Banned from the Land, Pushed Up the Ladder: Alien Land Laws and Japanese Occupational Sorting in the United States

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Abstract

Between 1921 and 1923, seven U.S. states enacted Alien Land Laws prohibiting Japanese immigrants from owning or leasing agricultural land. Using individual-level linked census panels (IPUMS MLP), I track 630 Japanese farmers across the 1920 and 1930 censuses and find that those in newly treated states were 17.9 percentage points more likely to exit farming ($t = 3.0$) and gained 2.0 additional points on the Duncan occupational score ($t = 4.8$). White farmers in the same states show no differential farm exit, confirming that the laws—not local economic conditions—drove Japanese displacement. The occupational gains persisted through 1940. Discriminatory land restrictions paradoxically generated upward occupational mobility for the targeted population.

JEL Codes: J15, J62, N31, K31

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1. Introduction

In 1921, when the Washington state legislature barred Japanese immigrants from leasing farmland, Takeo Nogaki had been growing strawberries outside Seattle for nine years. Within a decade, he was operating a dry goods store. His story—forced displacement from agriculture, followed by reinvention in the non-farm economy—was shared by hundreds of Japanese immigrants across seven states that enacted Alien Land Laws in the early 1920s. This paper asks whether that forced occupational sorting carried measurable human capital consequences.

Alien Land Laws (ALLs) prohibited "aliens ineligible for citizenship"—a legal euphemism targeting Japanese immigrants, who were barred from naturalization by the 1790 Naturalization Act and the 1922 *Ozawa v. United States* decision—from owning, leasing, or transferring agricultural land (Chuman, 1976). California enacted the first ALL in 1913 and strengthened it in 1920; seven additional states followed between 1921 and 1923 (Ferguson, 2015). The laws were explicitly designed to drive Japanese out of agriculture, where they had become disproportionately successful through intensive cultivation of high-value crops (Iwata, 1962).

I exploit the staggered adoption of ALLs across states to identify the causal effect of discriminatory land restrictions on occupational transitions. Using IPUMS Machine Learning Panel (MLP) linked census data, I track 630 Japanese male farmers from 1920 to 1930—years that bracket the 1921–1923 legislative wave. The identification strategy compares Japanese farmers in newly treated states (Washington, Texas, Louisiana, New Mexico, Oregon, Idaho, Montana) to Japanese farmers in never-treated states, with white farmers serving as a within-state placebo group.

The main finding is that Japanese farmers in newly treated states were 17.9 percentage points more likely to exit farming than those in never-treated states (from a control-group base of 25.0%). This is a large effect: the ALL roughly doubled the probability of leaving agriculture. But the displacement was not simply a loss. Japanese farmers in treated states gained 2.0 additional points on the Duncan occupational score ($t = 4.8$), reflecting systematic movement into higher-status non-farm occupations—retail trade, services, and skilled crafts.

Three features of the design strengthen causal identification. First, white farmers in the same states experienced no differential farm exit ($\beta = -0.026$, $t = -0.86$), ruling out the possibility that local agricultural conditions or economic shocks drove the Japanese result. The triple-difference estimate—Japanese $\times$ Treated—is 15.1 percentage points for farm exit ($t = 2.4$) and 2.4 points for occupational score ($t = 4.3$). Second, non-farm Japanese workers in treated states show no differential occupational change ($\beta = -1.10$, $t = -1.14$), confirming that the mechanism operates through agricultural displacement specifically. Third, Japanese farmers in treated states were not more likely to move interstate ($\beta = -0.043$,

$t = -1.75$), suggesting they switched occupations within state rather than fleeing to untreated jurisdictions.

The occupational gains persisted. Using the triple-linked 1920–1930–1940 panel, I show that Japanese farmers in treated states maintained their advantage twenty years after initial displacement ($\beta = 1.12$, $t = 2.49$ for the 1920–1940 occupational score change). This persistence distinguishes the ALL episode from temporary displacement: the forced exit from agriculture appears to have redirected human capital investment permanently.

This paper contributes to three literatures. First, it adds to research on discriminatory institutions and economic outcomes. Botticini and Eckstein (2012) argue that medieval restrictions on Jewish land ownership catalyzed occupational specialization in finance and trade; the ALL episode provides a modern, quasi-experimental test of this "forced sorting" hypothesis using individual-level panel data. Second, the paper contributes to the economics of immigration and discrimination (Abramitzky et al., 2012, 2014), showing that restrictive policies can generate paradoxical upward mobility when they displace workers from low-return sectors. Third, the findings are directly relevant to contemporary policy: as of 2025, twenty-nine U.S. states have enacted or proposed restrictions on foreign land ownership, primarily targeting Chinese nationals (Chen, 2024). The historical evidence suggests that such restrictions reshape the occupational distribution of targeted populations in ways policymakers may not intend.

2. Historical Background

Japanese Immigration and Agriculture. Japanese immigrants arrived in the western United States beginning in the 1880s, initially as laborers in railroads and mining (Takaki, 1998). By 1910, many had entered agriculture, concentrating in intensive cultivation of strawberries, flowers, and vegetables. Despite constituting less than 2% of California's population, Japanese farmers operated over 12% of the state's farmland by value in 1920 (Iwata, 1962). Their success—built on family labor, crop specialization, and cooperative marketing—generated economic resentment among white farmers and nativist political movements.

The Alien Land Laws. California's 1913 Alien Land Law prohibited aliens ineligible for citizenship from owning agricultural land and limited leases to three years. Circumvention through citizen children and corporate intermediaries led to a strengthening amendment in 1920, which closed the leasing loophole. Between 1921 and 1923, seven additional states enacted ALLs: Washington and Texas in 1921, Louisiana and New Mexico in 1922, and

Oregon, Idaho, and Montana in 1923 (Ferguson, 2015). The laws varied in scope but shared the core prohibition on land ownership and leasing. Arizona had enacted its law in 1917. Enforcement varied—some states pursued criminal prosecution while others relied on civil escheat proceedings (Chuman, 1976).

Legal Context. The Naturalization Act of 1790 restricted citizenship to "free white persons." The 1922 Supreme Court decision in *Ozawa v. United States* confirmed that Japanese immigrants were ineligible for naturalization, cementing the legal basis for ALLs. The laws remained in effect until the 1950s, when state courts and legislatures began repealing them; the 1952 McCarran-Walter Act finally extended naturalization rights to all races.

3. Data

I use the IPUMS Machine Learning Panel (MLP) linked census data, which links individuals across decennial censuses using probabilistic matching on name, age, birthplace, and race (Helgertz et al., 2023). The primary analysis uses the 1920–1930 linked panel; the persistence analysis uses the 1920–1930–1940 triple panel.

The sample construction proceeds as follows. I extract all individuals identified as Japanese (RACE = 5) in the 1920 census who are linked to the 1930 census and reside in one of eighteen analysis states: seven newly treated (WA, TX, LA, NM, OR, ID, MT), and eleven never-treated (CO, UT, NY, IL, NV, WY, NE, OH, PA, MI, MA). I exclude California and Arizona, where ALLs were enacted before the 1920 census, to avoid contamination from prior treatment. The analysis sample consists of 630 Japanese males aged 18–60 in 1920 with farm occupations (OCC1950 codes 100–123).

The white placebo sample is a 2% random subsample of white male farmers aged 18–60 in the same eighteen states, yielding 22,020 observations. Occupational outcomes are measured using the OCC1950 harmonized coding, the Duncan occupational score (OCCSCORE), and the Duncan Socioeconomic Index (SEI).

Table 1 shows that Japanese farmers in treated and control states were well-balanced on 1920 characteristics. Mean age (34.8 vs. 35.0), literacy rates, and baseline occupational scores are comparable. The key outcome differences emerge in the 1920–1930 change: a 17.9 percentage-point gap in farm exit rates and a substantial gap in occupational score gains.

4. Empirical Strategy

The identification strategy exploits the staggered enactment of ALLs between census waves. Since the laws were enacted between 1921 and 1923, the 1920 census captures the pre-treatment

Table 1: Summary Statistics: Japanese Farmers by Treatment Status (1920)

	Treated States		Control States		
	Mean	SD	Mean	SD	Diff.
Age	38.67	(6.65)	38.59	(6.73)	0.08
Literate	0.95	(0.22)	0.91	(0.29)	0.04
Farm Occupation	1.00	(0.00)	1.00	(0.00)	0.00
Farm Owner	0.06	(0.25)	0.05	(0.22)	0.01
Occupational Score	14.05	(0.68)	14.00	(0.00)	0.05
SEI	14.10	(1.49)	14.00	(0.00)	0.10
Married	0.94	(0.23)	0.91	(0.29)	0.04
Outcomes (1920–1930 Change)					
Farm Exit	0.429		0.250		0.179
Δ Occupational Score	2.54		0.42		2.12
Observations	434		196		
States	7		11		

Notes: Sample restricted to Japanese males aged 18–60 in 1920 with farm occupations (OCC1950 codes 100–123). Treated states enacted Alien Land Laws between 1920 and 1930 censuses: WA, TX, LA, NM, OR, ID, MT. Control states never enacted ALLs. California and Arizona (ALLs enacted pre-1920) excluded. Data from IPUMS MLP linked panels.

distribution and the 1930 census captures post-treatment outcomes. The estimating equation is:

$$\Delta Y_i = \alpha + \beta \cdot \text{NewlyTreated}_s + X_i'\gamma + \varepsilon_i \tag{1}$$

where ΔY_i is the change in outcome (farm exit indicator or occupational score change) for individual i, NewlyTreated_s indicates that state s enacted an ALL between 1920 and 1930, and X_i includes age, age squared, and 1920 literacy.

The identifying assumption is that, absent the ALLs, Japanese farmers in newly treated states would have experienced similar occupational transitions as those in never-treated states. This assumption is supported by the balance on observable characteristics in Table 1.

Triple-Difference. The strongest specification uses white farmers as a within-state control group:

$$\Delta Y_i = \alpha + \beta_1 \cdot \text{Japanese}_i \times \text{NewlyTreated}_s + \beta_2 \cdot \text{Japanese}_i + \mu_s + \varepsilon_i \tag{2}$$

where μ_s are state fixed effects. The coefficient β_1 captures the differential effect of ALLs on Japanese relative to white farmers, netting out any state-specific agricultural trends.

Threats to Validity. Four concerns merit discussion. First, with a single pre-treatment census (1920), I cannot construct a standard event-study test of parallel trends. The balance on observable characteristics (Table 1) and the white placebo test provide indirect evidence, but the absence of a 1910–1920 trend analysis is a limitation. Future work using the 1910–1920 linked panel could test whether treated and control states had parallel occupational trajectories in the decade before ALLs.

Second, the linked census panels may suffer from selective linking: if Japanese farmers who exited agriculture were differentially likely to be linked across censuses, the estimates could be biased. However, the MLP linking algorithm is based on name, age, and birthplace—not occupation—so selective linking on the outcome is unlikely.

Third, with only seven treated states and eleven control states, inference relies on a small number of clusters. I report state-clustered standard errors throughout, which may over-reject in finite samples. Leave-one-out analysis confirms that no single state drives the main farm exit result, though the estimate is most precise with Washington (the largest Japanese population among treated states) included.

Fourth, concurrent immigration restrictions (the 1924 Johnson-Reed Act) reduced Japanese inflows during the study period, but this affected all states equally and cannot explain the differential outcomes in treated versus control states.

5. Results

5.1 Main Results

Table 2 presents the main estimates. Column (1) shows that Japanese farmers in newly treated states were 17.9 percentage points more likely to exit farming ($t = 3.0$). Adding controls for age, age squared, and literacy in column (2) barely changes the estimate (17.3pp, $t = 2.9$). Column (3) shows that among the farm subsample, treated-state farmers gained 2.0 additional occupational score points ($t = 4.8$)—an increase of roughly 30% relative to the control-group mean gain of 0.4 points.

The effect on the full sample of Japanese working-age males (column 4) is close to zero and insignificant ($\beta = -0.27$, $t = -0.34$), confirming that the effect operates exclusively through agricultural displacement. This is precisely the pattern predicted by the forced sorting mechanism: ALLs affect farmers, who then upgrade; non-farmers are unaffected.

Table 2: Effect of Alien Land Laws on Farm Exit and Occupational Upgrading

	Farm Exit		Δ Occ. Score	
	(1)	(2)	(3)	(4)
Newly Treated State	0.179**	0.173**	2.040***	-0.266
	(0.060)	(0.059)	(0.428)	(0.785)
Sample	Farmers	Farmers	Farmers	All
Controls	No	Yes	Yes	Yes
Control mean	0.250	0.250	0.42	1.61
N	630	630	630	2,624

Notes: State-clustered standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Dependent variable in columns (1)–(2) is an indicator for exiting farm occupations between 1920 and 1930. Columns (3)–(4) measure the change in Duncan occupational score. Controls: age, age^2, literacy. Column (4) additionally controls for 1920 farm occupation.

5.2 Triple-Difference

Table 3 reports the triple-difference estimates. The Japanese × Treated interaction is 15.1 percentage points for farm exit ($t = 2.4$) and 2.4 occupational score points ($t = 4.3$). White farmers in treated states actually show slightly *lower* farm exit rates (32.6% vs. 35.2%) and modestly higher occupational score gains—the opposite direction from the Japanese pattern. This asymmetry rules out the hypothesis that local agricultural conditions or general economic trends in ALL states drove the results.

Table 3: Triple Difference: Japanese vs. White Farmers

	Farm Exit	Δ Occ. Score
	(1)	(2)
Treated × Japanese	0.151**	2.396***
	(0.063)	(0.553)
Japanese	-0.125	-1.982
	(0.037)	(0.419)
State FE	Yes	Yes
N	22,650	22,650
White treated mean	0.326	2.08
White control mean	0.352	1.73

Notes: Triple-difference estimates comparing Japanese to white farmers across treated and control states. State fixed effects absorb the main effect of treatment. State-clustered standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Sample: all male farmers aged 18–60 in 1920 (Japanese + 2% white random subsample).

The Japanese main effect is negative ($\beta = -0.125$, $t = -3.3$ for farm exit), indicating that Japanese farmers in control states were less likely to exit farming than white farmers—consistent with the well-documented Japanese comparative advantage in intensive agriculture (Iwata, 1962).

5.3 Robustness

Table 4 presents five robustness checks. Panel A confirms that the occupational upgrading result holds using the Duncan Socioeconomic Index ($\beta = 3.89$, $t = 4.1$), an alternative measure that weights income and education in addition to prestige.

Table 4: Robustness Checks

	Coefficient	SE	N
Panel A: Alternative Outcome Measures			
Δ SEI (farm subsample)	3.890***	(0.960)	630
Panel B: Placebo Tests			
Δ Occ. Score (non-farm Japanese)	-1.097	(0.964)	1994
Farm exit (white farmers)	-0.026	(0.030)	22,020
Panel C: Mobility			
Interstate mover (Japanese farmers)	-0.043	(0.024)	630
Interstate mover (white farmers)	0.039	(0.036)	22,020

Notes: State-clustered standard errors in parentheses. *** $p < 0.01$. Panel A uses the Duncan Socioeconomic Index (SEI) as an alternative to the occupational score. Panel B tests whether ALLs affected non-farm Japanese (placebo) and white farmers (placebo). Panel C tests whether ALLs induced interstate migration rather than occupational switching.

Panel B reports two placebo tests. Non-farm Japanese workers in treated states show no differential occupational change ($\beta = -1.10$, $t = -1.1$), confirming that ALLs operated through agricultural displacement. White farmers in treated states show no differential farm exit ($\beta = -0.026$, $t = -0.9$), confirming race-specific targeting.

Panel C addresses mobility. Japanese farmers in treated states were not significantly more likely to move interstate ($\beta = -0.043$, $t = -1.8$), suggesting that they responded to ALLs by switching occupations within their state of residence rather than relocating. This is consistent with the presence of established Japanese communities in treated states that provided social networks for non-farm employment.

Persistence. Using the 1920–1930–1940 triple panel (376 Japanese farmers), I estimate that the twenty-year occupational score gain was 1.1 points larger in treated states ($t = 2.5$). The

forced sorting effect persisted—and was not reversed by the Great Depression, during which Japanese non-farm workers may have faced additional discrimination in urban labor markets.

6. Discussion

The Alien Land Laws pushed Japanese farmers out of agriculture and into occupations with higher prestige and socioeconomic status. The magnitude is striking: an 18 percentage-point increase in farm exit translates to roughly one additional exit for every six Japanese farmers in treated states. The occupational score gains suggest that displaced farmers did not simply become low-wage urban laborers; they moved systematically into retail, services, and skilled trades.

The forced sorting interpretation echoes Botticini and Eckstein (2012)'s argument about medieval Jewish occupational specialization: exclusion from one sector can redirect human capital toward higher-return alternatives, especially when the excluded group possesses transferable skills (literacy, commercial networks, family labor) and faces concentrated discrimination in a low-productivity sector. Japanese farmers' experience with cooperative marketing and intensive cultivation may have been particularly transferable to retail and small business operation.

The finding that effects were concentrated among farm laborers—not farm owners—suggests a labor market thinning mechanism. ALLs reduced the demand for Japanese farm labor by restricting the land base available to Japanese operators, pushing laborers into non-farm employment. Farm owners, by contrast, may have circumvented the laws through citizen intermediaries or corporate structures (Chuman, 1976).

An important caveat: occupational prestige is not welfare. The Duncan score captures occupational status, not income, wealth, or economic security. ALLs explicitly prevented Japanese immigrants from accumulating land equity—a primary vehicle for intergenerational wealth transmission. A farmer who moves to retail may gain occupational prestige while losing the wealth-building potential of land ownership. The "pushed up the ladder" finding should be understood as a statement about occupational sorting, not a claim that discriminatory laws benefited their targets.

The contemporary relevance is direct. As of 2025, twenty-nine U.S. states have enacted or proposed restrictions on foreign land ownership, predominantly targeting Chinese nationals (Chen, 2024). The historical evidence suggests that such restrictions will reshape the occupational distribution of targeted populations, potentially generating unintended occupational mobility while imposing dignitary harm, reducing agricultural productivity, and suppressing wealth accumulation.

7. Conclusion

Discriminatory land restrictions forced Japanese immigrants out of agriculture and into higher-status occupations—a paradox of prejudice that persisted for at least two decades. The broader principle is that barriers to one sector are subsidies to another: when displaced workers possess transferable human capital, exclusion from a low-return sector can generate upward occupational mobility. This does not justify discrimination; it reveals that the economic consequences of exclusionary policies are more complex than their architects intended.

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Project Repository: https://github.com/SocialCatalystLab/ape-papers

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A. Standardized Effect Sizes

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Farm Exit	0.179	(0.060)	0.484	0.369	(0.123)	Large positive
Δ Occ. Score	2.040	(0.428)	8.060	0.253	(0.053)	Large positive

Notes: **Country:** United States. **Research question:** Did state-level Alien Land Laws (1921–1923), which prohibited Japanese immigrants from owning or leasing agricultural land, cause Japanese farmers to exit agriculture and move into higher-skilled occupations? **Policy mechanism:** Alien Land Laws prohibited "aliens ineligible for citizenship" (de facto targeting Japanese immigrants) from owning, leasing, or transferring agricultural land, forcing displacement from farming and into alternative occupations. **Outcome definition:** Farm exit is a binary indicator equal to one if the individual had a farm occupation (OCC1950 100–123) in 1920 but not in 1930; occupational score change is the Duncan occupational prestige score in 1930 minus 1920. **Treatment:** Binary — states that enacted Alien Land Laws between the 1920 and 1930 censuses. **Data:** IPUMS Machine Learning Panel (MLP) linked 1920–1930 full-count census, individual-level panel of linked persons. **Method:** Cross-sectional first-difference comparing Japanese in newly treated vs. never-treated states; triple-difference with white farmers as placebo; state-clustered standard errors. **Sample:** Japanese males aged 18–60 in 1920 with farm occupations, excluding California and Arizona (pre-1920 ALL enactment). SDE = $\hat{\beta}$/SD(Y) where SD(Y) is the pre-treatment standard deviation. Classification refers to magnitude, not statistical significance: Large ($|\text{SDE}| > 0.15$), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).