

Ethnic Enclaves and the Legacy of Internment

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September 9, 2024

1 Intro

1.1 Research Question

- Did post-war relocation cause a permanent shift in the migration choices of Japanese Americans?
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1.2 Motivation

In the aftermath of Pearl Harbor over 100,000 Japanese Americans were subjected to curfews, forced to assemble in temporary centers, and imprisoned in internment camps from 1942 until the war's end. These families lost out on years of earnings and education while also being forced to give up land and belongings which they could not bring with them. The economic damages were known to be large at the time, with the Japanese American Evacuation Claims Act of 1948 leading to a total of \$148 million worth of claims on damage or lost property and \$37 million actually being distributed ([Commission on Wartime Relocation, 1983](#)). Because interned families also left behind their records, it is very difficult to know the actual value of lost property. However, there is modern causal evidence that West Coast Japanese suffered higher rates of mortality lower long-term earnings ([Chin, 2005](#)), ([Saavedra, 2013](#)), and less educational attainment ([Saavedra, 2015](#)) because of internment.

Aside from the importance of understanding the losses to internees, Japanese Internment can also serve as an interesting natural experiment through the involuntary nature of the experiences of internees. One question asked by previous economic literature is the extent that locations in which people live affect their economic outcomes such as upward mobility or earnings. It is difficult to provide an unbiased causal estimate because households usually have a large degree of choice in where they live. Previous studies have used a variety of empirical strategies to separate out this causal effect including controlling for observable characteristics like education [Glaeser and Maré \(2001\)](#), worker fixed-effects ([Card et al., 2021](#)), or through leveraging other exogenous placements of households like the Moving to Opportunity Experiment ([Ludwig et al. \(2013\)](#), [Chetty et al. \(2016\)](#), etc).

- Immigrant populations tend to concentrate near places of initial settlement

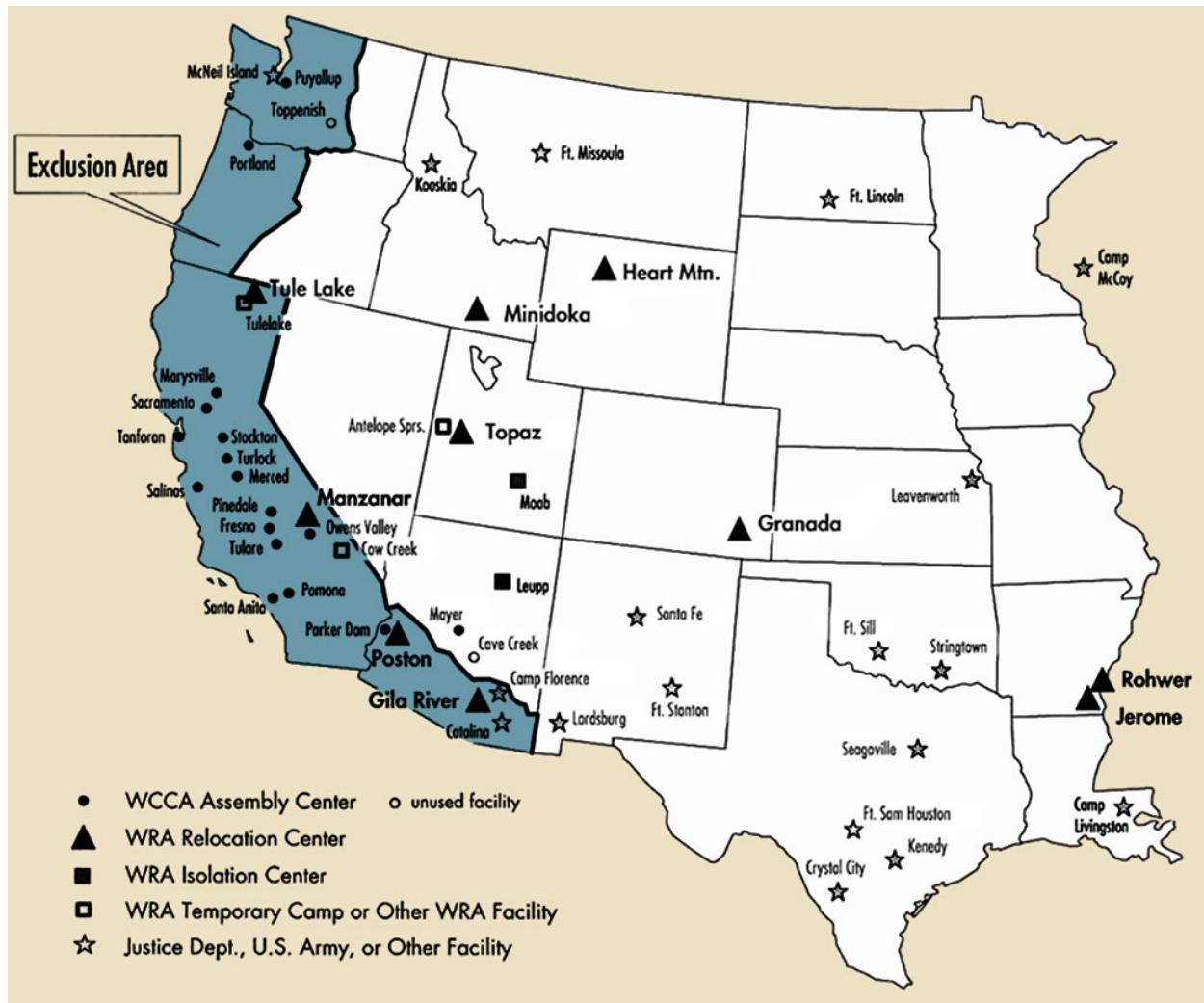
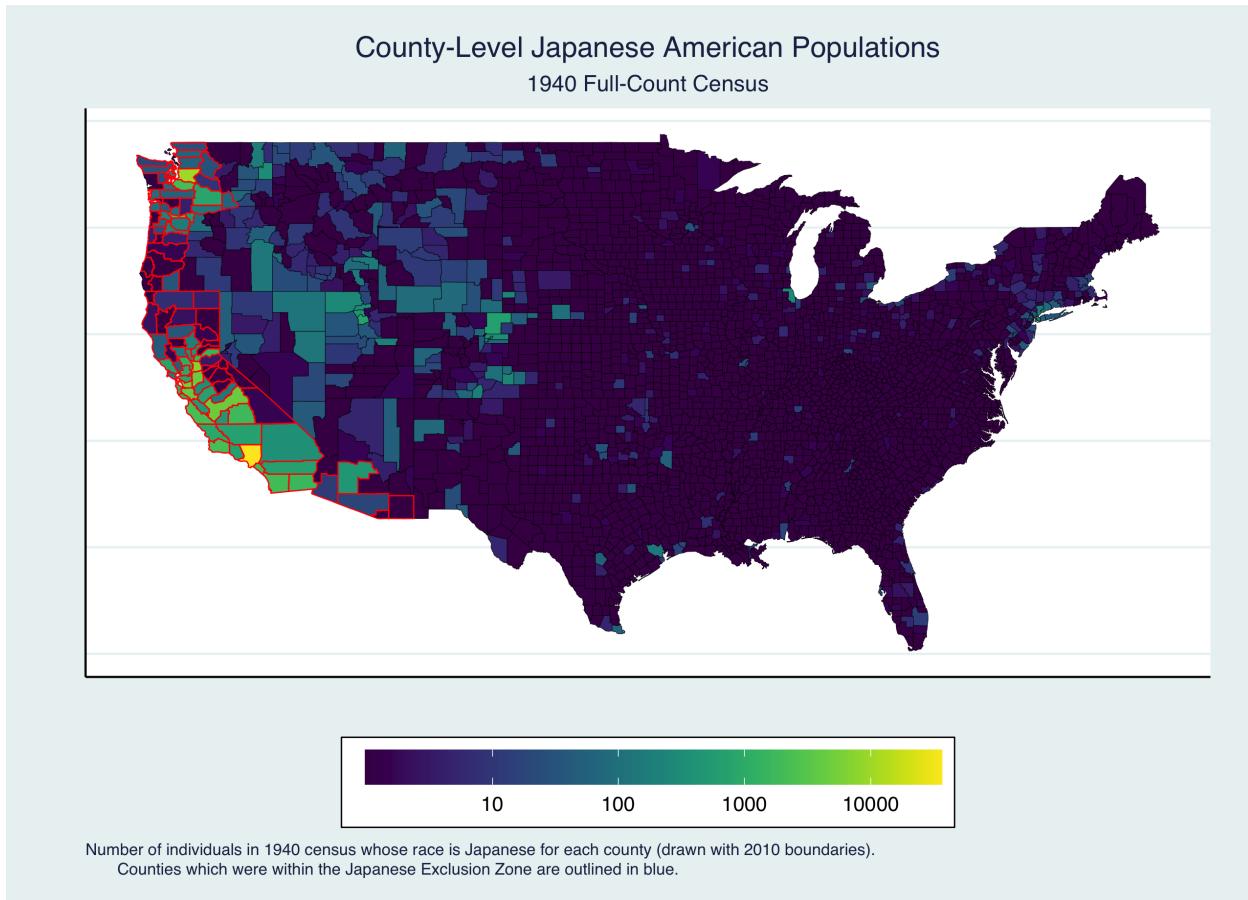


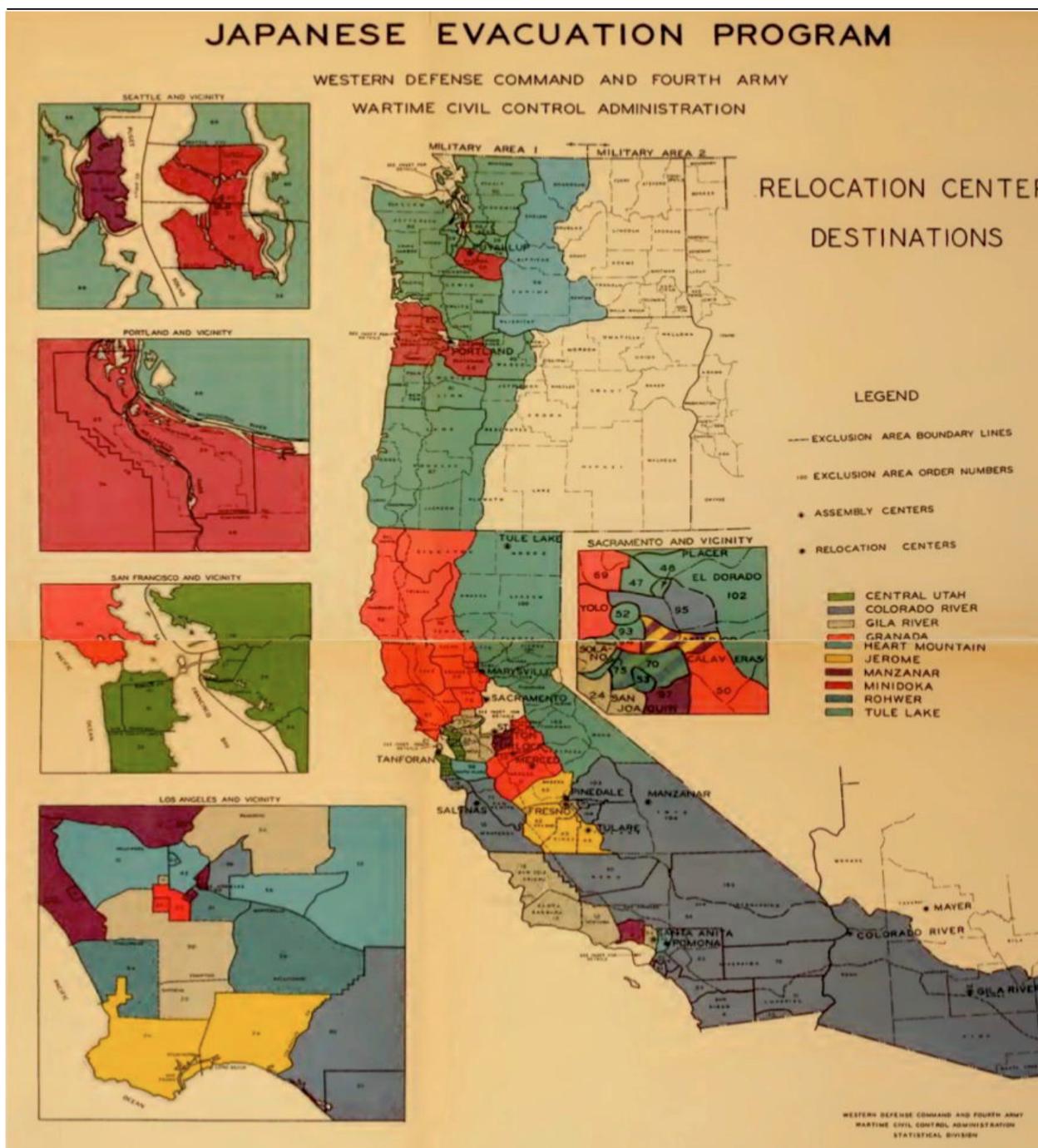
Figure 1: Caption

- Integration/assimilation could be important for immigrant labor market outcomes
 - Damm (2009)
- Evidence for Canadian Japanese internment having persistant effect on spatial Japanese distribution
- Chan (2022)

1.3 Initial Distribution of pre-war Japanese Population



1.4 Assignment of Internees to Camps



2 Data

2.1 Population and Migration

For long-run migration data, I use the Decennial Census data provided by the US Census Bureau via the [Integrated Public Use Microdata Series](#) (Ruggles et al., 2024). The census samples for which county locations are available include the 1940, 1950, 1980, and 1990 1% samples, the 1960 5% sample, and the 1970 Form 2 Metro 1% sample.

For the calculation of migration rates between counties, I define a migrant as someone who reports that they either moved within the state, between states, or that they were abroad five years ago (or in the past 1 year for 1960 respondents). This excludes people who report moving within the same house, didn't report their previous location, or the location is unknown.

2.2 Geography

2.2.1 Historical County Borders

Although most county borders did not change much in the second half of the 20th Century, there were counties which split, merged, or had name changes which can make cross-decade comparisons difficult. For these reasons, I choose to standardize the set of counties in my analysis to the set of counties as they appear in the year 1990. To map historical county-level data to 1990 county definitions, I implement the crosswalk method by [Eckert et al. \(2020\)](#). They overlay historical county boundary shapefiles from <https://www.nhgis.org/> onto county boundaries for a specific target year (in this case 1990). The sub-areas created by these overlays are used to calculate a set of geographic weights which represent the fractions of a 1990 county's area which were within the geographic areas of counties as they appear in different decades (specifically the decades between and including 1940 to 1980). For my analysis, I take the crosswalk weights from the example csv file for the end year 1990 which is published on the authors' [github repository](#).

2.2.2 Camp Locations

Locations for historical interment camp locations were archived by [Densho Encyclopedia](#) and downloaded in csv form via the [Behind Barbed Wires story project](#).

I calculate the straight line distances in meters between each 1950 county centroid to each camp location in QGIS with the [Distance Matrix](#) tool using the Standard (N x T) distance matrix setting.

2.3 Historical counties dataset

After narrowing down to counties which can be observed in each census year and then translating the historical counties to 1990 county boundaries, I am left with 3082 counties with observable migration rates in 1940, 108 in 1950, 410 in 1960, 115 in 1970, 254 in 1980, and 290 in 1990.

My primary dataset is therefore a pooled-crosssection with a total number of 28 county-year level observations. Each observation represents an individual county at a given year in time if it had the same borders as it had in 1990.

The Census Bureau confidentiality standards state that public-use microdata will cannot show report locations with populations of less than 100,000 people. For this reason, many sparsely-populated counties will be omitted from my sample because there are not enough observations for the Census to report locations of individuals living there.

Figure 2: County-year level population distributions

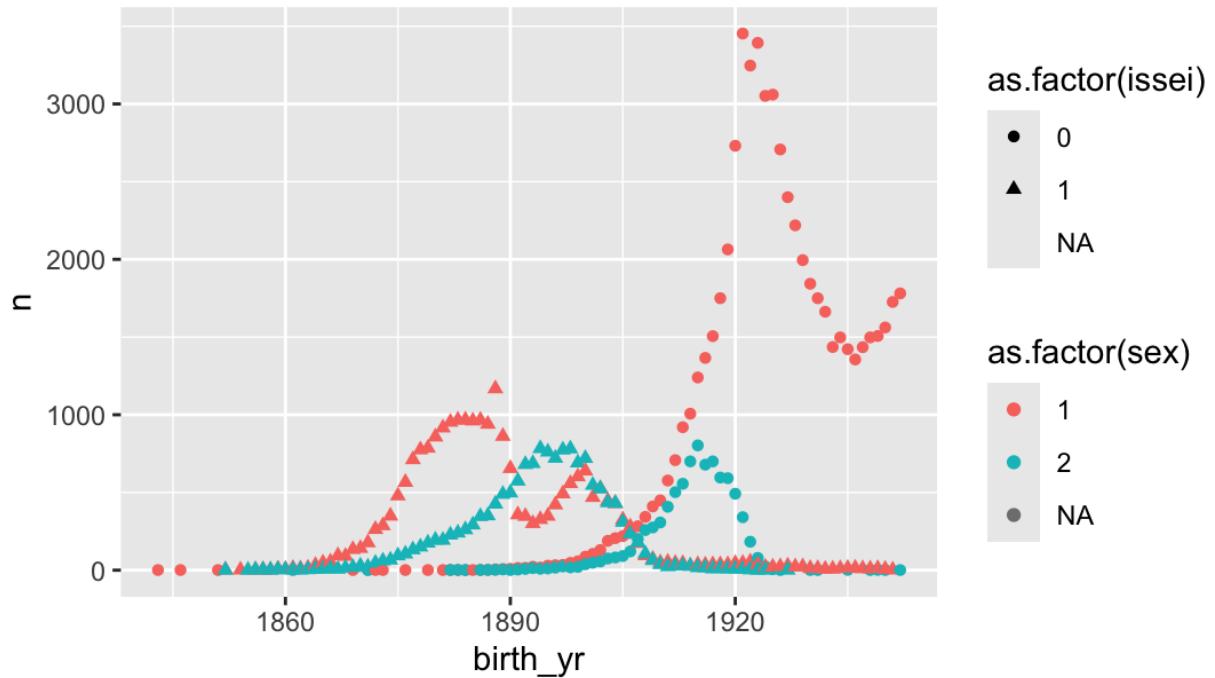
The average population of the census-year observations in my sample is 133,000 while the average population for crosswalked census-year observations outside my sample is 3,930,000. The fact that my sample is not fully representative of all county sizes will be a challenge for the external validity of my findings to extrapolate my results to smaller counties for which I have less information on. However, Figure 2 shows that two different densities of county-year populations observed in and out of the main sample have similar shapes with the exception of a larger right-tail in the in-sample density plot. This reflects the fact that counties with populations of greater than 100,000 meet the Census Bureau's confidentiality criteria, while data from smaller counties are subject to stricter confidentiality measures.

2.4 WRA first addresses

- *The Evacuated People: A Quantitative Description* Krug and Meyer (1946)
 - Final WRA report on “State and Post Office Address of First Destination by Nativity, Prior January 1, 1945 and January 1, 1945 and Later”
 - Digitized and uploaded by [Cooper Thomas](#) via [data.world](#)

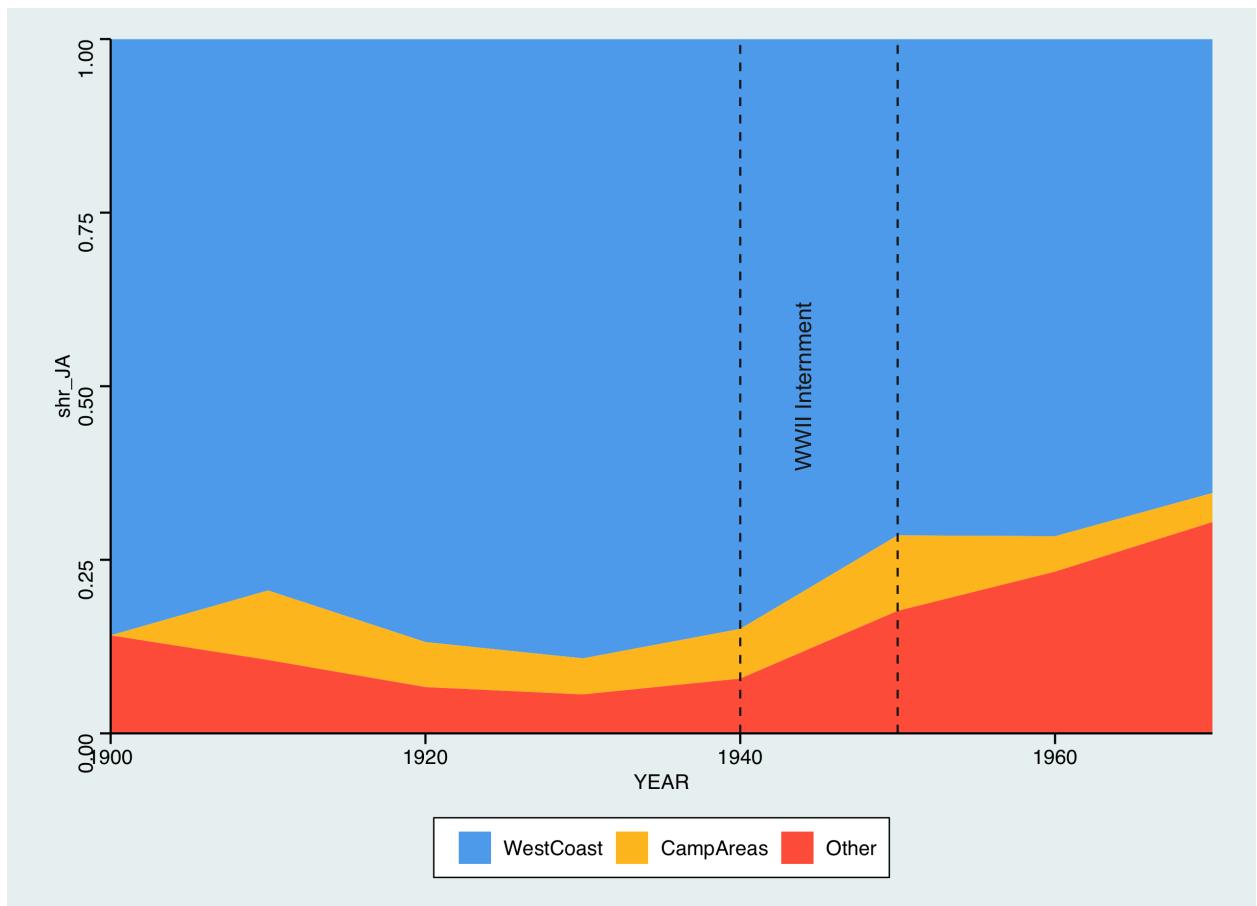
2.4.1 Map of Relocated Internees by City

2.5 WRA internees



2.6 IPUMS Census

- Decennial Census Data for years 1940, 1950, 1960, 1970, 1980, and 1990
 - Via IPUMS USA ([Ruggles et al., 2024](#))



2.7 NHGIS geo

3 Methods

3.1 immigration on dist to camps

$$\frac{mig_japn_{it}}{mig_total_{it}} = \beta_0 + \beta_1 \min_{c \in C} Dist^{c \rightarrow i} + \mathbb{X}_{ct}\gamma + \epsilon_{ct} \quad (1)$$

3.1.1 within cont. US migration of japanese americans

3.1.2 new immigration from japan

3.2 individual-level characteristics vs internees?

4 Results

5 Conclusion

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