. Black veterans were also more likely to reside in neighborhoods with higher median earnings and more segregation, while white and Asian veterans lived in neighborhoods with lower median earnings than same race non-veterans. We suggest that WWII service improved black veteran incomes relative to black non-veterans by allowing Black veterans to move to areas with better economic opportunities, while veterans of other races were less likely to benefit from moving.

JEL Codes: N12, J15, J71, J15

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1 Introduction

World War II was extremely destructive world-wide. The U.S. was lucky in that little of the war was fought on American soil, so America avoided the destruction to capital and land at home. Americans still sacrificed to win the war because 41 percent of the economic output was devoted to fighting the war, roughly 400,000 members of the military died and another 600,000 were seriously debilitated. The men and women who served in the military and survived the war also sacrificed during the War because they were paid wages and salaries in money and in kind by the military that were substantially below the earnings of similarly skilled civilians during the War. They also gave up opportunities to develop skills specific to working in a civilian peace-time economy, although this sacrifice was diminished to the extent that the skills they developed in the military were similar to ones developed by civilians during the War.

Our goal in this paper is to examine how veterans who served in the military during World War II fared later in life relative to non-veterans of the war on several dimensions. Did the veterans' experiences during the War lead to continued sacrifice after the War? Did the veterans return and generally have similar experiences to non-veterans after the War? Or did the veterans fare better after the War and make up for some of the losses they incurred during the War.

We are particularly interested in the impact of the War on different ethnic and racial groups¹: white, Black, Hispanic, Asian/Pacific Islander, and Native American. This leads to several potential comparisons. We compare the differences in the experiences of veterans and non-veterans within each group. We compare how non-veterans from different ethnic groups fared later in life relative to non-Hispanic ethnic groups. We also compare the impact of the War for each minority group with the impact of the war for non-Hispanic whites.

The experiences compared focus on the situations veterans faced in 1969 using information from federal tax returns. To examine economic welfare, we compare differences in wages and salaries, interest income and overall adjusted gross income. The men who served in the military often were trained and served in locations some distance from their homes in 1940, while a number of civilians moved when supporting the war production efforts; therefore, we

¹ For the purposes of this study, white, Black, Asian/Pacific Islander, and Native Americans include non-Hispanic while Hispanic includes any race that also identified as Hispanic.

examine the extent to which veterans and non-veterans were living in 1969 in different counties within the same state, different states, different districts, and different regions from where they resided in 1940.

Ethnic and racial housing segregation has been a common feature of American society, and we seek to examine how serving in the War influenced these patterns. We compare how the war influenced the characteristics of the census tract where they chose to reside: the median wage in the tract, the difference between the individual's wage and the median census tract wage, the share of people from the same race in the tract, and the dissimilarity index of the tract.

A common question asked about people who migrate is whether they ended up with more income and to what types of areas did they move. We therefore examine the racial and ethnic differences in income for World War II veterans who moved and World War II veterans who stayed. We also examine ethnic and racial differences in the characteristics of the locations where World War II veterans resided in 1969 for veteran movers and veteran stayers.

The results of the analyses show that serving in WWII led to higher income for Black veterans, while WWII service led to lower wage income with no statistically significant effect on investment income for white and Asian veterans. WWII service led to a lower likelihood of moving to a different county, state, and Census Region for white and Hispanic veterans, and a higher likelihood of moving counties and states for Black veterans compared to same race nonveterans. Black veterans were more likely to move to neighborhoods with higher median earnings and more segregation, while white and Asian veterans lived in neighborhoods with lower median earnings than same race non-veterans. We suggest that WWII service was a possible mechanism driving Black veteran income and neighborhood effects that opened economic opportunities improving the economic situation of Black veterans, while veterans of other races were less likely to benefit from moving.

2 Historical Background and Related Literature

More than 16 million Americans served during World War II, almost 10 million of whom were inducted via the draft. Even though America's soldiers were predominantly white, other racial groups shouldered a significant part of the war burden. Over one million Black Americans,

more than 13,000 Chinese Americans, 20,000 Japanese Americans, almost 20,000 Native Americans, and half a million Hispanic Americans served in the U.S. armed forces (Hershey, 1948; U.S. Congress, 2007).² Figure 1 plots the monthly number of enlisted and drafted soldiers for these groups from the enactment of the draft in September 1940 until the end of the war in August 1945.³ The graph shows that drafting in each group, except for the Japanese who were mainly excluded from service with a few exceptions,⁴ increased substantially after the attack on Pearl Harbor and peaked in the later part of 1942.⁵

The figure also reveals group-specific differences in their wartime participation and experience in terms of the draft burden and enthusiasm but also opportunities, or lack thereof, for volunteering. Such differences in group-specific wartime experiences are also visible in other metrics. Of the 473 Congressional Medals of Honor awarded for service in World War II, 7 were awarded to African Americans, 13 to Hispanic Americans, 24 to Asian-Americans, and 5 to Native American soldiers (Converse et al., 2008; Willbanks, 2011). This does not mean that soldiers from these groups fought less gallantly or were any less brave, but they were not rewarded in the same way as white soldiers (Converse et al., 2008).⁶ This bears the question as to whether America rewarded its minority group soldiers for their service in other areas like the labor market, which is the topic of this study. In this section, we provide an overview of the different wartime experiences faced by soldiers from different racial groups, how the war affected their economic outcomes, and what different barriers and degrees of racism they faced both inside and outside the military.

² For Hispanics, the number is estimated to be between 400,000 and 500,000 service members because official statistics did not treat them as separate group in racial breakdowns and instead counted them as white soldiers.

³ The Selective Training and Service Act was passed on September 16, 1940. It formed the basis for the creation of the Selective Service System. The first round of registrations for the draft commenced in October 1940.

⁴ The 4th Report of the Director of the Selective Service states: "The War Department, impelled by security reasons, determined that it would not accept *for service with the armed forces, Japanese or persons of Japanese extraction, regardless of citizenship status or other factors.*" All Japanese-Americans and Japanese-aliens were excluded by the Western Defense Command of the continental United States from the area within its jurisdiction until January 12, 1945." (Hershey, 1948, p. 900).

⁵ Voluntary enlistment was forbidden in December 1942 due to concerns over labor shortages in the war economy, which is why this line remains flat for all groups after that date.

⁶ The first Medal of Honor for service in World War II was awarded to a Black soldier in 1997 by President Clinton.

2.1 The World War II Experience of Black Americans

The Selective Service System, which organized the mobilization of Americans for the war effort, was mainly designed and run by military planners. A segregated military created issues for a successful draft, which most visibly affected the largest minority group in the U.S. at the time: Black Americans. Of the 6,442 draft boards with their approximate 25,000 board members,⁷ only 250 members across 33 states were Black, and in the South only Virginia, Kentucky, and North Carolina had any Black board members (Flynn, 1984).

This lack of representation was reflected in low early draft and enlistment rates among Black Americans. Prior to Pearl Harbor, there were only 4,450 Black soldiers in six regiments. The Marines would not even accept Black volunteers until 1943, and the Navy restricted their opportunities to messmen service. As late as January 1943, the share of Black soldiers in the Army was 5.9% and in July of 1944, only 5% of Navy sailors were Black (Flynn, 1984). The target share of Black men drafted of 10 percent of all soldiers – equal to the share of Black people in the population – was only reached towards the end of the war and after several presidential executive orders had been issued to force all service branches to accept Black soldiers. Medical and education requirements were the most frequently cited reason for rejection of Black draftees.⁸ The Army's inability to construct housing units to uphold segregation significantly contributed to higher rejection rates. An unintended consequence of the higher rejection rates, as well as the more frequent placement into support rather than fighting units, contributed to lower casualty rates among Black soldiers (Ferrara, 2022).

Once employed in the few segregated fighting units, Black soldiers achieved remarkable successes on the battlefield.⁹ Not everyone was keen to join the military though. Qian and Tabellini (2021) provide evidence that the willingness to volunteer among Black Southerners was negatively affected by the degree of discrimination they experienced in their home counties. Black community leaders, such as W.E.B. Du Bois, instead argued that active participation in the

⁷ The typical draft board had three members or more. Most counties tended to have one board, especially in rural areas, but could have substantially more in denser urban places and cities.

⁸ 1.1% and 12.3% of White and Black draftees, respectively, were rejected for “insufficient education” between May 15 and September 15, 1941. In 1943 around 33% of White draftees were rejected for any reason compared to a rejection rate of 50% among Black draftees.

⁹ Most notably, the “Buffalo soldiers” of the 92nd Infantry Division, the “Black Panthers” of the 761st Anti-Tank Battalion, and the Tuskegee Airmen, among others, quickly rose to fame.

war would strengthen their bargaining position when re-negotiating the social contract between Black and White Americans in the postwar era (Parker, 2009). This was reflected in the Double-V campaign, namely the victory over Nazism abroad and victory over racism at home. Many Black G.I.s experienced friendly treatment by their mostly white hosts in France and Britain. Yet, upon returning to the United States, and the South in particular, they were faced with many of the same racial barriers as before. Their experiences led them to a new viewpoint on the matter, which led many to partake in the subsequent rise of the Civil Rights movement (Phillips, 2012).

In terms of their labor market outcomes, the effect of World War II on Black workers has been studied extensively.¹⁰ This includes the substantial occupational upgrading of Black workers from mostly agricultural to industrial jobs during and immediately after the war due to labor shortages in various industries (Collins, 2000; Aizer et al., 2021; Ferrara, 2022). The upgrading contributed to the narrowing in the Black-White wage gap (Margo, 1995). Labor market gains were realized by both Black men and women (Bailey and Collins, 2006). In contrast, based on data from six cities, Collins (2000) does not find significant advantages for Black veterans in the labor market in terms of occupational upgrading or wages.¹¹

The impact of the second Great Migration to the industrial centers also contributed to Black economic progress in the 1940s (Boustan, 2016; Derenoncourt, 2022). Even though it is not always linked to World War II explicitly, the need for additional labor after the war began with the rise of the war economy (Wolfbein, 1947). Black veterans could take advantage of the G.I. Bill and attend college, but these benefits mainly accrued to those living outside the South (Turner and Bound, 2003).

2.2 Asian, Hispanic, and Native Americans in World War II

Even though Black Americans were the largest of the minority groups, Hispanic, Native, and Asian Americans made significant contributions to the war effort too. The absolute numbers, however, tend to undermine this picture. For instance, over 20,000 Native American soldiers served in the war. The number seems small, but so was the Native American population. In fact,

¹⁰ For a recent review, see Ferrara (2023).

¹¹ Angrist and Krueger (1994) even document a wage loss for veterans compared to non-veterans after controlling for selection into the military.

they had the highest participation rate of any group (Holm, 1981). Their culture and language also contributed directly to the American war success, and the 28 original *Navajo Code Talkers*, who helped the Marines secure their lines of communications in the Pacific theatre, were awarded the Congressional Gold Medal on July 26, 2001 (Jevec, 2001).

The second largest minority group were Hispanics, of whom around 400,000 and 500,000 were sent into war. This range is an estimate because Hispanics were not listed as a separate racial group but treated as White soldiers for most statistical purposes (see Converse et al., 2008). Of course, this does not imply that they experienced less racism. In fact, Mexican Americans, the largest subgroup among Hispanics at the time, had been deported during the Great Depression (Lee et al., 2019), and then invited to return to work on American farms as labor shortages in the agricultural sector during the war threatened food supply.

Alongside German and Italian immigrants in the U.S., Asians and Asian Americans were the target of hatred, especially after the attack on Pearl Harbor. Japanese citizens and Japanese Americans were interned in camps, while discriminatory behavior spilled over to other Asian groups due to Americans' inability to distinguish between different Asian groups (see Yui, 1992; Saavedra, 2021; Arellano-Bover, 2022).

Unlike for Black veterans, there is relatively little systematic evidence for the labor market effects of the war and WWII service on the labor market outcomes of these three groups. Using the one-percent sample of the 1960 Census, Browning et al. (1973) conclude that Black and Mexican American veterans earned higher wages than non-veterans, which they attribute to the idea that the military provided a bridge into better occupations via networks and knowledge acquired during service. This finding is contradicted by the work of Collins (2000) and a literature that attributes wage gains of veterans to selection bias into the military. The positive wage effects disappear once the analysis controls for selection bias (Angrist and Krueger 1994).¹²

3 Data

Our analysis relies on a fuzzy regression discontinuity approach in which the age of military eligibility plays an important role, and we want to compare men of similar ages. Therefore, our

¹² The effects of service on wages and other later-life economic outcomes are ambiguous a priori.

sample is restricted to men born between 1924 and 1931. The birth year 1928 is our dividing line for men who were eligible for military service during World War II. The pre-treatment characteristics for veterans and non-veterans were obtained using the full count 1940 Decennial Census made available by IPUMS (Ruggles et al., 2023). Veteran status was obtained by merging the full count census to records from the Army and Army Air Force using the World War II Enlistment Records.¹³ Information on outcomes later in life were obtained by merging these data with administrative records from the 1969 Internal Revenue Service (IRS) 1040 tax return form. We used the Census Bureau's internal best race file to assign race and ethnicity to individuals (Ennis et al. 2018). The best race file uses an algorithm to compile race and ethnicity data from the decennial census, household surveys, and administrative records and assigns race and ethnicity to everyone in a master file based on the quality of the race and ethnicity data and the proximity to the moment of observation.

The 1040 form contains data on individual wage and salary income, interest and dividend payments, adjusted gross income, and location of residence in 1969. We compare the respondent's county and state of residence in the 1940 Census to their location in the 1969 IRS data to construct mobility variables. We also construct a variable measuring median wage and salary income in each individual's tract of residence by taking the median of wage and salary income, the percent of residents in the tract of the same race or ethnicity, and a county level dissimilarity index for white versus nonwhite areas based on the racial composition within census tracts, using all individuals who filed a tax return in 1969 residing in the individuals tract and county, regardless of age.

Table 1 presents summary statistics comparing mean values of correlates from the 1940 Census between WWII veterans and non-veterans.¹⁴ It shows important differences between veterans and non-veterans pretreatment characteristics. By design for our fuzzy regression discontinuity framework, non-veterans tend to be younger than WWII veterans. All of the men were 18 or younger by 1940, so marriage rates were very low. Since veterans were older on average, their 1940 marriage rate was nearly twice as high at 0.24 percent than for non-veterans

¹³Need a footnote or appendix about match rates.

¹⁴ Note that non-veterans can include veterans from later wars such as the Korean war that occurred during the early 1950s

at 0.11 percent. WWII veterans had more years of schooling, 8.2 years as opposed to 5.5 years for non-veterans and were less likely to still be attending school in 1940. They had lower rates of non-labor force participation and were more than two times as likely to be employed than non-veterans.

For other correlates less related to age there are smaller differences. There is only about a \$12 difference in household income per capita. About 55 percent of WWII veterans were residing in urban areas, while 53 percent of non-veterans were living in urban areas. WWII veterans were slightly more likely to be residing in the same county for the past five years than non-veterans. They were 0.2 percentage points less likely to be US citizens and 2.2 percentage points more likely to be white than non-veterans. Additionally, veterans were more likely to come from the Northeast than from other geographic regions.

Table 2 presents summary statistics comparing mean values of outcome variables from the 1969 1040 tax data between WWII veterans and non-veterans. It shows major differences in post treatment outcomes for veterans and non-veterans. Overall, WWII veterans were less likely to move, but more likely to have higher measures of income. For instance, the adjusted gross income for WWII veterans was about \$800 higher than for non-veterans. Neighborhood median income, the percent of residents of the same race/ethnicity, and the county dissimilarity index between white and non-white residents are very similar between veterans and non-veterans. However, veterans tend to make 97.6 percent more than the median wage and salary income in their neighborhood, while non-veterans tend to make 88.4% more.

It is important to note that these higher average income measures for veteran versus non-veterans likely reflect differences in age and education, as well as any positive selection into the military. For this reason, we conduct our main method of analysis, the fuzzy regression discontinuity analysis to estimate the local average treatment effect of WWII service by race.

4 Methods

Our goal is to identify the relationship between participation in the military in World War II and thus veteran status and outcomes later in life for each racial and ethnic group. A simple comparison of veterans to nonveterans is likely to lead to problems with endogeneity bias

because a significant number of veterans volunteered, and the draft was not fully random. The number of correlates available for men in 1940 are limited and thus there are likely to be unmeasured differences between veterans and non-veterans that influenced their choice about participating that would also be correlated with outcomes later in life. These might include their willingness to take risks, ability to work in teams, health, and physical capacity in 1940, and a variety of other factors.

To reduce the endogeneity, we limit the sample to men born between 1924 and 1931. We do this for two reasons. First, someone born in 1928 or before was eligible to participate in the military at some point during the war because they would have turned 17 before 1945. Age 17 was the cut off for eligibility for the draft and volunteering during the war. Males born after 1928 would not have been eligible, although some might have joined by lying about their age. Additionally, we performed the structural break estimation technique as in Chay, McEwan, and Urquiola (2005), Card, Mas, and Rothstein (2008), and Fetter (2013). Using this technique and comparing heterogeneous cutoffs by race and region to the 1928 cutoff for all races and regions, we validate the appropriateness of the 1928 cutoff due to its higher explanatory power.

We then follow the methods developed by Turner and Bound (2003) to estimate the effect of World War II military service on retirement age outcomes by using a fuzzy regression discontinuity approach. The instrument for veteran status is a zero-one dummy that has a value of one when the person was born in 1928 or before and therefore was eligible for the draft at some time during the war and 0 for people born after 1928 and thus not eligible at any time during the war. Essentially, the dummy is an intent to treat based on the age cutoff. To control for other differences that arise based on age, like job experience, we include a linear age trend variable that serves as a running variable across the cutoff birth year. We allow for this trend to differ on both sides of the cutoff year.

This is implemented by estimating a Two Stage Least Squares model as demonstrated below in equation (1) and (2). Veteran status is denoted by $WWII_i$. We instrument for veteran status with the dummy variable $1(Yr \leq 1928)$ to capture a discontinuous change in draft probability following 1928 while controlling for a linear year-of-birth trend given by the coefficient on $(Yr - 1928)$.

$$(1) \vec{Y}_{i,S} = \vec{\beta}_S + \vec{\beta}_v \widehat{WWII} \text{Vet}_i \times \overrightarrow{Race}_i + \vec{\beta}_{Yr}(Yr_i - 1928) \\ + \vec{\beta}_{Yr,Pre}(Yr_i - 1928) \times 1(\leq 1928) + \overrightarrow{Race}_i \boldsymbol{\beta}_R + \vec{X}_i' \boldsymbol{\beta}_X + \varepsilon_i$$

$$(2) \widehat{WWII}_{i,S} = \delta_S + \delta_I 1(Yr \leq 1928) \times \overrightarrow{Race}_i + \delta_{Yr}(Yr - 1928) \\ + \delta_{Yr,Pre}(Yr - 1928) \times 1(Yr \leq 1928) + \overrightarrow{Race}_i \vec{\delta}_R + \vec{X}_i \vec{\delta}_X + \varepsilon_i$$

The vector $\vec{Y}_{i,S}$ is our vector of outcomes for individual i living in state S , including the natural log of measures of income reported in Table 2. Equations (1) and (2) control for state level fixed effects given by $\vec{\beta}_S$ and δ_S . The vector \overrightarrow{Race}_i describes the individual's race or ethnicity. The matrix \boldsymbol{X}_i contains variables controlling for pre-treatment characteristics from the 1940 Decennial Census that were listed in Table 1, including per capita household wage and salary income, education, employment, past moves, urban/rural status, and citizenship.

Equation (1) was estimated for the entire sample. The first-stage equation (2) was estimated separately for each racial and ethnic groups to detect heterogeneity in treatment effects by race and ethnicity. Additionally, a version of Equations (1) and (2) was estimated without interacting race with veteran status and born before 1928 to estimate the pooled effect regardless of race. For specifications of equations (1) and (2) conducted on the whole sample, race and ethnicity dummies were also used as control variables. Pacific Islanders were included in the Asian category due to severe sample limitations.

Figure 1 shows the relationship between birth year and participation in World War II for two groups: white non-Hispanics and the remaining non-whites and Hispanics. For both groups the probability of serving during the war declines as the birth year rises toward 1928. Five years before 1928 the share of white non-Hispanic males serving was approximately 33 percent and the share of non-white and Hispanic males serving was around 28 percent. Both groups had serving rates around 10 percent when born in 1928, and the shares for both when born in 1929 were less than 3 percent and declined thereafter.

5 Results and Discussion

Table 3 presents the first stage result estimates of equation (2) from the last section. The dependent variables are served in WWII in column (1) and served in WWII and belonged to the corresponding race and ethnicity in columns (2) through (4). For columns (2) through (4) race/ethnicities other than the respondent's race/ethnicity were also included in the list of instruments. However, the coefficients of these are not reported due to space considerations. Consistent with Figure 1, Table 3 shows that being born before 1928 is strongly associated with serving in WWII. For all veterans regardless of race, having been born before 1928 is associated with a 10.15 percentage point increase in serving. For different racial and ethnic groups, we see similar strong associations that range from an 11.3 percentage point increase for white non-Hispanic Americans to 29.34 percentage point increase to Asian Americans.

5.1 World War II Effects on Income

Table 4 presents our first set of 1969 tax data outcome variables related to income. The dependent variable in column (1) is log wages and salary, in column (2) is an indicator variable for whether individuals had received interest or dividends, in column (3) is log interest and dividends, and in column (4) is log adjusted gross income. The coefficients for different groups at the bottom of the table show the difference in the income measure between non-veterans from the group and the income measure for non-veteran non-Hispanic whites. In nearly all cases, minority non-veterans earned less than non-Hispanic white non-veterans, often substantially less. For example, the log wage and salary earnings of Black non-veterans were 0.2084 log points lower than for white non-veterans. There was one statistically significant exception; Asian non-veterans earned more interest and dividends than white non-Hispanic non-veterans.

The results comparing veterans and non-veterans without regard to ethnicity or race are in the top row of Table 4. The coefficients show that veterans earned log wages and salaries that were 0.043 log points lower than for non-veterans, the veterans were 6.9 percent less likely to earn interest, the veterans' log interest income was 0.1934 log points lower, and the veterans' log gross income was 0.085 log points less than for non-veterans. The coefficients in the second row below the line in Table 4 show the difference between the incomes of white non-Hispanic

veterans and white non-Hispanic non-veterans. The coefficients look very similar to the pooled results because non-white Hispanics are a very large share of the sample.

There are two sets of comparisons in Table 4 for the groups aside from non-Hispanic whites. In the third row for “Black WWII,” the coefficient of 0.1073 shows that Black veterans had wage and salary earnings that were 0.1073 log points higher than for Black non-veterans. In contrast, the coefficient of -0.04982 in the row for “White WWII” shows that non-Hispanic white veterans had log earnings that were -0.04982 log points lower than for non-Hispanic white non-veterans. In the row for “Black WWII,” we also calculated a difference-in-difference value that are reported in brackets below the standard error, which is in parentheses. The value of 0.157 shows that the Black effect of serving in World War II of 0.1073 log points is 0.157 log points greater than the non-Hispanic white effect of serving in World War II of -0.04982.¹⁵

Black veterans had higher gross incomes than Black nonveterans, but they obtained less interest income and were less likely to earn interest. Hispanic veterans earned roughly the same wages and salaries and gross incomes as Hispanic non-veterans but had less interest income. One potential explanation for the lower interest incomes might have related to non-veterans possibly investing their earnings, which were substantially higher than the earnings of servicemen, in War bonds during the war because consumption opportunities were limited; therefore, they had become more comfortable with investing than the veterans. Native American veterans earned more wages and salaries and had higher gross incomes than Native American non-veterans but there were only small differences in the interest earnings. In contrast, Asian veterans had lower salaries and gross earnings than Asian non-veterans but had more interest earnings. The situation for Asian non-veterans was quite different because so many Asian non-veterans had been forced into concentration camps during the War and thus had at best limited opportunities to gain skills and earn income, which restricted their long-term opportunities.

The difference-in-difference calculations in brackets in Table 4 were positive and statistically significantly different from zero for the differences in the World War II effects between

¹⁵ We can make another calculation of the difference in log wage and salary earnings between Black veterans and non-Hispanic white veterans, which is -0.0513. The calculation is the difference between the black veterans and white veterans is the coefficient of -0.2084 for the difference between black non-veterans and white non-veterans plus the coefficient of 0.1073 for the difference between black veterans and black non-veterans minus the coefficient of -0.0498 for the difference between white veterans and white non-veterans.

Blacks and non-Hispanic whites for log wages and log gross income. The positive sign suggests that World War II service reduced the gaps in earnings and income between Black veterans and non-Hispanic white veterans. The situation was similar for comparisons of Native Americans and non-Hispanic whites and comparisons of Hispanics and non-Hispanic whites, although the latter differences are not statistically significant. The World War II effect for Asian Americans relative to non-Hispanic whites was negative for log wages but very close to zero for gross income.

Men who served during World War II tended to have lower interest income in 1969 than non-veterans within groups by a substantial amount among non-Hispanic whites, Blacks, and Hispanics. The World War II effect in brackets for interest income was much more negative for Blacks and Hispanics than it was for non-Hispanic whites.

5.2 World War II Effects on Geographic Movement

The impact of service in World War II on geographic mobility is shown in Table 5. When interpreting these results, it's important to keep in mind the stronger labor market positions of Native American and Black veterans, and the weaker labor market positions of white and Asian American vets. Earnings can be related to mobility for two reasons. First individuals can leave their area of residence to pursue more economic opportunity and hence earn higher earnings when they move. Second, higher earnings can allow individuals to better overcome costs associated with moving and mobility.

The coefficients in the lower panel of Table 5 show that Black non-veterans were 13.8 percent more likely than non-Hispanic white non-veterans to move across state lines, 15.3 percent more likely to move to another district, and 19.5 percent more likely to move to a new region. The Hispanic, Asian, and Native American coefficients in the lower panel were almost all small and statistically insignificant, suggesting that non-veterans in those categories moved at the same rate as non-Hispanic white non-veterans. The one exception was that Hispanic non-veterans were 6.3 percent less likely to move across county lines than non-Hispanic non-veterans.

When focusing on veterans, serving in WWII led to less geographic mobility for non-Hispanic white, and Hispanic service members relative to non-veterans of the same race and ethnicity. The differences in movement for Native American veterans and non-veterans were

slightly negative but not statistically significant, while the differences for Asian Americans were slightly positive and not statistically significant.

The difference-in-difference calculations in brackets show that the effect of World War II service on the movement of Blacks was substantially more positive than it was for non-Hispanic whites. The same was true for Asian Americans and Native Americans relative to non-Hispanic whites, although the differences for the Native Americans were not statistically significant. The World War II effects for Hispanic and non-Hispanic whites were essentially the same.

5.3 Characteristics of the Locations Where Veterans and Non-Veterans Lived in 1969

The U.S. has a long history of geographic housing segregation along racial and ethnic lines. There is a possibility that the men who fought in World War II received more respect for their service that helped diminish discriminatory attitudes that led to housing segregation. Table 4 also shows that Black World War II and Native American veterans had higher incomes than their non-veteran counterparts and thus were better able to afford higher-valued accommodations found in largely non-Hispanic white neighborhoods.

We examine this issue in Table 6, which provides information about the census tracts where the veterans and non-veterans lived in 1969. In the lower part of Table 6, the coefficients show that Black non-veterans resided in census tracts in 1969 with \$1,619 lower wages and salaries than for non-Hispanic white non-veterans. The difference between Black non-veteran average earnings and the median for the census tract was 6.7 percent lower than for non-Hispanic white non-veterans. Because Blacks were a smaller share of the population than non-Hispanic whites, the Black non-veterans resided in tracts where the percent black was 8 percentage points lower than the areas where non-Hispanic white veterans resided. Non-veteran blacks lived in tracts where the dissimilarity index as 0.094 points more dissimilar than the tracts where non-veteran whites lived. These same patterns with different magnitudes largely held for the other groups with a few exceptions. The non-veterans in the other groups tended to earn more than the average in their census tracts, and Native American non-veterans tended to live in census tracts with dissimilarity indexes that were similar to the census tracts where non-Hispanic white non-veterans lived.

WWII service led white non-Hispanic and Asian service members in 1969 to in census tracts where median income was \$423 and \$859 lower, respectively, than their non-veteran counterparts. In contrast Black, Hispanic, and Native American veterans were more likely to live in census tracts in 1969 with higher earnings than their non-veteran counterparts. The difference of \$637 was largest and statistically significant, while the differences for Hispanics and Native-Americans were smaller and not statistically significant. The difference-in-difference results for the World War effects in brackets show that the impact of serving in the war was substantially higher for Blacks, Hispanics and Native Americans than for non-Hispanic whites, while the impact was substantially lower for Asian Americans.

The coefficients in column 2 show that the differences between the individual's earnings and the median earnings in the census tract in 1969 were about the same for veterans and non-veterans within the same ethnic or racial group. The differences were all less than a dollar.

Did WWII participation lead to lower segregation? The results for column 3 in the top part of Table 6 show that non-Hispanic white veterans were residing in census tracts in 1969 with a non-Hispanic white share of the population that was 1.4 percentage points lower than the census tracts where non-veteran non-Hispanics resided. On the other hand, Black, Hispanic, and Asian American veterans resided in neighborhoods with 11.5, 6, and 8 percentage point higher population shares of their own ethnic or racial group than non-veterans of the same group. At the county level, using the coefficients for the dissimilarity index, WWII service led to Black and Asian veterans living in more segregated counties than their non-veteran counterparts, while Native American veterans were less likely to live in more segregated counties than Native American non-veterans. There was little difference in the segregation in the counties where Hispanic veterans and non-veterans lived.

5.4. Income Comparisons between Veterans and Non-Veterans for Movers and Stayers

World War II immediately led to temporary geographic dislocations for the service men based on where they trained and where they served. Meanwhile, a number of civilians during World War II moved voluntarily and some through coercions to help produce munitions. Table 7 provides information on how the income differences in 1969 for veterans who moved in

comparison to non-veterans who moved within each racial/ethnic group, as well as the difference within racial/ethnic groups between veterans and non-veterans who resided in the same county in 1969 and 1940. Table 8 shows comparisons between veterans and non-veterans in each group related to their neighborhoods in 1969 among movers and again among stayers.

Among non-Hispanic white movers, the veterans earned lower wages than non-veterans, earned less interest, and had log gross incomes that were 0.06649 log points lower. Among Black movers, the veterans earned higher wages and had log gross incomes that were 0.1071 log points higher, but they also earned less interest, substantially less, than the Black non-veteran movers. The patterns for Hispanics and Native Americans were similar to those for Blacks, although fewer of the coefficients were statistically significant. The results for Asian American movers in Table 7 were similar to the results in Table 4, as veterans earned lower wage and gross incomes but did receive more in investment earnings.

The comparisons of non-Hispanic white veteran and non-veteran stayers were roughly similar to the situation for movers with veterans earning lower wage and gross incomes, except that the veterans earned a great deal less in interest incomes. The situation for Black veterans among Black stayers was substantially different from the situation for movers because the veteran stayers earned less than the non-veteran stayers. The veterans' situations also reversed from positive to negative incomes relative to nonveterans for Hispanic stayers. Among Asian American stayers the income loss for veterans relative to non-veterans was worse than it was for Asian American movers. Among Native Americans the veterans among stayers gained less wage and overall income relative to non-veterans than the veterans gained relative to non-veterans among movers.

Among stayers veterans earned even less in interest income relative to non-veterans than in the comparisons for movers among non-Hispanic whites, Blacks, Hispanics, and Asians. In contrast, among Native American stayers veterans had interest incomes that were much higher than non-veterans, when the reverse was true for Native American movers.

5.5 Neighborhood Comparisons for Veterans and Non-Veterans Among Movers and Stayers

The results in Table 8 show the impact of World War II service on the difference in choices about the neighborhoods where they resided in 1969 by veterans and non-veterans, based on whether they were in a new county in 1969 or lived in the same county in 1969 as they did in 1940.

Among non-Hispanic whites the differences in neighborhoods between veterans and non-veterans were similar for both movers and stayers. Among Black movers the veterans were in census tracts with earnings that were \$844 higher than the earnings in tracts where non-veterans lived. The veteran/nonveteran gap among Black stayers was much smaller at \$183. Among Black movers veterans had lower wages relative to the tract median wage than non-veterans, suggesting that they moved to higher-income neighborhoods, while Black veterans among stayers were more likely than non-veterans to live in neighborhoods where they earned more than the census tract median. Among Black movers the veterans lived in census tracts where the share Black was 15.6 percent higher than non-veterans, while the gap in share Black in the tracts where veterans and non-veterans lived was only 2 percent. Among Black movers veterans lived in counties with slightly more segregation than did non-veterans, while the reverse was true for Black non-movers.

Among Native Americans the difference in patterns between movers and stayers was roughly the opposite of the patterns for Blacks. Veterans among stayers lived in tracts with earnings substantially higher than the areas where non-veterans lived, while the gap was roughly 10 times smaller among movers. The gap between own earnings and the median for the tract among stayers was more negative for veterans than for non-veterans, while the gap was more positive for veterans than for non-veterans among movers. Among stayers, the veterans chose tracts where the share Native American was lower than the tracts chosen by non-veterans, while the veterans among movers chooses tracks with a higher share of Native Americans than the tracts chosen by non-veterans.

Among Asian American movers and also Asian American stayers, veterans relative to non-veterans lived in census tracts with lower earnings where they earned more than the median earnings in the tract; veterans chose tracts where the share Asian American was higher than the

tracts chosen by non-veterans, and veterans were in counties where segregation was higher than the counties where nonveterans lived.

Among Hispanics the comparisons of veterans and non-veterans for movers and the comparisons for stayers were roughly the same with respect to the gap between own income and the census tract median income and the share Hispanic in the neighborhood. Among Hispanic movers the veterans chose tracts with higher wages than nonveterans chose, while the veterans among stayers were in tracts with lower incomes, but neither effect was statistically significant. Among Hispanic stayers, veterans did choose counties with statistically significantly lower segregation.

6 Conclusion

We examine the effect of WWII service on several outcomes in later life using tax data from 1969 related to income, geographic mobility, and the socioeconomic characteristics of the census tract of residence. We sought to develop causal estimates with a fuzzy regression discontinuity approach that compares men who were too young to serve during World War II to slightly older men who were old enough to serve. There was substantial heterogeneity in the impact of War service on later outcomes among the different ethnic groups, including non-Hispanic whites, Blacks, Hispanics, Asian Americans, and Native Americans.

Among non-Hispanic whites World War II veterans had lower income overall and from earnings and interest in 1969 than non-veterans. The veterans were less likely to move between 1940 and 1969 across county, state, and regional boundaries. Relative to non-veterans, the census tracts where veterans lived in 1969 had lower median earnings, while the veterans' earnings were higher relative to median earnings. The share of whites and measures of segregation were roughly similar in the areas where veterans and non-veterans lived. The comparisons of veterans and non-veterans on nearly all of these dimensions was roughly the same for movers and stayers.

Black veterans had a much more positive experience relative to Black non-veterans than the comparisons for non-Hispanic white veterans and non-veterans. The earnings and gross incomes for Black veterans were higher than for Black non-veterans, although their interest

incomes were lower. Black veterans were more likely to move across county boundaries and less likely to move across regional boundaries than Black non-veterans. The Black veterans who moved tended to be the Black veterans who gained more in income than Black non-veterans. By 1969 relative to Black non-veterans, Black veterans chose census tracts where average incomes were substantially higher, their incomes were lower than median earnings, the share Black was higher, and there was more segregation. This pattern held in comparisons of Black veterans and non-veterans who moved, but less so for those who did not move. Since the non-Hispanic white service effects were commonly the opposite sign from the black service effects, the impact of the war tended to close the gap between the experiences of non-Hispanic white and black war veterans relative to the gap in experiences of non-Hispanic white and black non-veterans.

Hispanic war veterans and non-veterans had roughly the same earnings and gross incomes, although the veterans had substantially lower interest earnings. Among Hispanic movers veterans fared somewhat better than non-veterans, while the veterans fared somewhat worse than non-veterans among stayers. Most of the differences are statistically insignificant. Hispanic veterans were 5 to 10 percent less likely to move than Hispanic non-veterans. Compared with Hispanic non-veterans, Hispanic veterans lived in census tracts with slightly median incomes and their earnings were slightly higher than the median; the share Hispanic was about 5 percent higher in districts where the veterans lived, but the segregation measures were roughly the same. These experiences of veterans relative to non-veterans fit the pattern for Hispanic mover better than for Hispanic stayers.

Among Asian Americans veterans earned substantially lower wages and overall income than Asian American non-veterans, while earning somewhat more in interest. This pattern held in comparisons of veterans and non-veterans among stayers and again among movers. Veterans and non-veterans had similar migration patterns. In the neighborhoods where they resided in 1969, relative to non-veterans, the veterans were located where average earnings were lower but they individually earned more than the average earnings in the tract. The veterans were located in tracts where the share Asian-American was around 9 percent higher and the degree of segregation was slightly higher than in the tracts where non-veterans were located. These patterns held for both Asian-American movers and stayers.

Native American veterans had higher earnings and overall income than Native American non-veterans, while their interest earnings were slightly lower, but none of the coefficients were statistically significant. The same patterns held for movers although veterans among the movers earned less interest than the stayers. Among stayers, veterans and non-veterans earned about the same incomes but the veterans had much higher interest income. Native American veterans and non-veterans tended not to move. Veterans tended to live in higher income census tracts where their earnings were somewhat lower than the median and the extent of segregation was lower. Among movers the veterans tended to be in areas with more Native Americans than the non-veterans. Among stayers the veterans tended to live in areas with higher incomes but where their incomes were lower than the median income and there was a slightly lower share of Native Americans.

General, comparisons of non-veterans in 1967 show that non-Hispanic White and Asian Americans had about the same wage and salary earnings and overall earnings, although Asian Americans had higher interest and dividend earnings. Meanwhile, Hispanic, Black, and Native American non-veterans had wage earnings and overall incomes that were between 16 and 25 percent lower than for non-Hispanic whites. The interest they collected was 28 to 44 percent lower. World War II service helped Blacks and Native Americans to reduce substantially the differences with non-Hispanic whites in wage and overall earnings, while the service helped reduce the gaps for Hispanics to a lesser extent. On the other hand, World War II service was associated with wider gaps for Asian Americans in wages and overall earnings, but reduced the gaps in interest earnings.

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Tables

Table 1: Summary Statistics for Correlates for Veterans and Non-Veterans of All Races

VARIABLES	Non-Vet	WWII Vet	T Stat
Year of birth	1928	1925	863.3***
Per Capita HH Income 1940	238.8	250.4	-28.46***
Married by 1940	0.00111	0.00242	-15.28***
Enrolled in School 1940	0.929	0.876	91.05***
Years of School 1940	5.483	8.234	-820***
Employed 1940	0.039	0.0896	-101.2***
Not in Labor Force 1940	95.11	88.71	141.5***
Urban 1940	0.5349	0.553	-24.52***
Not Moved (5yrs County) 1940	0.8103	0.8377	-49.47***
US Citizen 1940	0.997	0.995	17.59***
White	0.9176	0.9396	-45.08***
Black	0.0588	0.0385	55.35***
Hispanic	0.0192	0.0172	9.13***
Asian	0.0027	0.0037	-11.63***
Native American	0.0017	0.0010	9.89***
South	0.2523	0.2272	36.23***
West	0.1066	0.1102	-7.24***
North East	0.2905	0.3657	-100***
Midwest	0.3506	0.2969	70.71***
Observations	2,673,000	457,000	

Note: This table reports the mean values of the independent and dependent variables grouped by veteran status. T-statistics for the differences in means are reported in the third column assuming unequal variances. The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBRDB-FY23-CES014-052, CBRDB-FY23-CES005-028). *** p<0.01, ** p<0.05, * p<0.1

Table 2: Summary Statistics: Outcomes for Veterans and Non-Veterans of All Races

VARIABLES	Non-Vet	WWII Vet	T Stat
Ever Move	0.6349	0.603	41.3***
Wage and Salary Income	11930	12350	-34.54***
Interest and Dividends	293.6	385.5	-16.3***
Adjusted Gross Income	13750	14520	-29.97***
Median Wage of Tract	7013	6925	24.83***
Difference Own Wage versus Median Tract Wage	-0.8837	-0.9757	10.11***
Pct: Same Race/Ethnicity residents in Tract	69.72	69.91	-7.79***
County White/Non White Dissimilarity Index	0.2343	0.225	-24.52***
Observations	2,673,000	457,000	

Note: Displays mean values of the independent and dependent variables grouped by veteran status. T-statistics are reported in the third column assuming unequal variances. The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY23-CES014-052, CBDRB-FY23-CES005-028, CBDRB-FY23-CES005-028). *** p<0.01, ** p<0.05, * p<0.1

Table 3: First Stage Results

VARIABLES	(1) Pooled	(2) White WWII	(3) Black WWII	(4) Hispanic WWII	(5) Asian WWII	(6) Native WWII
Born ≤ 1928	0.1015** (0.01002)					
White Born ≤ 1928		0.1129*** (0.01098)				
Black Born ≤ 1928			0.1500*** (0.00863)			
Hispanic Born ≤ 1928				0.2034*** (0.03286)		
Asian Born ≤ 1928					0.2934*** (0.01171)	
Native Born ≤ 1928						0.1694*** (0.00678)
Distance 1928	0.001319*** (4.5E-04)	0.0003855 (4.37E-04)	5.0e-04*** (1.48E-04)	-6E-06 (1.09E-04)	2.05E-05* (1.10E-05)	-1.49E-05 (8.9E-06)
Distance 1928 x Born ≤ 1928	-0.03647*** (0.00349)	-0.03483*** (0.003432)	-0.001035*** (2.23E-04)	-2.74E-04* (1.42E-04)	-1.01E-04* (5.94E-05)	-1.51E-05 (8.9E-06)
Constant	-0.00924 (0.00931)	-0.003675 (0.009137)	-0.006305*** (0.001459)	0.001497 (0.002239)	-0.001254* (7.20E-04)	6.9E-05 (5.7E0-05)
Observations	3125000	3125000	3125000	3125000	3125000	3125000
R squared	0.1271	0.138	0.146	0.199	0.294	0.170
First Stage F-stat	586.7	2613	165.6	446.9	242.2	132.2

Note: First stage results for Fuzzy Regression Discontinuity of WWII service by race on being born before the cutoff. All regressions control for state of residence, year of birth, race, education, household income per capita, urban/rural status, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 4: Service and Race Impact on Income

VARIABLES	(1) log Wage	(2) Any Interest	(3) log Interest	(4) log Gross Income
Pooled WWII	-0.04257** (0.01896)	-0.06851*** (0.0125)	-0.1934*** (0.06954)	-0.08546*** (0.01679)
White WWII	-0.04982*** (0.019)	-0.07246*** (0.01275)	-0.1832*** (0.06951)	-0.09331*** (0.01717)
Black WWII	0.1073** (0.04239) [0.157***]	-0.00617 (0.02946) [0.066**]	-0.8031*** (0.1195) [-0.62***]	0.06980* (0.0417) [0.163***]
Hispanic WWII	0.02761 (0.05533) [0.077]	-0.00691 (0.01995) [0.0656***]	-0.3431** (0.1404) [-0.16]	-0.01005 (0.06947) [0.0833]
Asian WWII	-0.2302*** (0.07855) [-0.1804**]	0.01275 (0.03199) [0.08522***]	0.08783 (0.2018) [0.271]	-0.1021** (0.04847) [-0.008853]
Native WWII	0.1928 (0.146) [0.2425*]	-0.02107 (0.0614) [0.05121]	-0.01936 (0.4159) [0.1638]	0.1541 (0.1238) [0.2472**]
Black	-0.2084*** (0.00803)	-0.2821*** (0.00714)	-0.4414*** (0.01831)	-0.2698*** (0.00916)
Hispanic	-0.1693*** (0.03114)	-0.1830*** (0.01354)	-0.2769*** (0.03446)	-0.2199*** (0.03205)
Asian	-0.00068 (0.02771)	0.1241** (0.05074)	0.4471*** (0.08502)	0.004273 (0.02915)
Native American	-0.2175*** (0.02606)	-0.1869*** (0.02536)	-0.3075*** (0.06457)	-0.2459*** (0.02297)
Constant	9.007*** (0.01606)	0.3906*** (0.01323)	4.362*** (0.03935)	9.040*** (0.01703)
Observations	2953000	3125000	1753000	3115000
R squared	0.04356	0.06472	0.03016	0.07905
First Stage F-stat	118.2	132.2	36.72	123.6

Notes: Fuzzy Regression Discontinuity Estimates of WWII service on log income measures. Top panel coefficients measure difference relative to same race non-WWII veterans. Term in brackets is difference in coefficient of minority veteran relative to white WWII veterans. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Service and Race Impact on Moves

VARIABLES	(1) County	(2) State	(3) District	(4) Region
Pooled WWII	-0.04897*** (0.01609)	-0.1055*** (0.01454)	-0.1153*** (0.01432)	-0.09220*** (0.01518)
White WWII	-0.05549*** (0.01616)	-0.1103*** (0.01462)	-0.1186*** (0.01455)	-0.09446*** (0.0155)
Black WWII	0.1251*** (0.03355) [0.181***]	0.009997 (0.02019) [0.120***]	-0.04199** (0.02122) [0.0766**]	-0.04578** (0.02057) [0.0487*]
Hispanic WWII	-0.05656** (0.02646) [-0.0011]	-0.1030*** (0.03395) [0.00737]	-0.1248*** (0.04036) [-0.0063]	-0.09137** (0.04084) [0.00309]
Asian WWII	0.00302 (0.02913) [0.0585**]	0.01115 (0.03388) [0.122***]	0.01662 (0.03374) [0.135***]	0.01672 (0.03411) [0.1112***]
Native WWII	-0.02155 (0.08757) [0.0338]	-0.03548 (0.09247) [0.0746]	-0.002174 (0.06689) [0.1161*]	-0.04685 (0.07759) [0.04739]
Black	0.01821 (0.0227)	0.1377*** (0.03324)	0.1533*** (0.03195)	0.1945*** (0.04129)
Hispanic	-0.06264** (0.02899)	0.01499 (0.03512)	0.02607 (0.0367)	0.02664 (0.04126)
Asian	0.008678 (0.01028)	0.0329 (0.03327)	0.03515 (0.02805)	0.03556 (0.02227)
Native American	0.006316 (0.01934)	-0.02203 (0.03996)	-0.01014 (0.03306)	0.005385 (0.03172)
Constant	0.7820*** (0.02036)	0.4356*** (0.02063)	0.3325*** (0.02048)	0.2806*** (0.02285)
Observations	3125000	3125000	3125000	3125000
R squared	0.04263	0.01863	0.01355	0.01578
First Stage F-stat	132.2	132.2	132.2	132.2

Note: Fuzzy Regression Discontinuity Estimates of WWII service on move measures. Top panel coefficients measure difference relative to same race non-WWII veterans. Term in brackets is difference in coefficient of minority veteran relative to white WWII veterans. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 6: Service and Race Impact on Local Area Characteristics

VARIABLES	(1) Tract Wage	(2) Difference Own Wage vs Tract	(3) % Same Race	(4) Dissimilarity Index
Pooled WWII	-378.0*** (68.49)	0.08451 (0.1252)	-0.007673** (0.0035)	-0.00565 (0.0041)
White WWII	-423.4*** (73.91)	0.08984 (0.1312)	-0.01381*** (0.00403)	-0.00646 (0.00409)
Black WWII	637.3 *** (121.9)	-0.1117 (0.213)	0.1146*** (0.01783)	0.01472* (0.00861)
Hispanic WWII	[1061***] 34.27 (149.2)	[-0.2016] 0.1341 (0.1291)	[0.1284***] 0.04789* (0.02905)	[0.02119**] -0.00659 (0.01198)
Asian WWII	[457.7***] -859.0*** (100.7)	[0.0443] 0.4357*** (0.1524)	[0.06170**] 0.0881** (0.02508)	[-0.00013] 0.02374** (0.01075)
Native WWII	[-435.6***] 155.4 (311.2)	[0.3459**] -0.1247 (0.2408)	[0.1026***] 0.02728 (0.02109)	[0.03020***] -0.04126* (0.0243)
Black	[577.8*] -1619*** (46.04)	[-0.2143] -0.06669*** (0.02162)	[0.04106**] -0.08015*** (0.01186)	[-0.03482] 0.09365*** (0.01114)
Hispanic	-834.6*** (287.5)	0.1039** (0.05163)	-0.4847*** (0.04556)	0.05976*** (0.00924)
Asian	-181.8*** (42.96)	0.07179*** (0.01978)	-0.5995*** (0.04064)	0.03434*** (0.00223)
Native American	-589.3*** (49.23)	0.1666*** (0.02774)	-0.6667*** (0.01266)	0.007675 (0.005867)
Constant	6678*** (56.8)	-0.4395*** (0.05513)	0.6942*** (0.002446)	0.2179*** (0.002893)
Observations	3125000	3125000	3125000	3125000
R squared	0.04241	0.00166	0.2917	0.06057
First Stage F-stat	132.2	132.2	132.2	132.2

Note: Fuzzy Regression Discontinuity Estimates of WWII service on local area of residence measures. Top panel coefficients measure difference relative to same race non-WWII veterans. Term in brackets is difference in coefficient of minority veteran relative to white WWII veterans. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 7: Service and Race Impact on Income for Movers and Stayers

VARIABLES	(1) log Wage	(2) Any Interest	(3) log Interest	(4) log Gross Income
Panel 1: WWII Veteran Movers vs. Non-veteran Movers				
White WWII	-0.04175** (0.021)	-0.06440*** (0.01486)	-0.08576 (0.08954)	-0.06649*** (0.02142)
Black WWII	0.1292** (0.05216)	0.05758 (0.03803)	-0.7366*** (0.1318)	0.1071** (0.054)
Hispanic WWII	0.0784 (0.07981)	0.01354 (0.02553)	-0.2485* (0.1451)	0.04634 (0.08774)
Asian WWII	-0.1150* (0.06651)	0.06298** (0.03182)	0.2263 (0.2392)	-0.06145 (0.06022)
Native WWII	0.2179 (0.1496)	-0.03395 (0.07781)	-0.3902 (0.471)	0.2072* (0.1196)
Observations	1869000	1969000	1098000	1963000
R squared	0.05345	0.07243	0.03418	0.09481
First Stage F-stat	72.93	61.63	34.91	60.65
Panel 2: WWII Veteran Stayers vs. Non-veteran Stayers				
White WWII	-0.03546 (0.02477)	-0.08641*** (0.02402)	-0.3487*** (0.09987)	-0.1171*** (0.02946)
Black WWII	-0.004798 (0.05055)	-0.1336*** (0.04228)	-0.9907*** (0.1921)	-0.09037* (0.05164)
Hispanic WWII	-0.009104 (0.03489)	-0.03358 (0.02624)	-0.4364** (0.173)	-0.06127 (0.05437)
Asian WWII	-0.3958*** (0.09499)	-0.07568 (0.0561)	-0.1231 (0.1677)	-0.1755*** (0.04999)
Native WWII	0.1434 (0.2515)	0.04472 (0.1384)	1.212 (0.8345)	0.009522 (0.2169)
Observations	1083000	1156000	656000	1152000
R squared	0.03674	0.05189	0.0218	0.06491
First Stage F-stat	65.56	57.7	9.42	55.68

Note: Fuzzy Regression Discontinuity Estimates of WWII service on log income measures for veteran movers only in Panel 1 and veteran non movers only in Panel 2. Top panel coefficients measure difference relative to same race non-WWII veterans. Term in brackets is difference in coefficient of minority veteran relative to white WWII veterans. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

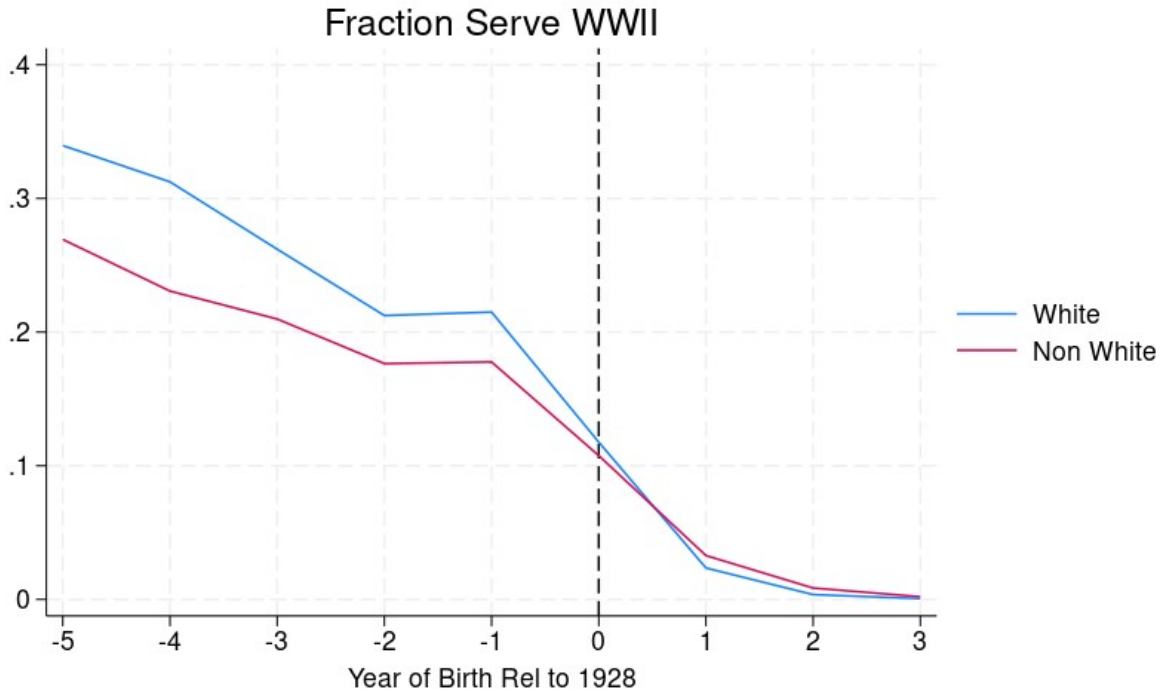
Table 8: Service and Race Impact on Local Residence for Movers versus Stayers

VARIABLES	(1) Tract Wage	(2) Difference Own Wage vs Tract	(3) Tract % Same Race	(4) County Dissimilarity Index
Panel 1: WWII Veteran Movers vs. Non-veteran Movers				
White WWII	-398.4*** (83.89)	0.1138 (0.1977)	-0.01053* (0.005483)	-0.008097* (0.004227)
Black WWII	844.4*** (145.7)	-0.1072 (0.3008)	0.1563*** (0.02332)	0.02375*** (0.008917)
Hispanic WWII	277.5 (283.4)	0.1514 (0.2074)	0.03939 (0.02738)	-0.004259 (0.01477)
Asian WWII	-878.1*** (116.3)	0.3221 (0.2069)	0.06092*** (0.02275)	0.02627* (0.01412)
Native WWII	68.93 (413.9)	0.1465 (0.3059)	0.05001*** (0.01352)	-0.03894 (0.02609)
Observations	1969000	1969000	1969000	1969000
R squared	0.05247	0.001558	0.2934	0.07174
First Stage F-stat	61.63	61.63	61.63	61.63
Panel 2: WWII Veteran Stayers vs. Non-veteran Stayers				
White WWII	-327.5*** (92.08)	0.0106 (0.06664)	-0.01730*** (0.004908)	-0.006533 (0.005604)
Black WWII	183.1 (134.5)	0.1279* (0.07392)	0.0209 (0.01727)	-0.01469 (0.011)
Hispanic WWII	-117.7 (123.5)	0.07863 (0.102)	0.0289 (0.02363)	-0.01954** (0.00913)
Asian WWII	-794.3*** (208.2)	0.5973*** (0.1578)	0.1188*** (0.04033)	0.02481** (0.01001)
Native WWII	631.4 (445.5)	-0.6511** (0.3275)	-0.03831 (0.0588)	-0.03583 (0.03632)
Observations	1156000	1156000	1156000	1156000
R squared	0.0445	0.003173	0.2924	0.1059
First Stage F-stat	371.3	371.3	371.3	371.3

Note: Fuzzy Regression Discontinuity Estimates of WWII service on local residence measures for veteran movers only in Panel 1 and veteran non movers only in Panel 2. Top panel coefficients measure difference relative to same race non-WWII veterans. Term in brackets is difference in coefficient of minority veteran relative to white WWII veterans. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Figures

Figure 1: Share of WWII Veterans by Birth Cohort among Black and Non-White Men



Note: Graph showing fraction of White Non-Hispanic and Non-White and Hispanic American men that served in WW2 by birth year cohort relative to 1928. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBRDB-FY23-CES014-052).

Appendix

Table A1: Service and Race Impact on Income for Movers versus Stayers Non Vet

VARIABLES	(1) log Wage	(2) Any Interest	(3) log Interest	(4) log Gross Income
Panel 1: Non WWII Vet Movers				
Black	-0.2179*** (0.01006)	-0.2764*** (0.006446)	-0.3801*** (0.02131)	-0.2700*** (0.01132)
Hispanic	-0.1882*** (0.02705)	-0.1761*** (0.0099)	-0.2273*** (0.02626)	-0.2264*** (0.02801)
Asian	-0.01254 (0.03174)	0.1078** (0.04935)	0.4413*** (0.1027)	-0.001596 (0.03565)
Native American	-0.2144*** (0.03242)	-0.1808*** (0.02715)	-0.2186*** (0.06323)	-0.2350*** (0.02911)
Constant	9.033*** (0.01695)	0.3984*** (0.01716)	4.407*** (0.03621)	9.077*** (0.01618)
Observations	1869000	1969000	1098000	1963000
R squared	0.05345	0.07243	0.03418	0.09481
First Stage F-stat	72.93	61.63	34.91	60.65
Panel 2: Non WWII Vet Stayers				
Black	-0.1994*** (0.01438)	-0.3030*** (0.008232)	-0.5986*** (0.03665)	-0.2792*** (0.01732)
Hispanic	-0.1299*** (0.02966)	-0.1922*** (0.02116)	-0.3716*** (0.05471)	-0.2053*** (0.034)
Asian	0.01609 (0.0276)	0.1486*** (0.05124)	0.4441*** (0.06264)	0.0117 (0.02374)
Native American	-0.2246*** (0.0369)	-0.2036*** (0.02621)	-0.5713*** (0.117)	-0.2738*** (0.03317)
Constant	8.905*** (0.01945)	0.3632*** (0.009562)	4.274*** (0.05255)	8.927*** (0.02377)
Observations	1083000	1156000	656000	1152000
R squared	0.03674	0.05189	0.0218	0.06491
First Stage F-stat	65.56	57.7	9.42	55.68

Note: Fuzzy Regression Discontinuity Estimates on log income measures for non-veteran movers only in Panel 1 and non-veteran non movers only in Panel 2. All coefficients are relative to white reference group. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A2: Service and Race Impact on Local Residence for Movers versus Stayers Non Vet

VARIABLES	(1) Tract Wage	(2) Difference Own Wage vs Tract	(3) Tract % Same Race	(4) County Dissimilarity Index
Panel 1: Non-WWII Vet Movers				
Black	-1765*** (46.64)	-0.07328*** (0.02107)	-0.08682*** (0.01391)	0.09220*** (0.01097)
Hispanic	-831.4*** (260.3)	0.1208** (0.04946)	-0.5287*** -0.03882	0.05048*** -0.003544
Asian	-70.52 (46.7)	0.1118*** (0.02594)	-0.6290*** (0.0288)	0.04494*** (0.005884)
Native American	-558.6*** (66.96)	0.1651*** (0.03265)	-0.6827*** (0.01053)	0.006514 (0.004701)
Constant	6689*** (52.61)	-0.5398*** (0.06127)	0.6958*** (0.0022)	0.2218*** (0.0026)
Observations	1969000	1969000	1969000	1969000
R squared	0.05247	0.001558	0.2934	0.07174
First Stage F-stat	61.63	61.63	61.63	61.63
Panel 2: Non-WWII Vet Stayers				
Black	-1332*** (57.82)	-0.07009* (0.04023)	-0.07200*** (0.01812)	0.07529*** (0.01522)
Hispanic	-713.0** (321.1)	0.1128 (0.0705)	-0.4199*** (0.06029)	0.06036*** (0.02237)
Asian	-337.4*** (75.54)	0.02457 (0.03633)	-0.5520*** (0.05335)	0.01660** (0.006798)
Native American	-667.8*** (88.29)	0.1565*** (0.05456)	-0.6206*** (0.02607)	0.009911 (0.0123)
Constant	6382*** (102.2)	-0.2269*** (0.05978)	0.6954*** (0.004153)	0.1939*** (0.006329)
Observations	1156000	1156000	1156000	1156000
R squared	0.0445	0.003173	0.2924	0.1059
First Stage F-stat	371.3	371.3	371.3	371.3

Note: Results from Fuzzy Regression Discontinuity on local residence measures for non-veteran movers only in Panel 1 and non-veteran non movers only in Panel 2. All coefficients are relative to white reference group. All regressions control for state of residence, year of birth, education, household income per capita, urban/rural residence, citizenship, and indicator for having moved in the past five years. Note: The data presented in this table are approved for dissemination by the U.S. Census Disclosure Review Board (CBDRB-FY24-CES010-007). Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1