RACE, ASIAN AMERICANS, AND THE WORKS PROGRESS ADMINISTRATION

By
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Abstract: This paper examines racial disparities in employment for Chinese and Japanese American citizen heads of households in the 1940s in the Works Progress Administration (WPA). Utilizing 1940 census full-count microdata and Oaxaca-Blinder decompositions, I estimate employment probabilities, revealing employment gaps for Chinese and Japanese American male heads of households relative to their White counterparts. Among these, the gap is largest for Japanese American male heads of households. The analysis reveals that while non-racial factors such as age and family size contribute to the employment probability gap, they do not account for all the variation. The results indicate that different treatment favored Chinese Americans in some cases, yet a substantial portion of the employment gap remains unexplained, suggesting that racial discrimination contributed to these disparities. These results challenge the notion that the WPA primarily privileged employment based on family size and need, underscoring the need for scholars to reconsider how New Deal Policy—the origin of the welfare state—perpetuated racial inequality, particularly for Asian Americans.

Introduction

What role did discrimination play in the employment of Asian Americans, particularly Chinese and Japanese Americans, in the Works Progress Administration (WPA)? Utilizing Oaxaca-Blinder models and 1940 census data, I analyze disparities in WPA employment, comparing these groups to their White counterparts. Established as part of the Second New Deal in 1935, the WPA aimed to mitigate the staggering 25% unemployment rate by providing jobs to millions of Americans. While prior research has found that New Deal programs generally favored Whites relative to Blacks (Fishback et al., 2007; Glenn, 2002), the treatment of Chinese and Japanese Americans within these programs, specifically the WPA, is not well understood (Daniels, 1980; Glenn, 1983). This study fills this gap in our understanding by examining the extent to which discrimination contributes to the observed employment gaps between Chinese and Japanese Americans and their White counterparts in the WPA.

WPA employment census data, displayed in Graph 1, reveals significant gaps among those eligible: 48% for Whites, 51% for Blacks, 37% for Chinese Americans, and only 23% for Japanese Americans (author calculation, IPUMS). Although the WPA officially prioritized able-bodied, unemployed heads of households, officials applied this policy unevenly, often favoring Euro-American males as beneficiaries of New Deal Programs (Fox, 2012; Katznelson, 2005; Lieberman, 1998; Quadagno, 1995).

[Insert Graph 1 here]

This paper examines the impact of discrimination on Chinese and Japanese American employment in the WPA. To flesh this out, I first investigate "non-racial" factors affecting WPA employment for Chinese and Japanese Americans compared to Whites. These alternative explanations, such as age and family size, are insufficient for explaining the observed gaps. I then describe the nature of racial discrimination in the New Deal and, specifically, the WPA. By employing Oaxaca-Blinder decompositions, I show that while "non-racial" factors contribute to some of these employment gaps, a large portion of each gap remains unexplained for both Chinese and Japanese Americans relative to Whites, indicating that discrimination was an important factor in WPA employment. Furthermore, the differential treatment of Chinese and Japanese Americans reflects both favorable and unfavorable biases, underscoring the complexity of racial discrimination in New Deal programs.

Alternative Explanations for Asian Americans' WPA Employment Gap

This section explores potential "non-racial" factors for explaining the employment gaps for these groups. These factors include criteria that the WPA officially prioritized for employment (i.e., family size, family neediness in household wages) and unofficially (e.g., regional concentration, age structure) as documented by the social policy literature on the WPA. Amenta (1998, p. 222-224) provides an important insight into how state and local officials had significant sway over WPA projects, negatively affecting Black Americans' employment opportunities. This body of work points to a larger pattern where employment disparities can develop not just from overt racist social policy but from the discretionary power of local administrators, which could affect other minority groups (i.e., Chinese and Japanese Americans) as well. While racial dynamics shaped these factors, they cannot be measured as pure "racial" bias, which is why I distinguish between "racial" and "non-racial" factors. Building on this body of work, I explore to what extent "non-racial" factors can account for the employment gaps between Chinese and Japanese Americans relative to Whites in the WPA.

Family Size

The WPA gave preference to workers with large families over single persons or others without dependents (Howard, 1973, pp. 347-349). Table 1 shows that Chinese and Japanese Americans had smaller family sizes on average (2.9 and 3.01, respectively) relative to Whites, likely disadvantaging their employment probability in the WPA. The average family sizes of Whites (3.97) and Black Americans (3.73) clearly show that these groups had a demographic advantage under the WPA's employment criteria. Whites' and Blacks' larger family sizes likely confer an advantage and could help explain their relative advantage in WPA employment.

Household Income

Need was one of the factors the WPA focused on for employment. This factor was measured through a formal measurement called "security wages," which approximated but did not exceed what workers would receive in a private-sector job every month. Household wages summed up for every member of the household, including the head of household, can help us approximate the WPA's assessment of need.

Table 1 shows that household wages are highest for Japanese Americans, at 830.65 dollars, followed by Whites, at 738.04 dollars, and finally, Chinese Americans, at 690.82 dollars. Relative to Whites, Chinese Americans are disadvantaged in household wages, meaning we would expect them to be more likely to be employed in the WPA due to their low household wages. We would expect Japanese Americans to be less likely to be employed in the WPA due to their high wages alone.

Regional and State Concentration

The WPA was concerned with the difficulties of bringing together workers and employment; Thus, the availability of workers and the likelihood of providing jobs near a worker's residence mattered for the likelihood of employment in the WPA (Howard, 1973). By extension, the regional concentration of jobs and the availability of workers affected the ability of Chinese and Japanese Americans to find employment in the WPA relative to Whites.

Table 3 provides an overview of the regional distribution of employment and WPA jobs across the United States. I calculate unemployment to employment in the WPA ratios, measuring how dense unemployment is compared to WPA jobs. A ratio greater than one here indicates more unemployed individuals than WPA jobs. A ratio of less than 1 indicates that there are enough WPA jobs to cover unemployment. Table 3 shows significant variation across regions, with the Northeast and West having higher unemployment ratios. Conversely, this means more job competition in these regions than in the Midwest and South. see that there is quite a bit of relief in the Northeast and West relative to the Midwest and South.

Table 4 breaks this down further by breaking down the unemployment ratios to WPA jobs by race in each region. It shows that Chinese and Japanese Americans faced higher ratios of unemployment in the West and Northeast compared to Whites. Looking at Table 4A, we can see that the places with the highest ratios of unemployed Chinese Americans relative to WPA jobs coincide with where they were most concentrated. Pairing the ratios from Tables 4 and 4A, the story is similar for

Japanese Americans. This indicates that it was harder for these groups to obtain WPA employment in these regions.

Thus, there is little support for the argument that Chinese Americans were less represented because they were more likely to live in places with fewer WPA jobs than Whites, given that they lived in places that followed the general unemployment trend relative to WPA jobs for Whites. However, the noticeably higher ratios for Chinese and Japanese Americans suggest that despite living in areas with a comparable supply and demand of WPA jobs, these groups faced additional barriers (or discrimination) that hindered their access to WPA jobs more than their White counterparts.

Age Structure of the Population

The federal government never established a maximum age limit for WPA employment. However, it did establish other criteria that denied employment to those in poor physical condition, including those with disabilities or chronic illness (Howard, 1973, pp. 4, 16). These criteria meant that workers over sixty-five were sometimes denied WPA employment. Despite this, because the WPA privileged the employment of heads of households and larger families, this often worked against younger workers (Howard, 1973).

Thus, a fourth possible explanation for the employment gap in the WPA is differences in age among Chinese and Japanese Americans relative to Whites. Table 1 shows that Chinese Americans were slightly older than Whites on average, meaning we would expect them to have an advantage in WPA employment based on age alone. Japanese Americans were disadvantaged relative to their White counterparts because they were younger, on average.

Furthermore, we know from the documentation on federal policy in the WPA that when the WPA reduced the number of workers on its roll, it was only possible to do so because younger workers left the WPA to take jobs in the private labor market; younger workers were perceived to be more likely than older workers to be able to find work, resulting in favorable treatment of older workers (Howard, 1973, p. 277).

Social Capital

Historical accounts of Chinese and Japanese American life in the early 20th century underscore the crucial role of community organizations and social ties—referred to as social capital—in shaping these groups' economic prospects, community life, and access to information. The work of Light (1983), Wong (1974), and Kitano (1969) highlights how community organizations facilitated the survival and success of Chinese and Japanese Americans, transformed San Francisco's Chinatown from a vice district into a tourist town, and bolstered the social mobility of Asian Americans overall. Given the significant role of social capital, it is reasonable to expect that the geographic concentration of these populations would positively impact the likelihood of being employed in the WPA by providing better access to job information and assistance in the application process.

These dense social networks and ties, in other words, social capital, within Chinese American and Japanese American communities likely increased the likelihood of employment for Chinese Americans in the WPA by providing information about jobs and aiding in the application process. This was especially true in geographic regions with a high concentration of these populations, where these dense social networks and communities were well-established (Chan, 1991b, pp. 148-166).

According to Petersen (1972) and Bonacich (1975), racial solidarity—another form of social capital—played a crucial role in the economic success of Japanese Americans, including in their accumulation of capital, formation of credit associations, and passing of information on jobs (Bonacich, 1980, pp. 48-56). Brooks (2009) documents that highly educated Chinese Americans attempted to help other Chinese Americans in San Francisco's Chinatown gain access to WPA employment, indicating that similar forms of social capital facilitated information sharing on employment opportunities within the Chinese American community.

Reliance on strong social networks by Chinese and Japanese Americans was driven by racial discrimination and economic survival. White Americans, by contrast, were not affected by the same level of discrimination, even if they were from ethnic or racial groups that were historically discriminated against. Fox (2012) documents that whites of European descent, even if labeled "foreign," were seen as capable of assimilating and deserving of New Deal benefits, suggesting less of a need for outside social ties and racial solidarity with co-ethnics to navigate the WPA.

Racial Exclusion in the New Deal and the WPA

Racial gradations in New Deal benefits are nothing new. Scholars have consistently documented that New Deal programs, such as the Federal Emergency Relief Administration (FERA) and the Public Works Administration (PWA), substantially aided Black Americans but that such aid simultaneously reinforced existing racial hierarchies (Blackmon, 2008; Kirby, 1984; Wolters, 1975; Zinn, 1966a). These programs were shaped by segregationist attitudes of a congressionally powerful Southern planter class (Katznelson et al., 1993; Tomaskovic-Devey & Roscigno, 1996), leading to uneven distribution of benefits along racial lines as states had discretionary power. Consequently, Black beneficiaries often faced more stringent criteria for benefits and received fewer benefits (Katznelson, 2005; Quadagno, 1994).

In 1939, Blacks comprised 14% of WPA employees, a statistic reflective of the population's economic needs and labor market discrimination (Amenta, 1998; Wolters, 1970). Local administrators often manipulated job placements for Black beneficiaries, assigning them to less desirable, lower-paying jobs. Furthermore, pervasive segregationist policies further limited the ability of Blacks to benefit from WPA projects through separate and unequal treatment in job assignments, wages, and working conditions (Katznelson, 2005; Smith, 1989).

Although some scholarship has started to address the participation of Asian Americans in New Deal programs, our knowledge remains strikingly limited. Fox (2021) documents that Asian Americans faced state-imposed alienage restrictions in accessing programs such as Old Age Assistance (OAA), particularly in states with significant Asian populations (e.g., California). Housing and employment programs, such as the Public Works Administration (PWA) and the Works Progress Administration (WPA), often marginalized, outright excluded, or relegated Asian Americans to unskilled labor positions (Brooks, 2009). This exclusion was part of a broader pattern of popular racial attitudes and legislative acts like the Chinese Exclusion Act of 1882 and the Immigration Act of 1924.

Racial discrimination in the late 19th and early 20th centuries significantly shaped Chinese and Japanese Americans' economic opportunities and social integration. Discriminatory laws such as the Chinese Exclusion Act of 1882, the Scott Act of 1888 (which barred Chinese laborers who left the U.S. from re-entry), and the Alien Land Laws of 1913 and 1920 (targeting Japanese individuals in agriculture[1]) (Daniels, 1992, p. 150-151; Brooks, 2009, p. 46), reflecting broad anti-Chinese and anti-Japanese sentiments, which cast these groups as perpetually foreign (Lee 2003, pp. 43-45; Ngai, 2005).

Monolithic Treatment and Exclusion

Given the pervasive discrimination faced by Chinese and Japanese Americans and joint treatment as a monolithic group, it is reasonable to expect that they would experience similar exclusion and discriminatory practices in WPA employment. Discrimination against these groups extended beyond immigration laws intended to exclude them from migrating to the U.S., affecting every aspect of their lives, from marriage to property ownership (Chan, 1991a; Lee, 2003; Brooks, 2009). Scholars debate whether this discrimination was monolithic or varied, i.e., arguing there is no one Asian American experience (Daniels, 1992; Brooks, 2009).

During the Great Depression, Euro-Americans blamed all foreigners, including Chinese and Japanese Americans, for their economic woes, especially those who "refused" to naturalize (Fox, 2012, pp. 214-215). This blame was misplaced as these groups were legally barred from naturalization, unlike their European counterparts. Therefore, when Congress fully barred non-citizens from participating in the WPA by 1939, it effectively excluded large swaths of the Chinese and Japanese populations who had no legal recourse once alienage restrictions appeared. Both groups faced institutionalized hiring discrimination and were often jointly seen as "objectionable to Americans" (Lee, 2003, p. 156).

The early 1930s to late 1940s saw increased racial discrimination and xenophobia against Japanese Americans, heightened by geopolitical concerns between the United States and Japan. This "Yellow peril" jingoism reflected fears of a Japanese "foreign invasion" (Kurashige, 2002, p. 74). Despite this racist treatment, Chinese and Japanese Americans were able to carve out entrepreneurial niches, turning these niches into opportunities amidst labor shortages in the early 20th century and resisting social discrimination (Light, 1974).

Furthermore, landmark judicial decisions like the US Supreme Court's 1922 Ozawa decision reinforced racial discrimination against Japanese immigrants and reflected broader anti-Japanese sentiments that affected Japanese Americans as well (Kurashige, 2008, p. 52). The decision ruled that the Japanese were not "white" and ineligible for naturalization. It built on the Naturalization Act of 1790, which limited naturalization eligibility to "free white persons." This decision underscored the status of Chinese and Japanese immigrants as "alien citizens" who were seen as perpetual foreigners (Ngai, 2004, p. 8).

The Ozawa decision particularly sidelined Japanese farmers, reducing their land ownership and pushing some out of agriculture entirely (Brooks, 2009, pp. 46-47). Such exclusion likely shaped the WPA participation of Chinese and Japanese Americans, as their marginalized economic status likely

[1] These laws prohibiting land ownership among the Japanese and made it illegal to sell agricultural property to aliens or their children.

made them seek employment through New Deal programs. This pattern of legal exclusion underscores the discrimination that constrained Asian Americans' economic opportunities and reinforced their social marginalization.

The Differential Treatment of Chinese and Japanese Americans

While some scholars have argued that Chinese and Japanese Americans faced similar discrimination, there are also reasons to believe that their experiences differed from one another (relative to Whites) in New Deal Programs. The differential treatment of Chinese and Japanese Americans extended beyond legislative acts to daily discrimination by local and federal administrators (Lee, 2003).

For example, in cities like Los Angeles, immigration and housing officials often excluded Asian Americans from New Deal housing programs, but this exclusion materialized differently for Chinese and Japanese Americans. In San Francisco, city officials neglected Chinatown's housing crisis, reflecting a belief that Chinese Americans could not contribute to the broader community (Brooks, 2009). Conversely, Japanese Americans often faced more direct forms of exclusion due to rising anti-Japanese sentiments heightened by the geopolitical tensions of the Sino-Japanese War (Kurashige, 2008).

Furthermore, the WPA discriminated against Chinese Americans, placing the majority of applicants in non-skill positions; it also provided unanticipated opportunities for a handful of college-educated Chinese Americans, resulting in a complicated relationship with the WPA ("The WPA in Chinatown," 1936). Despite racist discrimination in the WPA, some Chinese Americans started to have "new expectations of the state" (Cohen, 1990). When the WPA was introduced, the Chinese American citizens saw the potential positive role the American government could play in the community (Brooks, 2009), likely increasing their engagement with the WPA.

The shadow of international politics of the period further complicated the participation of Chinese and Japanese Americans in the WPA. The period leading up to WWII marked a critical moment; China was seen as a declining national power while simultaneously growing respect for Japan was emerging (Kitano & Nakaoka, 2000). However, these attitudes started to shift due to the Sino-Japanese War. US Gallup data from this period mirrors this shift; in 1937—the start of the Sino-Japanese War— only 47 percent of respondents favored China in the war, and 51 percent reported no preference, while in 1939, 74 percent of respondents supported China, and 24 percent expressed no preference (Gallup & Robinson, 1938; Gallup & Robinson, 1939). Japanese Americans started to face heightened suspicion and hostility. At the same time, Chinese Americans found business opportunities due to this attitudinal shift in cities like San Francisco in business competition against Japanese Americans.

Despite that New Deals administrators "placed them [Chinese and Japanese Americans] largely outside the emergency welfare state" (Brooks, 2009, p. 70), sympathy for war-torn China resulted in Chinese Americans accessing these programs in Los Angeles and San Francisco. These differences between Chinese and Japanese Americans reveal the complex interplay of racialized labor, social policy, and international politics that characterized their participation in the WPA. The era's international politics also shaped White Americans' perception of these groups, sometimes resulting in the favorable treatment of Chinese Americans relative to Japanese Americans broadly. While we do not directly test Chinese Americans' WPA employment relative to Japanese Americans, we

estimate their likelihood of participation in the WPA relative to Whites, underscoring differences in treatment.

Against this backdrop, the Works Progress Administration (WPA) emerged as the most significant employment initiative, evidenced by its employment of 3.3 million at its peak (Patterson, 1986, p. 231) at rates and wages that approximated but did not exceed private sector wages (Rose, 1999). The WPA "absorbed the greatest amount of both public spending and public attention" (Amenta, 1998: 81,83, 144), targeting able-bodied individuals, often male heads of households, as beneficiaries. The WPA prioritized larger families and neediness, measured by family wages (Howard, 1973). How these criteria applied to Chinese and Japanese American male heads of household citizens' WPA employment is not well understood despite these two groups' growing demographic visibility during the 1940s.

Given this historical context, the analysis tests the following expectations:

1) Both Chinese and Japanese Americans faced significant discrimination in WPA employment compared to Whites.
2) The nature and extent of discrimination varied between Chinese and Japanese Americans when compared to Whites. This expectation considers that geopolitical tensions may have led to more favorable treatment for Chinese Americans and heightened suspicion towards Japanese Americans.

Methodology

I utilize the Oaxaca-Blinder decomposition to dissect the factors contributing to the employment gaps between Chinese and Japanese Americans relative to their White counterparts, a method widely used to study racial gaps in wages and earnings (e.g., Sakamoto, Wu, and Tzeng 2000; Sandefur & Sakamoto, 1988; Wellington, 1994; Zipp, 1994). This statistical method allows us to decompose the difference of an average outcome into two components: "endowments," which quantify baseline differences in observable characteristics such as family size, age, and household wages, and "coefficients," which capture differences in how these characteristics affect the outcome, often referred to as the "unexplained" component and often interpreted as evidence of discrimination in the economics literature.

For comparing two groups, Group A (Whites) and Group B (Chinese or Japanese Americans), it makes sense to estimate equations like 1 and 2.

$$(1)\ Y_i^A = \beta_0^A + \sum_{j=1}^{n} \beta_j^A X_{ij}^A + \epsilon_i^A$$

$$(2)\ Y_i^B = \beta_0^B + \sum_{j=1}^{n} \beta_j^B X_{ij}^B + \epsilon_i^B$$

Here, $\mathrm{Y_i^A}$ and $\mathrm{Y_i^B}$are the probabilities of employment for individuals of Group A and Group B. Given equations (1) and (2), it is straightforward to compute the portion of the WPA employment differential explained by regression: $\sum_j \beta_j^A \overline{X_j^H} - \sum_j \beta_j^L \overline{X_j^L}$ and the amount explained by the shift coefficient, $\beta_0^A - \beta_0^B$.

I employ a linear probability model to estimate WPA employment probabilities, as it provides a clear interpretation of how the independent variables affect the outcome (Gomila, 2020).[2] This model estimates coefficients (β) as the change in the probability that Yi =1, holding constant the other k -1 regressors, using OLS with robust standard errors.

To address heteroskedasticity, common in models with binary dependent outcomes, I use bootstrapped standard errors based on 50 sampling replicates. This procedure involves resampling with replacement, calculating decomposition estimates, and estimating the bootstrapped error as the standard deviation of these estimates, providing a reliable measure of variability.

After estimating these probabilities, we decompose the raw difference in the probability of WPA employment between the two groups (ΔY_{Raw}) into endowments and coefficients. The endowments component reflects group differences in characteristics—keeping the beta coefficients the same for both groups but using their respective characteristics. The coefficients component captures the part of the employment probability gap due to differences in the β coefficients, reflecting differential returns to characteristics between the groups under comparison.

$$\Delta \mathrm{Y}_{\text{Raw}} = \mathrm{Y}_{\text{Endowments}} - \mathrm{Y}_{\text{Coefficients}}$$

Using the Oaxaca-Blinder decomposition, the endowment component is rewritten as:

$$Y_{\text{Endowments}} = \sum_{j=1}^{5} \beta_j \left(\overline{X}_j^{w} - \overline{X}_j^{c} \right)$$

Each term of the equation represents a difference between Whites and Chinese Americans in the average value of an endowment (independent variable). This process is repeated when comparing Whites and Japanese Americans. The β coefficients estimate the impact of each independent variable on the outcome. The endowments component quantifies the part of the difference in mean probabilities due to group differences in levels of the independent variables, assuming the same β coefficients for both groups but using their respective characteristics.

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[2] I opt for linear probability models instead of other non-linear strategies as my primary concern is with explanation rather than prediction. Additionally, analytical proof has been provided that regressions of binary outcomes on binary treatment do not produce out-of-bound predictions and provide an unbiased estimate of causal effects (Angrist & Pitschke, 2009). Recent advances in statistics and methods have shown that OLS is robust when using a binary outcome (Angrist & Pischke, 2009; Freedman, 2008; Hellevik, 2009; Wooldridge, 2002). While logistic regression is commonly suggested for binary outcomes, OLS offers direct probability changes associated with the explanatory variables. Without additional steps to convert logistic regression results into probabilities and standardization measures, researchers can only rely on statistical significance and not effect sizes (Hellevik, 2009). Moreover, given the focus of the analysis on understanding the impact of these characteristics on employment probabilities, the linear probability model facilitates the interpretation of the results, aligning with the previously mentioned literature that supports this usage. The Oaxaca-Blinder decomposition method has been shown to provide a consistent estimator of the population average treatment effect on the treated, particularly in the economics literature (Slycynski, 2012).

Here, $\overline{X}_{jw}$ and $\overline{X}_{jc}$ represent the means of the explanatory variables for White and Chinese Americans. Each β_j corresponds to the coefficient for a specific explanatory variable:

$\overline{X}_1$: Age
$\overline{X}_2$: Household Wages
$\overline{X}_3$: Family Size
$\overline{X}_4$: National to State Relief Ratio
$\overline{X}_5$: Proportion of Whites to Non-Whites

A positive value in the endowment component indicates that Whites have a higher average for that variable (e.g., family size) than Chinese Americans. $Y_{Endowments}$ quantifies the estimated difference in endowments between the two groups, weighted by the variable's importance in influencing the overall employment probability gap in the WPA.

The coefficients component is calculated by taking the difference in the β coefficients between the two groups for each explanatory (independent) variable.

$$Y_{Coefficients} = \sum_{j=1}^{5} \overline{X}_{jc}(\beta_{jw} - \beta_{jc})$$

The $Y_{Coefficients}$ represents the portion of the difference in the probability of WPA employment between these groups is due to how these characteristics are valued (or treated). Each product term, such as $\overline{X}_{2c}(\beta_{2w} - \beta_{2c})$, represents the portion of the employment probability gap that is due to differences in how a specific variable (i.e., household wages) affects WPA employment for Whites compared to Chinese. Here, $\overline{X}_{jc}$ represents the average value of the explanatory variables for Chinese Americans, and β_{jw} and β_{jc} represent the coefficients for Whites and Chinese Americans, respectively. This reflects how much of the employment gap can be attributed to the differential impact of a specific variable on employment probabilities between the two groups.

To reiterate, the Oaxaca-Blinder model compares a mean outcome between two groups and uses observable factors to estimate how these characteristics explain the mean employment probability gap in the WPA. The model decomposes the overall gap into two components: explained (by observable characteristics) and unexplained (the residual or intercept). The explained portion accounts for variables that were the official criteria for WPA employment (i.e., family size, neediness) as well as factors recognized by the social policy literature (e.g., age) as affecting the likelihood of employment; any leftover difference likely represents discrimination (or other unobserved factors).

Data: In this study, I use 1940 census full-count microdata obtained from IPUMS. This data set covers the entirety of the United States population recorded in 1940 and includes variables such as age, race, citizenship status, household composition, and other key demographic measures. The dataset contains individual-level and household-level information pertinent to the analysis (i.e., household wages).

Furthermore, my analysis includes only citizens belonging to White, Chinese, and Japanese demographic groups, excluding those reported as living in group quarters. This exclusion is because individuals in group quarters are not considered part of a household and don't meet the WPA's requirements for "family" employment. Post-1939 WPA policies that required citizenship for participation. Existing research on the WPA demonstrates that this requirement was uneven; White non-citizens sometimes received favorable treatment compared to other non-White non-citizens and were allowed to participate through their citizen children (Fox, 2012). However, the analysis in this study adheres to WPA's official policy, which prioritizes providing jobs to (assumed) male heads of households to support their families. These restrictions are aligned with WPA policy, even if in practice this did not apply universally.

To minimize skewness and ensure representativeness, I limit the dataset to only individuals reporting family sizes and household wages at or below the 99th percentile. I further limit the population to citizen male heads of households aged between 18 and 64, encompassing non-Hispanic Chinese, Japanese, and White working-age individuals. To make a clear comparison, only heads of households eligible for WPA employment, excluding those in the workforce and other employment categories, are considered. These restrictions resulted in a total of 2,259,733 observations.[3]

Dependent Variables:

WPA Employment Status: **The items used in the census to help us develop our dependent measures are as follows: "22. If not, was he at work on, or assigned to, public EMERGENCY WORK (WPA, NYA, CCC, etc.) during week of March 24-30 (Yes or No). 23. Was this person SEEKING WORK? (Yes or no)."** This study categorizes employment status into two distinct groups: individuals employed in the Works Progress Administration (WPA), Civilian Conservation Corps (CCC), or the National Youth Administration (NYA) or otherwise unspecific local work and relief programs are assigned a value of 1, while those who are unemployed and actively seeking work are assigned a value of 0. Those who are employed in non-WPA jobs are excluded from the study. This categorization aligns with how the census measures employment in these programs, distinguishing between WPA employment and unemployment. Since the CCC and the NYA employed men mainly between the ages of 16 and 25, I proceeded with the analysis, understanding that the WPA generally disadvantaged younger workers and that it is possible that those in the age categories between 16 and 25 could alter the results of my analysis. However, I do not find evidence that this is the case since I reran the analysis by excluding those who are below the age of 25, effectively removing anyone employed in the CCC or NYA, and finding the same results for the pair-wise comparisons between Whites and Chinese and Whites and Japanese.

Independent Variables

Race: The race variable is categorical: 0 = non-Hispanic White, 1 = non-Hispanic Chinese American. I reuse this coding for the second model that estimates employment in the WPA for Japanese Americans, with 0 corresponding to non-Hispanic White and 1 = non-Hispanic Japanese

[3] The full census has 23,919,342 Whites, 19,045 Chinese, and 22,773 Japanese. Filtering by whether or not someone was head of household, male, 18 or older, not living in group quarters, and either White, Chinese, or Japanese resulted in 24,367,678 cases. Filtering for citizens resulted in a total of 23,056,382 cases. Filtering out members of households that did not report having any earners, did not report having a head of household, who reported being a citizen, and who were either White, Chinese, or Japanese further restricted this to 2,259,733 cases.

American. This categorization is based on enumerators' classification of the individual informant, i.e., the person who responded to the census. Although the census did not ask about Hispanic origin until 1970, it does infer Hispanic origin based on where individuals, their parents, grandparents, or other relatives were born. IPUMS establishes Hispanic origin in the pre-1980 samples according to rules captured in the HISPRULE variable, based on the methods described in Gratton & Gutmann (2000). This same set of rules to infer who is non-Hispanic in the population.

Family Size: Family size counts the number of family members residing in each household, including the head of household. Family size is a continuous variable, capped at the 99th percentile. This cap is applied because larger families beyond this size represent a small portion of the overall distribution and are considered outliers. At the 99th percentile, families in the dataset report having a family size of 13.

Household Income: This variable is constructed by aggregating family wages and salary income for the primary family (i.e., the household head and the person related to the head). Only the income of persons present in the household during enumeration is included in this variable. I group each household by its serial number in the dataset, and the total wages contributed by individuals classified as head of the household, spouses, biological or adopted children, and other contributing relatives are summed to create a family-level variable. This variable reflects the economic neediness of families. Households with wages exceeding $5,000 were considered unrepresentative of the population. Following census coding procedures, observations exceeding the 99th percentile of household wages for each racial group (Whites, Chinese, Japanese, Blacks) were filtered out. This filtering resulted in the following caps at the 99th percentile: $738.04 for White households, $690.83 for Chinese households, $830.64 for Japanese households, and $509.60 for Black households.

National to State Relief Ratio: To get more granular about the effect of the number of unemployed individuals relative to the availability of WPA jobs on the employment gaps observed, I construct a variable that represents the disparity between each state relief ratio and the national relief ratio. The National WPA ratio, calculated as 0.05, is derived by dividing the total number of individuals employed by the WPA by the total number of unemployed individuals and the number of people in the WPA. The ratio calculation is as follows:

$$\text{National to State Relief Ratio:}$$

$$= \left(\frac{\text{Number of People in WPA Jobs}_{\text{state}}}{\text{Number of People Unemployed}_{\text{state}} + \text{Number of People in WPA Jobs}_{\text{state}}}\right)$$

$$- \left(\frac{\text{Number of People in WPA Jobs}_{\text{national}}}{\text{Number of People Unemployed}_{\text{national}} + \text{Number of People in WPA Jobs}_{\text{national}}}\right)$$

This variable helps account for the variation in WPA employment rates among states and quantifies the differences in their relief efforts. It is important to acknowledge that racial animosity and discrimination likely influenced employment ratios among states. Indeed, several New Deal policy scholars have argued that race influenced the budgetary spending of the New Deal (Katznelson, 2005; Lieberman, 2005; Skocpol, 1995; Weiss, 1983). As Howard (1973) notes, states decide how much funding to allocate and how much WPA relief to provide based on regional economic conditions, state-level policies, and the supply and demand of particular jobs. By focusing on the

broader economic context, we can get a sense of the overall context in which WPA jobs were allocated.

Age: Age is measured continuously. Treating age linearly here allows for a straightforward interpretation of its effect on employment probability. Including age as a control variable allows us to assess whether age explains the employment gap in WPA participation. I restricted the age of household heads between 18 and 64. These are prime working ages established by the social policy literature as corresponding to those actively participating in the labor force and most likely to be affected by work relief programs.

Non-white to White Proportion: To capture the effect of social capital on WPA employment, I include a measure that measures, at the county level, the proportion of non-whites relative to whites for each Oaxaca-Blinder decomposition. This measure allows us to assess the effect that the presence of whites relative to non-whites has on employment in the WPA. For Whites, I calculate the proportion of Whites in the total population. The idea here is to capture whether or not having a larger presence of a minority group matters for employment in the WPA. In some sense—this gets at the idea of social capital for Asian Americans as a possible explanation for the employment gap in the WPA by race. This is because the presence of a larger minority group could facilitate community networks and job information—in other words, social capital—for WPA employment. This measure serves as a proxy for the available social capital and allows us to test if differences in social capital can explain some of the employment probability gaps.

Thus, this measure looks like this for whites and non-whites, respectively:

$$P_{Non-White} = \frac{n_{Non-White}}{N_{White}}$$

$$P_{White} = \frac{n_{White+\epsilon}}{N_{White} + n_{Black} + n_{Chinese} + n_{Japanese}}$$

Where n_i represents the count of individuals for race i in a given county, and N_{White} represents the count of White individuals in the county.

Results

Descriptive Results

Table 1. provides an overview of the mean differences in key explanatory variables among four demographic groups: Whites, Chinese, and Japanese Americans. These variables reveal demographic and economic differences within this population discussed in the literature review. White and Chinese Americans exhibit relatively similar mean ages (around 41 and 43 years). In comparison, Japanese Americans are significantly younger on average at 34.18 years of age (compared to 43.24 for Chinese Americans). White Americans have the largest family size (3.97), followed by Chinese Americans (3.02) and Japanese Americans (2.89). White Americans comprise the largest population—88% of the population, Chinese Americans comprise .005%, and Japanese Americans comprise 0.006%.

In Table 1, Japanese and Chinese Americans have the highest average family wages per person, with similar values ($380.19 and $379.47, respectively). This is followed by White Americans ($236.51). White Americans have the highest relative National to State Relief Ratio (0.97), followed by Chinese Americans (0.81) and Japanese Americans (0.25). This measure shows that Japanese Americans were concentrated mainly in counties with fewer average WPA jobs. If we look at Chinese Americans for this measure, we can see that they are next in line for living in counties with fewer WPA jobs on average.

Oaxaca-Blinder Results

Using Oaxaca-Blinder decompositions, this study analyzed the disparities in employment in the WPA between Whites and two groups: Chinese Americans and Japanese Americans. The analysis aimed to discern how much of the employment gap in WPA participation could be explained by differences in endowments versus coefficients. In other words—to what extent is the employment gap explained by differences in observable characteristics versus differences in how these groups were treated? I present the key findings for each pairwise comparison below.

White vs. Chinese Americans

Raw probabilities

In Table 5, the linear probabilities show that the employment gap in the WPA between Chinese Americans and their White counterparts is 11%. In Table 6**,** the Oaxaca-Blinder decomposition breaks down this gap into endowment and coefficient contributions.

Endowment Contribution

In Table 6**,** approximately 43% (4.7 percentage points) of the employment probability gap is attributable to endowment differences. This is calculated by dividing the total endowment contribution (E = 0.047) by the employment gap (R = 0.110) in the Total row. Family Size, WPA Difference, and Non-White to White Proportion contribute significantly to the employment probability gap.

First, it is clear that Chinese Americans had smaller families on average than Whites (Table 1). Returning to Table 6, if Chinese Americans had the same family size characteristics as Whites, the employment gap would decrease by 43.40% (4.7 percentage points). Chinese Americans were more likely to live in states with fewer WPA jobs as indicated by their National to State Relief Ratio estimate (0.81). If Chinese Americans lived in states where the size of the WPA was relatively larger compared to the unemployed population, the employment gap would decrease by 32.59% (or 3.6 percentage points).

With respect to the Non-White to White variable, Chinese Americans lived in fewer Chinese relative to Whites. This is evident in Table 2, where Whites lived in counties where the average proportion of Whites to Non-whites was high. The relationship between the proportion of Whites to Chinese Americans and employment in the WPA is much weaker for Whites than for Chinese Americans (Appendix A, Figure A). If Chinese Americans lived in areas with more Chinese relative to Whites, the gap would increase by 31% (3.4 percentage points).

Coefficient Contribution

The coefficients part of the decomposition in Table 6 examines the counterfactual: "What would happen to the employment probability gap if Chinese Americans were treated the same as Whites with respect to their characteristics?" Using the beta coefficients from Appendix A, we analyze how the relationship between previously outlined independent variables and employment in the WPA would change.

If Chinese Americans were treated the same as Whites with respect to age, the gap would increase by 137% (15 percentage points). Whites have a small but negative relationship between age and employment in the WPA. In contrast, Chinese Americans have a positive relationship. This indicates that contrary to Whites, older age is associated with higher WPA participation for Chinese Americans. If Chinese Americans had a negative relationship, like Whites, their average participation would be lower, increasing the employment probability gap.

Household wages and family size also contribute to the employment probability gap. The relationship between household wages and WPA employment is negative for both groups, meaning higher income is negatively associated with employment. However, this relationship is more negative for Whites, so if Chinese Americans were treated the same, the gap would be larger. Similarly, if family size had a weaker relationship with WPA employment for Chinese Americans, the gap would grow, indicating differential treatment.

The relationship between National to State Relief Ratio and employment in the WPA is similar for both groups. If Chinese Americans had a similar relationship to Whites, the gap would decrease by -9.18% (-.1 percentage points). For the Non-White to White proportion variable, the effect on WPA employment is quite large for Chinese Americans. If the relationship were the same as for Whites, the gap would decrease by 28.99 % (3.2 percentage points).

These results beg the question: Where and how does discrimination happen? A lot of what is happening for the observed employment gap between Chinese and white Americans can be attributed to differences in treatment. This differential treatment seems beneficial as Chinese Americans' participation would be much lower. However, a large portion of the gap is left unexplained. The differences in coefficients do not explain the employment gap, and one-third of that gap can be explained by favoritism for Chinese Americans relative to Whites. However, about 34% of the employment gap remains unexplained, which can be observed in the shift coefficient row (Table 6).

Overall, the endowments tell us that the gap would be significantly reduced if Chinese Americans had the same characteristics as Whites. Interestingly, the coefficients tell us that the differential treatment of the characteristics between the two groups contributes to the employment gap, albeit in an unexpected way: Chinese Americans are treated favorably relative to Whites. The Oaxaca-Blinder decomposition intercept tells us that an unexplained portion of the employment probability gap favors Whites. This unexplained portion suggests that even after accounting for the official criteria for WPA employment and observable characteristics (endowments) and how those are valued (coefficients), there remains a disadvantage for Chinese Americans that the model does not capture.

White vs. Japanese Americans

Raw Probabilities

In Table 5, the linear probabilities show that the employment probability gap in the WPA between Japanese Americans and their White counterparts was 25%. Table 7 breaks down this gap using the Oaxaca-Blinder decomposition.

Endowment Contribution

In Table 7, approximately 140% (35 percentage points) of the employment probability gap is due to differences in endowments, calculated by dividing the Total Endowment Contribution (E = 0.35) by the employment gap (R = 0.250) in the Total row. The main contributors to the employment probability gap are Age, Family Size, National State Relief Ratio, and Non-White to White variables.

First, it is clear that Japanese Americans were, on average, younger than White Americans (Table 7). Thus, if Japanese Americans had the same age characteristics as Whites, the employment probability gap would close by 26.94% (6.6 percentage points). Japanese Americans had smaller families on average compared to Whites. Thus, if Japanese Americans had the same family size characteristics as Whites, the employment gap would decrease by 61.32% (15.1 percentage points). Japanese Americans were more likely to live in states with fewer WPA jobs, as indicated by their National to State Relief Ratio estimate of 0.25 (Table 1). Conversely, if Japanese Americans lived in states where the size of the WPA was relatively large compared to the unemployed population, the employment gap would decrease by 61.32% (or 15.1 percentage points).

The Non-White to White variable estimates in Table 2 tell us that Japanese Americans lived in counties with relatively few Japanese Americans relative to Whites. However, they still had a sizable number of Japanese to Whites relative to other non-white groups. The beta coefficients of the Oaxaca-Blinder model (Figure B in the Appendix) reveal that the relationship between the White to Non-Whites variable is much weaker for Whites than for Japanese Americans. Returning to Table 7, we can see that if Japanese Americans lived in places with few Japanese Americans**,** the gap would decrease by 10.80% (3.7 percentage points) as a proportion of the total employment gap.

Coefficient Contribution

The coefficients part of the decomposition in Table 7 examines the counterfactual: "What would happen to the employment probability gap if Japanese Americans were treated the same as Whites with respect to their characteristics?" Using the beta coefficients from Appendix A, we analyze how the relationship between previously outlined independent variables and employment in the WPA would change.

If Japanese Americans were treated the same as Whites with respect to age, the employment probability gap would increase by 139% (34.2 percentage points). Figure B in the Appendix shows that Japanese Americans have a positive relationship between age and WPA employment. Practically, this means that, with respect to age, older Japanese Americans are more likely to participate in the WPA than White Americans. In other words, if Japanese Americans had a negative relationship between age and WPA, like their White counterparts, their average participation would be even lower, and the gap would be larger.

The relationship between household wages and WPA employment is negative for both groups but more negative for Whites. Thus, if Japanese Americans were treated the same as Whites in terms of household wages, the gap would be even larger by 7% (1.8 percentage points), as seen in the coefficients column (Table 7). If the relationship between family size and WPA employment was the same as for Whites, the gap would decrease, indicating unequal treatment. The relationship between the National to State Relief Ratio and WPA employment is similar for both groups. The gap would decrease slightly if Japanese Americans had a similar relationship to Whites. The effect of the proportion of Non-Whites to Whites on WPA employment is quite large for Japanese Americans. If the relationship were the same as for Whites, the gap would increase by 7% (1.8 percentage points).

Overall, we can see quite a sizable amount of the employment probability gap is due to differences in endowments (140%, or 35 percentage points). The gap would be reduced if Japanese Americans had the same characteristics as whites. Some coefficients suggest that Japanese Americans are treated favorably compared to Whites. In contrast, the coefficients for household wages and non-White to White proportion suggest that Japanese Americans were treated unfavorably with respect to these characteristics. Similar to Chinese Americans, the positive intercept (.557) in this Oaxaca-Blinder decomposition tells us that over 50% of the employment gap remains unexplained by the variables included in the model. Thus, there remains quite a large disadvantage for Japanese Americans that the model does not capture.

Conclusion

This study's analysis reveals that while non-racial factors such as age and family size contribute significantly to the employment probability gap between Whites and Chinese Americans and Whites and Japanese Americans, they do not account for all the variation in WPA employment. A large portion of the employment gap is attributable to discrimination, reflecting favorable and unfavorable treatments.

I tested two expectations regarding the discrimination faced by Chinese and Japanese Americans in Works Progress Administration employment. The first expectation is that both groups faced similar discrimination due to perceptions of being foreign and unassimilable. The second expectation posited that the nature of discrimination varied, potentially reflecting different levels of racial discrimination in WPA employment.

The findings from the Oaxaca-Blinder models show nuanced differences between Chinese and Japanese Americans. While both groups faced intense economic, social, and cultural discrimination--their experiences in the WPA differed markedly. For Chinese Americans, almost 43% of the employment probability gap can be attributed to endowment differences. However, when we examine the coefficients portion of the decomposition, it becomes evident that differential treatment actually favored Chinese Americans in some instances. Yet, a significant portion of the gap remains, suggesting discrimination.

For Japanese Americans, endowment differences account for a larger portion of the employment probability gap (about 140%). were younger and resided in areas with fewer WPA jobs than their White counterparts. Age, family size, and WPA job availability (measured in the WPA Difference

variable) were among the largest contributing factors. Despite some favorable treatment in coefficients, a significant portion of the gap remains unexplained, suggesting discrimination.

Implications/Contributions

This study contributes to a growing body of work examining the role of racial discrimination in the welfare state, specifically in New Deal programs. Previous work has primarily focused on Whites and Blacks (Fishback et al., 2007; Glenn, 2002), often overlooking Asian Americans entirely. This study adds to our understanding of how discrimination uniquely affected Chinese and Japanese Americans—emphasizing the need to have more nuanced scholarship on racial inequality in New Deal programs. By testing the extent to which racial discrimination explains the employment gap in the WPA, this paper contributes to this call to action, emphasizing and reinforcing the need for a better understanding of how racial inequality shaped the formation of American social policy.

Thus, I find limited support for the first expectation, as the experiences of Chinese and Japanese Americans differed from those of White Americans and each other. Instead, the second expectation has greater support, showing that Chinese and Japanese Americans were treated differently based on demographic factors. This differential treatment likely reflects the general public's perception of China as a sympathetic underdog and Japan as an imperial threat.

Work by Amenta et al. (1998) argues that the WPA played a central role in shaping American social policy by providing work instead of "direct relief." This body of work asserts that work on New Deal policies has failed to recognize the WPA's impact on the development of welfare systems in the United States and its significance in shaping social policy.

Limitations

This study has several limitations that warrant consideration. First, we have limited insights into the decision-making processes of WPA officials, which hinders the analysis of discrimination. Future studies could benefit from archival research or the examination of administrative records to illuminate how these agencies made such decisions. Second, the reliance on cross-sectional data limits the ability to establish temporal patterns and causality. Third, we are dealing with a small number of cases, especially among Japanese Americans, with only 159 cases of individuals who are either unemployed or in the WPA. This small number of cases reduces statistical power and increases the likelihood of Type II error.

Fourth, reliance on self-reported household wages can introduce errors due to social desirability effects. Fifth, census data on WPA employment includes those in other work relief programs, such as the CCC or the NYA. The CCC primarily targeted young men between the ages of 18 and 25. I re-ran my analyses to deal with this possibility by limiting the number of people in the dataset to only those above 25, which produced similar results overall.

Sixth, some scholars have challenged taking ethnic affiliation for granted because ethnic groups have boundary problems (Barth, 1969), intra-ethnic conflict, and exploitation within these communities (Benicich, 1980). This study assumes that the mere presence or absence of Chinese or Japanese Americans is a reliable metric of social capital. However, it is possible that having more Chinese or Japanese Americans could have resulted in ethnic conflict for WPA jobs instead of cooperation.

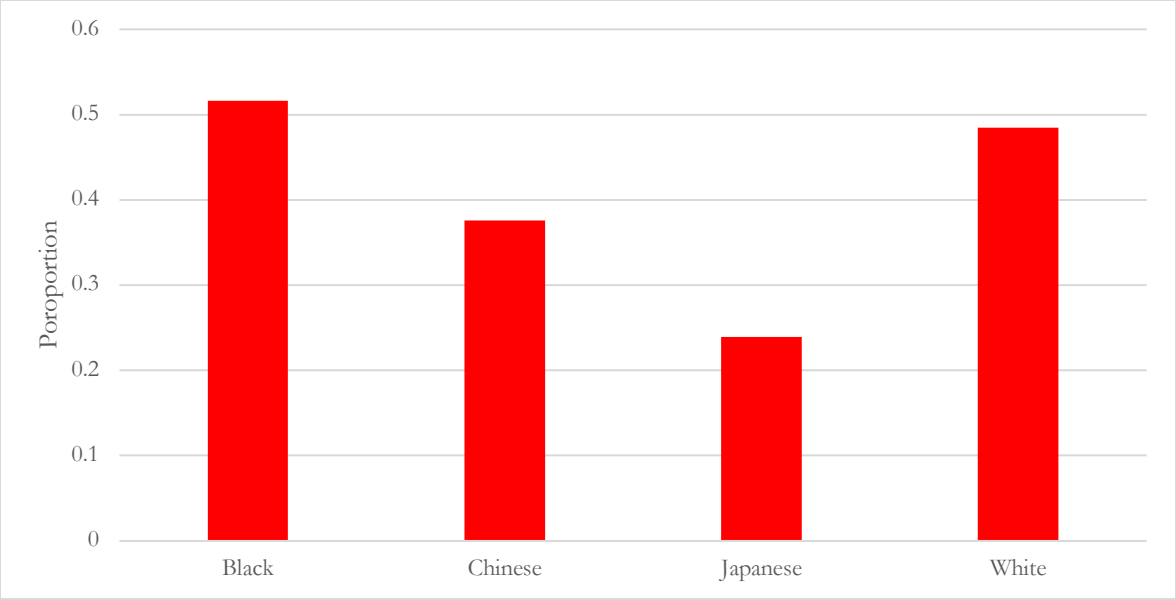
Finally, there was widespread concern about the potential influence of politics in the administration of the Works Progress Administration employment—an aspect of WPA employment that I cannot test with census data. Issues such as worker coercion, political allegiance, and the misallocation of New Deal resources to gain political favor (The Works Progress Administration, 1936) were beyond the scope of this study.

Future Work

Future work could examine how Chinese and Japanese workers in programs like the CCC and the NYA were employed. Similarly, other work could look at the role that gender played in WPA employment. Furthermore, we do not test how different occupations affect the likelihood of employment. Given what we know about the likelihood of Chinese or Japanese Americans being placed into low-skilled jobs in the WPA--this likely mattered for employment in the WPA. Future work could also work to integrate the participation of Black Americans comparatively. For context, I provide descriptive results and an Oaxaca-Blinder decomposition for Blacks relative to Whites.

The WPA represented a significant shift towards government responsibility for ensuring employment—aiming to integrate citizens into productive economic activities rather than financial assistance. The WPA significantly reduced employment and had a significant impact on infrastructure but faced lots of political opposition, logistical issues, varying regional needs (Amenta et al., 1998), and—as this study shows—the uneven application of criteria for employment. The WPA was not just one singular governmental program--it represents the origins of the social welfare state. While previous research has extensively shown the effect this had on generations of Black Americans, the same cannot be said for Asian Americans. In light of these observations, it is essential to recognize the role of racial discrimination in shaping American social policy (i.e., in the WPA and the New Deal) and its beneficiaries.

Graphs and Tables



Graph 1: Proportion of Eligible Male Citizen Workers Employed in the WPA by Race in 1940 Census (N = 2,474,203)

Table 1. Average Differences in Explanatory Variables

Variable	Black	Chinese	Japanese	White
Household Income	509.60	690.82	830.65	738.04
Family Size	3.73	3.02	2.89	3.97
Income by Family Size (Per Person)	190.78	379.47	380.19	236.51
National to State Relief Ratio	1.12	0.81	0.25	0.97
Age	41.09	43.24	34.18	42.45
Population Size	281,046	1,360	159	2,191,638

Table 2. Average Differences in Non-White to White Proportions

Race	Average of Non-White to Whites	Chinese to White	Japanese to White	Black to White
Black	0.803	0.000	0.340	0.000
Chinese	0.944	0.001	0.060	0.006
Japanese	0.979	0.003	0.016	0.002
White	0.945	0.000	0.073	0.000
Population Size	281,046	1,360	159	2,191,638

Table 3. Distribution of Unemployment and WPA Jobs in Regions of United States

Region	Unemployment	WPA	Ratio
Northeast	488,241	273,204	1.79
West	220,053	149,769	1.47
Midwest	387,353	456,561	0.85
South	310,911	375,149	0.83

Table 4. Ratio of Unemployment and WPA Jobs by Race and Region

Race	Midwest	Northeast	South	West
Black	0.58	1.25	1.05	1.09
Chinese	0.59	2.79	0.78	5.88
Japanese	2.33	9.33	1.5	10.23
White	0.87	1.83	0.75	1.5

Table 4A. Proportion of Each Racial Group in Region

Region	**White**	**Chinese**	**Japanese**	**Black**
Midwest	0.34	0.11	0.01	0.12
Northeast	0.29	0.31	0.03	0.10
South	0.26	0.07	0.01	0.77
West	0.12	0.52	0.96	0.01

Table 5: Differences in Probability of Employment in the WPA (N = 2,370,626)

Racial Comparison	Whites vs. Chinese	Whites vs. Japanese	Whites vs. Blacks
Mean Group A in WPA Probabilities	0.48	0.48	0.48
Mean Group B in WPA Probabilities	0.37	0.23	0.51
Difference	0.11	0.25	-0.03

Table 6. Threefold Decomposition of Probability Differential in WPA Employment in White vs. Chinese American Males

Causal Factor	Amount Attributable		Attributable to Endowments		Attributable to Coefficients	
	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap
Age	-0.151	-138.27%	-0.001	-1.06%	-0.150	-137.22%
Household Wage	-0.037	-34.06%	-0.001	-0.49%	-0.037	-33.57%
Family Size	-0.010	-9.40%	+0.047	43.40%	-0.058	-52.81%
National to State Relief Ratio	+0.026	23.42%	+0.036	32.59%	-0.010	-9.18%
Non-White to White Proportion	-0.066	-60.11%	-0.034	-31.13%	-0.032	-28.99%
Intercept					+0.339	
Subtotal	-0.238		E = +0.047		C = -0.286	
Shift Coefficient	U = +0.34					
Total	R = +0.110		D = C + U = +0.05			

Notes: A + sign indicates advantage for Whites; a – sign indicates advantage for Chinese. Components may not add up to 100% due to rounding. "Pr." is shorthand for probability. U represents the rows for the differences in the intercepts between Group A (Whites) and Group B (Chinese), while E represents the portion attributable to difference endowments, C = portion of differential attributable to differing coefficients. U = the unexplained portion of the differential ($\beta A0 - \beta B0$). D is the sum of the portion of differential attribute to differing coefficients and the unexplained portion of the differential.R represents the raw differential, meaning E + C + U.

Table 7. Threefold Decomposition of Probability Differential in WPA Employment in White vs. Japanese American Males

Causal Factor	Amount Attributable		Attributable to Endowments		Attributable to Coefficients	
	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap
Age	-0.276	-112.16%	+0.066	26.94%	-0.342	-139%

Household Wage	+0.026	10.57%	+0.008	3.24%	+0.018	7%
Family Size	-0.080	-32.59%	+0.101	40.93%	-0.181	-74%
National to State Relief Ratio	+0.149	60.58%	+0.151	61.32%	-0.002	-1%
Non-White to White Proportion	+0.044	17.94%	+0.027	10.80%	+0.018	7%
Intercept					+0.557	
Subtotal	-0.137		E = +0.35		C = -0.49	
Shift Coefficient	U = +0.56					
Total	R = +0.250		D = C + U = +0.07			

Notes: A + sign indicates advantage for Whites; a – sign indicates advantage for Japanese. Components may not add up to 100% due to rounding. "Pr." is shorthand for probability. U represents the rows for the differences in the intercepts between Group A (Whites) and Group B (Japanese), while E represents the portion attributable to difference endowments, C = portion of differential attributable to differing coefficients. U = the unexplained portion of the differential ($\beta A0 - \beta B0$). D is the sum of the portion of differential attribute to differing coefficients and the unexplained portion of the differential.R represents the raw differential, meaning E + C + U.

Table 8. Threefold Decomposition of Probability Differential in WPA Employment in White vs. Black American Males

Causal Factor	Amount Attributable		Attributable to Endowments		Attributable to Coefficients	
	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap	Percentage Points	Proportion of Total Gap
Age	-0.131	419%	+0.002	-5%	-0.132	424%
Household Wage	-0.032	104%	-0.000	0%	-0.032	103%
Family Size	+0.029	-93%	+0.006	-19%	+0.023	-74%
National to State Relief Ratio	-0.005	17%	-0.027	86%	+0.022	-69%
Non-White to White Proportion	-0.027	87%	-0.000	0%	-0.027	87%
Intercept					+0.134	
Subtotal	-0.167		E = -0.02		C = -0.15	
Shift Coefficient	U = -0.13					

Total	R = -0.04		D = C + U = -0.28			

Notes: A + sign indicates advantage for Whites; a – sign indicates advantage for Blacks. Components may not add up to 100% due to rounding. "Pr." is shorthand for probability. U represents the rows for the differences in the intercepts between Group A (Whites) and Group B (Black), while E represents the portion attributable to difference endowments, C = portion of differential attributable to differing coefficients. U = the unexplained portion of the differential (βA0 – βB0). D is the sum of the portion of differential attribute to differing coefficients and the unexplained portion of the differential.R represents the raw differential, meaning E + C + U.

Regression Coefficients for Oaxaca-Blinder Results

Table A-1 Regression Estimates White vs. Chinese

Independent Variable	White Males	SE	Chinese Males	SE
Constant	0.29	0.00	-0.04	0.00
Age	-0.01	0.00	0.01	0.00
Household Wage	-0.01	0.00	-0.01	0.00
Family Size	0.03	0.01	0.05	0.01
National to State Relief Ratio	0.20	0.01	0.22	0.01
Non-White to White	0.96	0.25	6.68	0.25

Table A-2 Regression Estimates White vs. Japanese

Independent Variable	White Males	SE	Japanese Males	SE
Constant	0.30	0.00	-0.25	0.00
Age	-0.01	0.00	0.01	0.00
Household Wage	-0.01	0.00	-0.01	0.00
Family Size	0.03	0.01	0.09	0.01
National to State Relief Ratio	0.20	0.01	0.21	0.01
Non-White to White	-3.36	0.25	-8.73	0.25

Table A-3 Regression Estimates White vs. Black

Independent Variable	White Males	SE	Black Males	SE
Constant	0.29	0.00	0.16	0.00
Age	-0.01	0.00	0.01	0.00
Household Wage	-0.01	0.00	-0.01	0.00
Family Size	0.03	0.01	0.02	0.01
National to State Relief Ratio	0.21	0.01	0.19	0.01
Non-White to White	-0.08	0.25	0.00	0.25

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Appendix

Figure A. Regression Estimates for Oaxaca-Blinder Decomposition Whites vs. Chinese Americans

Betas for Group A

(Intercept)	Age	Wages	Family Size	National to State	Chinese Proportion
0.29650816	-0.0019984	-6.45E-05	0.03050591	0.20365551	0.96309809

Betas for Group B

(Intercept)	Age	Wages	Family Size	National to State	Chinese Proportion
-0.0419958	0.00146517	-1.14E-05	0.04962203	0.21596239	6.68094814

Betas for Group Differences

(Intercept)	Age	Wages	Family Size	National to State	Chinese Proportion
0.33850396	-0.0034636	-5.30E-05	-0.0191161	-0.0123069	-5.7178501

Figure B. Regression Estimates for Oaxaca-Blinder Decomposition Whites vs. Japanese Americans

Betas for Group A

(Intercept)	Age	Wages	Family Size	National to State	Japanese Proportion
0.30069222	-0.002	-6.44E-05	0.03035344	0.20125522	-3.363647

Betas for Group B

(Intercept)	Age	Wages	Family Size	National to State	Japanese Proportion
0.15910976	0.001209141	-6.223E-07	0.024153777	0.1948789	0.00047787

Betas for Group Differences

(Intercept)	Age	Wages	Family Size	National to State	Japanese Proportion
0.13410567	-0.003218944	-6.327E-05	0.006182818	0.01928456	-0.0798061

Figure C. Regression Estimates for Oaxaca-Blinder Decomposition Whites vs. Black Americans

Betas for Group A

(Intercept)	Age	Wages	Family Size	National to State	Black Proportion
0.29321543	-0.002009803	-6.39E-05	0.030336596	0.21416346	-0.0793282

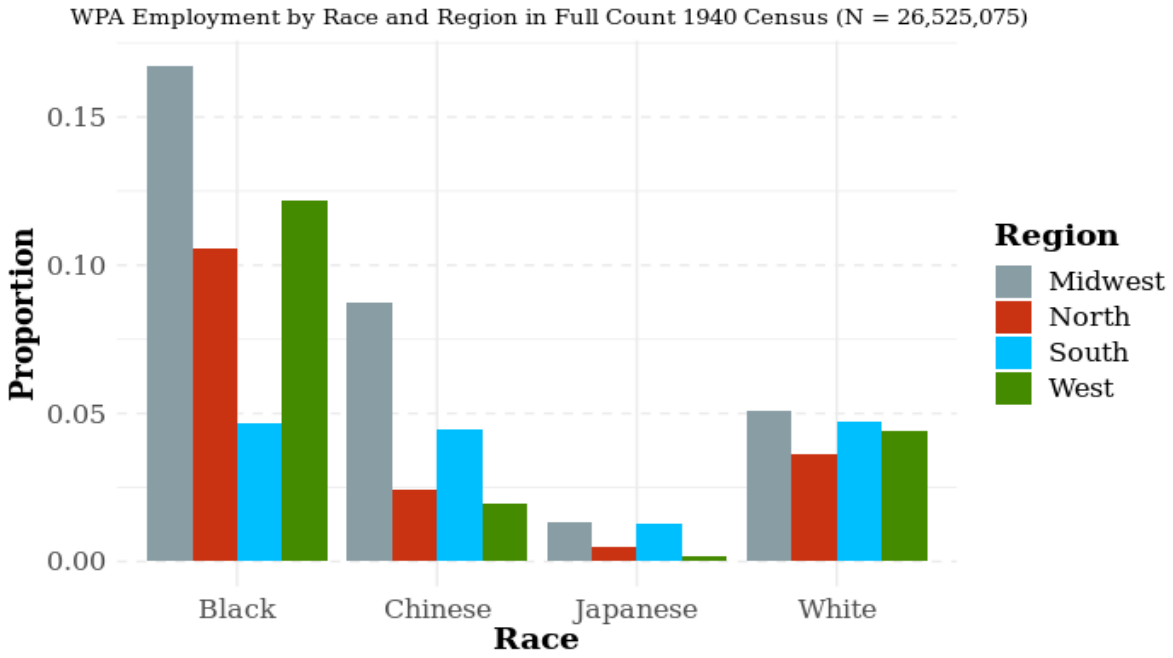
Betas for Group B

(Intercept)	Age	Wages	Family Size	National to State	Black Proportion
0.15910976	0.001209141	-6.223E-07	0.024153777	0.1948789	0.00047787

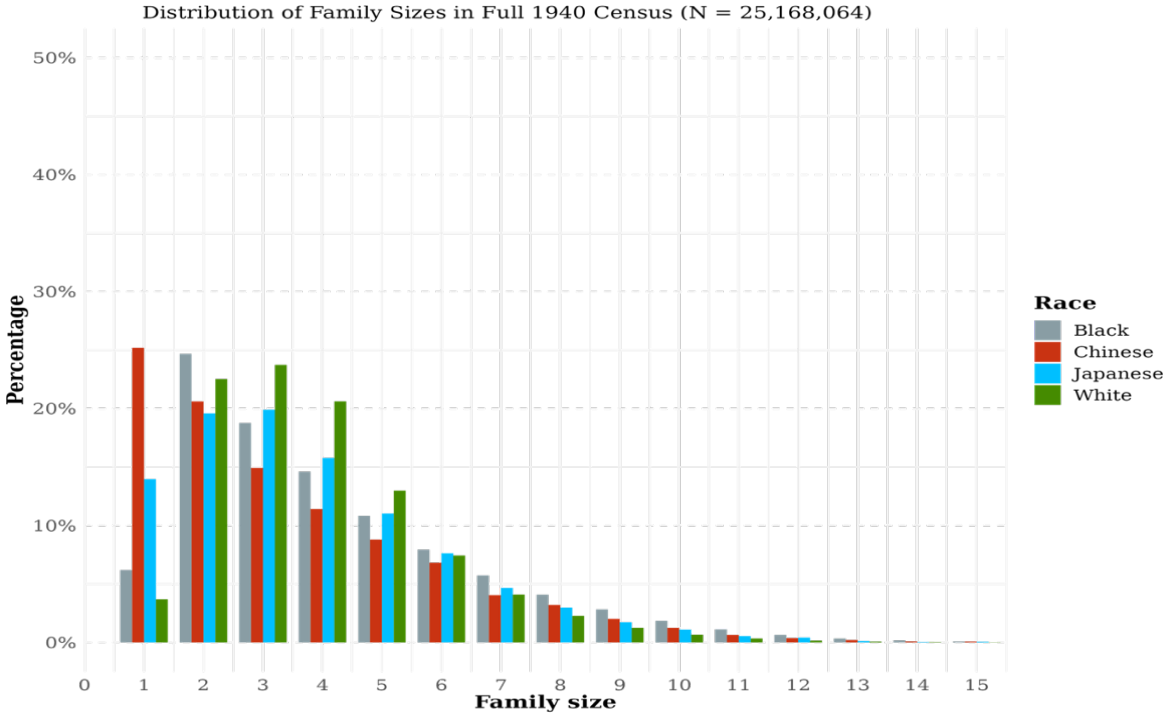
Betas for Group Differences

(Intercept)	Age	Wages	Family Size	National to State	Black Proportion
0.13410567	-0.003218944	-6.327E-05	0.006182818	0.01928456	-0.0798061

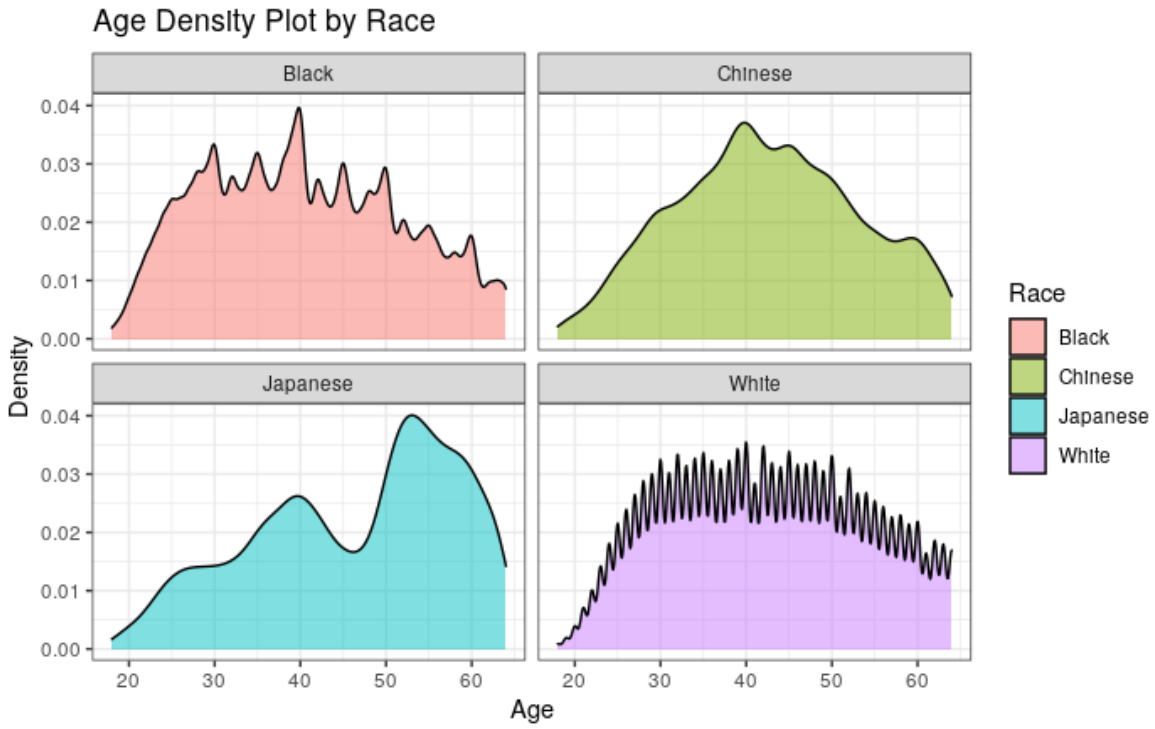
WPA Employment by Race and Region in Full 1940 Census



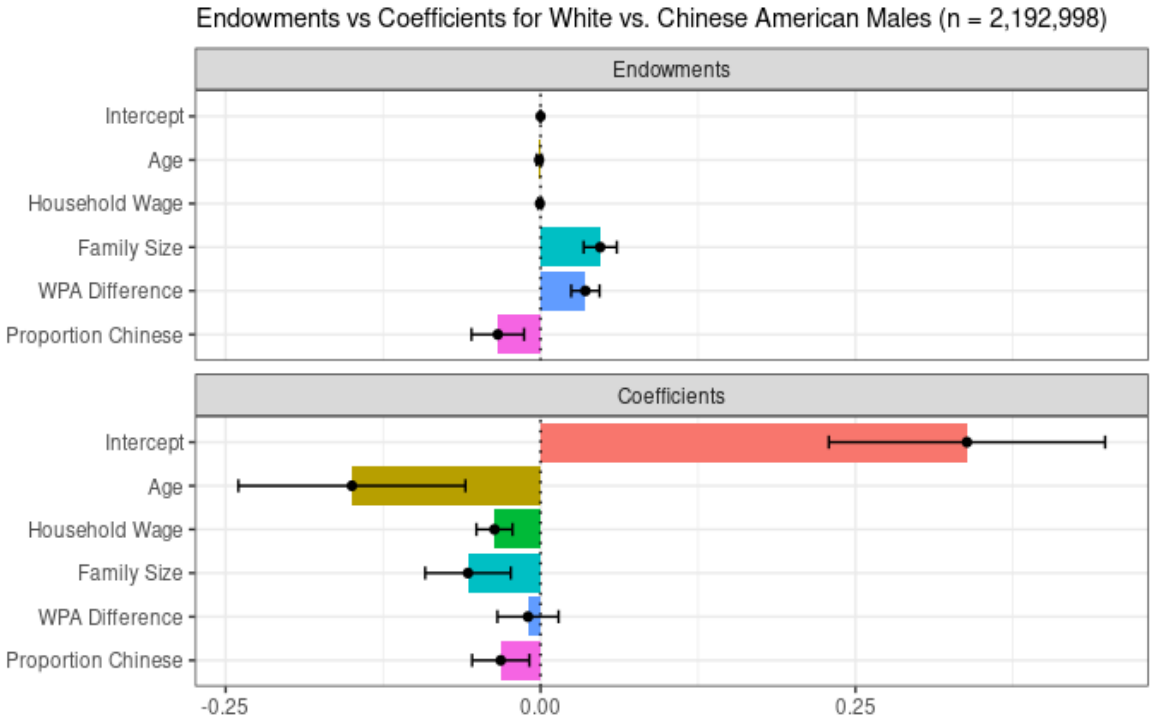
Family Size by Race



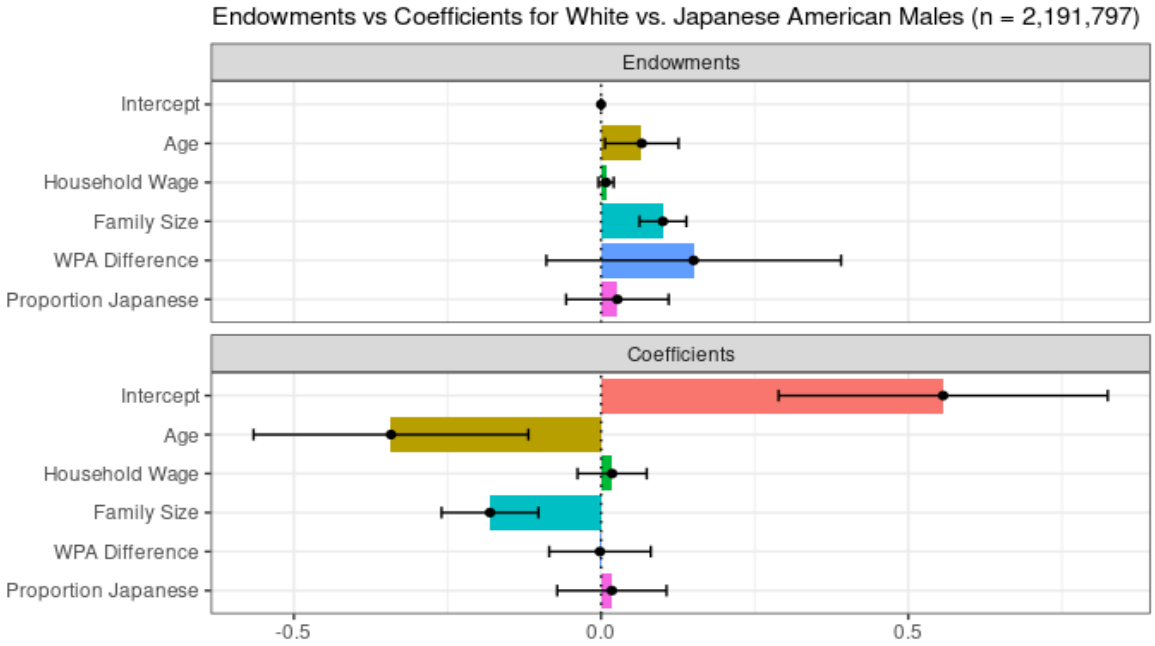
Age Distributions by Race (N = 25,168,054)



Oaxaca-Blinder Plots of Coefficient Contributions to Gap W. vs. C



Oaxaca-Blinder Plots of Coefficient Contributions to Gap W. vs. J



Oaxaca-Blinder Plots of Coefficient Contributions to Gap W. vs. B