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OF TWO MILLION MEXICANS

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ABSTRACT

Two million Mexicans were granted lawful permanent residency in the U.S. under the Immigration Reform and Control Act of 1986 (IRCA). We find that a prominent proxy for legal status poorly detects this event. A decade after legalization, the share of Mexicans who are likely legal according to this proxy shows little change in survey data. Estimates rule out increases of three and eight percentage points relative to comparison groups of Mexican Americans and non-Hispanic Blacks, respectively – figures well below expectations based on administrative data. In contrast, an actual measure of status, citizenship, does rise in line with administrative facts.

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I. Introduction

The Department of Homeland Security (DHS) estimates about 11 million foreign-born individuals, the plurality from Mexico, resided in the U.S. without authorization as of 2022 (Baker and Warren, 2024). Despite high policy interest, studying this population is challenging due to limited official data identifying immigration status.¹ One solution has been to develop proxies for status in large-scale surveys such as the Current Population Survey (CPS), American Community Survey (ACS), and Census of Population, using characteristics like country of origin and education. However, by construction, any proxy based on time-invariant characteristics will not detect when an immigrant's legal status changes.

A more sophisticated proxy based on time-varying characteristics was developed by the Pew Hispanic Center (Passel and Cohn, 2014), then adapted by Borjas (2017) and Borjas and Cassidy (2019). At its core, the approach is a residual one: it identifies immigrants as “likely legal” based on citizenship, year of arrival, occupation, and public benefits receipt, then treats the remainder as unauthorized.² While sensible, this approach has potential for false negatives: any non-citizen immigrant arriving since 1980 who is not enrolled in one of the public programs or working in one of the occupations that require authorization will not be “likely legal” and thus classified as unauthorized. As the authors of these original studies acknowledged, and has been confirmed since (Heinzel et al., 2021), this leads to an undercount of immigrants in the U.S. legally and an overcount of the unauthorized.³

¹ The California Health Interview Survey, the National Agricultural Workers Survey, and the Survey of Income and Program Participation contain self-reported legal status, but the CPS, ACS, and Census do not include information on status beyond self-reported citizenship. It is possible to be a legal immigrant without being a naturalized citizen.

² Passel and Cohn's (2014) original methodology is described here (accessed July 18, 2023): <https://www.pewresearch.org/hispanic/2014/11/18/appendix-c-methodology-4/>. It also treats certain family members living in the same household of likely legal immigrants as authorized (Section II.B).

³ While Passel and Cohn (2014) reweighted the data to match other estimates of the unauthorized population, their approach may have still been biased (Van Hook et al., 2015). More recent versions of this approach have also produced downward biased estimates of the relative poverty rates of unauthorized immigrants (Spence et al., 2020).

In this paper, we offer novel insight into the validity of the proxy approach by asking to what extent *actual* changes in the legal status of immigrants cause them to move from “likely unauthorized” to “likely legal” status in survey data. To do so, we take advantage of the fact that a large cohort of previously unauthorized Mexicans – two million – became lawful permanent residents (LPRs) in the U.S. between 1989 and 1992 through the legalization programs of the Immigration Reform and Control Act of 1986 (IRCA) (Cascio and Lewis, 2019, 2023). As described below, these two million represented almost half of the Mexican immigrants residing in the U.S. at the time, so the change in status should be detectable in survey data.

Our primary analysis draws on two surveys – the Legalized Population Survey (LPS), a short panel of immigrants becoming LPRs through IRCA, and the Annual Social and Economic Supplements (ASEC) of the CPS. Because the ASEC gathered data on year of arrival and citizenship starting only in 1994, we initially focus on the proxy’s occupation and public benefits components. This is not a limitation: the year 1994 was in fact the first the IRCA cohort could have naturalized, so changes in citizenship should not have contributed to changes in likely legal status any earlier than this. We conclude our analysis by exploring how observation of naturalized citizenship and year of arrival affect the proxy’s reliability from 1994 forward.

Changes in occupation and receipt of public benefits do a poor job of detecting changes in actual legal status among Mexican immigrants due to IRCA. Adapting the Borjas (2017) approach to the occupation and benefit use variables in the LPS, we find that share likely legal among Mexican IRCA LPRs rises little between 1986 and 1992. Moreover, there is a similar increase in likely legal share in the ASEC over this period for Mexican Americans and non-Hispanic Blacks – groups whose legal status should not have changed – suggesting the proxy is sensitive to aging or aggregate shocks. Likewise, using a version of the proxy modified for the

ASEC prior to 1994 – and so incorporating only the benefit use and occupation variables of the original – we find that share likely legal rises little between 1986 and 1992 among a fixed cohort of Mexican ethnic respondents highly likely to have been affected by IRCA. It also increases only slightly through the late 1990s, both in absolute terms and relative to Mexican Americans and non-Hispanic Blacks in the same cohort, the modest increase driven by rising participation in public assistance programs. Our upper bound estimates of 3 and 8 percentage-point increases in the likely legal share, respectively, are well below the benchmarks we establish for the true relative increases in legalized share among Mexican ASEC respondents, using administrative records and the Census.

Moreover, the unmodified Borjas (2017) proxy – incorporating naturalized citizenship and year of arrival in addition to occupation and benefit use – also increases little in absolute or relative terms between 1994 and 2000 in the ASEC, despite citizenship rates for the IRCA cohort rising substantially over this period. Indeed, focusing on citizenship alone, we see increases in the ASEC starting in 1994 that are in line with expectations from administrative records (Rytina, 2002). The signal in increasing naturalization rates is thus cancelled out in the unmodified proxy, due to a declining share of the cohort having arrived in 1980 or prior.

This paper makes several contributions. First, no existing study has attempted to validate a proxy for immigrant legal status with an actual legalization event. We show that true changes in legal status induce at best modest changes in a commonly used proxy for status in survey data. Second, we explore how the individual variables used to construct this proxy – occupation, public benefit receipt, citizenship, and year of arrival – contribute to this finding. This aspect of our analysis reveals that only a true measure of status – citizenship – was able to capture the change in legal status experienced by Mexican immigrants due to IRCA.

II. Data

A. Sources and Samples

Our analysis draws on two survey data sources. The first is the LPS, a panel that tracked the characteristics of applicants to IRCA’s General Legalization Program (GLP) from before application (retrospectively, in a 1989 survey) to 1992.⁴ While the full LPS included unsuccessful GLP applicants, and GLP applicants from across the world, we limit the sample to applicants from Mexico who became LPRs by 1992. We also restrict attention to Mexicans in this subsample born 1940 to 1969. These cohorts represent 81% of all Mexican IRCA LPRs.⁵

The value of the LPS sample is that all respondents became LPRs. However, it is limited in both individual characteristics and years. We therefore also examine changes in likely legal status among self-reported Mexicans born 1940 to 1969 in the 1983 to 2000 waves of the CPS ASEC (Flood et al., 2023).⁶ Data are collected in March, and labor force variables refer to the prior calendar year (1982 to 1999). Mexican ethnicity is a strong signal of nativity, and thus of potential “treatment” by IRCA: 82% of self-reported Mexicans were foreign born in the 1994 through 2000 ASEC, where both nativity (inferred from citizenship) and ethnicity were reported. By contrast, only 13% of self-reported Mexican Americans were foreign born. We use these figures to estimate the change in *actual* IRCA-legalized share among Mexicans (and Mexican Americans) in the ASEC, i.e., to establish a benchmark for the ASEC analysis (Section II.C).

Because the definition of “likely legal” relies on variables that might evolve across the lifecycle or in response to economic shocks (Section II.B), our analysis requires a comparison

⁴ The data are available at <https://mmp.opr.princeton.edu/LPS/LPSpage.htm>. See Cascio and Lewis (2019) for further description. The LPS does not cover applicants through IRCA’s Special Agricultural Workers (SAW) program. LPRs from the SAW program are covered by other survey data, including the ASEC.

⁵ Authors’ calculations using microdata on IRCA LPRs (U.S. Department of Justice, 1991-1995 a,b,c).

⁶ We limit attention to the 1940 to 1969 birth cohorts because: (1) The ASEC only covers those over age 14, which in the earliest wave in our sample (1983) means born before 1970; and (2) This set of cohorts are of working age through 1999, the end of our sample period.

group. Our first comparison group consists of self-reported Mexican Americans.⁷ While U.S. born Hispanics have served as a comparison group in estimating IRCA’s labor market impacts (e.g., Amuedo-Dorantes et al., 2007), a concern is that ethnic self-identification may be endogenous to legal status.⁸ However, there was no trend in the likelihood of being foreign-born among Mexican-American ASEC respondents between the 1994 and 2000 surveys (Figure A1), despite increasing citizenship among the IRCA cohort (Rytina, 2002). Endogenous ethnic identification is also not an issue for our second ASEC comparison group – non-Hispanic Blacks.

B. The “Likely Legal” Proxy

The Borjas (2017) adaptation of the Passel and Cohn (2014) approach to estimating immigrant legal status in survey data was based on ASEC waves from 1994 and later, which include data on year of immigration and citizenship status. These variables allow Borjas (2017) to classify ASEC respondents as “likely legal” not only if they worked in a licensed occupation or received certain federal benefits, but also if they were a naturalized citizen or reported arriving in the U.S. in prior to 1980 – or if they had a spouse, parent, or grandparent with any of these characteristics. See Table A1 for details.

Because our application necessitates the use of ASEC data from before 1994, we cannot replicate this proxy for most of our analysis. Conveniently, however, the earliest IRCA LPRs would have been eligible to naturalize in 1994. As such, the pertinent analysis for the pre-1994 period concerns the non-citizen components of the likely legal proxy – occupation and benefit use. In principle, these variables should distinguish between LPRs and authorized immigrants.⁹

⁷ We limit the comparison groups to the 1940 to 1969 birth cohorts.

⁸ More generally, ethnic self-identification may be endogenous to economic outcomes or incentives. See, for example, Duncan and Trejo (2011) and Antman et al. (2016).

⁹ The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) did limit federal benefits to LPRs, unless states “filled in” with their own funds. However, these restrictions were only effective starting in 1996. Moreover, California, which was home to more than half of Mexican LPRs, was a “fill in” state.

Table A1 lists the variables available to calculate the proxy in the LPS and our full ASEC sample (1983-2000). We first look at what we call the “harmonized” definition of likely legal, feasible in the LPS; the LPS includes fewer benefit use variables and does not connect relatives. We then consider a “broader definition” in the 1983-2000 ASEC, where the full slate of benefit use variables is available, and relatives can be linked. Lastly, we consider the unmodified version of Borjas (2017) from 1993 to 1999 (ASEC years 1994 to 2000), when it is possible to do so and when the added components – year of arrival and citizenship (nativity) – are relevant.¹⁰

C. *Benchmarks*

What should we expect to find if the proxy works well? The answer depends on the survey. In principle, the share likely legal should rise from zero to one in the LPS, where the entire sample became LPRs. In the ASEC, we expect less of an increase in likely legal share, but it should still be substantial – on the order of a 30 percentage-point (pp) rise.

To arrive at this figure, we proceeded in two steps. First, we used Census and administrative data to estimate the share of all foreign-born Mexican U.S. residents born 1940 to 1969 who became LPRs due to IRCA. These data imply that Mexicans legalized directly under IRCA comprised a majority (56%) of foreign-born Mexicans residing in the U.S. in 1990 – roughly the time of legalization.¹¹ This number falls to 47% if we adjust for the potential undercount of Mexicans in the 1990 Census.¹² While this share was at risk of falling over the 1990s due to the arrival of new Mexican immigrants, we mitigate this risk by focusing on a fixed set of (aging) birth cohorts. Some new arrivals in these birth cohorts were also relatives of IRCA

¹⁰ We edited the Borjas (2017) STATA code for compatibility with changes in how IPUMS coded the citizenship variable, and to ensure those with missing values of certain variables were not treated as likely legal by default.

¹¹ According to public use administrative records – the *Legalization Summary Public Use Tapes* – 1,594,430 Mexicans born 1940 to 1969 were legalized under IRCA (U.S. Department of Justice, 1991-1995a,b,c). According to the 1990 Census, there were 2,824,899 Mexican-born individuals born 1940 to 1969 living in the U.S. at the time (Ruggles et al., 2024). The ratio of the two figures is 0.56, or 56%.

¹² With a 20% Mexican undercount (Van Hook and Bean, 1998) the share falls to $1,594,430 / (2,824,899 \times 1.2) = 0.47$.

LPRs, who entered as LPRs through family sponsorship (Cascio and Lewis, 2023). We estimate that 43% of foreign-born Mexicans born 1940 to 1969 and in the U.S. in 2000 – roughly the end of our sample period – were legalized directly through IRCA or family sponsorship.¹³

Second, we account for the fact that we do not directly observe foreign-born Mexicans in the full 1983-2000 ASEC sample, since country of origin is not observed prior to 1994. Instead, we use the ethnicity variable (i.e., Hispanic code). As a result, the 43% figure must be scaled down by the likelihood of being foreign conditional on self-identifying as Mexican. As earlier described, 82% of self-identified Mexicans are foreign-born in our 1994-2000 ASEC sample, whereas this figure is only 13% for self-identified Mexican Americans (Table B1; Figure A1). For the comparison between Mexicans and Mexican Americans in the ASEC, a lower bound estimate on the anticipated increase in likely legal share by 2000 is thus $(0.82-0.13) \times 0.43$, or 0.295 – a 29.5 pp increase.^{14, 15}

We also examine changes in likely legal share for women and high school dropouts, groups for which we might expect larger increases in likely legal share due to higher rates of eligibility for public benefits. We carry out benchmark calculations for these groups in a similar fashion; details are in Table B1. For the comparison to Mexican Americans, the anticipated increase in legalized share among Mexicans in the ASEC varies a bit across groups but is in the

¹³ The 2000 Census (Ruggles et al., 2024) implies there were 4,240,703 Mexicans in the U.S. from the 1940 to 1969 birth cohorts, which we adjust upward for a roughly 8% undercount of Mexicans that year (Card and Lewis, 2007) to 4,579,959. In addition to the 1,594,430 legalized by IRCA, we estimate 357,575 family-sponsored Mexican LPRs admitted from the 1940 to 1969 cohorts in the 1990s (authors' calculations using *Immigrants Admitted to the United States* 1991-1997, 1999, 2000 and *Lawful Immigrant Files*, 1998). The share of Mexicans who were IRCA or post-IRCA family-sponsored admissions thus declined from 47% in 1990 to 43% in 2000 $((1,594,430+357,575)/4,579,959)$, not accounting for return migration or mortality. See Table B1.

¹⁴ This is a lower bound estimate because we assume the probability of being legalized through IRCA is the same for self-reported Mexicans and self-reported Mexican Americans. However, the probability for Mexican Americans may be lower.

¹⁵ Only 7.5% of non-Hispanic Blacks in the 1994-2000 ASEC sample were foreign-born, and a very small percent (approximating zero) of these would have become LPRs through IRCA. For the comparison to non-Hispanic Blacks, a lower bound estimate on the anticipated change in likely legal share is thus larger, at $(0.82-0) \times 0.43 = 0.35$.

ballpark of the benchmark for the full sample – a 34.1 pp increase by 2000 for men, a 24.1 pp increase for women, and a 31.4 pp increase for dropouts.¹⁶

III. Results

A. Findings from the LPS

Figure 1 displays the share likely legal based on the benefit use and occupation variables in the LPS (harmonized definition; Table A1) both before and after IRCA, constructed using both waves of the LPS and the 1986-88 (labeled 1986) and 1992-94 (labeled 1992) ASEC files. The lowest line corresponds to Mexicans in the LPS, the next line up to self-identified Mexicans in the ASEC, and the upper two lines to self-identified Mexican Americans and non-Hispanic Blacks, also from the ASEC. Figure A2 shows longer time series for this likely legal definition in the ASEC samples, which we return to below.

While the share likely legal rises a little among Mexicans in both the LPS and the ASEC by 1992, it does not increase noticeably more than in comparison groups of Mexican Americans and non-Hispanic Blacks (see Table A2a for exact numbers).¹⁷ Difference-in-differences (DD) estimates – subtracting the change in the likely legal share for the comparison group from the change in that share for the treatment group (Table A2b) – imply no significant change in Mexicans’ likely legal share in either the LPS or ASEC when compared to Mexican Americans

¹⁶ To calculate the benchmark for the analysis of high school dropouts, we need to know the high school dropout shares among both IRCA LPRs and subsequent family-sponsored admissions. IRCA’s GLP and SAW provisions legalized 840,312 and 754,118 Mexicans born 1940-69, respectively. According to the LPS, 65.7% of GLPs were high school dropouts, and according to 1989 wave of the National Agricultural Workers Survey (NAWS), 93% of SAWs (respondents with a pending legalization application, following Cascio and Lewis (2019)) were high school dropouts. Dividing by the undercount-adjusted number of Mexican high school dropouts from these cohorts in 1990, we calculate that $(840,312 * 0.657 + 754,118 * 0.93) / 2,417,786 = 51.8\%$ were legalized by IRCA. For 2000, we impose that Mexican LPRs admitted in the 1990s had the same dropout rate as IRCA LPRs, arriving at an anticipated increase in legalized share of 31.4 pp. See Table B1.

¹⁷ The likely legal share is far below one even for the comparison group of Mexican Americans, almost all of whom are legal residents of the U.S. (Section II.A). This is a more limited “harmonized” version of the proxy, however, that could be constructed in the LPS data. The likely legal share is also not zero among LPS Mexicans prior to legalization, though some of that may be due to run-of-the mill occupational misclassification or the fact that some Mexicans had already qualified for benefits by the first wave of the LPS.

(coef. (se.) = 0.00467 (0.0120) and 0.0161 (0.0125), respectively). Comparisons of Mexicans to Blacks produce estimates a couple of percentage points larger and statistically significant (coef. (se.) = 0.0210 (0.00986) and 0.0324 (0.0107), respectively). However, all DD estimates are significantly below not just one, but also the 30 pp ASEC benchmark.¹⁸

B. *Longer Term Comparisons in the ASEC*

The findings thus far are consistent with other LPS-based evidence that IRCA had little impact on the occupations of newly legalized Mexicans (Kassoudji and Cobb-Clark, 2000), as well as the fact that IRCA applicants under the GLP had limited access to public programs until 1992.¹⁹ However, the estimates could be biased downward by the limited variables available to estimate likely legal status in the LPS. We therefore turn to the broader definition of likely legal that is feasible in the 1983-2000 ASEC, which is identical to Borjas (2017), less the citizenship and year of immigration criteria.

Figure 2 Panel A shows trends in likely legal share by group in these data, with years grouped in three-year bins to increase precision. Like in Figure 1, share likely legal rises slightly among Mexicans between 1985-87 and 1991-93. However, we now see that most of this increase was after 1990. We also see that the increase was almost identical among Mexican Americans, the vast majority of whom were U.S. born (Section II.A). There is, furthermore, little increase in the share likely legal after 1991-93 for either group, suggesting narrow timing was not the primary reason for the small increases in likely legal share in Figure 1. Indeed, even using the

¹⁸ Regressions in Table A2b were estimated in the stacked individual-level data, with a likely legal dummy (by the harmonized definition) regressed on a dummy for “treatment” group, dummy for 1992, and their interaction, with the coefficient on the latter representing the DD estimate. Standard errors are robust to arbitrary error correlation within household and to heteroskedasticity. The upper end of a 95% confidence interval implies a 5 pp increase in likely legal status for Mexicans in the ASEC compared to Blacks in the ASEC, the largest DD estimate.

¹⁹ Medicaid is one of the programs incorporated into the proxy (Table A1), and GLP applicants were ineligible for Medicaid (and cash welfare and food stamps) for a five-year period beginning the date they were granted temporary status (Cascio, Cornell, and Lewis, 2024). Temporary status awards occurred in 1987 and 1988.

narrower harmonized definition of likely legal from Figure 1, the longer-term patterns are similar (Figure A2). The time series in share likely legal for our other comparison group, non-Hispanic Blacks (top line), is flatter. Relative to Blacks, Mexicans therefore show a slightly larger increase in likely legal share. However, the relative gain still appears to be small in relation to the true increase in legalized share in the surveyed population.

As noted, the ASEC identifies foreign-born respondents starting in 1994. Figure 2 Panel A also shows that, as anticipated, limiting the Mexican sample to the foreign-born lowers their likely legal share. However, it does not change the trend much. Similarly, limiting the comparison groups to the native-born changes the level slightly but not the trend. We cannot rule out that observing nativity would have had a bigger effect in earlier years, but this aligns with the ethnicity variable offering a reasonably strong signal of foreign-born status.

We now turn to a formal event-study model differencing the full series. Specifically, Figure 2 Panel B plots the estimated coefficients, θ_τ , with 95% confidence intervals, on interactions between a Mexican dummy and dummies for year bins, from the regression:

$$(1) \quad LL_{it} = \alpha_0 + \alpha_1 Mex_i + \sum_{\tau \neq 1985-87} \theta_\tau D[t \in \tau] \times Mex_i + \delta_t + \varepsilon_{it},$$

where LL_{it} is a dummy equal to 1 if respondent i in year t meets the criteria to be likely legal under the broader definition; Mex_i is a dummy for Mexican ethnicity, $D[t \in \tau]$ are indicators for three-year bins (excluding 1985-87); δ_t are coefficients on year dummies (unrestricted year effects); and ε_{it} is an error term. θ_τ thus represents the change in share likely legal for Mexicans relative to Mexican Americans (or non-Hispanic Blacks) in year bin τ compared to 1985-87.

Standard errors are robust to heteroskedasticity and error correlation within household.²⁰

²⁰ Figure A3 reproduces the event study graph in Figure 2 Panel B, but for the harmonized definition of likely legal feasible in the LPS. The post-IRCA coefficient estimates are smaller in magnitude in Figure A3 than in Figure 2 in the comparison to non-Hispanic Blacks.

Figure 2 Panel B reveals no further convergence of Mexicans to the likely legal share of Mexican Americans after 1992: the gap between Mexicans and Mexican Americans remains close to and statistically indistinguishable from what it was in 1985-87. As expected, there is a slightly larger increase relative to non-Hispanic Blacks, owing to their flatter trends. For both comparison groups, the estimates also imply no convergence prior to 1985-87, consistent with the parallel trends assumption required for causal inference in a DD model.

Table 1 summarizes the estimates in Figure 2 using a simple DD specification, which replaces the interaction terms in (1) with $Mex_i \times D[t \geq 1988]$. The means are themselves not encouraging: barely half of Mexican Americans and two-thirds of non-Hispanic Blacks have the occupational or benefit-use characteristics of those who are likely legal (Panel A). To be clear, the likely legal share is lower among Mexicans, at around 25%, but this figure hardly budges after IRCA, rising less than 3 pp. Even some of this small change may also be due to cohort aging or macroeconomic trends: the increase for Mexican Americans is almost as large, at 1.8 pp, and the relative increase is below 1 pp in magnitude and insignificantly different from zero (coef. (se.) = 0.00992 (0.0102); Panel B). The change for non-Hispanic Blacks is negative (Panel A), and so the corresponding increase for Mexicans relative to non-Hispanic Blacks is larger and statistically significant. However, it is still small in magnitude (coef. (se.) = 0.0376 (0.00839); Panel C).

The next estimates in the table address possible biases from differential changes in the composition of the treatment and comparison groups by adding flexible controls for age and years of education – a quadratic in each that is allowed to differ before and after 1985-87. This specification lowers the estimated relative increase when Mexican Americans are the comparison group (Panel B) and raises it when non-Hispanic Blacks are the comparison group (Panel C).

However, the upper bound of a 95% confidence interval on the DD estimate is below 8 pp when the comparison group is Blacks and below 3 pp when the comparison group is Mexican Americans. Both are again well below 30 pp, our lower bound estimate of the true relative increase in legalized share for Mexicans in the ASEC (Section II.C).

C. Subpopulation Heterogeneity in the ASEC

The likely legal proxy may work better in some subpopulations. For example, some groups may be more likely to use public benefits – high school dropouts (due to low skill levels yielding a higher eligibility rate) and women (due to the relative generosity of U.S. social assistance for single mothers).²¹ We examine this possibility, limiting both the treatment and comparison groups accordingly.

The estimates for high school dropouts are in column (4) of Table 1; raw shares and the event study estimates are in Figure A4. Contrary to expectations, the increase in likely legal share from before to after IRCA for Mexicans is smaller – and not statistically significant – in this subsample (Panel A). While it is larger relative to Mexican American dropouts than in the full sample, the DD estimate is not robust to controls (Panel B). Even for the larger DD estimate (without controls), the upper bound on the 95% confidence interval (6.5pp) is well below the anticipated increase in legalized share for this group in the ASEC (31.4 pp; Table B1).

The estimates for women (and men) are presented in Table A3, with underlying event studies shown in Figure A5. The DD estimates are, in fact, larger for women, regardless of the comparison group, but are only statistically significant in comparison to non-Hispanic Blacks (coef. (se.) = 0.0445 (0.0100) and 0.0285 (0.00988) for women and men, respectively). Even so,

²¹ Separate estimates by sex are also of independent interest. For example, Amuedo-Dorantes et al. (2007) argued there were sex differences into the response to legalization, with females more likely to respond by dropping out of the workforce, leading to selection bias in the measurement of wage impacts of legalization.

the upper bounds on the 95% confidence intervals (in the model with controls) are 9 pp for women and 7.3 pp for men – again well below the ASEC benchmarks of 24.1 and 34.2 pp, respectively, for these groups (Table B1).

D. Estimates by Proxy Component

We also estimated effects for separate components of the proxy in the full sample, examining separate (but not mutually exclusive) dependent variables for meeting the benefit use and occupational criteria for being likely legal, as well as being a spouse, child, or grandchild of someone with these characteristics. Figure 3 plots the event study coefficients; Table A4 gives the underlying means and DD estimates.

The benefit use component (Panel A) indeed drives what increases in likely legal share we observe. Though benefit use levels for Mexicans are lower than for either comparison group, they are rising slightly faster over time: 2 pp compared to Mexican Americans, and 5 pp compared to Blacks (coef. (se.) = 0.0234 (0.00717) and 0.0501 (0.00642), respectively). The DD estimates are also robust to the additional age and education controls, and the timing aligns with when most IRCA LPRs could access federal social assistance, with relative increases in benefit receipt arising 1991-93 and later (Section III.B). Being a relative of someone using these public benefits (or in a designated “authorized” occupation) also robustly increases the overall relative change in likely legal share, regardless of the comparison group (Panel C). By contrast, likely legal share is actually pulled down by a relative decline in the share working in licensed occupations (Panel B), which is rising in each comparison group but not among Mexicans.

Implicit in these findings are independently interesting estimates of the effect of legalization on public benefit use. Using our benchmarks as a crude “first stage” for how much IRCA might have increased the true share of Mexicans who were legal relative to each

comparison group, these estimates imply that legal status increases benefit receipt among Mexicans by about 7 to 14 pp.²² While the Earned Income Tax Credit (EITC) is not included among these benefits, these results are consistent with the Cascio and Lewis (2019) finding that IRCA's legalization programs increased tax filing and EITC receipt.

E. The Unmodified Borjas (2017) Proxy and the Importance of Citizenship

The analysis thus far has excluded two variables in the original proxy – citizenship and year of arrival – because they are not available in the ASEC until 1994. Figure 4 Panel A gives trends in means for the unmodified Borjas (2017) proxy from 1994 through 2000. We plot the data a year prior to the survey year, consistent with earlier graphs. However, due to differences in scale, we now give the means in separate graphs (with the same y-axis range) for the comparison groups (upper half of figure) and Mexicans (lower). Likely legal share under the unmodified proxy rises only a little bit for Mexicans over this period. Moreover, the increase under the unmodified definition is like what we found under the broader definition over the same period (Figure A6), suggesting these additional components jointly add little signal of legal status.

And yet, citizenship – an actual measure of legal status – appears to do a good job on its own of capturing changes in the status of Mexicans. There is a 15 pp rise in citizen share among Mexicans in the ASEC between 1993 and 1999 (Figure 4 Panel B). This figure is in line with expectations from actual naturalizations among Mexican IRCA LPRs. Using administrative data, Rytina (2002) shows that 27% of Mexican IRCA LPRs naturalized by the end of the 1990s, and roughly half of Mexicans were legalized by IRCA (Section II.C). We might therefore expect an increase in the likelihood of citizenship of roughly half this size in the ASEC.

²² Our benchmark in the comparison with Mexican Americans was 0.3, and $0.02/0.3 = 0.067$. Using non-Hispanic Blacks as a comparison group instead, we noted, the benchmark should be larger (as almost no Blacks changed legal status due to IRCA), at around 0.35. This implies an increase in program use of $0.05/0.35 = 0.142$.

An implication is that the simultaneous incorporation of year of arrival in the likely legal proxy largely cancels out the signal in rising citizenship rates. Indeed, the share of Mexicans arriving before 1980 falls 6 percentage points between 1993 and 1999, from 38% to 32%; excluding this variable from the proxy, the likely legal share rises more over this period, from 46% to 56%. Thus, a variable meant to capture legal status among non-citizens – year of arrival – is unsuccessful in doing so, muddying the signal of legal status in the full proxy.

IV. Discussion and Conclusion

This paper finds that a prominent proxy for legal status exhibits little increase among Mexicans who gained LPR status through IRCA, either in absolute terms or relative to comparison groups not directly affected by IRCA's legalization programs. The observed increase derives from benefit use: gaining legal status raises Mexicans' use of public programs by 7 to 14 pp. This is offset by a relative decline in the share of Mexicans in licensed occupations; a relative decline over time in the share of immigrants arriving prior to 1980 also contributed to the proxy's poor performance in the 1990s. Together, these variables – occupation, benefit use, and year of arrival – may thus have limited value in generating a proxy for legal status among Mexicans in survey data, and by extension, in capturing changes in the size of unauthorized population.

Why might these variables carry such low signal for legal status? Contributing factors may include low take-up of public programs among immigrants (e.g., Currie, 2004), and the fact that legalization was not associated with much immediate change in the occupations of those legalized (Kossoudji and Cobb-Clark, 2000). Many of the Mexicans legalized under IRCA may have also continued to be farm workers, an unlicensed occupation. In fact, nearly half (47%) of Mexicans legalized under IRCA did so under the Special Agricultural Workers (SAW)

program.²³ In addition, pre-1980 arrivals – or even pre-1982 arrivals (used in Heinzel et al., 2021) – do not capture immigrants eligible for the SAW program, who could have arrived as late as 1986. Year of arrival might also be a poor choice as a proxy for legal status in general, as it is reported inconsistently and with considerable error (Lubotsky, 2007).²⁴

Nevertheless, changes in self-reported citizenship in the ASEC *do* appear to capture actual naturalizations among IRCA LPRs.²⁵ This finding suggests researchers interested in the effect of legal status, descriptively or causally, may be better served by pursuing or creating data sources that measure legal status directly.²⁶

²³ 47% of our sample legalized through the SAW program (authors' calculations for 1940 to 1969 birth cohorts using Department of Justice (1991-1995 a,b,c)). This includes 57% of men and 25% of women.

²⁴ While we cannot be certain this validation exercise applies to more recent waves of unauthorized immigrants, the population remains dominated by Mexico (Baker and Warren, 2022).

²⁵ Most of those identified as “likely legal” in recent data are so classified through citizenship anyway (60% according to Heinzel et al., 2021), something that is true in our data by the end of the 1990s. This reinforces that the other variables used in the proxy are unhelpful in improving its validity (Figure 4).

²⁶ This is what the DHS already does for their estimates of the unauthorized population, and the idea has made its way into some academic research. For example, Kuka et al. (2020) use noncitizens to proxy for the unauthorized population.

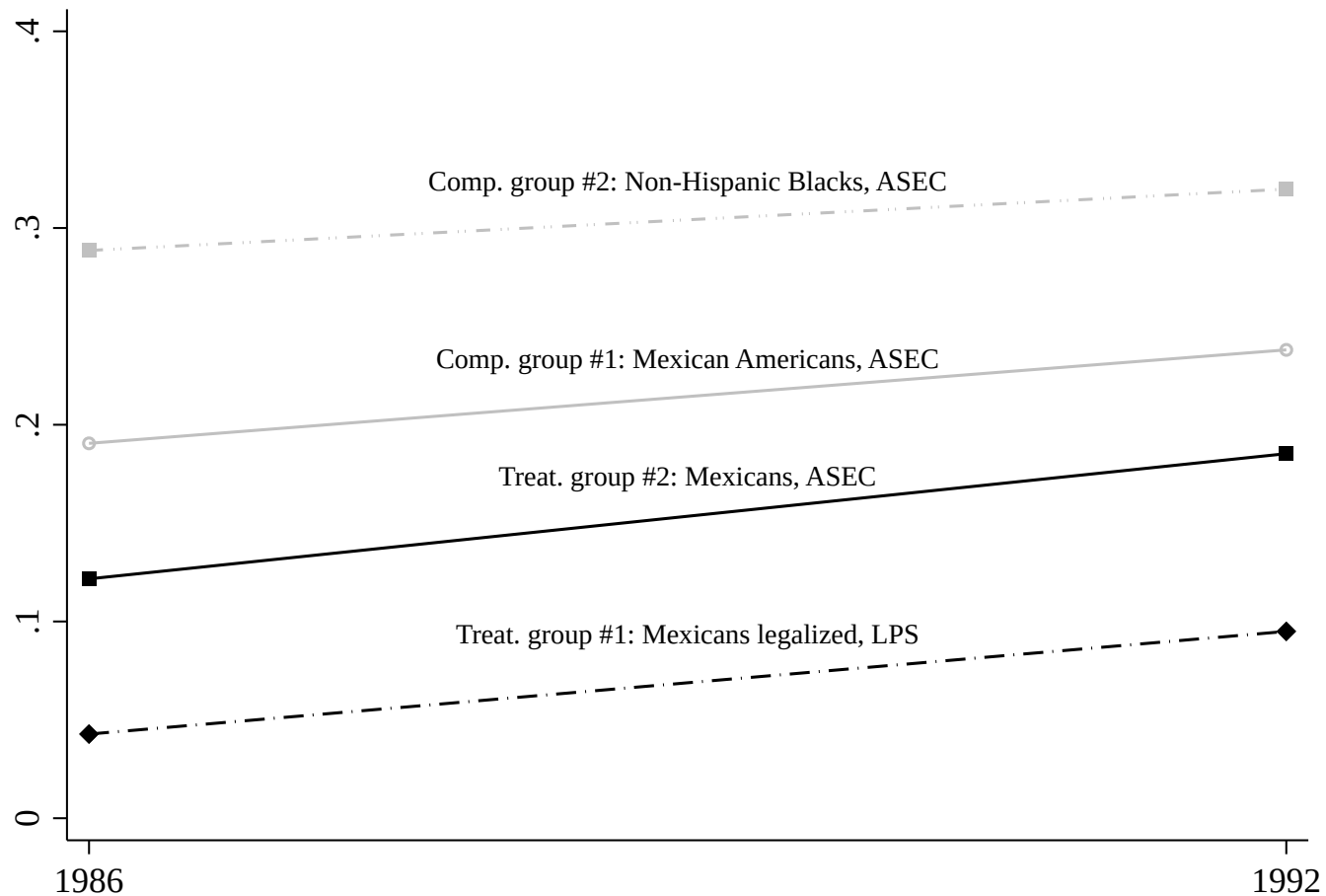
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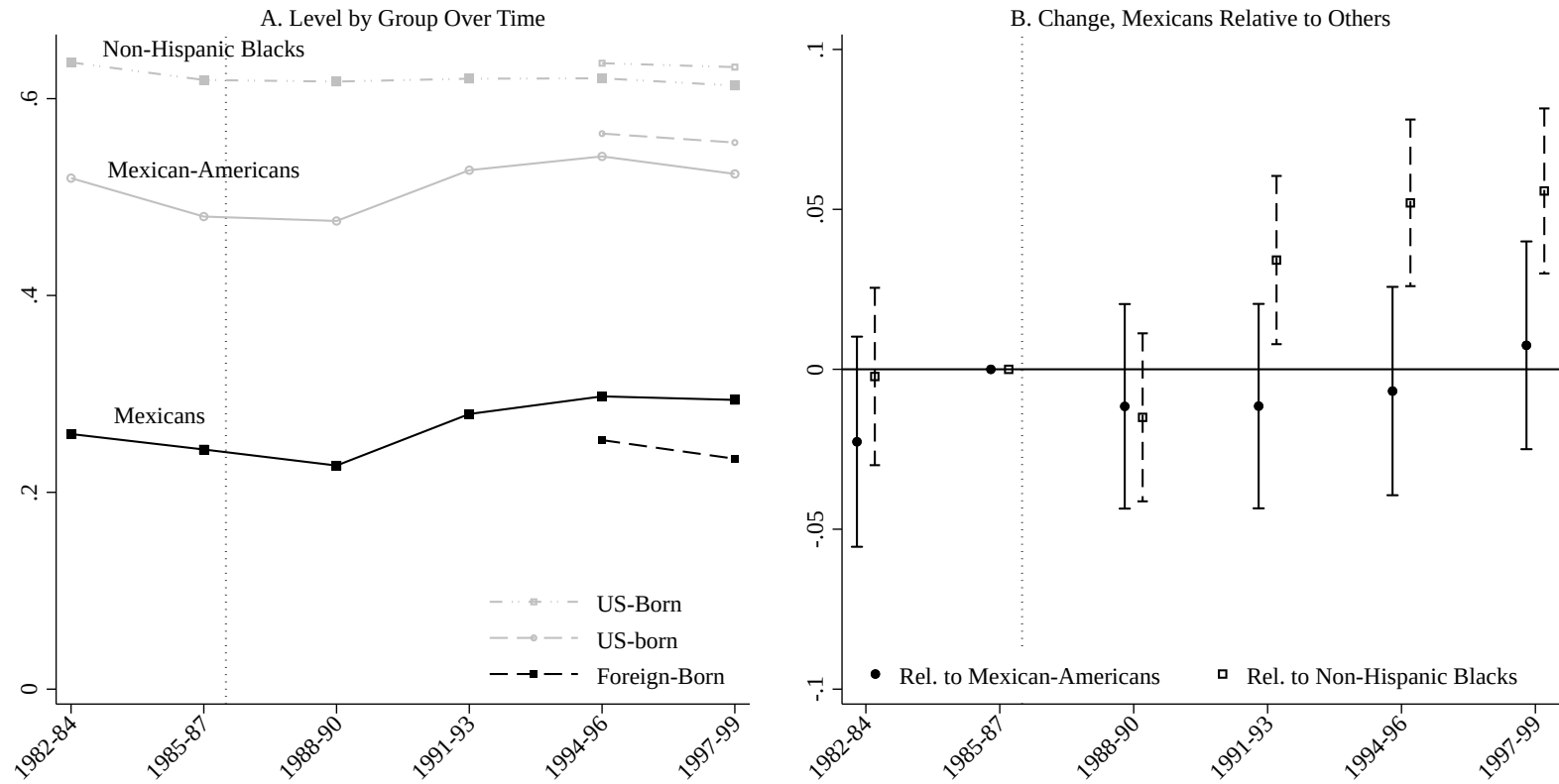
Figure 1. Likely Legal Share (Harmonized Definition) by Group, Before and After IRCA



Sources: Treatment group #1: 1989 and 1992 waves of the Legalized Population Survey (LPS). Comparison groups and treatment group #2: 1986, 1987, 1988 (for 1986) and 1992, 1993, and 1994 (for 1992) Annual Social and Economic Supplements (ASEC) of the Current Population Survey. All samples limited to those born 1940-69.

Notes: Figure plots share likely legal under the harmonized definition (Table A1). The 1989 LPS measured characteristics prior to implementation of IRCA, roughly in 1986. ASEC data year is the year prior to ASEC survey year (e.g., the 1987 survey gives 1986 data). See Table A2a for the means underlying this figure and Table A2b for the difference-in-differences of these means.

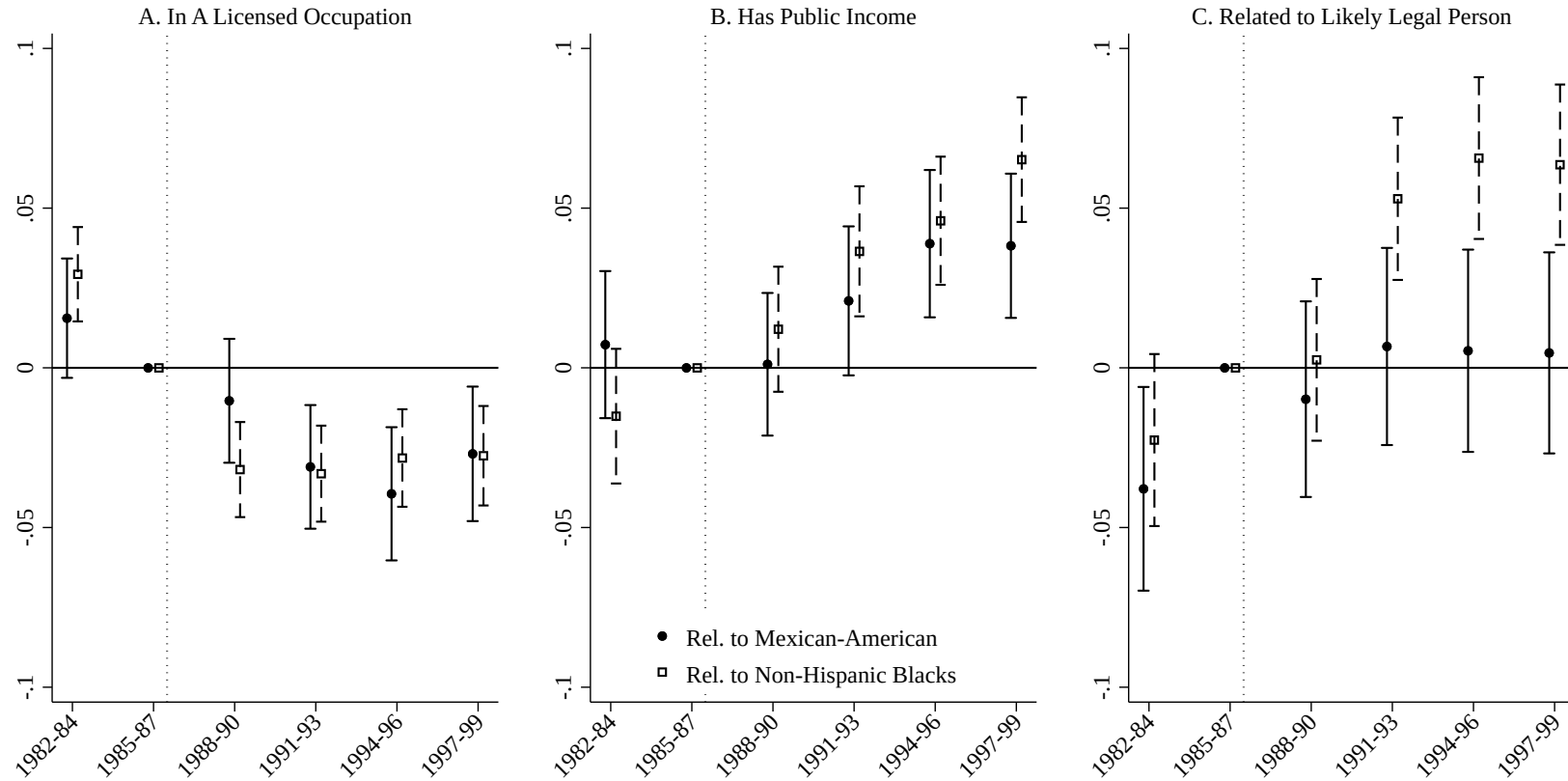
Figure 2. Likely Legal Share, Broader Definition



Sources: ASEC, 1983-2000. Sample limited to those born 1940-69.

Notes: Panel A plots share likely legal under the broader definition (Table A1), by group and year bin. Panel B shows coefficients on interactions between year bin dummies and a dummy for Mexican ethnicity from a regression that also includes dummies for year and Mexican ethnicity; the comparison group consists either of Mexican Americans or non-Hispanic Blacks. The outcome variable is a dummy for likely legal under the broader definition. Bars show 95% confidence intervals, with standard errors robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data).

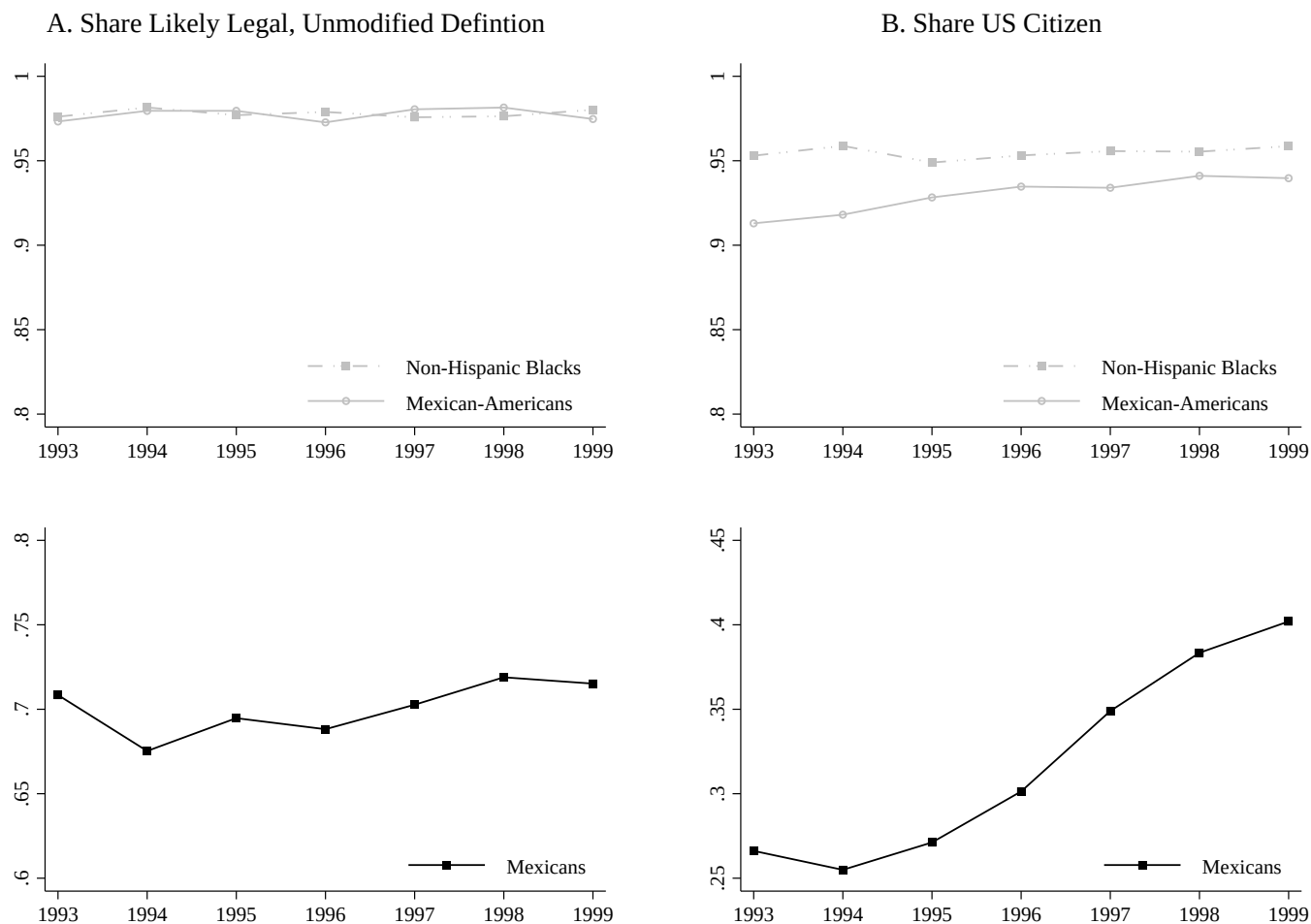
Figure 3. Changes in (Not Mutually Exclusive) Components of Likely Legal Share



Sources: ASEC, 1983-2000. Sample limited to those born 1940-69.

Notes: Each panel plots coefficients on interactions between year bin dummies and a dummy for Mexican ethnicity from a regression that also includes dummies for year and Mexican ethnicity; the comparison group consists either of Mexican Americans or non-Hispanic Blacks. The dependent variable is a dummy for a component of likely legal status: occupation (Panel A), public benefit use (Panel B), or being related to someone with either (Panel C). The broader definition of likely legal (Table A1) is defined as being in any of these categories, so they are not mutually exclusive. Bars show 95% confidence intervals, with standard errors robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data).

Figure 4. Other Legal Status Measures



Sources: ASEC, 1994-2000. Sample limited to those born 1940-69.

Notes: Panel A plots the share with likely legal status defined using code from Borjas (2017), which includes everything in the “broader” definition (Table A1) plus being a naturalized citizen or an immigrant who arrived before 1980. Panel B plots the share who are U.S. citizens. All are plotted in the year prior to the survey.

Table 1. Likely Legal: Means by Group, Changes Before and After IRCA, and Differences-in-Differences, 1982-1999

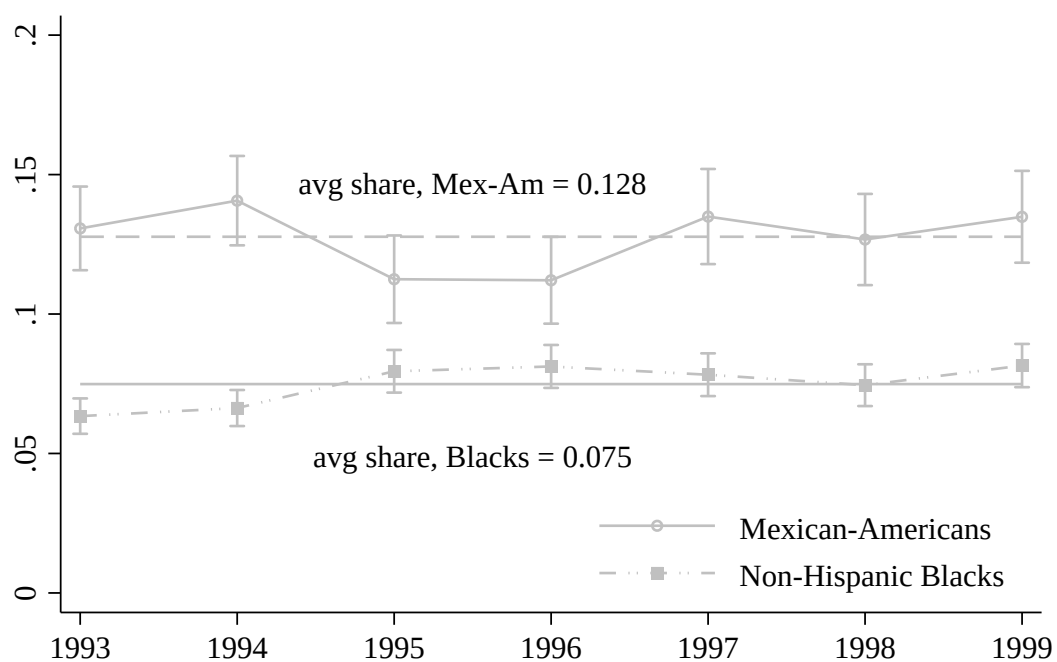
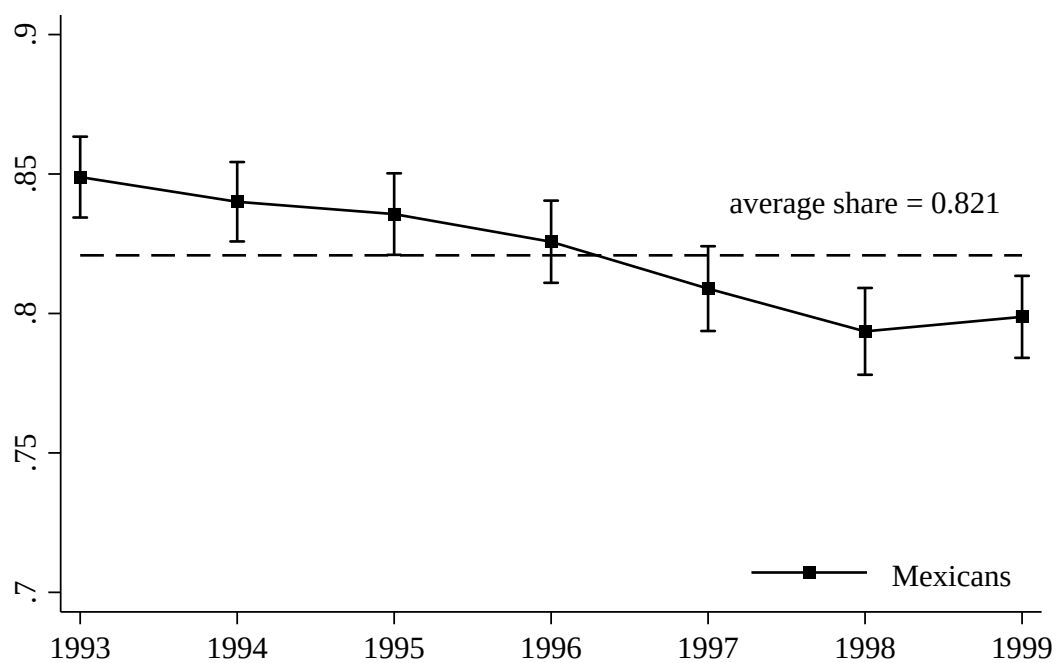
	<u>All Born 1940-69</u>			<u>w/o HS</u>
	Before	After	Change	Change
	(1)	(2)	(3)	(4)
<i>A. Share Likely Legal Over Time, by Group</i>				
Mexicans	0.251	0.278	0.0275 (0.00720)	0.0113 (0.00751)
Mexican-Americans	0.499	0.516	0.0176 (0.00742)	-0.0296 (0.00963)
Non-Hispanic Blacks	0.628	0.618	-0.0101 (0.00431)	-0.0145 (0.00620)
<i>B. Difference: Mexicans - Mexican Americans</i>				
Difference	-0.248 (0.00841)	-0.238 (0.00574)	0.00992 (0.0102)	0.0409 (0.0121)
Difference with Controls: ^a	-0.182 (0.00895)	-0.173 (0.00618)	0.00839 (0.0109)	0.0143 (0.0132)
<i>C. Difference: Mexicans - Non-Hispanic Blacks</i>				
Difference	-0.378 (0.00708)	-0.340 (0.00451)	0.0376 (0.00839)	0.0259 (0.00974)
Difference with Controls: ^a	-0.346 (0.00807)	-0.287 (0.00541)	0.0584 (0.00972)	0.0290 (0.0124)
<i>Observations</i>				
Mexicans	10,426	28,831	39,257	28,780
Mexican-Americans	15,530	23,103	38,633	20,601
Non-Hispanic Blacks	41,102	65,611	106,713	46,731

Sources: 1983-2000 ASEC. Sample limited to those born 1940-69.

Notes: Standard errors (in parentheses) are robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data), with “after” IRCA defined as data years 1988 and later. Column (4) limits the sample to those without high school education.

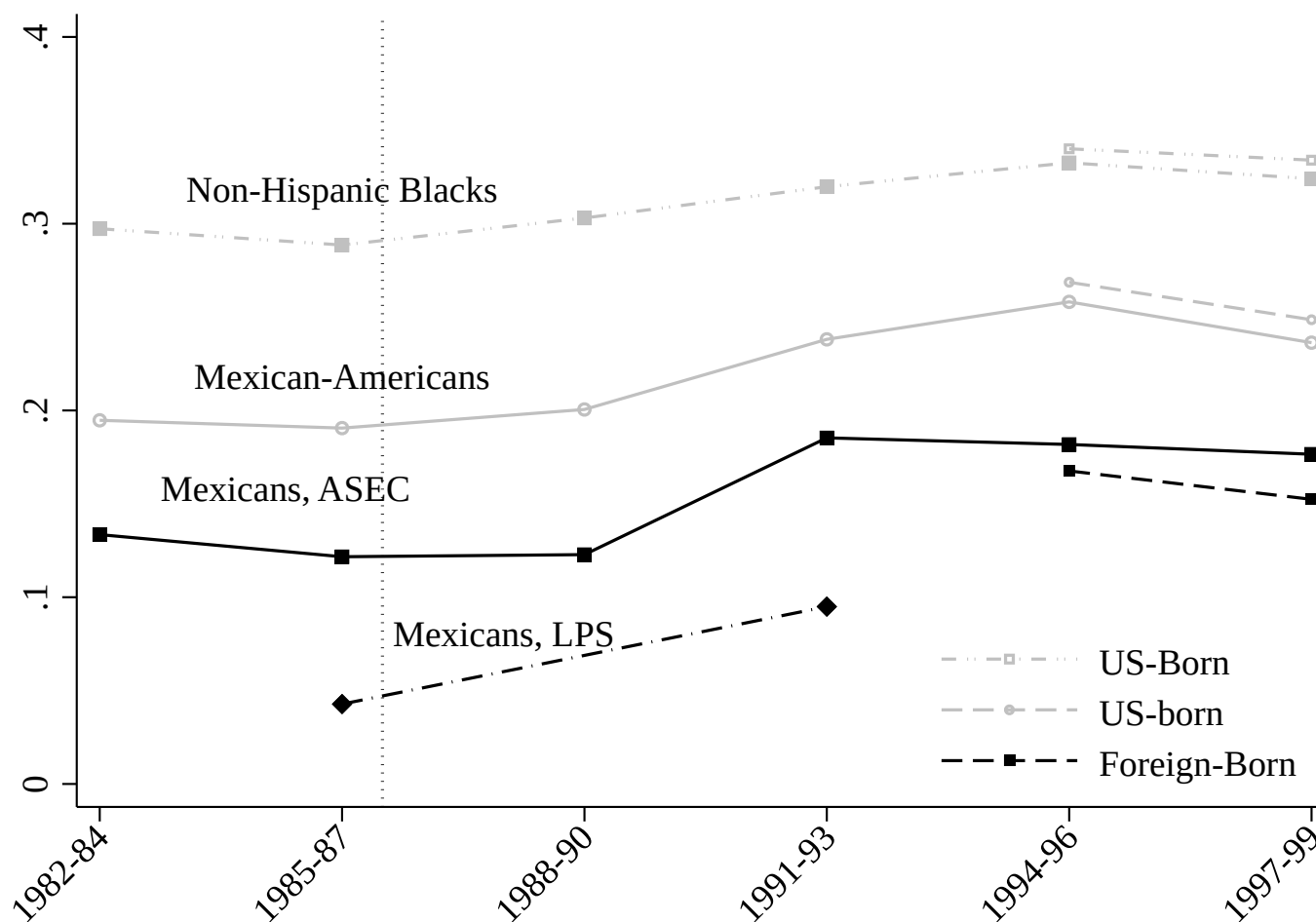
^aQuadratic in age and years of education, entered separately before and after 1987, and unrestricted year effects.

Figure A1. Foreign Born Share



Sources: Annual Social and Economic Supplements (ASEC) of the Current Population Survey, 1994-2000.
 Notes: Bars show 95% confidence intervals.

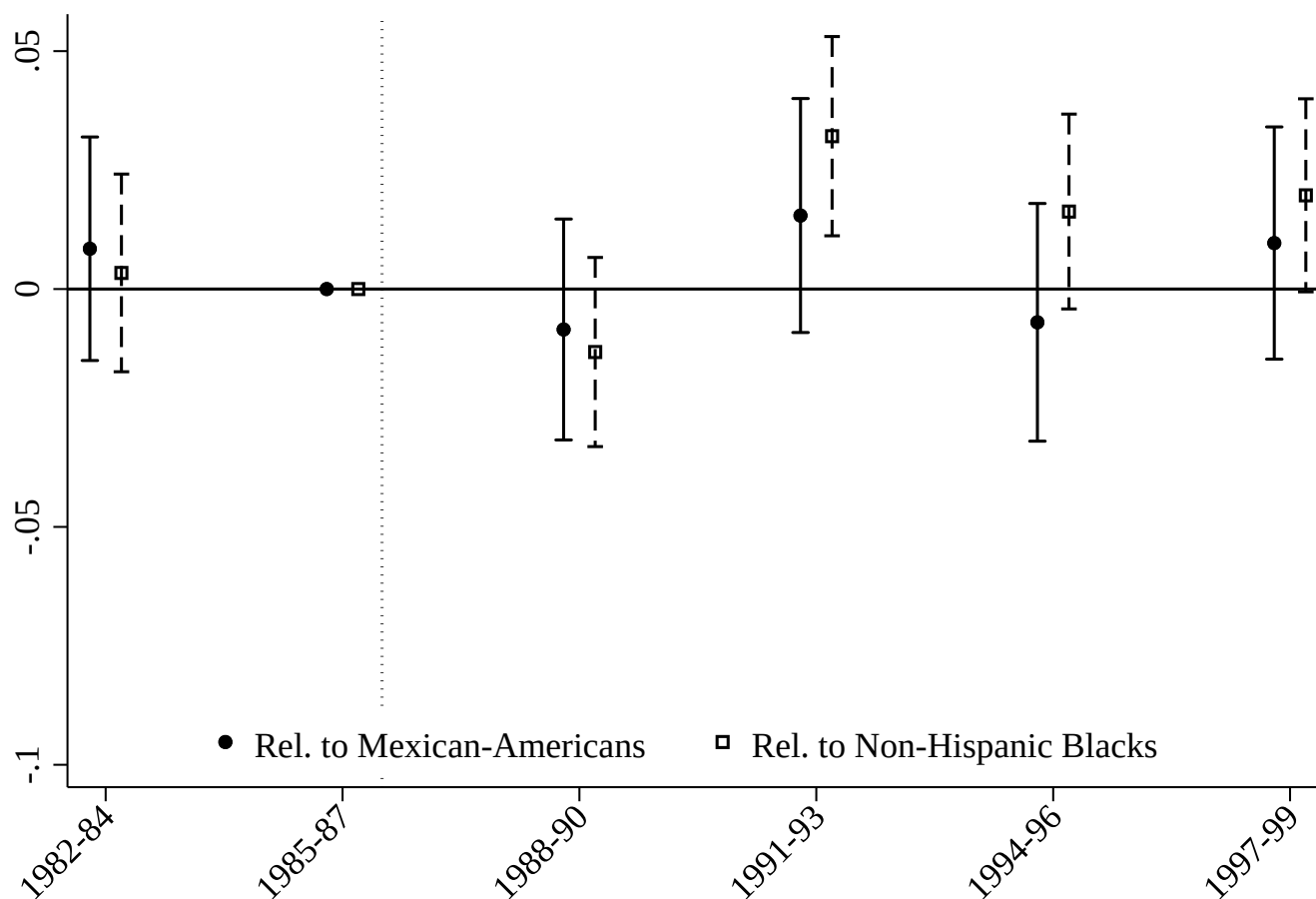
Figure A2. Likely Legal Share, Harmonized Definition



Sources: Annual Social and Economic Supplements (ASEC) of the Current Population Survey, 1983-2000 (upper lines) and the 1989 and 1992 waves of the Legalized Population Survey (LPS, plotted at 1985-87 and 1991-93, respectively; lowest line). Sample limited to those born 1940-69.

Notes: Figure plots share likely legal under the harmonized definition (Table A1), by group and year bin. ASEC data year is the year prior to the ASEC survey year (e.g., the 1987 survey gives 1986 data). 1985-87 and 1991-93 points are the same as in Figure 1.

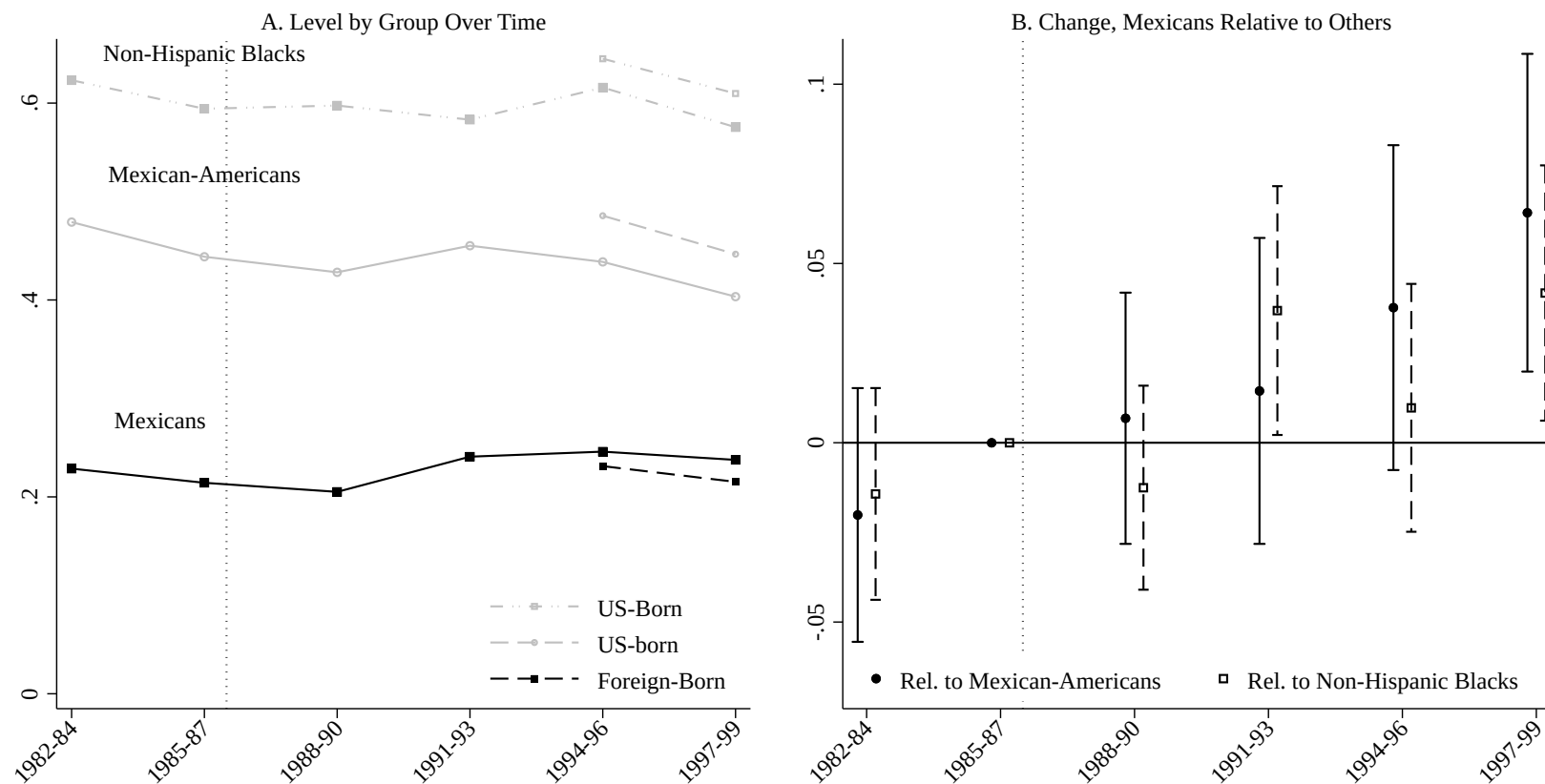
Figure A3. Change in Likely Legal Share (Harmonized Definition), Mexicans Relative to Others



Sources: 1983-2000 ASEC. Sample limited to those born 1940-69.

Notes: Figure shows coefficients on interactions between year bin dummies and a dummy for Mexican ethnicity from a regression that also includes dummies for year and Mexican ethnicity; the comparison group consists either of Mexican Americans or non-Hispanic Blacks. The outcome variable is a dummy for likely legal under the harmonized definition (Table A1). Bars show 95% confidence intervals, with standard errors robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data).

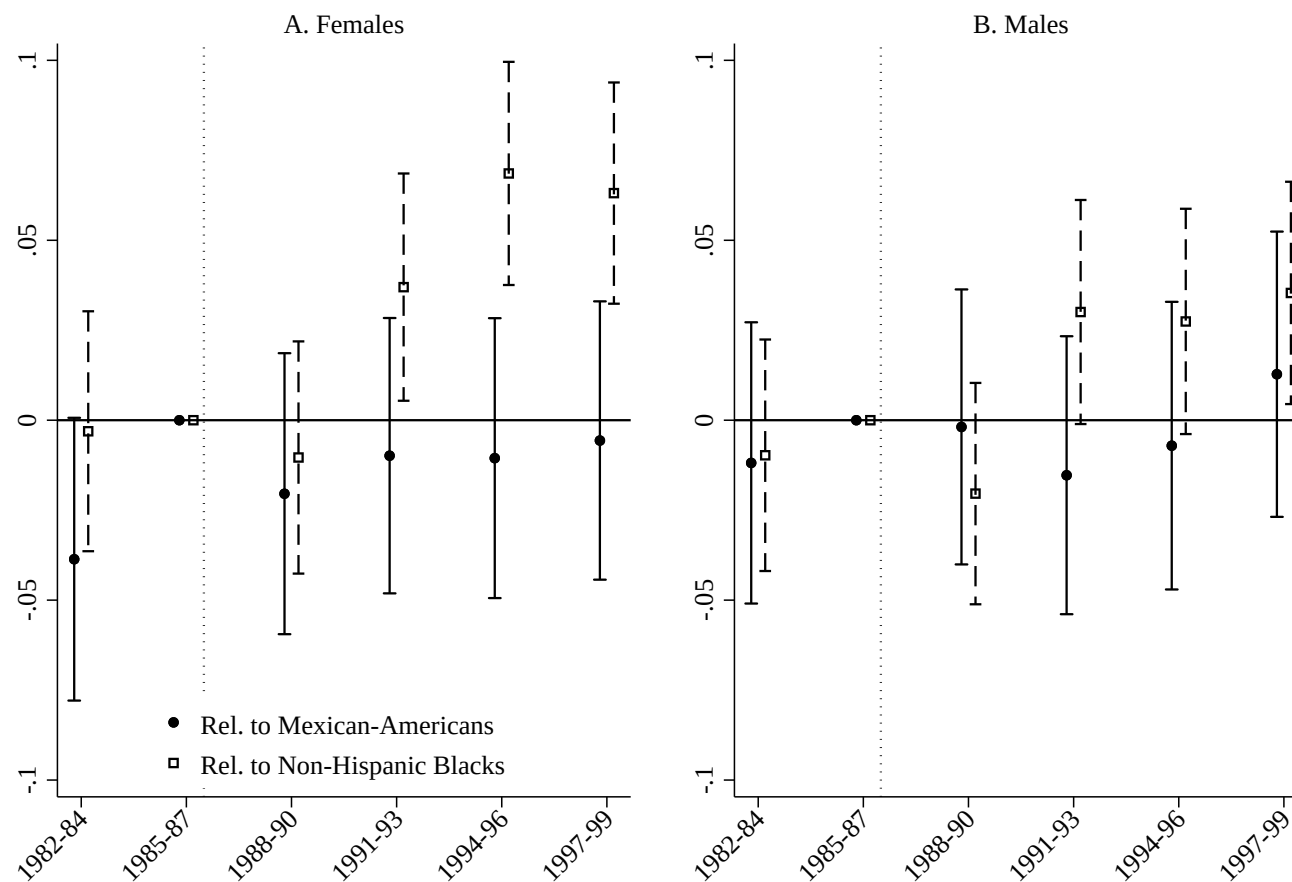
Figure A4. Likely Legal Share, Broader Definition, High School Dropouts



Sources: ASEC, 1983-2000. Sample limited to those born 1940-69 who did not complete high school.

Notes: Panel A plots share likely legal under the broader definition (Table A1), by group and year bin. Panel B shows coefficients on interactions between year bin dummies and a dummy for Mexican ethnicity from a regression that also includes dummies for year and Mexican ethnicity; the comparison group consists either of Mexican Americans or non-Hispanic Blacks. The outcome variable is a dummy for likely legal under the broader definition. Bars show 95% confidence intervals, with standard errors robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data).

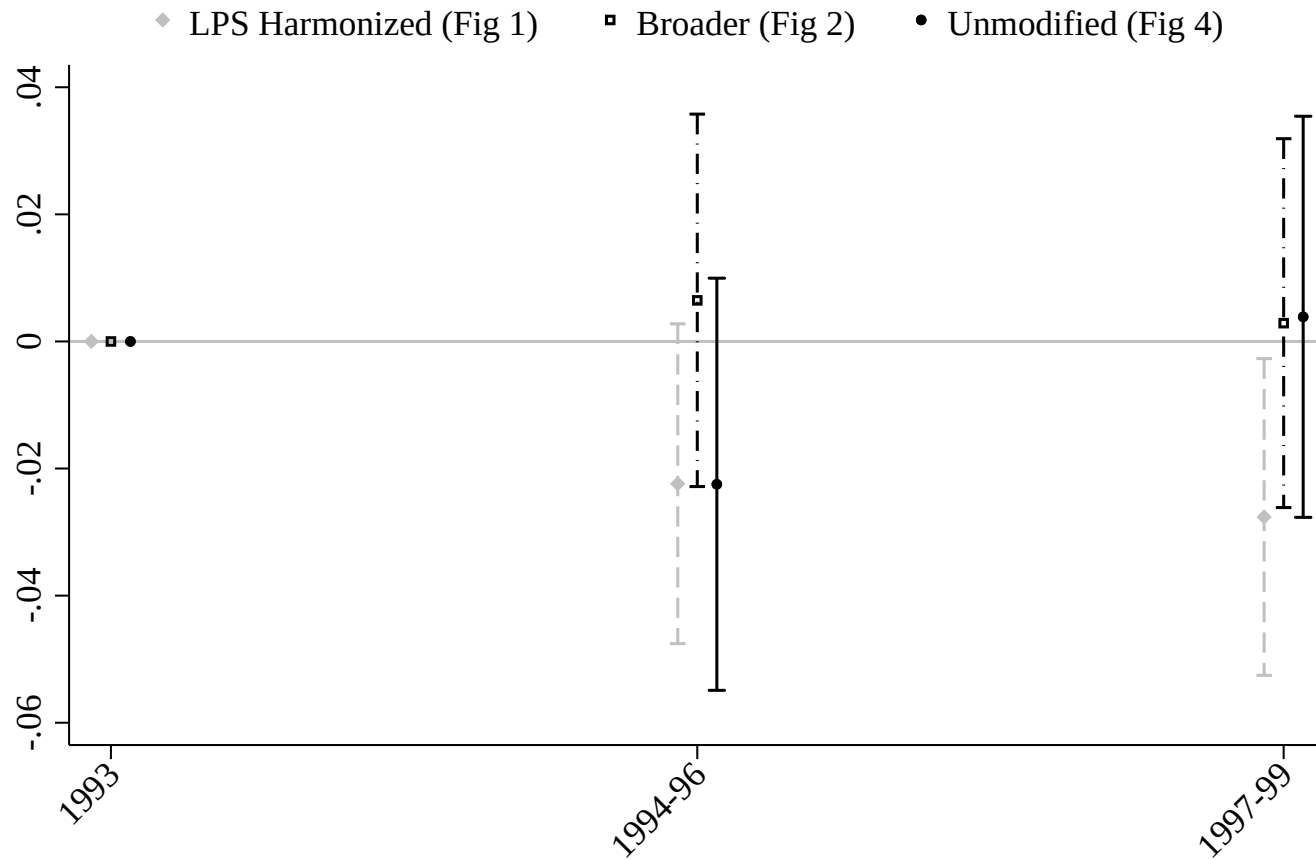
Figure A5. Change in Likely Legal Share Since 1985-7, Broader Definition, by Sex



Sources: 1983-2000 ASEC. Sample limited to those born 1940-69.

Notes: Figure shows coefficients on interactions between year bin dummies and a dummy for Mexican ethnicity from regressions, estimated separately for females (panel A) and males (panel B), that also includes dummies for year and Mexican ethnicity; the comparison group consists either of Mexican Americans or non-Hispanic Blacks. The outcome variable is a dummy for likely legal under the broader definition (Table A1). Bars show 95% confidence intervals, with standard errors robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data).

Figure A6. Change in Likely Legal Share for Mexicans Since 1993, All Definitions



Sources: 1994-2000 ASEC. Sample limited to those born 1940-69.

Notes: Data year is the year prior to the survey year (e.g., the 1994 survey gives 1993 data). See Table A1 for “harmonized” and “broader” definitions of likely legal. The “unmodified” definition uses the original Borjas (2017) code. Bars show 95% confidence intervals; standard errors are robust to heteroskedasticity and error correlation within household.

Table A1. Definitions of Likely Legal Used

		<u>Harmonized Definition</u>		<u>Broader Definition</u>	<u>Unmodified Definition</u>
		ASEC	LPS	ASEC	ASEC, 1994+
Occupation	Licensed occupations	Yes ²	Yes ³	Yes ¹	Same as broader definition
	Government	Yes (Industry)	Yes (Industry)	Yes (Class)	
	Armed forces	Yes (Occupation Only)	Yes (Occupation Only)	Yes (Class and Occupation)	
	Veteran	No	No	Yes	
Public Benefits		Social Security, Medicaid, Medicare ⁶	Social Security, Medicaid, Medicare ⁷	Social Security, SSI, Medicaid, Medicare, Military Insurance, Public Housing ⁴ , Subsidized Rent ⁵	
Citizenship		No	No	No	U.S. Citizens
Year of Arrival		No	No	No	Prior to 1980
Family relationship ⁸		No	No	Yes	Yes

Notes: The "broader definition" adapts the STATA code from Borjas (2017) "unmodified definition," removing those given likely legal status based on citizenship or year of immigration (not observable in pre-1994 Annual Social and Economic (ASEC) supplement of the Current Population Surveys) and makes minor coding changes to adapt to changes in the data. The "harmonized definition" further restricts to what can also be measured in the Longitudinal Population Survey (LPS).

1. Include: legislators; chief executives and public administrators; postmasters and mail superintendents; funeral directors; accountants and auditors; construction inspectors; inspectors and compliance officers, outside construction; architects; health diagnosing occupations; health assessment and treating occupations; teachers, except postsecondary; lawyers; judges; health technologists and technicians; airplane pilots and navigators; air traffic controllers; insurance adjusters, examiners, and investigators; firefighting and fire prevention occupations; police and detectives; inspectors of agricultural products; military
2. Identical to 1, but excluding: legislators; postmasters and mail superintendents; funeral directors; judges; inspectors of agricultural products.
3. Same as 2.
4. Also spouse or children of householder living in public housing
5. Also spouse or children of householder receiving subsidized rent
6. Also if spouse receives Social Security income, Medicaid, or Medicare
7. Also if any family member living with the individual receives Social Security income, Medicaid, or Medicare
8. If the individual is the spouse, child, or grandchild of a householder who meets the other criteria for likely legal; for spouse, as long as married spouse present.

Table A2a. Likely Legal Share, Harmonized Definition

Group	Source	1986	1992	Change
		(1)	(2)	(3)
<i>A. Treatment Groups</i>				
Mexicans	LPS	0.043	0.095	0.0522 (0.00795)
Mexicans	ASEC	0.122	0.185	0.0636 (0.00894)
<i>B. Comparison Groups</i>				
Mexican-Americans	ASEC	0.191	0.238	0.0475 (0.00901)
Non-Hispanic Blacks	ASEC	0.289	0.320	0.0312 (0.00584)
Observations				
Mexicans	LPS	1,736	1,736	3,472
Mexicans	ASEC	5,149	7,088	12,237
Mexican-Americans	ASEC	7,108	6,625	13,733
Non-Hispanic Blacks	ASEC	19,863	17,751	37,614

Sources: 1989 and 1992 waves of the Legalized Population Survey (LPS), and the 1986, 1987, 1988 (for 1986) and 1992, 1993, and 1994 (for 1992) Annual Social and Economic Supplements (ASEC) of the Current Population Survey. All samples limited to those born 1940-69.

Notes: Standard errors (in parentheses) are robust to arbitrary error correlation within household and to heteroskedasticity. See Table A1 for “harmonized” definition of likely legal.

Table A2b. Difference-in-Differences Estimates of the Impact of IRCA on Likely Legal Share (Harmonized Definition)

Treatment Group:	Mexicans-LPS	Mexicans-ASEC
	(1)	(2)
<i>A. Comparison Group: Mexican Americans in the ASEC:</i>		
Difference-in-	0.00467	0.0161
Difference	(0.0120)	(0.0125)
Observations	17,205	25,970
<i>B. Comparison Group: Non-Hispanic Blacks in the ASEC:</i>		
Difference-in-	0.0210	0.0324
Difference	(0.00986)	(0.0107)
Observations	41,086	49,851

Sources: 1989 and 1992 waves of the Legalized Population Survey (LPS) and 1986, 1987, 1988 (for 1986) and 1992, 1993, and 1994 (for 1992) Annual Social and Economic Supplements (ASEC) of the Current Population Survey. All samples limited to those born 1940-69.

Notes: See Table A1 for “harmonized” definition of likely legal.

Table A3. Likely Legal: Means by Group, Changes Before and After IRCA, and Differences-in-Differences, 1982-1999, by Sex

	<u>A. Females</u>			<u>B. Males</u>		
	Before	After	Change	Before	After	Change
	(1)	(2)	(3)	(4)	(5)	(6)
<i>A. Share Likely Legal Over Time, by Group</i>						
Mexicans	0.303	0.333	0.0298 (0.00887)	0.209	0.233	0.0236 (0.00804)
Mexican-Americans	0.513	0.532	0.0191 (0.00836)	0.484	0.500	0.0159 (0.00931)
Non-Hispanic Blacks	0.648	0.633	-0.0147 (0.00474)	0.604	0.599	-0.00494 (0.00574)
<i>B. Difference: Mexicans - Mexican Americans</i>						
Difference	-0.210 (0.0100)	-0.200 (0.00683)	0.0107 (0.0122)	-0.275 (0.0100)	-0.267 (0.00705)	0.00772 (0.0123)
Difference with Controls: ^a	-0.158 (0.0109)	-0.144 (0.00755)	0.0138 (0.0132)	-0.196 (0.0108)	-0.193 (0.00766)	0.00253 (0.0132)
<i>C. Difference: Mexicans - Non-Hispanic Blacks</i>						
Difference	-0.345 (0.00851)	-0.301 (0.00536)	0.0445 (0.0101)	-0.395 (0.00823)	-0.367 (0.00546)	0.0285 (0.00988)
Difference with Controls: ^a	-0.331 (0.00987)	-0.264 (0.00662)	0.0673 (0.0119)	-0.349 (0.00980)	-0.300 (0.00690)	0.0493 (0.0120)
Observations						
Mexicans	4,906	13,795	18,701	5,520	15,036	20,556
Mexican-Americans	8,138	12,237	20,375	7,392	10,866	18,258
Non-Hispanic Blacks	23,390	37,803	61,193	17,712	27,808	45,520

Sources: 1983-2000 ASEC. Sample limited to those born 1940-69.

Notes: Standard errors (in parentheses) are robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data), with “after” IRCA defined as data years 1988 and later. ^aQuadratic in age and years of education, entered separately before and after 1987, and unrestricted year effects.

Table A4. (Not Mutually Exclusive) Components of Likely Legal Share Before and After IRCA, 1982-1999

	<u>A. Public Benefits Receipt</u>			<u>B. In A Licensed Occupation</u>			<u>C. Related to Likely Legal Person</u>		
	Before	After	Change	Before	After	Change	Before	After	Change
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>I. Share Over Time by Group</i>									
Mexicans	0.123	0.143	0.0199 (0.00519)	0.062	0.074	0.0111 (0.00338)	0.193	0.207	0.0143 (0.00674)
Mexican-Americans	0.157	0.154	-0.00347 (0.00510)	0.206	0.249	0.0432 (0.00511)	0.398	0.388	-0.00959 (0.00746)
Non-Hispanic Blacks	0.281	0.251	-0.0302 (0.00377)	0.245	0.300	0.0548 (0.00326)	0.408	0.360	-0.0478 (0.00459)
<i>II. Difference: Mexicans - Mexican Americans</i>									
Difference	-0.0343 (0.00590)	-0.0109 (0.00409)	0.0234 (0.00717)	-0.144 (0.00481)	-0.176 (0.00376)	-0.0321 (0.00611)	-0.205 (0.00817)	-0.181 (0.00555)	0.0239 (0.00988)
Difference with Controls: ^a	-0.0546 (0.00650)	-0.0380 (0.00447)	0.0166 (0.00789)	-0.0729 (0.00479)	-0.0937 (0.00385)	-0.0208 (0.00615)	-0.150 (0.00875)	-0.125 (0.00597)	0.0255 (0.0106)
<i>III. Difference: Mexicans - Non-Hispanic Blacks</i>									
Difference	-0.158 (0.00539)	-0.108 (0.00349)	0.0501 (0.00642)	-0.182 (0.00380)	-0.226 (0.00276)	-0.0437 (0.00470)	-0.215 (0.00688)	-0.153 (0.00437)	0.0621 (0.00815)
Difference with Controls: ^a	-0.246 (0.00650)	-0.189 (0.00436)	0.0573 (0.00783)	-0.0810 (0.00427)	-0.0968 (0.00325)	-0.0158 (0.00537)	-0.168 (0.00808)	-0.0893 (0.00525)	0.0791 (0.00964)

Sources: 1983-2000 ASEC. Sample limited to those born 1940-69.

Notes: Standard errors (in parentheses) are robust to arbitrary error correlation within household and to heteroskedasticity. Data year is the year prior to the survey year (e.g., the 1987 survey gives 1986 data), with “after” IRCA defined as data years 1988 and later. ^aQuadratic in age and years of education, entered separately before and after 1987, and unrestricted year effects.

Table B1. Benchmark Calculations of Expected Change in Likely Legal Share due to IRCA

	<u>All</u>		<u>Men</u>		<u>Women</u>		<u>High School Dropouts²</u>	
Mexicans, born 1940-69	1990	2000	1990	2000	1990	2000	1990	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Numerator</i>								
i. IRCA Admissions	1,594,430	1,594,430	1,118,803	1,118,803	475,627	475,627	1,253,559	1,253,559
ii. LPR Arrivals, 1990s		357,575		101,802		255,680		281,130
<i>Denominator</i>								
iii. Census Raw #Mexicans	2,824,899	4,240,703	1,607,627	2,319,705	1,217,272	1,920,998	2,014,822	2,986,286
iv. Mexican undercount ¹	20%	8%	20%	8%	20%	8%	20%	8%
v. Adjusted for Undercount	3,389,879	4,579,959	1,929,152	2,505,281	1,460,726	2,074,678	2,417,786	3,225,189
vi. Share Legalized (i+ii)/v	0.470	0.426	0.580	0.487	0.326	0.352	0.518	0.476
<i>Share Foreign Born, ASEC, 1994-2000</i>								
vii. Treat Group: Mexicans		0.821		0.833		0.807		0.912
viii. Comp Group: Mexican-Americans		0.128		0.133		0.122		0.251
ix. Difference:		0.693		0.700		0.684		0.661
x. Benchmark: (vi × ix)		0.295		0.341		0.241		0.314

Sources: Authors' calculations using (i): the *Legalization Summary Public Use Tapes* (U.S. Department of Justice, 1991-1995 a,b,c); (ii): U.S. Department of Justice, *Immigrants Admitted to the United States* 1991-1997, 1999, 2000 and *Lawful Immigrant Files*, 1998; (iii): Ruggles et al., 2024. (vi, viii): Flood et al., 2023. ¹Mexican undercount estimated by Van Hook and Bean (1998) for 1990 and Card and Lewis (2007) for 2000. ²High school dropout counts estimated by interacting total admissions with of the share high school dropout separately for those admitted under the general legalization program (GLP) (840,312) and special agricultural worker (SAW) (754,118) provisions of IRCA. We used the Legalized Population Survey to calculate that 65.7% of GLPs were high school dropouts and the 1989 wave of the National Agricultural Workers Survey to calculate that 93% of SAWs were high school dropouts (using those with a pending legalization application to identify SAWs, following Cascio and Lewis, 2019). Finally, the 320,435 for admitted high school dropouts in the 1990s is calculated by applying the same high school dropout share to admissions, so $1,253,559 / 1,594,430 * 357,575 = 281,130$, where the latter two numbers on the right-hand side of the calculation are in column (2), rows (i) and (ii).