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Law-Abiding Immigrants: The Incarceration Gap Between Immigrants and the U.S.-Born, 1870–2020

Ran Abramitzky
Stanford University

Leah Boustan
Princeton University

Elisa Jácome
Northwestern University and IPR

Santiago Pérez
University of California at Davis

Juan David Torres
Stanford University

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Abstract

Combining full-count Census data with Census/ACS samples, the researchers provide the first nationally representative long-run series (1870–2020) of incarceration rates for immigrants and the U.S.-born. As a group, immigrants had lower incarceration rates than the US-born for the last 150 years. Moreover, relative to the U.S.-born, immigrants' incarceration rates have declined since 1960: Immigrants today are 60% less likely to be incarcerated (30% relative to U.S.-born whites). This relative decline occurred among immigrants from all regions and cannot be explained by changes in immigrants' observable characteristics or immigration policy. Instead, the decline likely reflects immigrants' resilience to economic shocks.

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The tendency to associate immigration and crime has been pervasive throughout US history. For example, in 1891, Senator Henry Cabot Lodge advocated closing the border, warning that Italian immigrants were "members of the Mafia, a secret society… using murder as a means of maintaining its discipline" (Lodge 1891). Indeed, over the past 150 years, Congressional speeches about immigration were twice as likely to mention words related to crime (per speech) than were speeches on other topics (Card et al. 2022).

Contrary to this anti-immigrant rhetoric, we document that, as a group, immigrant men have had a *lower* incarceration rate than US-born men for the last 150 years of American history.[1] We combine newly assembled full-count Census data (1870–1940) with Census/ACS samples (1950–2020) to construct the *first nationally representative* series of incarceration rates for immigrants and the US-born between 1870 and the present day. From 1870 to 1950, immigrants' incarceration rate was only slightly lower than that of US-born men. However, starting in 1960, immigrants have become *significantly less* likely to be incarcerated than the US-born, even though as a group immigrants now are relatively younger, more likely to be non-white, have lower incomes, and are less educated – characteristics often associated with involvement in the criminal justice system.[2] Today, immigrants are 60% less likely to be incarcerated than all US-born men, and 30% less likely to be incarcerated relative to white US-born men.

With access to large samples, including the full-population Census before 1950, we are also able to provide the first investigation of incarceration rates by country of origin spanning 1870 to 2020. We find a substantial decline in incarceration rates relative to the US-born among immigrants from *all major sending regions*. European immigrants historically had slightly lower incarceration rates to US-born men, but recently experience far lower incarceration rates. Chinese immigrants had similar incarceration rates to the US-born before 1960, albeit higher rates when compared to white US-born men, but today have significantly lower incarceration rates when compared to either group. Mexican and Central American immigrants had particularly high incarceration rates in the past but have had lower incarceration rates than the US-born since 1960. From 2005 on, Mexican

[1] We focus on men because men constitute the vast majority of the incarcerated population both today and in the past (Freeman 1999). Our takeaways are unchanged if we include women (Figure A7).

[2] On average, immigrants were older than US-born male adults from 1870–1970 but have been relatively younger in the past 50 years. The share of immigrants that are Black, which used to be close to zero, has also grown since 1950; roughly 10% of immigrants are Black today.

and Central American immigrants have been more likely to be incarcerated than *white* US-born men, although we note that a large portion of the increase in Mexican and Central American incarceration after 2005 is driven by detentions in federal immigration facilities, often for immigration-related offenses; when we drop the 17 areas home to the largest Immigration and Customs Enforcement (ICE) facilities, the gap relative to US-born white men moderates or disappears in most years.

We next explore the reasons behind the sharp relative decline in the immigrant incarceration rate since 1960. We begin by ruling out three potential explanations. First, the relative decline in immigrant incarceration is not driven by rising rates of incarceration of US-born Black Americans; the decline in incarceration is also apparent when comparing immigrants to US-born *white* men only. Second, the decline is not driven by changes in immigrants' observable characteristics, namely, their countries of origin, age, race, marital status, state of residence, or educational attainment. If anything, immigrants' lower educational attainment in recent decades would predict that they should have higher incarceration rates than they do. Third, the relative decline is not mechanically driven by immigrant offenders being more likely to be deported in recent years (and thus not being present in the incarceration data): the relative decline in incarceration is present even among immigrants who are US *citizens* and thus cannot be deported. Moreover, non-citizen immigrants who have been convicted of a crime are typically deported only *after* serving their sentence.[3]

After ruling out changes in immigrant characteristics and immigration policy as explanations for immigrants' relative decline in incarceration, we turn our attention to structural changes in the economy – such as globalization and skill-biased technological change – that may have affected less-educated US-born men (the group that accounts for the vast majority of incarcerated individuals) more than similarly educated immigrants.

To explore the role of economic forces, we start by documenting that lower-educated immigrants and US-born men *not only* diverged in their incarceration propensities in recent decades, but also

[3] The timing of the decline is also inconsistent with this explanation; whereas the relative decline in immigrant incarceration emerges in the 1960s, the sharp rise in deportations took place around 2000.

diverged at a similar moment along other dimensions including their labor force participation, likelihood of marriage, and health. We argue that this broader pattern of divergence is consistent with less-educated immigrants being less affected by economic shocks than less-educated US-born men. Immigrants may have remained relatively shielded from these shocks because they are concentrated in manual tasks and service occupations (rather than routine occupations), which did not experience large wage or employment declines in recent decades (Autor et al. 2006; Peri and Sparber 2009). Furthermore, immigrants may be more resilient to shocks, given that they are a self-selected group of individuals possessing traits such as a greater willingness to move long distances (Cadena and Kovak 2016), less risk aversion (Jaeger et al. 2010), higher adaptability and cognitive ability (Bütikofer and Peri 2021), and higher levels of entrepreneurship (Azoulay et al. 2022).

Related literature. Our work is most closely related to a set of papers that document immigrant-US-born incarceration gaps for specific states and time periods. Moehling and Piehl (2009) studies historical flows into prisons using state prison records from 1904, 1910, 1923, and 1930.[4] Moehling and Piehl (2014) studies historical incarceration rates in eight states by locating individuals residing in state correctional facilities in full-count Census samples between 1900 and 1930.[5] Butcher and Piehl (1998b, 2007) use Census subsamples between 1980 and 2000 to compare the incarceration propensities of immigrants to those of US-born men.[6]

Relative to these papers, we provide the first large, nationally representative, century-and-a-half-long series on the incarceration gap between immigrants and the US-born.[7] Our long-run perspective enables us to document that immigrants not only have lower criminal propensities than

[4] To our knowledge, data on flows into prison by nativity are not consistently available, limiting our ability to compare this study's results with other periods.

[5] We use our methodology to compute incarceration rates for immigrants and US-born men in the states included in this study and find higher levels, although similar trends, of incarceration, presumably because our data include federal prisons and local jails.

[6] Light et al. (2020) uses arrest records from Texas between 2012–2018 and finds that unauthorized and legal immigrants are less likely to be arrested than US-born citizens. Related work in criminology and sociology confirms that, today, immigrants in the U.S. are less crime-prone than their US-born counterparts (e.g., Bersani 2014, Bucerius 2011, Sampson et al. 2005, and Kubrin and Ousey 2023 and cites therein).

[7] A nationally representative series is key for studying the immigrant-US-born incarceration gap, as the gap can differ substantially across states. For example, in 1920 and 1930, 15 and 9 states, had positive incarceration gaps (i.e., immigrants were *more* likely to be incarcerated than the US-born), respectively, whereas 13 and 24 states had negative gaps.

the US-born today (a well-known fact in the criminology literature), but that they have experienced similar or lower incarceration rates than the US-born *throughout American history*. Importantly, we document when the immigrant-US-born incarceration gap began to widen (circa 1960). This timing coincides with broader changes in the US economy that have negatively affected less-educated men. Finally, our large samples allow us to disaggregate our series by immigrant country of origin and document that the relative decline in immigrant incarceration applies to immigrants from all sending regions.

This paper is also related to a large literature for the modern period studying how changes in the number of immigrants in an area affect local crime rates (Adelman et al. 2017, Butcher and Piehl 1998a, Chalfin 2014, and Spenkuch 2014 in the US; Akbulut-Yuksel et al. 2022, Bell et al. 2013, Bianchi et al. 2012, Gehrsitz and Ungerer 2022, and Piopiunik and Ruhose 2017 in Europe, among many others). A number of papers, primarily those based on European data, find that recent waves of immigrants *increase* crime rates. Others, including those based on US data, find null effects.[8] We contribute to this literature by documenting that immigrants *themselves* have been less likely to be incarcerated than the US-born for the last 150 years. If immigrant arrivals have no effect on crime rates (despite the fact that immigrants themselves are less prone to crime), one possibility is that the presence of immigrants increases the criminal propensities of other groups – for example, by increasing population growth or racial diversity in local areas.

Finally, our study also contributes to the literature studying long-term changes in immigrants' outcomes in the US (Abramitzky et al. 2020, 2021). We contribute to this literature by providing a past-present comparison on an as-yet unexplored dimension of immigrants' performance: criminal behavior.

1. Data and Methods

Sources. For the 1870–1940 period, we use the full-count Census (Ruggles et al. 2021) to observe the universe of prisoners in the US every ten years (the exception is 1890, for which individual-level records did not survive).[9] We start in 1870, as this is the first Census to include the full

[8] We refer the reader to Orrenius and Zavodny (2019), Fasani et al. (2019) and Buonanno et al. (2022) for reviews of this literature.
[9] Figure A1 shows an example record of incarcerated individuals in the 1930 Census.

population, including those formerly enslaved. Incarceration is a relatively rare occurrence (particularly in this earlier period), so the full-count Census allows us to more accurately measure incarceration rates for all immigrants as well as for immigrant subgroups. The 1940 Census is the last Census for which full-count data are currently available in digitized form. Hence, for the 1950–1990 period, we use the largest available sample in each decade (Ruggles et al. 2022).[10] For the most recent years, we use data from the American Community Survey (the annual versions or the 2008–2012 and 2015–2019 five-year samples to represent 2010 and 2020, respectively). We include details on these samples in the Online Appendix.

Measuring Incarceration and Sample Selection. Prior work has typically relied on the group quarters type variable coded by IPUMS (indicating whether an individual lives in a "correctional institution") to classify individuals as incarcerated. For the 1870–1940 full-count data, we improve on this classification using the original strings of the "group quarters," "occupation," and "relationship to household head" variables (e.g., using the fact that someone's occupation or relation is listed as "prisoner").[11] This refinement addresses potential misclassification of prisoners; for instance, some individuals whose occupation is listed as "prisoner" are not classified as living in a correctional institution (see Eriksson 2020 for more discussion).[12] The Online Appendix includes step-by-step instructions on how to implement these refinements. Nevertheless, our takeaways are similar if we use IPUMS' group quarters type variable (Figure A5).

For 1950 onward, we rely on the group quarters type variable to classify individuals as incarcerated. Starting in 1990, IPUMS data report whether individuals are institutionalized, but

[10] For 1960, 1980, and 1990, we use the 5% samples. For 1950 we use the 1% sample and for 1970 we pool three 1% samples. When considering results by country-of-origin, we do not include the 1950 Census given its smaller size. Given that data availability requires switching from full-count data to sub-samples for 1950–1970 when incarceration was still relatively rare, we focus on trends in the immigrant-US-born incarceration gap in this period, rather than the exact magnitude of the gap. Nevertheless, we validate the incarceration rates against auxiliary data sources: between 1950 and 1980, the overall incarceration rate using the Census falls between 200 and 300 per 100,000 residents, which is very close to measures from the Bureau of Justice Statistics (Kearney et al. 2014). Finally, we do not include the 2000 Census in our main analysis due to potential mismeasurement of incarceration rates for immigrants (i.e., the difference in incarceration rates between immigrants and US-born men in 2000 is significantly larger than in any adjacent data sources, namely, the 1990 Census or the 2005–2010 ACS). Including the 2000 Census would only reinforce our takeaways (Figure A2).

[11] These string variables are not available for later Censuses, preventing us from implementing these adjustments in the post-1940 data.

[12] Moreover, as described by IPUMS, in the 1870–1930 and the 1960–1970 samples, non-inmates living in institutions are assigned an institutional group quarter type.

not the type of institution in which they reside (for instance, we do not know if someone is in a prison or a nursing facility). To address this issue, in our baseline sample we focus on men ages 18–40 for whom institutionalization is a very close proxy of incarceration.[13]

To summarize, our baseline sample focuses on men ages 18–40 and compares immigrants (those born outside of the US) to all US-born men. Our main takeaways are nevertheless similar if we compare immigrants to US-born *white* men (Figure A3) or if we focus on other age groups (Figure A6).[14] Table A1 shows the sample sizes and the share incarcerated in each of our samples, by nativity status.

Advantages and Disadvantages of Using Incarceration to Compare the Criminality of Immigrants and the US-Born. Ideally, to compare the criminality of immigrants and the US-born, we would want to measure whether an individual actually committed a crime. However, such data are not available because many crimes are not reported and many offenders are not arrested. As a result, two common proxies for crime are arrests and incarceration. We rely on incarceration as our proxy.

The main advantage of using incarceration is that it can be measured in the Census, thus enabling us to build a nationally representative series on incarceration *by birthplace* starting in 1870. An alternative approach would be to use arrest data, but these data typically do not include information on immigrant status. Moreover, these data are collected at the local level, making it impossible to build a long-run, nationally representative series. Finally, arrest data include relatively minor offenses (e.g., parole violations), which may be more subject to the bias of law enforcement

[13] Among those institutionalized in 2000 and 2019, 90% of men ages 18–64 and 96% of individuals ages 18–44, respectively, were incarcerated. For the 2000 data, we calculate the number of men aged 18–64 who are in a correctional institution as a share of the institutionalized population (2000 Census Summary File 1 API). For the 2019 data, we calculate the share of individuals aged 18–44 in a correctional institution as a share of the institutionalized population (2019 ACS Table S2603).

[14] We do not restrict the sample to non-Hispanic white men, as Hispanic ethnicity cannot be measured consistently over time. The 1970 Census was the first to ask respondents whether they were of "Mexican, Puerto Rican, Cuban, Central or South American, Other Spanish" descent.

officials (see, e.g., Lang and Spitzer 2020). By contrast, because incarceration typically relies on obtaining a criminal conviction, it is a better proxy for serious criminal offending.[15]

The main concern with using incarceration to study immigrant-US-born differences in criminality is that, for a given level of underlying offending, immigrants' incarceration probabilities might differ from those of the US-born. For example, some immigrants who commit crimes may be deported right away and thus might not be present in Census data, thereby understating immigrants' level of criminality (especially in more recent years). However, this explanation is unlikely to be driving the relative decline in immigrants' incarceration that we document. We find similar patterns when we restrict the comparison to *citizen* immigrants (who cannot be deported). Moreover, the relative decline in immigrants' incarceration appears decades before the recent rise in deportations.[16] If anything, we show below that the rise in immigrant detentions in federal immigration facilities, often for low-level or civil offenses, may be *overstating* immigrants' incarceration rates.

Additionally, incarceration rates may not reflect true differences in criminal behavior if aspects of the criminal justice system are biased toward or against immigrants. These biases, however, are unlikely to explain immigrants' relative decline in incarceration: Prior work shows that noncitizens tend to receive *longer* prison sentences than citizens for comparable crimes (Light et al. 2023), and that the modern criminal justice system is biased against Hispanics (Goncalves and Mello 2021, Tuttle 2023). Thus, unless the criminal justice system has become substantially *less* biased toward immigrants, and now favors immigrants over the US-born (including US-born white men, since we also see a decline when they are the main reference point), it is unlikely that such biases can explain the relative decline in immigrants' incarceration.

2. The Evolution of the Immigrant-US-Born Incarceration Gap from 1870 through 2020

[15] 70% of incarcerated individuals are in state or federal prisons, which require a criminal conviction, and among state prisoners, 70% are sentenced for violent or property crimes (Beck and Harrison 2001). In contrast, only 16% of arrests are for violent or property crimes (Federal Bureau of Investigation Crime in the U.S. trends).

[16] A related concern is that incarceration rates might understate immigrants' criminality if unauthorized immigrants are less likely to report crimes due to fear of deportation (Comino et al. 2020, Jácome 2022). Yet, we see the relative decline among immigrants from all sending regions (with significantly different shares of unauthorized populations), among citizen migrants (who cannot be deported), and decades prior to the rise in deportations.

Figure 1 plots the incarceration rates of immigrants and US-born men from 1870 through 2020. Panel (a) shows that immigrants as a group had similar incarceration rates to the US-born in 1870, slightly lower incarceration rates from 1880 to 1950, and have been *significantly less* likely to be incarcerated since 1960. Before 1960, the immigrant-US-born incarceration gap was relatively small. The gap then began to widen in 1960, as immigrants' incarceration rate dipped to around 300 per 100,000, whereas the incarceration rate of the US-born jumped to around 900. After 1980, incarceration rates rose dramatically for both groups, but the gap between them remained large so that immigrants are between 50–60% less likely to be incarcerated today. Although the magnitudes of the gaps are smaller, Figure A3 shows that the overall trend in the incarceration gap is similar when we compare immigrants to US-born white men only, in which case immigrants are 15–30% less likely to be incarcerated today.

The remaining panels of Figure 1 compare the incarceration rates of US-born men to those of immigrants from different country-of-origin groups. We split immigrants into five groups with large enough numbers to be followed both historically and today: immigrants from Northern and Western Europe (considered to be the "old immigrant stock" historically), Southern and Eastern Europe (the "new" immigrants historically), China, Mexico and Central America, and the "rest of the world" (those not included in the previous four groups).[17] Figure A4 displays the share of immigrants in each of these groups over time.

Figure 1 shows that the relative decline in immigrants' incarceration rates starting in 1960 has occurred among immigrants from all country-of-origin groups. Immigrants from groups with historically similar incarceration rates (the "old" and "new" Europeans, the Chinese, and those from the "rest of the world") have become significantly less likely to be incarcerated. Immigrants from Mexico and Central America, who featured higher incarceration rates than the US-born before 1960, have fully reversed the gap. Figure A3 shows broadly similar patterns when comparing immigrants to US-born whites. In that case, all immigrant groups, except Mexicans and Central Americans, are less likely to be incarcerated today than US-born white men.

[17] Before 1950, immigrants from the "rest of the world" constituted 10–13% of all immigrants and came primarily from Canada, Japan, and the Caribbean. In the modern period, this group constitutes 40–45% of immigrants and come from the Caribbean, from other countries in South America, Asia, Africa, and the Middle East.

In the Online Appendix, we show that the decline in immigrants' relative incarceration is robust to alternative measures of incarceration in the historical period (Figure A5)[18] and alternative sample definitions (Figures A6, A7, and A8). Figure A9 illustrates the importance of using *full-count* data in the historical period: incarceration gaps can be noisy or even be the wrong sign for immigrant subgroups when using only Census sub-samples.

3. Explanations for the Relative Decline in Immigrants' Incarceration

a. Changes in Immigrant Characteristics

A first potential explanation for the decline in immigrants' relative incarceration rates is that their observable characteristics (such as their age distribution or racial composition) might have changed in ways that make them less likely to be incarcerated than the US-born. Figure 2 compares the incarceration propensities of immigrants to observationally similar US-born men. The goal of this exercise is simply to assess the extent to which the differences in incarceration between immigrants and the US-born can be "accounted for" by differences in observable characteristics. Specifically, we use regressions to estimate the immigrant-US-born incarceration gap and we quantify how this gap changes once we add observable characteristics to the regression. To do so, we estimate (separately for each Census year):

$$\text{Incarcerated}_{it} = \alpha + \beta_t \ \text{Immigrant}_{it} + X_{it} \ + \epsilon_{it}$$

where Incarcerated_{it} denotes if individual *i* was incarcerated at time t, and Immigrant_{it} is equal to one for foreign-born individuals. For ease of interpretation, the outcome variable is multiplied by 100 (so that β_t captures percentage-point differences in incarceration rates). X_{it} reflects a set of individual-level fixed effects for age, race, marital status, state of residence, and education (literacy before 1940 and three educational categories from 1940 onward: less than high school, high school completion, and any college or more).

[18] Figure A10 compares our Census-based incarceration measures to prison admissions data from Missouri for 1870–1920; the figure shows that although the levels do not correspond (one measure is a stock and the other is a flow), the two data sources tend to agree on the direction of the immigrant-US-born incarceration gap. Figure A11 shows that immigrants' lower rate of admission to prison in Missouri is present for all crime types.

Panel (a) in Figure 2 shows that adjusting for age, marital status, state of residence, and race leaves the estimated incarceration gaps mostly unchanged. However, accounting for differences in education significantly widens the gap in recent decades, so that immigrants are even *less* likely to be incarcerated relative to US-born men (a fact noted by Butcher and Piehl 2007 for the 1980–2000 period). Figure A12 shows very similar patterns when comparing immigrants only to US-born white men.

Panels (b)-(f) display analogous estimates for the five previously defined immigrant groups.[19] For all groups except for Mexicans and Central Americans, accounting for individual-level characteristics tends to shrink the immigrant-US-born incarceration gap in recent decades (although immigrants remain less likely to be incarcerated). This reduction is driven by accounting for educational differences: immigrants from groups other than Mexico and Central America are on average more educated than the US-born (and there is a negative association between education and incarceration). By contrast, adjusting for educational differences *amplifies* the magnitude of the incarceration gap between Mexicans and Central Americans (a group with relatively low levels of education) and the US-born. Once we compare this group to US-born men with similar levels of education, they are even *less* likely to be incarcerated in recent decades. Figure A13 shows that the gap is driven by large differences in incarceration among high school dropouts. Of course, immigrants and US-born men who are high school dropouts may be quite different in terms of unobservable traits; however, insofar as criminal behavior is a function of labor market opportunities (Becker 1968), then this figure indicates that Mexican and Central American immigrants are significantly less likely to be incarcerated than US-born men with comparable labor market prospects.[20]

Finally, we rule out that the relative decline in immigrant incarceration is driven by changes in the country-of-origin mix of immigrants (Figure A15) or increases in the share of immigrants that are

[19] We include race fixed effects in this exercise to assess the extent to which the changing racial composition of the immigrant population can account for the relative decline in incarceration. However, including such fixed effects becomes redundant when looking at subgroups since there are limited changes in the racial composition of the immigrant population *within* a country-of-origin group. Hence, we do not include race fixed effects in panels (b)-(f).
[20] Figure A14 plots the average immigrant-US-born income gap by educational group starting in 1940, showing that low-educated immigrants tend to have similar or lower incomes than low-educated US-born men.

recent arrivals (who may not have had sufficient time to commit a crime or be incarcerated; Figure A16).

Taking stock, we conclude that changes in migrants' observable characteristics cannot explain the decline in immigrants' relative incarceration rates. If anything, once we account for these characteristics, the difference between immigrants and the US-born becomes larger.

b. Changes in Immigration Policies: Deportations and Detentions

The number of immigrant deportations from the US began rising in the 1990s and reached record-high numbers around 2010 (Figure A17). Increased deportations may have affected immigrants' incarceration rates in two ways. First, surges in deportations increase the expected cost of committing a crime for non-citizens: these migrants can expect to serve a period of incarceration in the US *and* then may face deportation after serving their sentence (the so-called "double penalty"). In this case, rising deportation risk could lower rates of criminal activity among immigrants. Second, if immigrants who commit crimes are deported without serving their sentence, then we might find that immigrants are less likely to be incarcerated — because immigrant offenders are removed from the data via deportation — even if they committed as many or more crimes than the US-born. We rule out these two possibilities in turn.

First, if the relative decline in immigrants' incarceration rates was solely driven by an increased risk of deportation, we would not expect to see the decline for immigrants who hold US citizenship and thus cannot be deported. However, Figure 3 shows that if anything, the relative decline is *more pronounced* when we focus on immigrants who are US citizens.[21]

Second, the relative decline in immigrants' incarceration rates is unlikely to be mechanically driven by deportations. First, immigrants who have been convicted of a crime are typically deported *after* serving their sentence and immigrants may not have access to benefits that can shorten incarceration spells for citizens (e.g., participating in diversion programs; Watson and

[21] Although citizen immigrants could also be affected by the "double penalty" (if they have relatives or friends who are subject to deportation risk, making them hesitant to interact with law enforcement to protect their loved ones), most citizen immigrants do not live in mixed-status households (Alsan and Yang 2022), making it unlikely that the "double penalty" can explain the relative decline in citizen immigrants' incarceration.

Thompson 2022).[22] Furthermore, the relative decline in immigrants' incarceration rates emerged by 1960, before the rise in mass deportations in the 2000s (specific mass deportation events like the 1954 Operation Wetback were limited to particular years). Finally, more than 90% of individuals who are deported today are Mexican and Central American (Watson and Thompson 2022). Yet, the immigrant-US-born incarceration gap has widened for immigrants from all regions.

In addition to the recent rise in deportations, there has also been a rise in immigrant detentions for immigration-related violations. This surge in detentions, however, would bias us *against* finding a decline in immigrants' incarceration: if immigrants are held in detention facilities for immigration violations (e.g., overstaying their visa), they would likely be counted as "incarcerated" by our metric and hence inflate immigrants' (and especially Mexican and Central American immigrants') incarceration rates.

Indeed, Figure A18 shows that if we exclude from the sample the 17 Public Use Microdata Areas (PUMAs) or county groups containing Immigration and Customs Enforcement (ICE) contract detention facilities or service processing centers (out of more than 1,000 total areas), then the incarceration gap between Mexican and Central American immigrants and US-born men becomes even larger. This exclusion also eliminates Mexicans and Central Americans' higher incarceration rates relative to US-born *white* men for most years between 2005 and 2019.[23] These patterns suggest that immigrant detentions are overstating the degree to which immigrants, especially those from Mexico and Central America, engage in serious criminal behavior.

c. Structural Changes Disproportionately Affecting US-born Men

[22] Immigration law states that "the Attorney General may not remove an alien who is sentenced to imprisonment until the alien is released from imprisonment" (8 U.S.C. sec. 1231[a][4][A]). However, there is some concern is that non-citizen immigrant offenders might be deported earlier and thus would not be included in our data (leading us to underestimate immigrants' crime rates). To assess this possibility, we use data from the Department of Homeland Security on the number of deported individuals who had a previous criminal conviction (that is, the group of individuals who could have plausibly remained incarcerated had they not been deported). These data are not restricted to men ages 18–40, so we are likely overestimating the number of deportations in our target population. Yet, even under the extreme assumption that half of these individuals would have remained in prison rather than being deported, immigrants' incarceration rates would still be lower than those of US-born men.

[23] By contrast, excluding these areas does not change the immigrant-US-born gap in the years *prior* to the creation of ICE. Moreover, individuals detained for immigration violations can also be detained in other facilities, like local jails. Excluding these areas is thus a conservative approach for assessing the role of immigrant detentions. We refer the reader to the Data Appendix for details on excluded facilities.

After ruling out changes in immigrant observable characteristics or immigration policy as explanations for the decline in immigrants' relative incarceration rates, we turn to structural changes in the economy that have affected less-educated men (the group that accounts for most of the recent increase in incarceration; panel (a) of Figure 4). Numerous studies have shown that less-educated men have experienced a deterioration in outcomes including employment, family formation, incarceration, and health (Abraham and Kearney 2018, Binder and Bound 2019, Coile and Duggan 2019, Case and Deaton 2020). This deterioration has been attributed to declines in labor demand from globalization (e.g., Autor et al. 2013) and skill-biased technological change (e.g., Acemoglu and Autor 2011), among other forces.

Considering these trends, a potential explanation for the relative decline in immigrant incarceration may be that immigrants have remained relatively shielded from the structural forces that negatively affected their US-born counterparts, either because immigrants were not affected by these forces or because they were better able to withstand them. If this were the case, then the divergence that we document with respect to incarceration should also be present when considering other outcomes.

The remaining panels of Figure 4 confirm that low-educated immigrants and US-born men have indeed diverged along several dimensions beyond incarceration since the 1960s, particularly high school dropouts (Figure A19 shows this same divergence when comparing immigrants to white US-born men only).[24] Panels (b) and (c) show that there has been a divergence in the degree of attachment to the labor force: among men without a high school degree, immigrants were employed at similar rates than their US-born counterparts in the past but are 30 percentage points more likely to be employed today. Hence, the declining economic prospects of lower-educated men in recent decades appear to have disproportionately affected the US-born.

Panels (d) and (e) show that low-educated immigrants and US-born men have also diverged with respect to rates of family formation. Again, we find that low-educated immigrants and US-born men were comparable in this respect prior to 1960 and then began to diverge, with low-educated

[24] The figures in this section start in 1940 because this is the first Census that records educational attainment. The sample is restricted to individuals who are not institutionalized. Figures A20 and A21 show analogous figures for all men and for low-educated women.

immigrants now being significantly more likely to be married and to be living with children. This divergence has been mostly driven by the US-born having a lower probability of marriage and of living with children, rather than by increases among immigrants, suggesting that the pattern is not driven by family reunification rules in the immigration system.

Finally, panel (f) uses data from the General Social Survey (GSS) to show that there has been a divergence with respect to self-reported health status. By 1980, the proportion of US-born men without a high school degree who reported having "excellent" or "good" health (as opposed to "fair" or "poor") was about 63%, 8 percentage points below the corresponding proportion among immigrants without a high school degree. Today, the gap is much larger (closer to 20 percentage points).

Of course, the outcomes in this subsection are correlated with each other and the direction of causality is not obvious. On the one hand, worse employment prospects (Gould et al. 2002, Britto et al. 2022), lower marriage rates (Dustmann and Ladersø 2021, Massenkoff and Rose 2022), and lower parenthood rates (Sampson et al. 2006) may all contribute to higher incarceration. On the other hand, higher incarceration rates among low-educated men may have negatively impacted their labor market outcomes (Agan and Starr 2018, Dobbie et al. 2018) and their family formation (Charles and Luoh 2010). Regardless of the direction of causality, the patterns in this figure highlight that incarceration is part of a broader divergence of outcomes between less-educated immigrants and their US-born counterparts.

Why have less-educated immigrants remained relatively insulated from the structural forces that negatively affected low-educated US-born men? Our data does not allow us to pinpoint precise reasons, but we offer two possible explanations. First, lower-educated immigrants have specialized in manual, non-routine occupations, which are often located at the bottom of the wage distribution (Peri and Sparber 2009). Hence, immigrants were relatively shielded from the "hollowing out" of the middle of the wage distribution that took place in recent decades (Autor et al. 2006, 2008).[25] Second, low-educated immigrants are a self-selected group of individuals that likely differs from their US-born counterparts in characteristics such as their risk aversion (Jaeger et al. 2010) or their

[25] In contrast, consistent with Autor et al. (2023), Figure A22 shows that immigrants were equally likely to be concentrated in the declining manufacturing sector.

adaptability and cognitive ability (Bütikofer and Peri 2021). Immigrants have revealed that they are willing to travel long distances for opportunity, a trait which is consistent with immigrants' higher rates of entrepreneurship (Azoulay et al. 2022).[26] Such characteristics may have helped immigrants to weather the negative shocks that affected less-educated US-born men.[27]

4. Conclusion

We construct the first nationally representative series of immigrant-US-born incarceration gaps from 1870 until present day. We find that, as a group, immigrant men have had a *lower* incarceration rate than US-born men for the last 150 years of American history. The differences in incarceration have become more pronounced starting in 1960, with recent waves of immigrants being 50–60% less likely to be incarcerated than US-born men (and 30% when compared to US-born white men). This relative decline in incarceration has occurred among immigrants from all major countries of origin.

Why have immigrants' relative incarceration rates declined? We argue that this decline most likely cannot be explained via changes in criminal justice and immigration policies. Instead, it likely reflects deeper structural forces disproportionately affecting low-educated US-born men (and not their immigrant counterparts) in the past half century. Although this paper has briefly considered potential reasons for this difference, future work might further explore immigrants' abilities to insulate themselves from these forces, and how the relatively better outcomes among low-educated first-generation immigrants are connected to the higher levels of upward mobility that we see for the children of immigrants today (Abramitzky et al. 2021).

[26] Prior work (Amior 2020, Basso and Peri 2020, Cadena and Kovak 2016) shows that immigrants have greater migration responsiveness to economic conditions. Nevertheless, we note that differences in location cannot explain the gaps between lower-educated immigrants and their US-born counterparts. Figures A23 and A24 show that labor market and family formation gaps are stable after accounting for granular geographic (i.e., county or PUMA) fixed effects.

[27] Additional figures consider and rule out other reasons for immigrants being relatively less affected by these forces. Figure A25 shows that low-educated *citizen* immigrants also have significantly higher employment and labor force participation rates than US-born men, making it unlikely that differences in the availability of social insurance can explain the widening of the gap. We also do not find any evidence that differences in the likelihood of committing drug-related offenses can explain the immigrant-US-born incarceration gap (Figure A26).

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ADDITIONAL DETAIL ON DATA SOURCES

Data Sources: Census and ACS

We combine the full-count decennial Censuses between 1870 and 1940 (excluding 1890) with the largest available subsample of each Census between 1950 and 2000 and the American Community Survey for the more recent period. We recover the full-count decennial Censuses from the IPUMS datasets in the NBER server (Ruggles et al. 2021) and the Census subsamples and the ACS from the IPUMS website (Ruggles et al. 2022). In particular, we use the following:

- 1870, 1880, 1900, 1910, 1920, 1930, and 1940 full-count decennial Censuses.[28]
- 1950 1% weighted sample
- 1960 5% unweighted (flat) sample
- 1970 pooled 1% FORM 1 unweighted state, metro and neighborhood samples. Form 1 compiles a set of variables that were asked to 5% of the population, which is included in these samples
- 1980 5% unweighted (flat) state sample
- 1990 5% weighted state sample
- 2000 5% weighted state sample
- 2005–2019 annual ACS weighted sample corresponding to 1% of the population in each year
- 2008–2012 5-year ACS weighted sample corresponding to 5% of the population
- 2015–2019 5-year ACS weighted sample corresponding to 5% of the population

We also collect historical subsamples from IPUMS for robustness exercises:

- 1870 1% unweighted (flat) sample
- 1880 10% weighted sample

[28] For 1870-1940, we use the full-count Census files located in the following directory of the NBER server: /home/data/census-ipums/v2021/dta/. For 1940, we use the file located in /homes/data/cens1940/20180316/100files/ to produce alternative measures of incarceration (i.e., our "GQ" and "Relate" measures, as described in this appendix).

- 1900 5% unweighted (flat) sample
- 1910 1% unweighted (flat) sample
- 1920 1% unweighted (flat) sample
- 1930 5% unweighted (flat) sample
- 1940 1% weighted sample

We use annual ACS samples to plot incarceration rates and five-year samples to estimate differences in incarceration between immigrants and the US-born. We do not pool annual and five-year samples for the same analysis.

Our baseline results restrict the sample to men ages 18–40. Given its small sample size, we exclude the 1950 Census from results that split immigrants by country-of-origin group. Throughout the analysis, we utilize person weights provided by IPUMS.

Defining US-born, immigrants, and country groups

We define immigrants as individuals who were not born in any US state or outlying US area or territory. The US-born includes every individual not coded as an immigrant under this definition. Following Butcher and Piehl (2007), we exclude from the sample individuals born in outlying areas of the United States as well as those born abroad to US citizens.

We define the following five countries-of-origin groups for immigrants:

- "Old Europeans": individuals born in the countries that belong to Northern and Western Europe including Germany (IPUMS codes 400–429 and 453).
- "New Europeans": individuals born in the countries that belong to Southern Europe, Central/Eastern Europe, and the former USSR (IPUMS codes 430–499 excluding 453).
- Individuals born in China.
- Individuals born in Mexico and Central America.
- "Rest of the World": individuals born in other countries in Asia, Africa, Oceania, the Caribbean, and South America.

Measuring incarceration

Full-count censuses

Incarceration can in principle be measured in the full-count data using the "group quarters" and "group quarter type" variables available from the Census. Prisoners are defined as those who reside in institutional and other group quarters and whose group quarter type corresponds to correctional institutions. Correctional institutions include federal and state correctional facilities, prisons, penitentiaries, military prisons, local correctional facilities, jails, school juvenile delinquents, reformatory, camp or chain gangs, and houses of correction.

However, these variables were not consistently coded to identify prisoners in the full-count Census data (see Eriksson 2020 for a discussion). Common issues with these variables involve individuals who were not incarcerated but were counted as such, individuals that were actually incarcerated but appeared in households, and individuals that lived in prisons but were not incarcerated (such as prison guards). An additional issue is the classification of individuals defined solely as inmates, who may not be incarcerated in a correctional facility (e.g., inmates who frequent or live in mental and elderly institutions or those in non-institutional group quarters).

To account for these issues, we construct our preferred incarceration measure for the full-count Census data using the following procedure:

1. For each individual in the data, we retrieve their "group quarters," "group quarter type," "relate," and "occupation" variables (i.e., the code as well as the original strings as reported in the Census).
2. Next, we define individuals as incarcerated using information in the "relate" string variable if they meet *any* the following requirements:
    a. *Explicit correctional string:* Individuals who have the following words and their spelling variations in the "relate" string variable: "Prisoner," "Convict," or "Jail." At this step, we exclude individuals whose "relate" string variable conveys a relationship to "Prisoner," "Convict," or "Jail," such as "Daughter," "Son," "Wife," "Head," as well as "Guard," "Jailer," "Chief," "Helper," "Officer," "Manager," "Charge," "Superintendent," including their spelling variations. (i.e., we exclude an individual whose "relate" string variable is "Prisoner guard," "Convict daughter," etc.).

b. *Inmate and explicit correctional institution string*: Individuals who have the following words and their spelling variations combined with the word "Inmate" in the "relate" string variable: "Prison," "Jail," "Penitentiary," "Reformatory," and "Correction." We exclude individuals classified by the "group quarter type" variable as part of a mental institution, an institution for the elderly, handicapped, and poor, or a non-institutional group quarter. This avoids counting individuals who reside in these institutions as inmates, but for whom it is not clear that they are serving a criminal sentence.

c. *Inmate with missing information in the string variable:* Individuals who have the word "Inmate" (without any additional words) in the "relate" string variable or who have a missing value, an "X," or a "*" in the "relate" string variable. These individuals are classified as incarcerated if either:

   i. their "group quarters" string variable contains the words "Prison," "Jail," "Penitentiary," "Reformatory," "Correction," "Convict," "Delinquent," "Penal," and other grammatical variations of these words; or

   ii. their "group quarters type" variable code corresponds to a correctional institution when the relate string says "Inmate." For individuals with missing values, "X," or "*" in the relate string variable, we additionally condition on whether the individual is an institutional inmate based on their "relate" variable code.

3. We follow the steps in (2) to classify individuals as incarcerated using the "occupation" string variable.

   a. We follow the procedure in (2.a) (i.e., an individual is identified as incarcerated if their occupation includes "Prisoner," "Convict," or "Jail."). Because the "occupation" string does not convey familial relationships, we do not exclude any individuals in this step based on their relationship to household. However, we do exclude individuals if their occupation denotes a potential non-prisoner occupation ("Guard," "Jailer," "Chief," "Helper," "Officer," "Manager," "Charge," and "Superintendent").

   b. We replicate step (2.b) exactly.

c. We replicate step (2.c), but in addition to "Inmate," "X," and "*," we also include individuals in this step whose occupation string variable says "No Occupation," "No," "None," "Without Occupation," "Nothing," or has a missing value.[29]

In our preferred measure of incarceration, we define an individual as incarcerated if they are classified as such in steps one through three.[30]

The 1870 Census does not include the "relate" string variable. We classify individuals as incarcerated in these years using the "occupational" string variable (step 3). In addition, we include individuals as incarcerated if their "relate" variable code is "institutional inmate" and their "group quarter type" variable code corresponds to correctional institutions.

The 1910 Census does not identify group quarter types. In this case, we rely on our preferred measure to classify prisoners based on strings of the "relate" and "occupation" variables that clearly identify individuals as prisoners (as in step 2.a). However, due to the lack of the "group quarter" string variable and the "group quarter type" variable, we are unable to implement steps 2.b, 2.c., 3.b, and 3.c.

For robustness checks, we also construct two alternative measures of incarceration, which we refer to as the "GQ measure" and the "relate measure." The "GQ measure" refers to individuals who reside in institutional and other group quarters and whose group quarter type corresponds to correctional institutions (without any additional modifications). The "relate measure" refers to individuals who satisfy the "GQ measure" and either steps (2.a) or (2.b). In the "relate measure," we exclude individuals who appear to be incarcerated via the "GQ measure," but who are coded as family members of the household head in their "relate" variable code.

We note that the paper's main takeaways are similar when using just IPUMS group quarters variable, rather than this more detailed approach. Indeed, Table A2 shows that between 1870–

[29] To be conservative, when an individual is classified as incarcerated using missing information under the relate string (step 2c), but not under the occupation string (step 3c), we only identify an individual as incarcerated if they are classified as institutional inmates in their "relate" variable code or if their "relate" variable string is the word "Inmate."
[30] The 1940 Census presents a comparability issue among large households. According to IPUMS: "Before 1940 and in 1980–1990, units with 10 or more individuals unrelated to the householder are considered group quarters." We adjust our "preferred" measure in 1940 to include individuals whose "relate" variable string says "Inmate" (in cases where the "group quarters" variable code is "Other Group Quarters" and the "group quarter type" variable code indicates a "Non-group quarter household"). For more details, see https://usa.ipums.org/usa-action/variables/GQ#comparability_section.

1930, more than three-fourths of individuals that we classify as incarcerated are coded as living in a correctional institution, and this share is comparable across immigrants and the US-born.

Census subsamples and ACS

Between 1950 and 1980, we define prisoners as those who belong to institutional and other group quarters and whose group quarter type corresponds to correctional institutions (analogous to the GQ measure described above). For 1910, group quarter types were imputed by IPUMS. Between 1990 and 2019, the "group quarter" variables only allow us to identify institutionalized individuals, but not those who are institutionalized in adult correctional facilities. In this case, we identify incarcerated individuals as those who are classified as living in institutional group quarters.

Other variable definitions

Education

We use the "education" variable in each sample to assign individuals to three educational groups: high school dropouts (i.e., those with no schooling up to those who completed grade 11), high school only (grade 12), and any college (1 or more years of college). These three groups comprise the educational fixed effects used in our analysis. This variable is defined starting with the 1940 Census.

Race

We use the "race" variable in each sample to assign individuals to three racial groups: white, Black, and "other" (referring to individuals whose race classification is neither white nor Black). These three groups comprise the race fixed effects used in our analysis.

Marital status

We use the "marital status" variable in each sample to assign individuals to three marital status groups: married (married, spouse present or absent); separated, divorced, or widowed; and never married/single. These three groups comprise the marital status fixed effects used in our analysis and we use the married category to construct marriage rates. This variable is defined for every year.

State of residence

To compare individuals living in similar geographies, we use state-of-residence fixed effects. Although the vast majority of individuals convicted of crimes are incarcerated in their state of residence, we cannot control for geography below the state level because inmates can be incarcerated in correctional facilities far from their initial residential location (i.e., their county of residence at the time of the Census may not reflect their county of residence prior to incarceration).[31]

Parenthood status

We utilize the variable "NCHILD" available via IPUMS to calculate the share of men living with children of their own among individuals who are not incarcerated. This variable is defined for every year.

Citizenship status

This variable is not available in 1880 and 1960. In 1870, 1900, and 1910, citizenship status was defined for foreign-born men older than 20. From 1920 onwards, it was defined for all foreign-born individuals. Individuals born in any US state are classified as citizens in all of these samples.

ICE Facilities and Deportations Data

We identify 18 Immigration and Customs Enforcement (ICE) contract detention facilities and service processing centers from the list provided in the 2022 ICE Detentions Statistics Appendix found in https://www.ice.gov/detain/detention-management . These are the detention facilities that are either owned by ICE or directly contracted with ICE.[32] In 2017, these type of facilities were 6% of the total number of facilities used for detention, and held approximately 28% of detainees.[33] We geolocate these facilities, identify their counties, and assign them to their corresponding time-varying PUMA in 1990 (1,726 total PUMAs), in 2006–2011 (2,069 total PUMAs), and 2012–2019 (2,351 total PUMAs) using the county-to-PUMA crosswalk geographic correspondence engine

[31] This assumption may not be true for those incarcerated for federal offenses because individuals might be sent to federal prisons outside of their state of residence. Nevertheless, the share of inmates in federal prisons is generally small (5–7% of incarcerated individuals in 1990 and 2000; Beck and Harrison 2001).
[32] See also https://www.ice.gov/doclib/foia/media-requests/09foia5638detentionfacilitylist.xls.
[33] "ICE Does Not Fully Use Contracting Tools to Hold Detention Facility Contractors Accountable for Failing to Meet Performance Standards." Office of Inspector General, Department of Homeland Security. https://www.oig.dhs.gov/sites/default/files/assets/2019-02/OIG-19-18-Jan19.pdf.

provided by the Missouri Census Data Center. For 1970 and 1980, we assign corresponding county groups by geolocating ICE facilities into shapefiles provided by IPUMS (309 and 1,154 county groups in 1970 and 1980, respectively). Two ICE facilities are located in the same area, so in practice, we exclude 17 areas in Figure A18.

To consider how the incarceration rate would change after including deportations, we use the 2006–2019 reports from the Department of Homeland Security on Immigration Enforcement Actions. We focus on removals of individuals with criminal histories.

Health

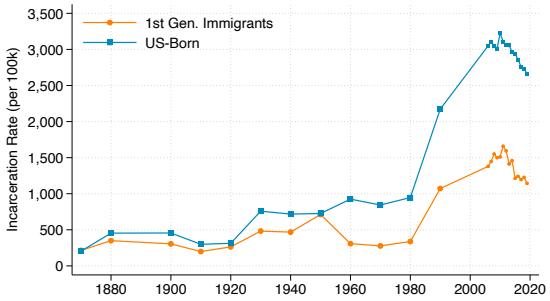
We use data from the General Social Survey (GSS) to measure health outcomes. We focus on the 1977–2021 period, in which individuals can be classified as foreign-born. We group annual data into five-year bins (e.g., the 2000 point includes the 1998--2002 survey waves). We rely on the "health" variable, identifying individuals who report an "excellent" or "good" health condition. Given small samples, we focus on men ages 18–65.

Admissions for Drug-Related Offenses

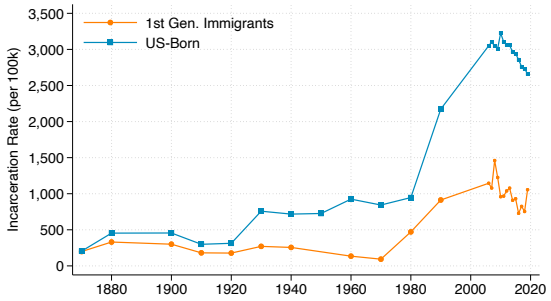
We use data from the National Corrections Reporting Program (NCRP; ICPSR 36404) between 1991 and 2010. We derive the stock of incarcerated individuals for each year by keeping all records of individuals admitted to prison before or during that calendar year who are released after that same year. We then sum the number of drug-related incarcerations in each state and year and compute average drug incarceration rates at the state level for the 1991–1993 and 2008–2010. To calculate incarceration rates, we use state population counts from the 1990 and 2010 Census.

Figure 1: Incarceration Rates of Immigrants and US-born Men, 1870–2019

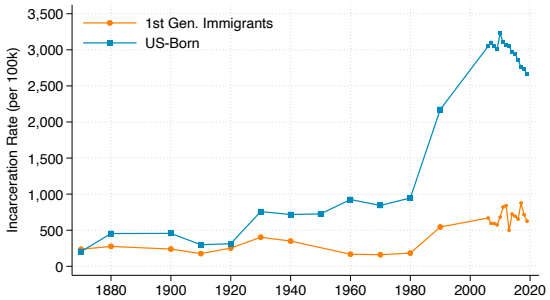
(a) All Immigrants



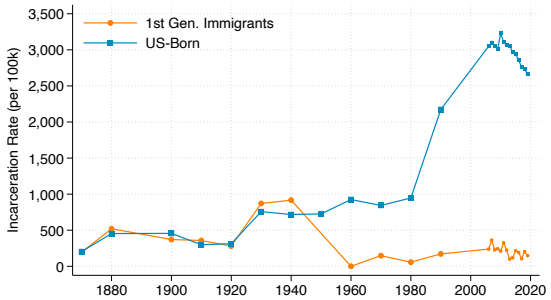
(b) "Old" Europeans



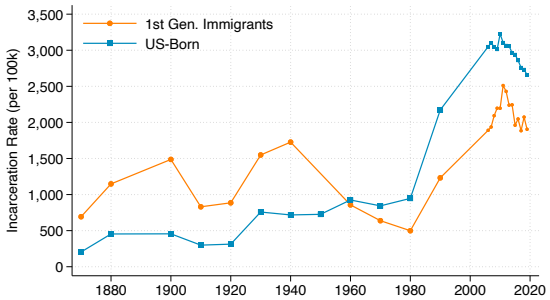
(c) "New" Europeans



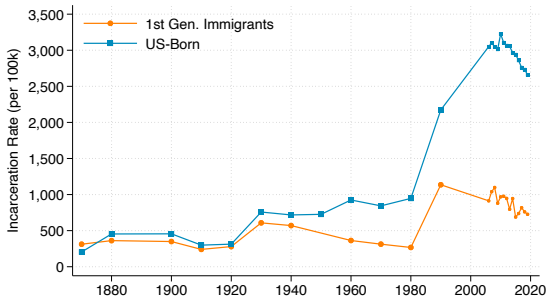
(d) Chinese



(e) Mexican and Central Americans



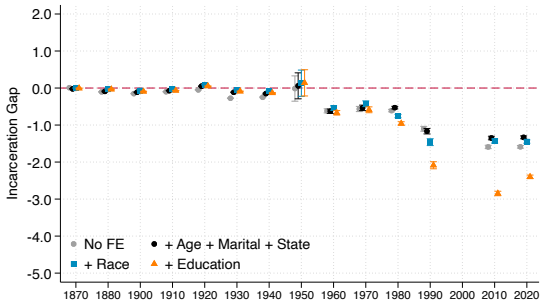
(f) Rest of the world



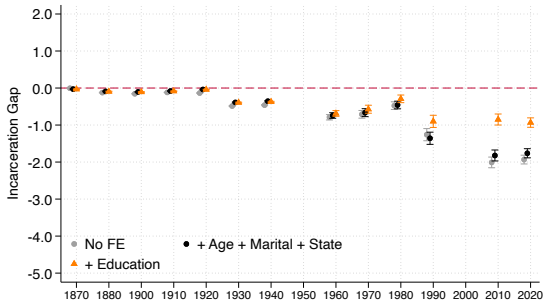
Notes: Each panel plots incarceration rates for immigrants and US-born men between 1870 and 2019. Data are restricted to males ages 18-40. Data spanning 1870 to 1940 are from the full-count decennial Censuses. Data spanning 1950 to 1990 are from the largest available sub-sample from the corresponding decennial Censuses. Data from 2005 onward are from the annual American Community Surveys (ACS). Panel (a) compares US-born men to all immigrants. Panels (b)-(f) compare US-born men to immigrants from a particular country-of-origin group. "Old Europeans" are immigrants from countries in the North and West of Europe. "New Europeans" are immigrants from countries in Eastern and Southern Europe. The "Rest of the world" category includes immigrants from countries not included in panels (b)-(f). For more details, see the Online Appendix.

Figure 2: Difference in Incarceration Rates of Immigrants and US-born Men, Adjusting for Individual-Level Characteristics, 1870–2019

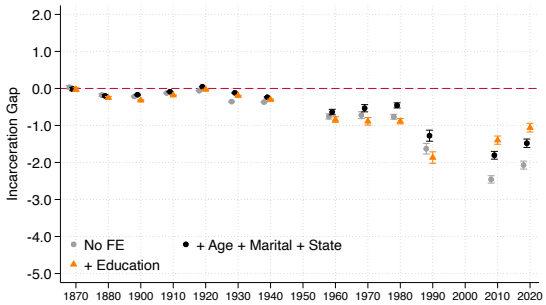
(a) All Immigrants



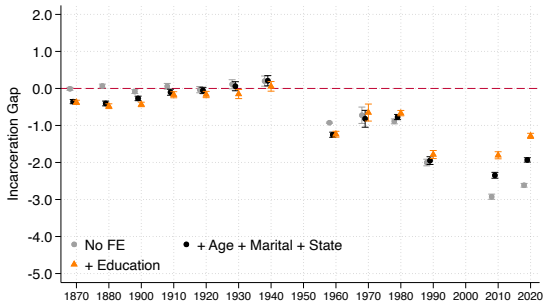
(b) "Old" Europeans



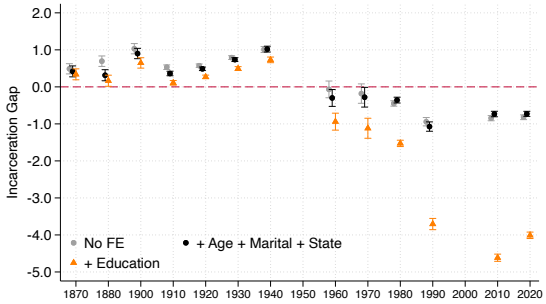
(c) "New" Europeans



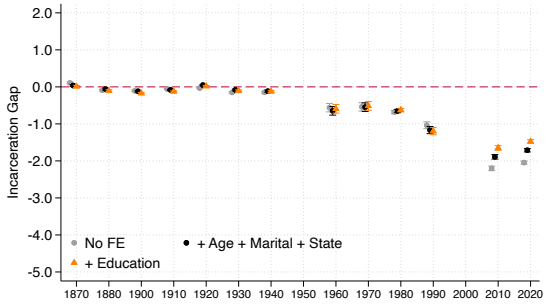
(d) Chinese



(e) Mexican and Central Americans



(f) Rest of the world

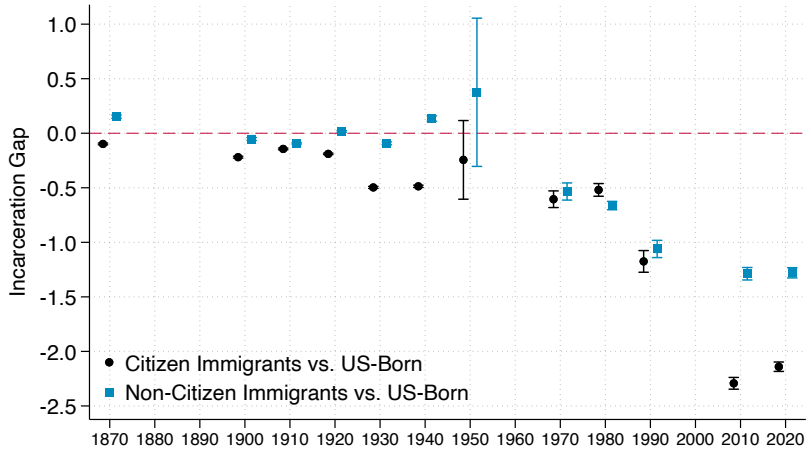


Notes: Each panel presents the estimated values of β_t from the following regression (estimated separately by Census year):

$$\text{Incarcerated}_{it} = \alpha + \beta_t \text{Immigrant}_{it} + \gamma X_{it} + \epsilon_{it}$$

where Incarcerated is a variable that takes a value of 100 if individual i in year t is incarcerated (0 otherwise) and Immigrant is an indicator taking a value of one if an individual is foreign-born. The vector X_{it} sequentially adds age, marital status, state, race (only in panel (a)), and education fixed effects. Education refers to literacy before 1940 and educational attainment starting in 1940 (HS dropout, HS graduate, any college). Data are restricted to males ages 18-40. Data spanning 1870 to 1940 are from the full-count decennial Censuses. Data spanning 1950 to 1990 are from the largest available sub-sample from the corresponding decennial Censuses. Data from 2005 onward are from the annual American Community Surveys (ACS). Panel (a) compares US-born men to all immigrants. Panels (b)-(f) compare US-born men to immigrants from a particular country-of-origin group. See Figure 1 and the Online Appendix for definitions of each country-of-origin group.

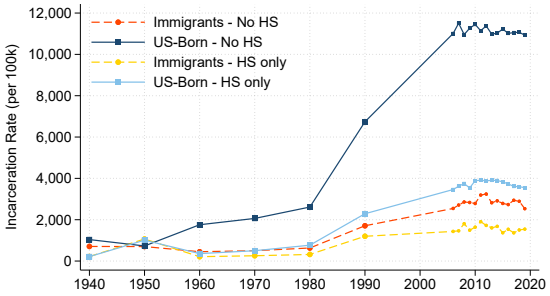
Figure 3: Differences in Incarceration Rates of Citizen and Non-Citizen Immigrants, 1870–2019



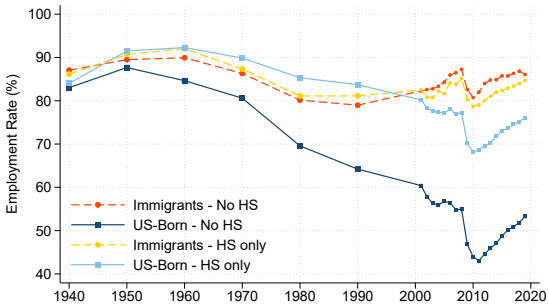
Notes: The first series plots the incarceration gaps (as in Figure 2) restricting the sample of immigrants to those that are US citizens. The second series then plots the incarceration gaps after restricting the sample of immigrants to those that are non-citizens. Data are restricted to males ages 18-40. In 1870, 1900, and 1910, data are restricted to males ages 21-40, since citizenship was not defined for individuals under 21 in these censuses. Data spanning 1870 to 1940 are from the full-count decennial Censuses. Data spanning 1950 to 1990 are from the largest available sub-sample from the corresponding decennial Censuses. Data from 2005 onward are from the annual American Community Surveys (ACS). Data from 1880 and 1960 are omitted because the Census did not include a citizenship question in those years.

Figure 4: Incarceration, Labor Market, Family Formation, and Health Outcomes of Immigrants and US-born Men Without Any College Education, 1940–2019

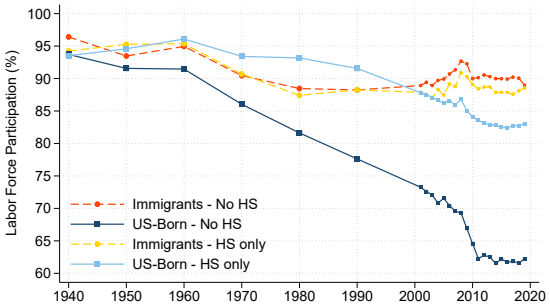
(a) Incarceration Rate (per 100,000)



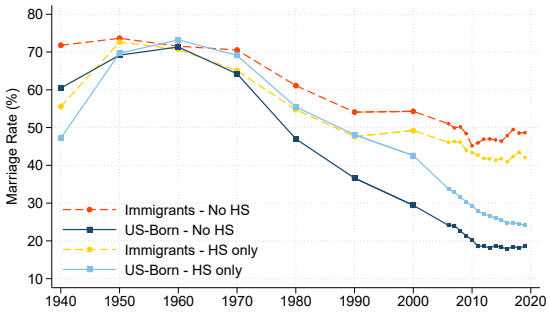
(b) Employment Rate (%)



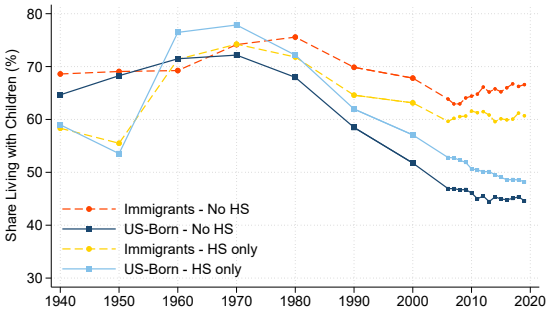
(c) Labor Force Participation Rate (%)



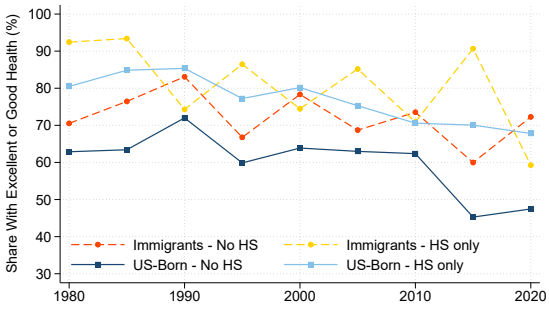
(d) Marriage Rate (%)



(e) Share Living with Children (%)



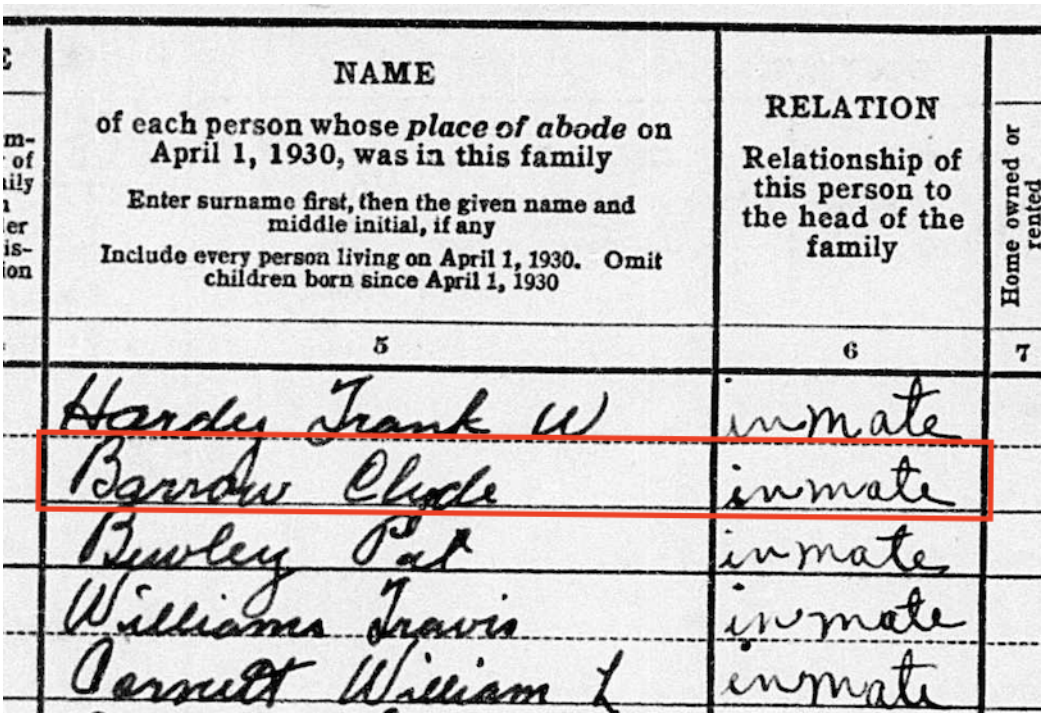
(f) Share with Excellent or Good Health (%)



Notes: This figure plots the outcomes of immigrant and US-born men by educational attainment between 1940 and 2019. "No HS" refers to individuals with 11 or fewer years of schooling. "HS Only" refers to individuals with exactly 12 years of schooling. Panels (a)-(d) are restricted to males ages 18–40. Panels (e) and (f) are restricted to males ages 30–50 and 18–65, respectively. Panels (b)-(e) focus on the non-institutionalized population. For panels (a)-(e), data spanning 1950 to 1990 are from the largest available subsample from the decennial Census, and data from 2000 onward are from the annual American Community Survey (ACS). Panel (f) uses data from the 1977–2020 General Social Survey (GSS) and plot the share of individuals who report being in excellent or good health. Each data point in this panel reflects information from various survey waves around that year. For more details, see the Online Appendix.

A Appendix Figures and Tables

Figure A1: Example Record of Incarcerated Individuals in 1930 Census

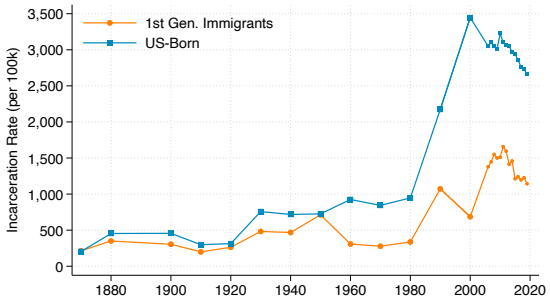


NAME of each person whose *place of abode* on April 1, 1930, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on April 1, 1930. Omit children born since April 1, 1930	RELATION Relationship of this person to the head of the family	Home owned or rented
5	6	7
Hardy Frank W	inmate	
Barrow Clyde	inmate	
Bowley Pat	inmate	
Williams Travis	inmate	
Bennett William L	inmate	

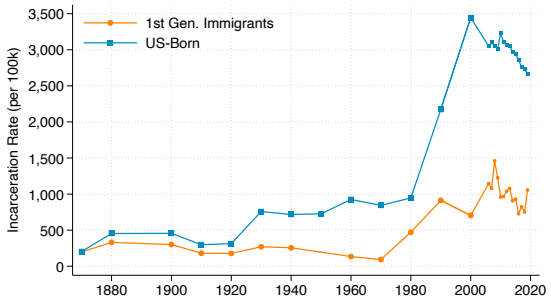
Notes: This figure shows an example record of incarcerated individuals in the 1930 population Census.

Figure A2: Incarceration Rates of Immigrants and US-born Men for 1870–2019, Including 2000

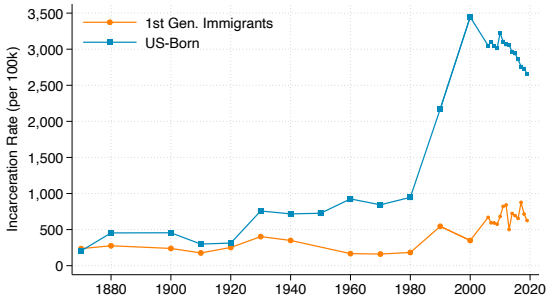
(a) All Immigrants



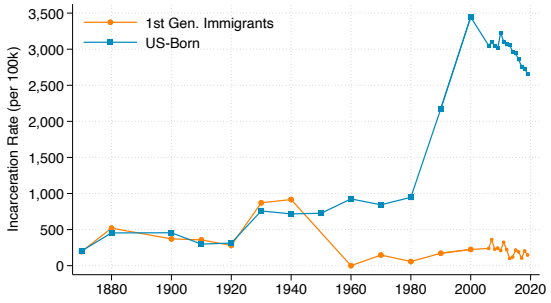
(b) "Old" Europeans



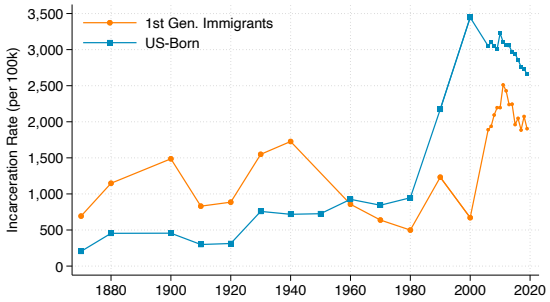
(c) "New" Europeans



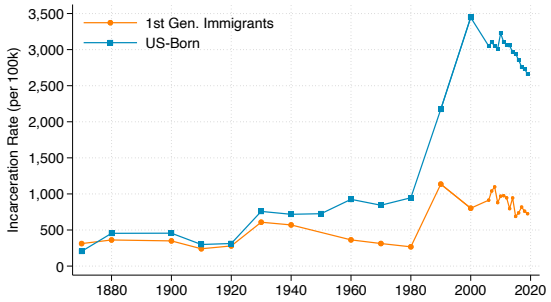
(d) Chinese



(e) Mexican and Central Americans



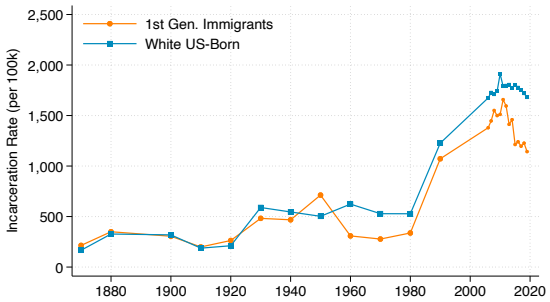
(f) Rest of the world



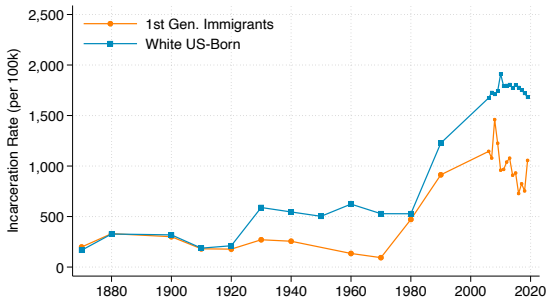
Notes: Each of the panels in this figure plots incarceration rates for immigrants and US-born between 1870 and 2019 as in Figure 1, but including the corresponding points for the 2000 Census. For more details, see the note to Figure 1 and the Online Appendix.

Figure A3: Incarceration Rates of Immigrants and White US-born Men, 1870–2019

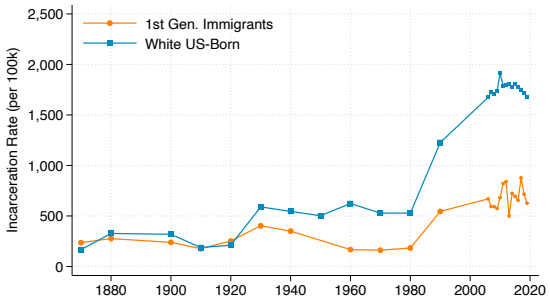
(a) All Immigrants



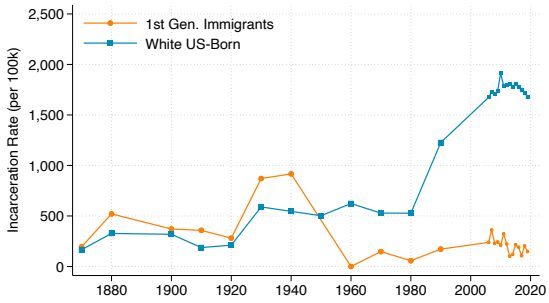
(b) "Old" Europeans



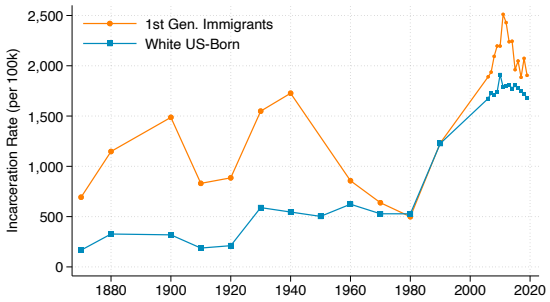
(c) "New" Europeans



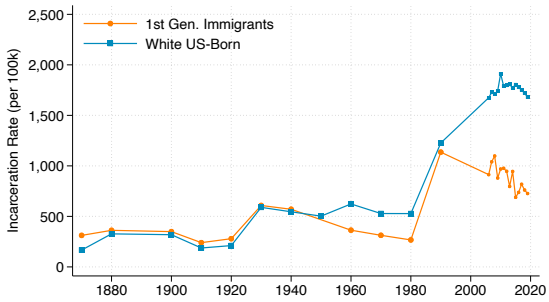
(d) Chinese



(e) Mexican and Central Americans



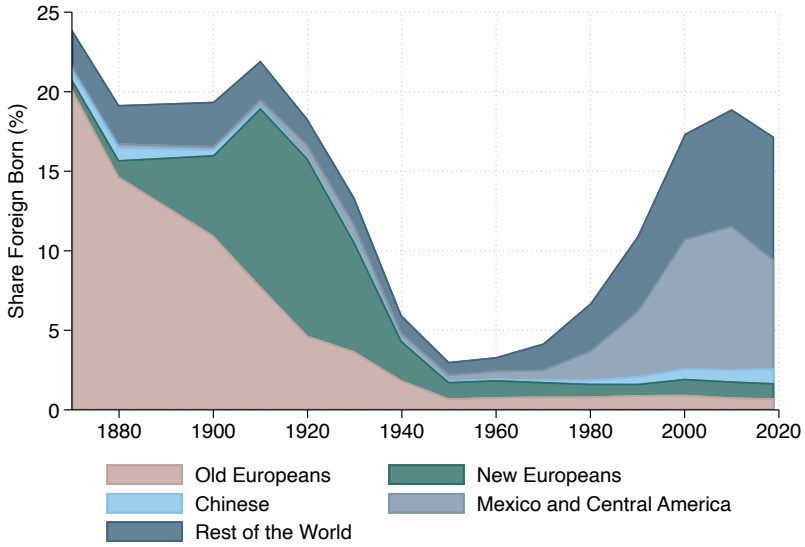
(f) Rest of the world



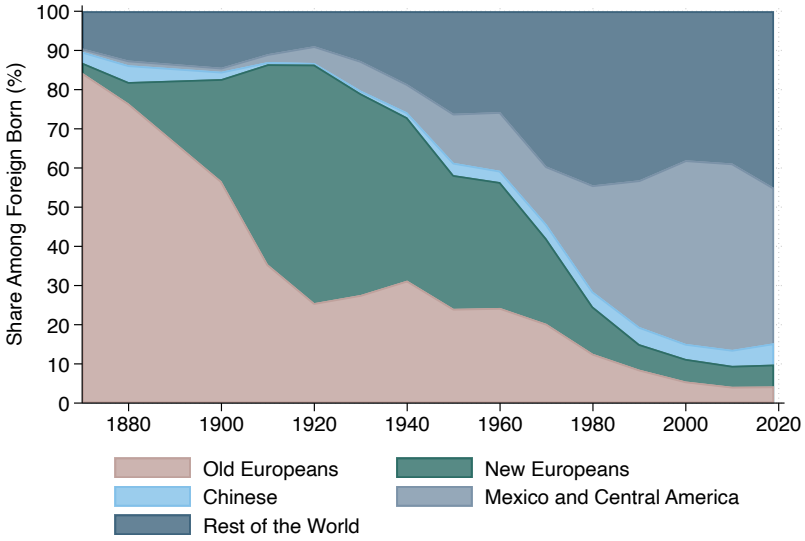
Notes: Each of the panels in this figure plots incarceration rates for immigrants (regardless of their race) and white US-born men between 1870 and 2019. For more details, see the note to Figure 1 and the Online Appendix.

Figure A4: Immigrant Composition in the US, 1870-2019

(a) Within the US Population

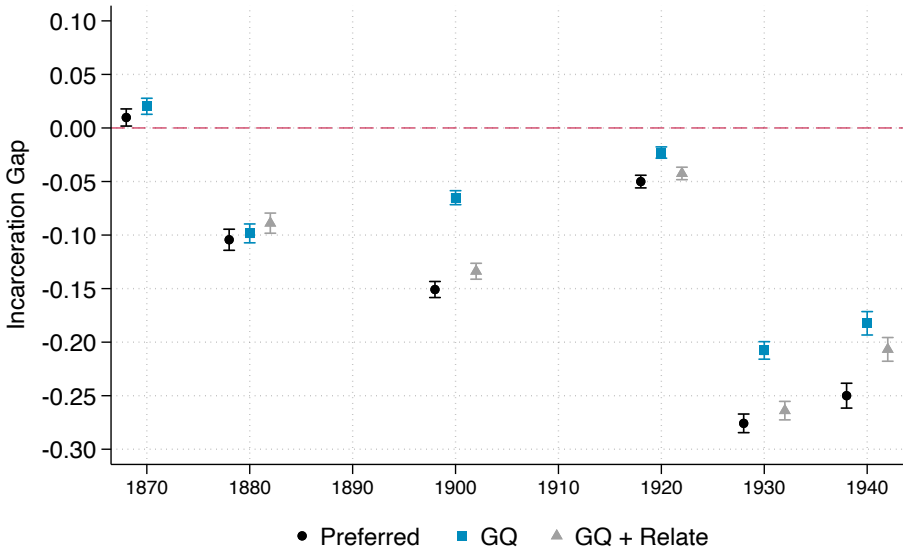


(b) Within the Immigrant Population



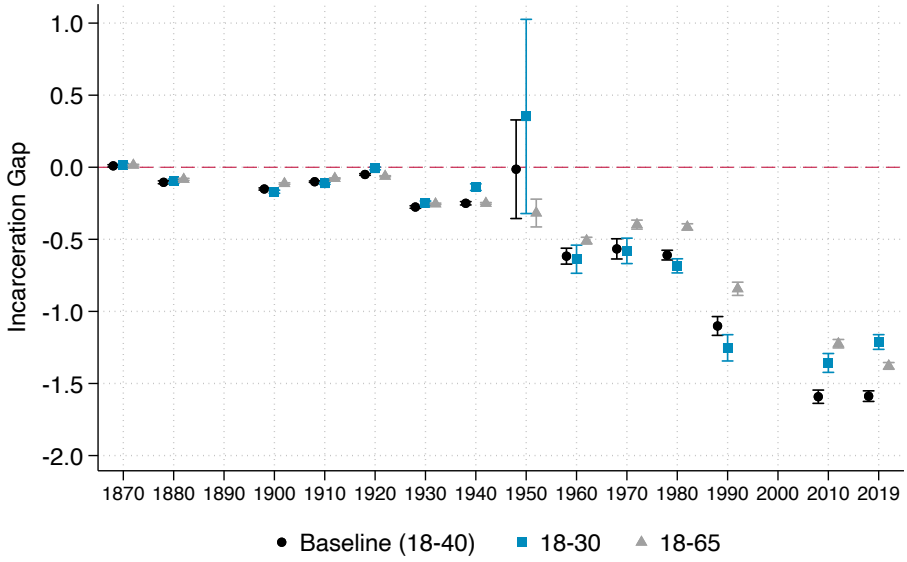
Notes: Panel (a) illustrates the share of men ages 18–40 that are foreign-born between 1870 and 2019. Panel (b) shows the composition of each immigrant group among foreign-born individuals. Each color depicts immigrants from a specific country-of-origin group, showing that immigrants today are more likely to come from Mexico and Central America as well as from the "rest of the world" group. For more details on the definition of each country-of-origin group, see the Online Appendix.

Figure A5: Incarceration Gap between Immigrants and US-born Men Using Alternative Incarceration Measures, 1870–1940



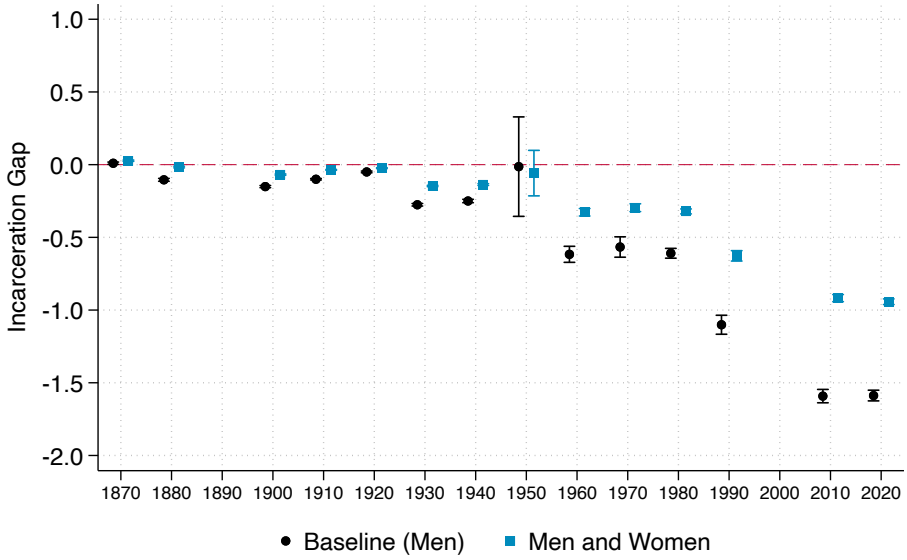
Notes: This figure plots the immigrant-US-born incarceration gap using the full-count decennial Censuses between 1870 and 1940. The baseline estimate utilizes the preferred measure of incarceration. The second series only uses the IPUMS group quarters variable to classify an individual as incarcerated. The third series uses the group quarters variable and the variable denoting the relationship to the household head to classify an individual as incarcerated. The 1910 Census does not identify group quarter types, so we omit this year in the comparison. The 1870 Census does not include a question on relationship to household head. For more details on these measures, see the Online Appendix.

Figure A6: Incarceration Gap between Immigrants and US-born Men, Varying the Age of the Sample



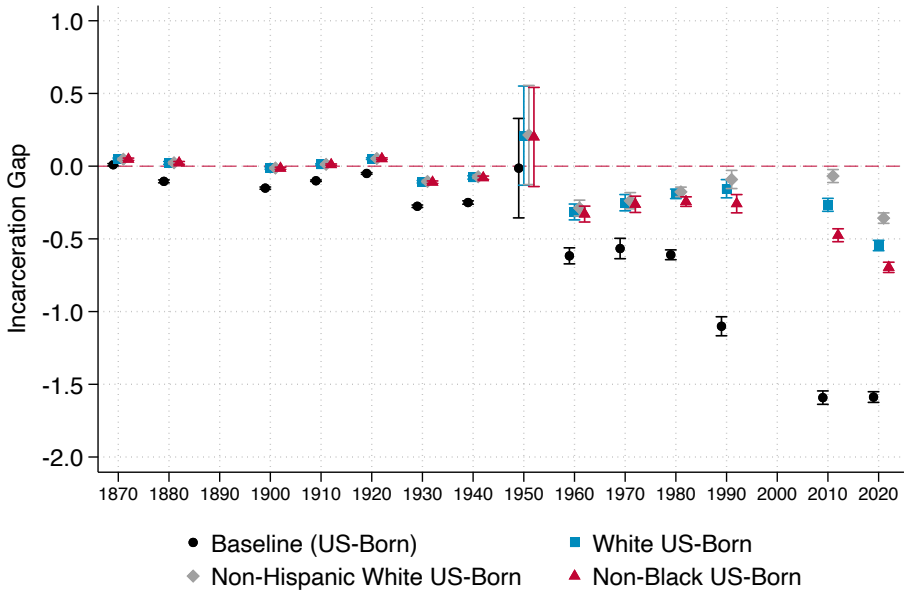
Notes: This figure plots the incarceration gap between immigrants and US-born men varying the age of the individuals in the sample. The first series reproduces the baseline estimates using men ages 18–40. The second and third series consider men ages 18–30 and 18–65, respectively.

Figure A7: Incarceration Gap between Immigrants and US-born Individuals, Including Women



Notes: This figure plots the incarceration gap between immigrants and US-born individuals ages 18–40. The first series reproduces the baseline estimates only including men. The second series includes women.

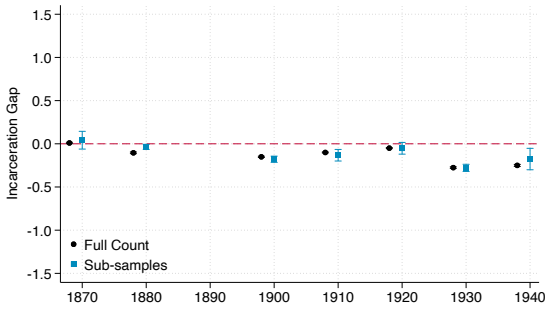
Figure A8: Incarceration Gap between Immigrants and US-born Men, Using Alternative Groups of US-born Individuals



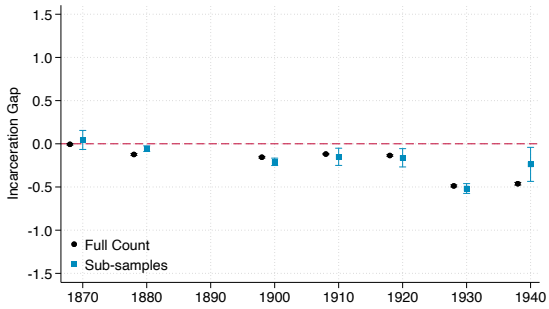
Notes: This figure plots the incarceration gap between immigrants and US-born men, varying the group of individuals used to estimate the incarceration rates of US-born individuals. The first series reproduces the baseline estimate considering all US-born men. The second series only considers white US-born men. The third series considers non-Hispanic white US-born men. Hispanic individuals are identified using the "Hispan" variable provided by IPUMS. Before 1980, individuals were classified as Hispanic based on their country of birth, parental country of birth, Spanish surname, or relationship to someone identified as Hispanic through these characteristics. The fourth series considers US-born men whose race is not classified as Black.

Figure A9: Incarceration Gap between Immigrants and US-born Men, Comparing Full Count Census with Sub-samples, 1870–1940

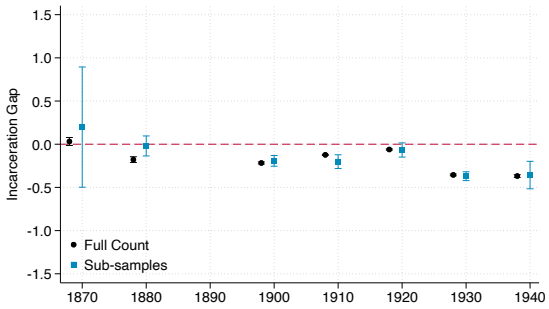
(a) All Immigrants



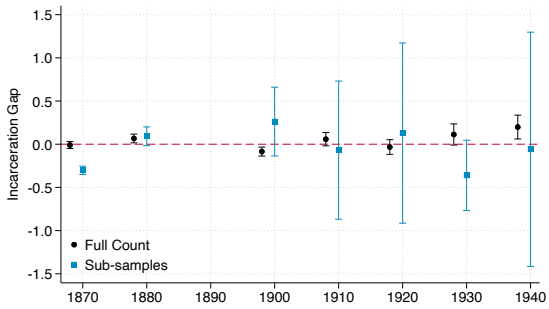
(b) "Old" Europeans



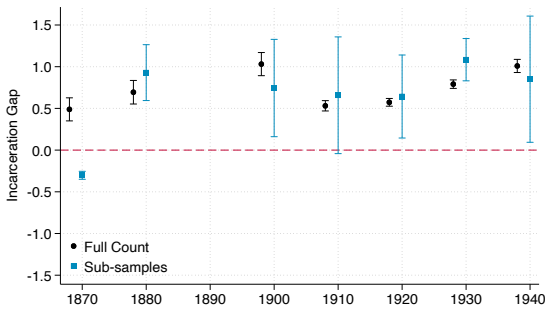
(c) "New" Europeans



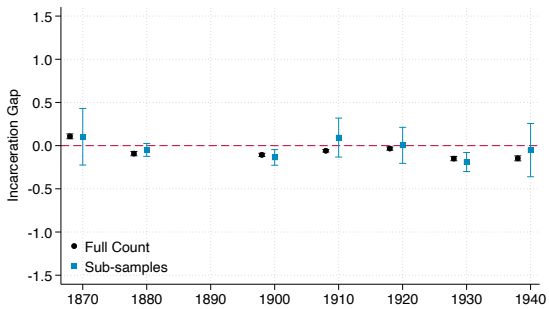
(d) Chinese



(e) Mexican and Central Americans

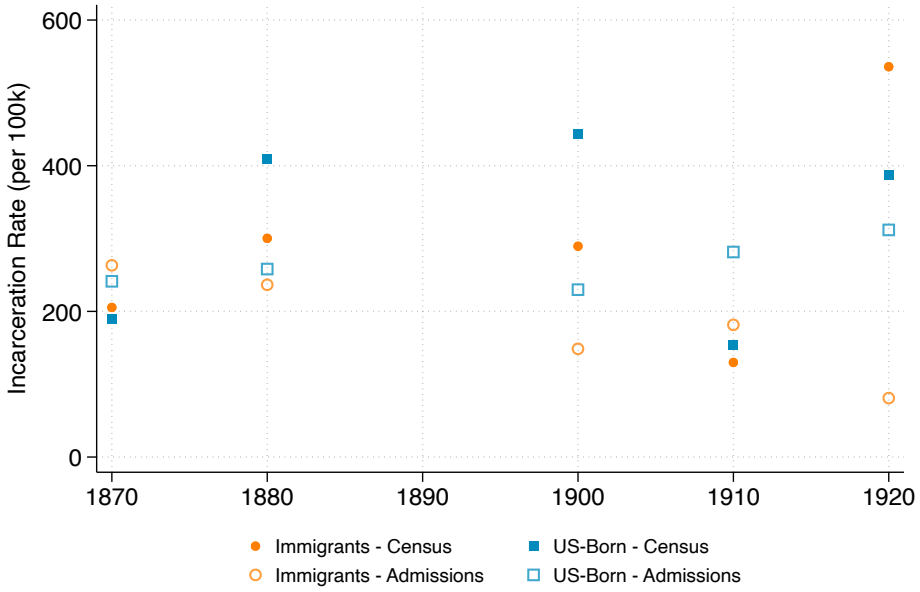


(f) Rest of world



Notes: This figure plots the incarceration gap between immigrants and US-born men. The first series reproduces the baseline estimates using the full-count Censuses. The second series utilizes the largest available sub-sample from each decennial Census. Panel (a) compares US-born men to all immigrants. Panels (b)-(f) compare US-born men to immigrants from a particular country-of-origin group. For more details, see the note to Figure 1 and the Online Appendix.

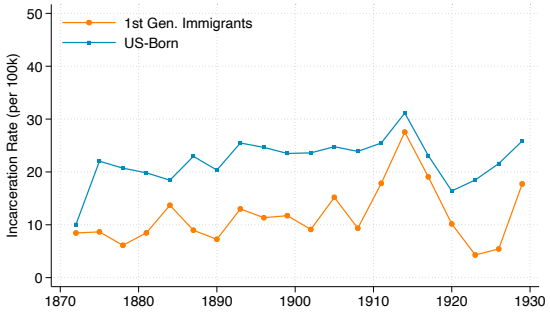
Figure A10: Comparison of Census-based Incarceration Rates in Missouri to Prison Admissions Rates from the Missouri State Penitentiary



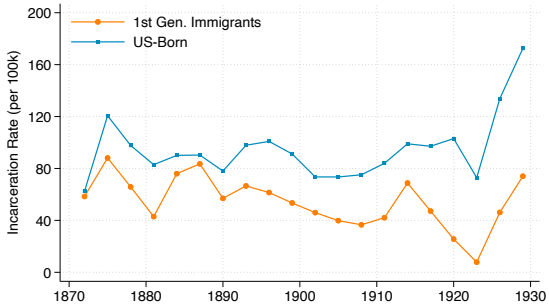
Notes: This figure compares the incarceration rates of immigrants and US-born men residing in Missouri (based on Census data) with prison admissions rates by nativity based on prison admission records from the Missouri State Penitentiary. The data on prison admissions come from digitized administrative records of the Missouri State Penitentiary, which covers the universe of prison inmates in Missouri. Population counts (for calculating rates) come from the full-count Census.

Figure A11: Prison Admissions Rates of Immigrants and US-born Individuals in Missouri by Type of Crime, 1872–1929

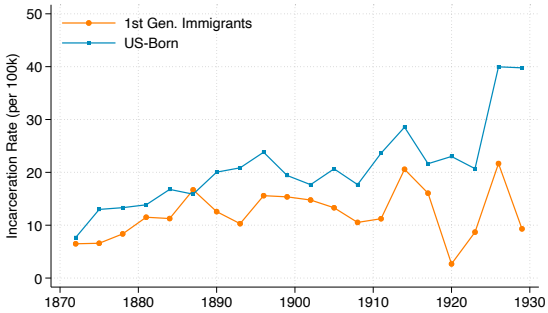
(a) Violent Crimes



(b) Property Crimes



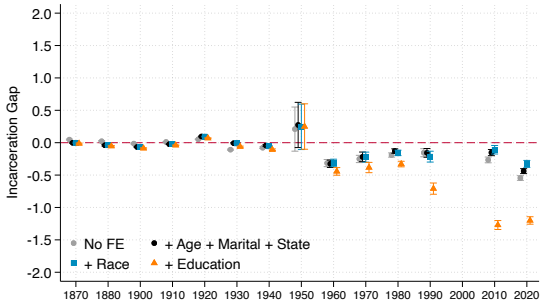
(c) Other Crimes



Notes: This figure plots prison admissions rates of immigrants and US-born individuals between 1872 and 1929 separately by crime type. Data are based on prison admission records from digitized administrative records of the Missouri State Penitentiary, which covers the universe of prison inmates in Missouri. Panels (a), (b), and (c) consider admissions for violent, property, and other crimes, respectively. Population counts (for calculating rates) come from the full-count Census and are interpolated between Census years.

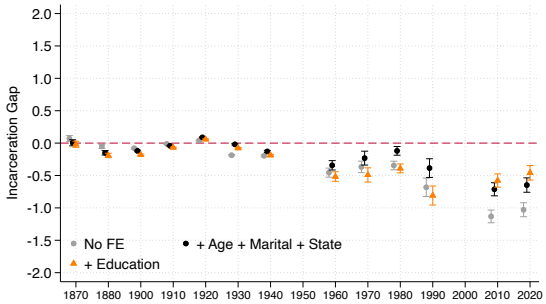
Figure A12: Difference in Incarceration Rates of Immigrants and White US-born Men, Adjusting for Individual-Level Characteristics, 1870–2019

(a) All Immigrants

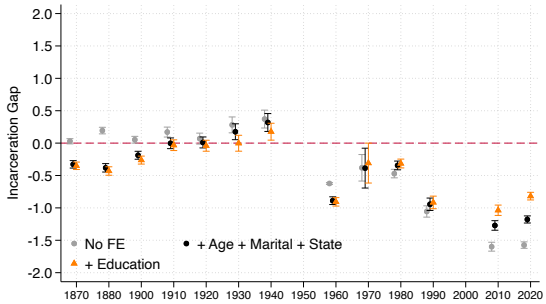


(b) "Old" Europeans

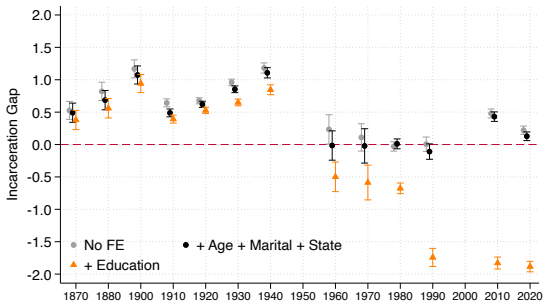
(c) "New" Europeans



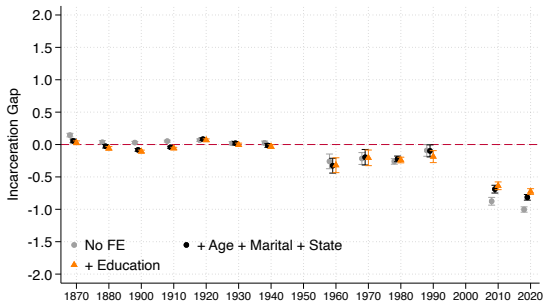
(d) Chinese



(e) Mexican and Central Americans



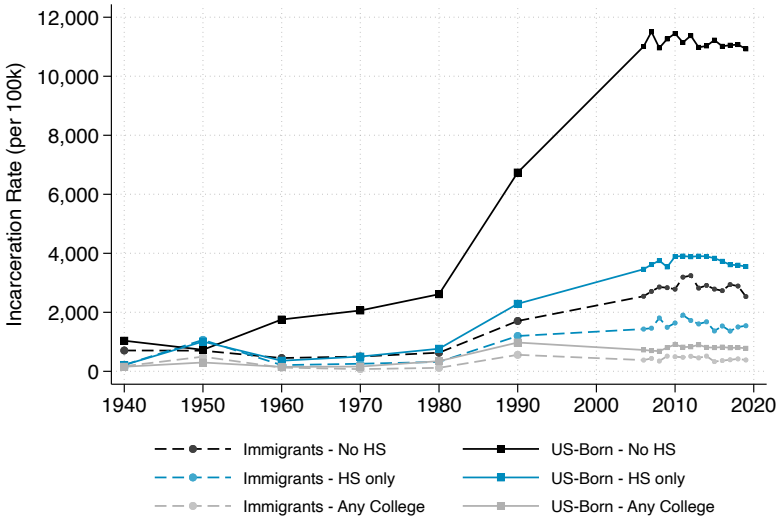
(f) Rest



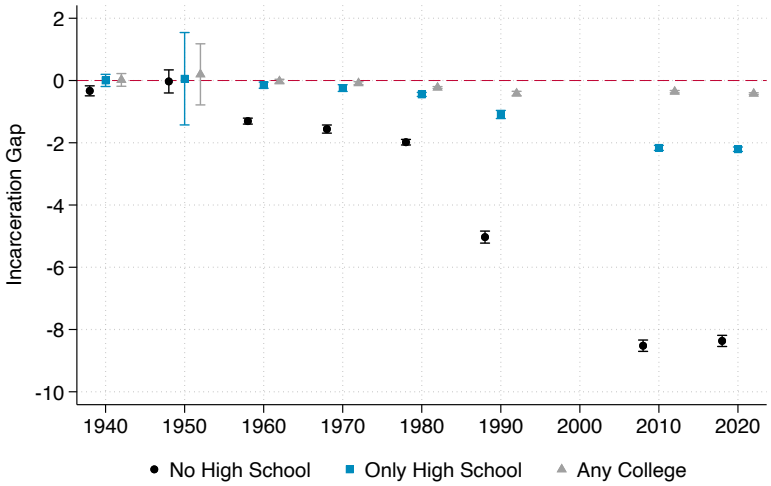
Notes: This figure is analogous to Figure 2 but considers white US-born individuals. For more details, see the note to Figure 2 and the Online Appendix.

Figure A13: Incarceration Gap Between Immigrants and US-born Men, by Educational Attainment, 1940–2019

(a) Incarceration Rates

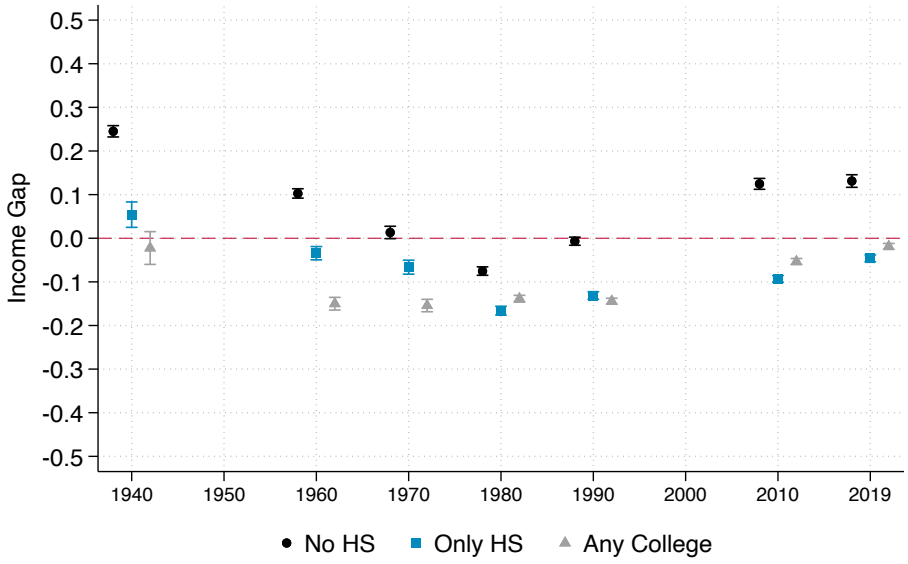


(b) Differences in Incarceration



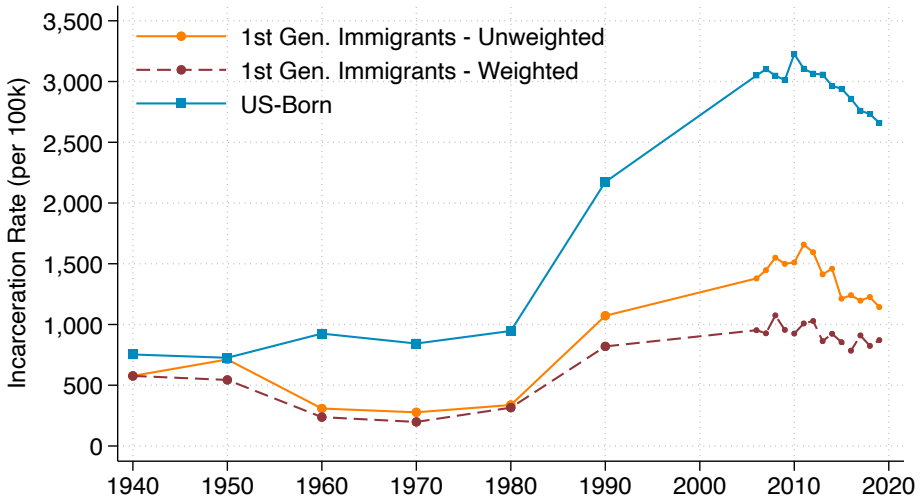
Notes: Panel (a) plots incarceration rates for immigrants and US-born men between 1940 and 2019 separately by educational attainment. Panel (b) plots the corresponding immigrant-US-born incarceration gap by level of educational attainment. "No High School" refers to individuals with 11 or fewer years of schooling. "High School" refers to individuals with exactly 12 years of schooling. "Any College" refers to individuals with one or more years of college.

Figure A14: Differences in Logged Income Between Immigrants and US-born Men, by Educational Attainment, 1940–2019



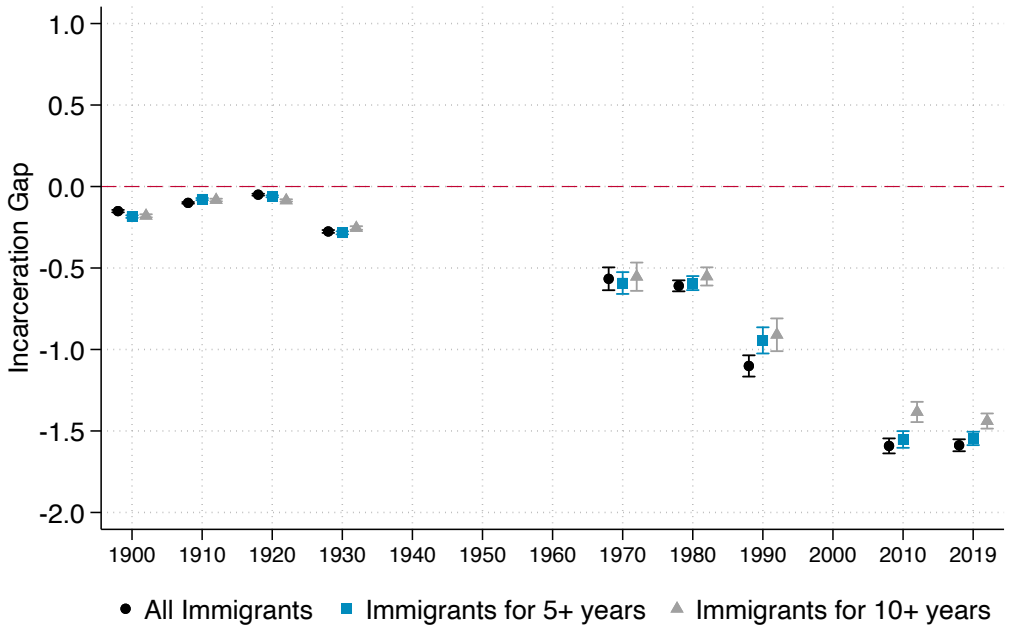
Notes: The figure plots the income gap between immigrants and US-born men separately by educational attainment. Individuals in the sample are men ages 18–40 who are in the labor force and have positive income. "No High School" refers to individuals with 11 or fewer years of schooling. "High School" refers to individuals with exactly 12 years of schooling. "Any College" refers to individuals with one or more years of college.

Figure A15: Incarceration Rate of Immigrants and US-born Men, Fixing the Immigrant Country-of-Origin Composition at 1940 Levels



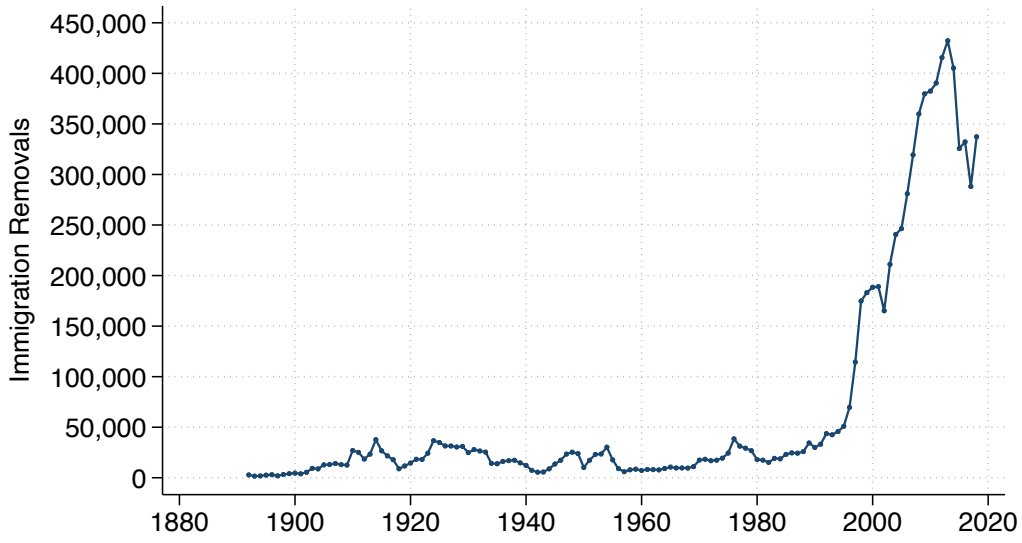
Notes: The first (orange) and third (blue) series plot the raw incarceration rates of immigrant men and US-born men, analogous to those in Figure 1. The second series (dashed red) holds fixed the immigrant composition in 1940 using the five country-of-origin groups ("old" Europeans, "new" Europeans, Chinese immigrants, Mexican and Central American immigrants, and immigrants from the "rest of the world") and calculates the counterfactual incarceration rate after 1940 if each group's incarceration had evolved naturally but their proportion in 1940 (as a share of all immigrants) remained fixed. This figure makes clear that if the immigrant composition had not changed since 1940, the immigrant incarceration rate would be lower than it actually is, and thus the immigrant-US-born incarceration gap would be even larger today.

Figure A16: Incarceration Gap between Immigrants and US-born Men, Excluding Recent Immigrants



Notes: This figure plots the incarceration gap between immigrants and US-born men ages 18–40. The first series reproduces the baseline estimate including all immigrants regardless of time since arrival. The second and third series exclude individuals who arrived to the US within five and ten years, respectively. Estimates for 1940–1960 are omitted because the Census did not include a question about time since arrival to the United States.

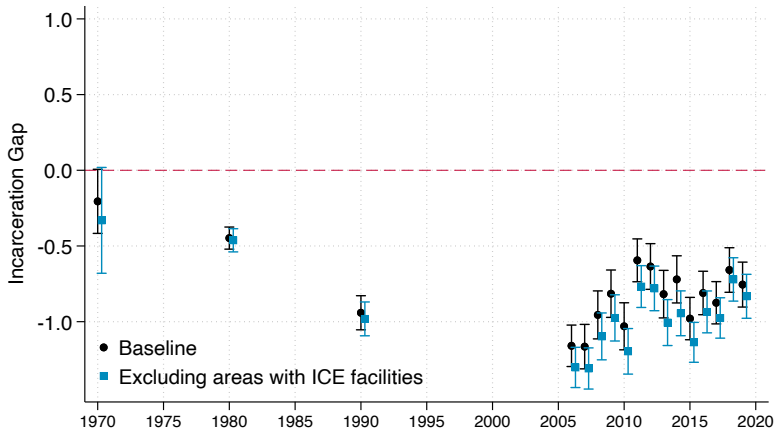
Figure A17: Number of Removals, 1892–2018



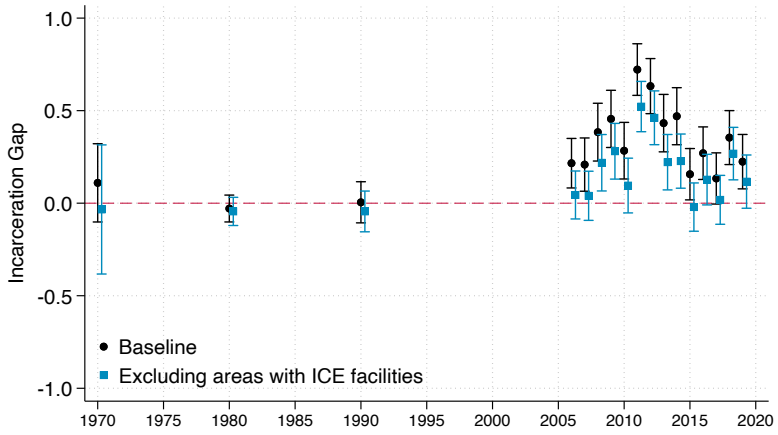
Notes: This figure plots the annual number of removals of inadmissible or deportable individuals between 1892 and 2018 using data from the 2018 Yearbook of Immigration Statistics of the Department of Homeland Security.

Figure A18: Incarceration Gap between Mexican and Central American Immigrants and US-born Men, Excluding Areas with ICE Facilities

(a) Relative to All US-born



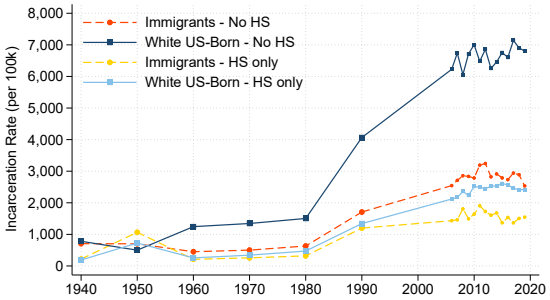
(b) Relative to White US-born



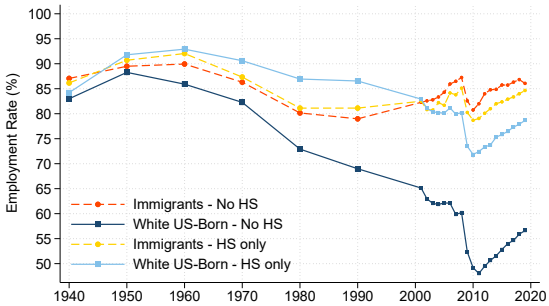
Notes: This figure plots the incarceration gap between Mexican and Central American immigrants and US-born men ages 18–40. Panel (a) compares these immigrants to all US-born men. Panel (b) restricts the comparison to white US-born men. The first series in each panel uses the baseline sample. The second series excludes the 17 areas (using county groups before 1990 and Public Use Micro Areas starting in 1990) that included Immigration and Customs Enforcement (ICE) contract detention facilities and service processing centers as of 2022. For more details, see the Online Appendix.

Figure A19: Incarceration, Labor Market, Family Formation, and Health Outcomes of Immigrants and White US-born Men Without Any College Education, 1940–2019

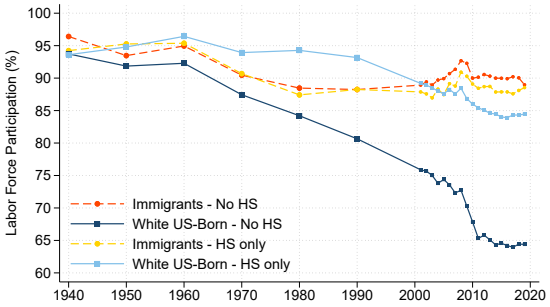
(a) Incarceration Rate (per 100,000)



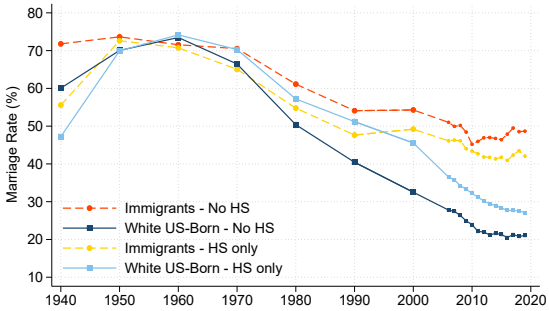
(b) Employment Rate (%)



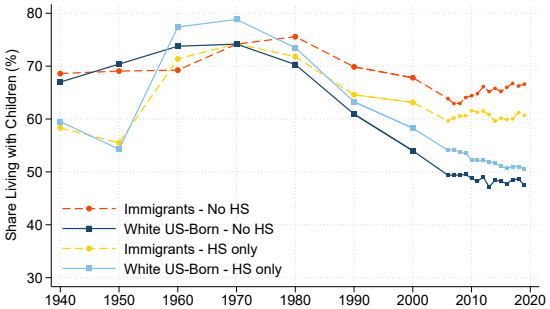
(c) Labor Force Participation Rate (%)



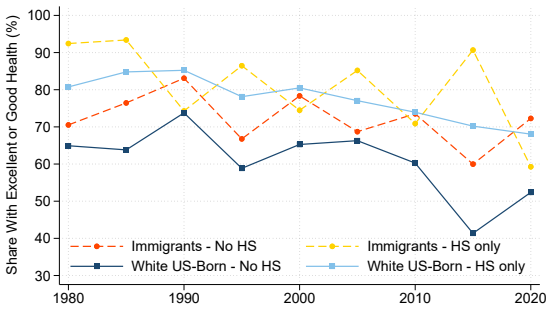
(d) Marriage Rate (%)



(e) Share Living with Children (%)



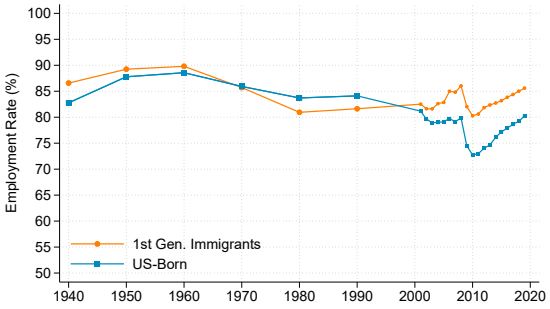
(f) Share with Excellent or Good Health (%)



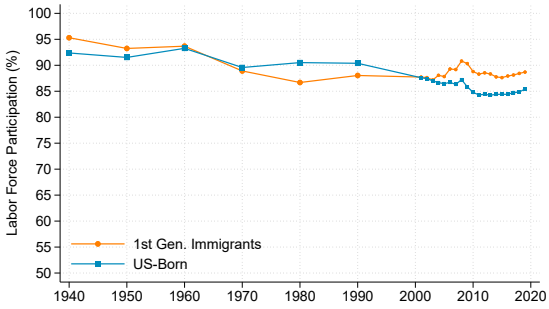
Notes: This figure is analogous to Figure 4 but considers immigrants relative to white US-born men. For more details, see the note to Figure 4 and the Online Appendix.

Figure A20: Labor Market, Family Formation, and Health Outcomes of Immigrants and All US-born Men (Regardless of Educational Attainment), 1940–2019

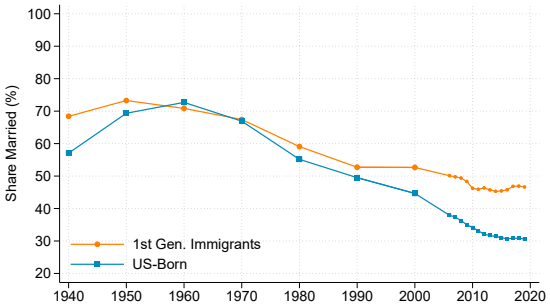
(a) Employment Rate (%)



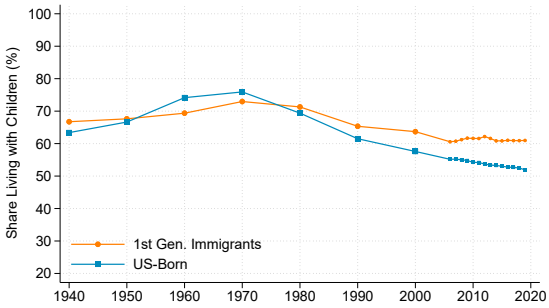
(b) Labor Force Participation Rate (%)



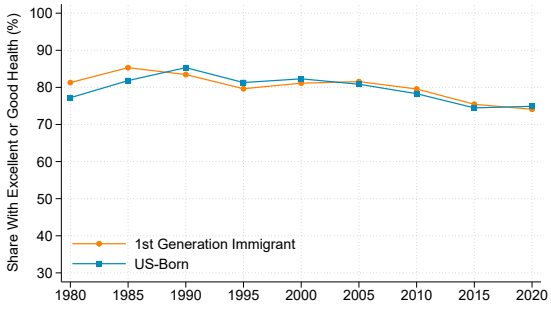
(c) Marriage Rate (%)



(d) Share Living with Children (%)



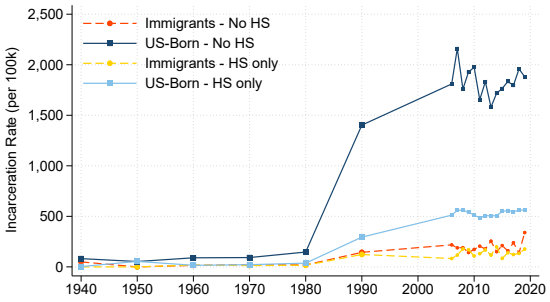
(e) Share with Excellent or Good Health (%)



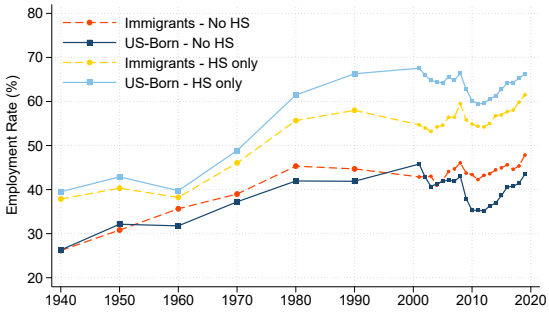
Notes: This figure is analogous to panels (b)-(f) of Figure 4 but considers immigrants and all US-born men regardless of educational attainment. For more details, see the note to Figure 4 and the Online Appendix.

Figure A21: Incarceration, Labor Market, Family Formation, and Health Outcomes of Immigrants and US-born Women Without Any College Education, 1940–2019

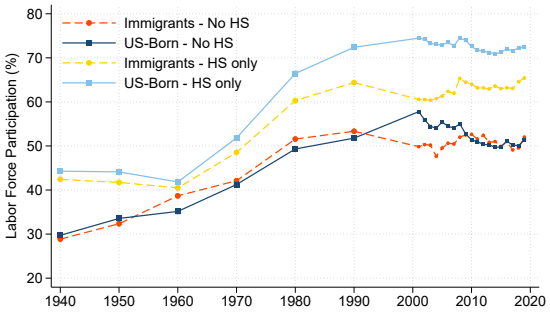
(a) Incarceration Rate (per 100,000)



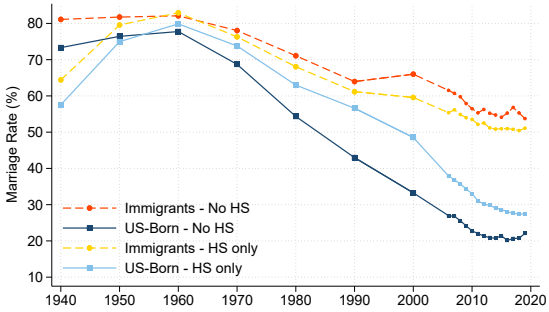
(b) Employment Rate (%)



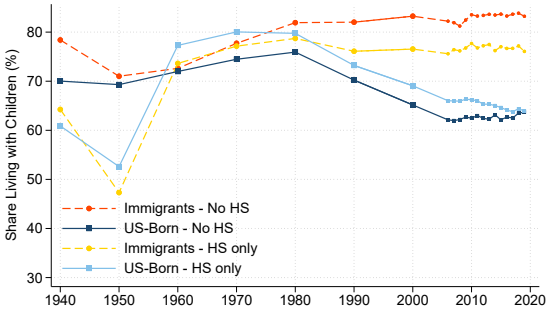
(c) Labor Force Participation Rate (%)



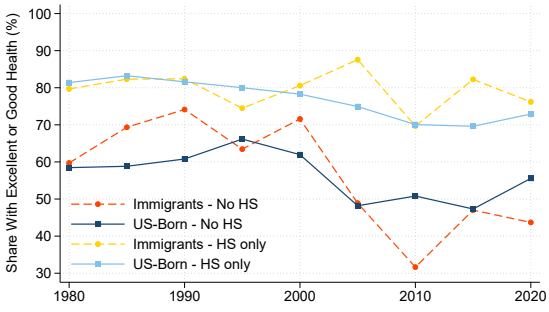
(d) Marriage Rate (%)



(e) Share Living with Children (%)

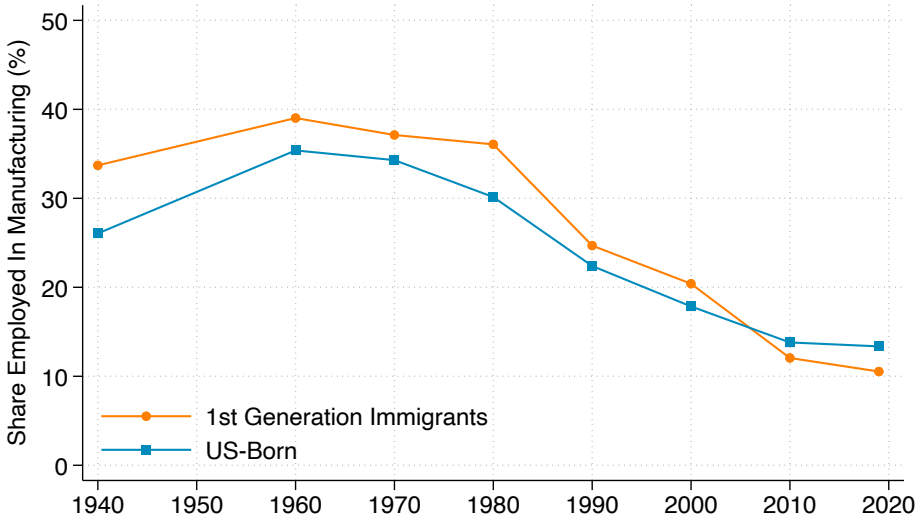


(f) Share with Excellent or Good Health (%)



Notes: This figure is analogous to Figure 4 but considers female immigrants and US-born women. For more details, see the note to Figure 4 and the Online Appendix.

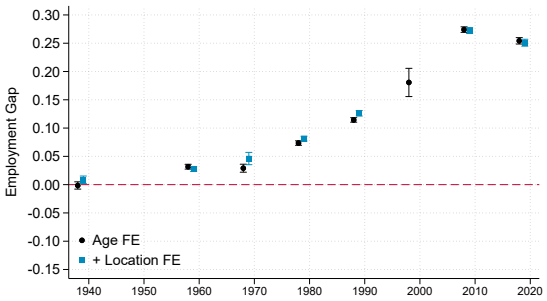
Figure A22: Share of Low-Educated Immigrants and US-born Men Employed in Manufacturing



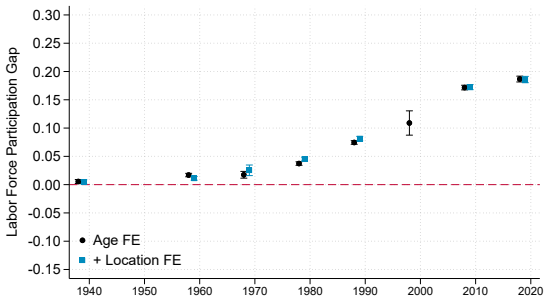
Notes: This figure plots the share of immigrants and US-born men ages 18–40 that were employed in manufacturing between 1940 and 2019. The sample is restricted to men without a high school degree, who were not institutionalized, and who were in the labor force. This figure shows that the shares resembled each other until 2010, suggesting that compositional differences across declining industries cannot alone explain the immigrant-US-born differences in labor market outcomes.

Figure A23: Differences in Labor Market and Family Formation Outcomes of Immigrants and US-born Men Without a High School Degree, Adjusting for Geography, 1940–2019

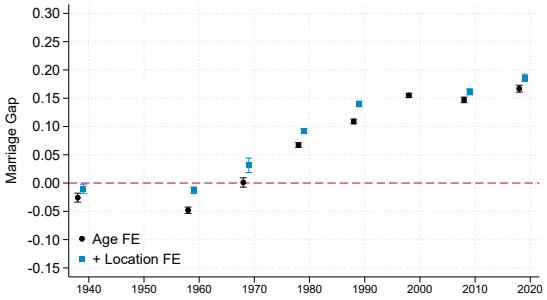
(a) Employment Rate



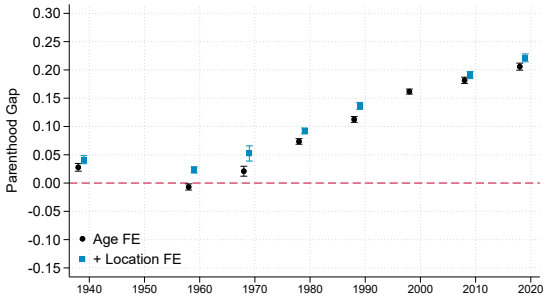
(b) Labor Force Participation Rate



(c) Marriage Rate



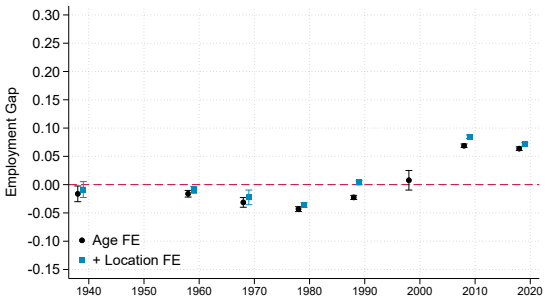
(d) Share Living with Children



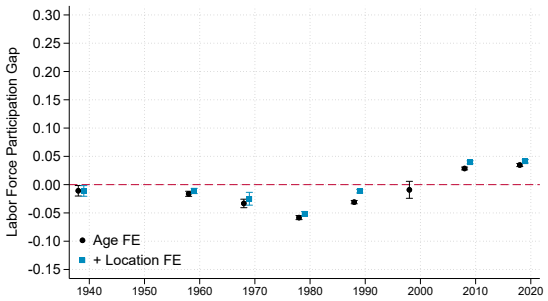
Notes: Each panel plots the gap between immigrants and US-born men without a high school degree in employment rates, labor force participation rates, marriage rates, and the likelihood of living with children. The sample is men who are not institutionalized ages 18–40 in panels (a)-(c) and ages 30–50 in panel (d). The first series plots the estimated gaps including age fixed effects. The second series adds location fixed effects. For 1940, we include county-of-residence fixed effects. For 1970 and 1980, we include fixed effects for each county group. For 1960 and 1990 onward, we include Public Use Metropolitan Area (PUMA) fixed effects. For more details, see the note to Figure 4 and the Online Appendix.

Figure A24: Differences in Labor Market and Family Formation Outcomes of Immigrants and US-born Men With Only a High School Degree, Adjusting for Geography, 1940–2019

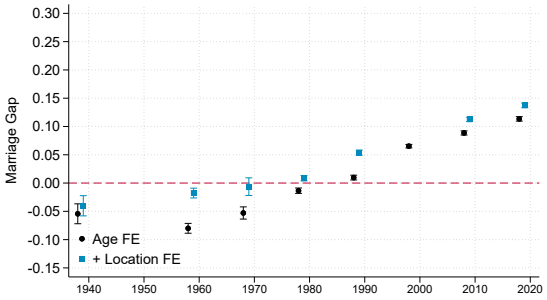
(a) Employment Rate



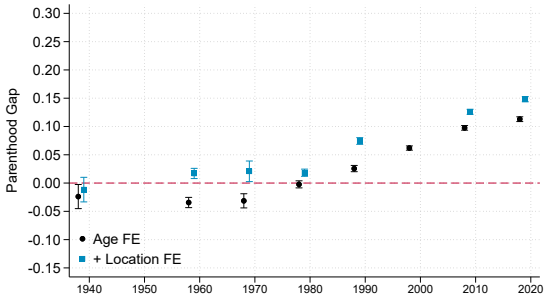
(b) Labor Force Participation Rate



(c) Marriage Rate



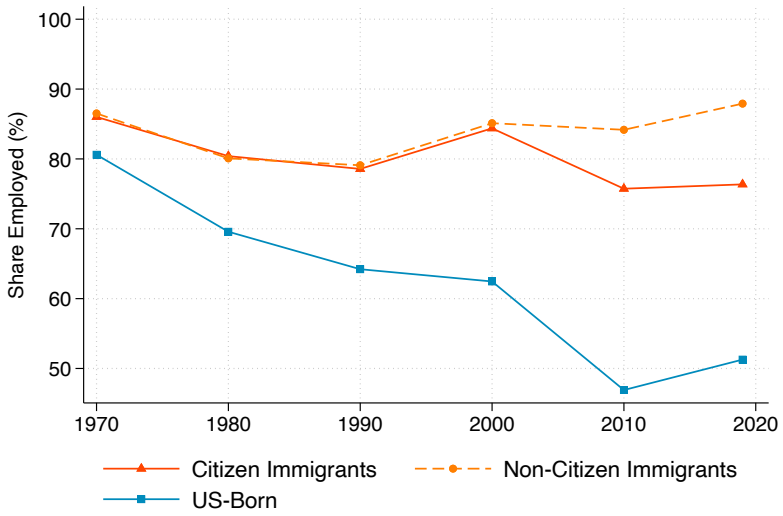
(d) Share Living with Children



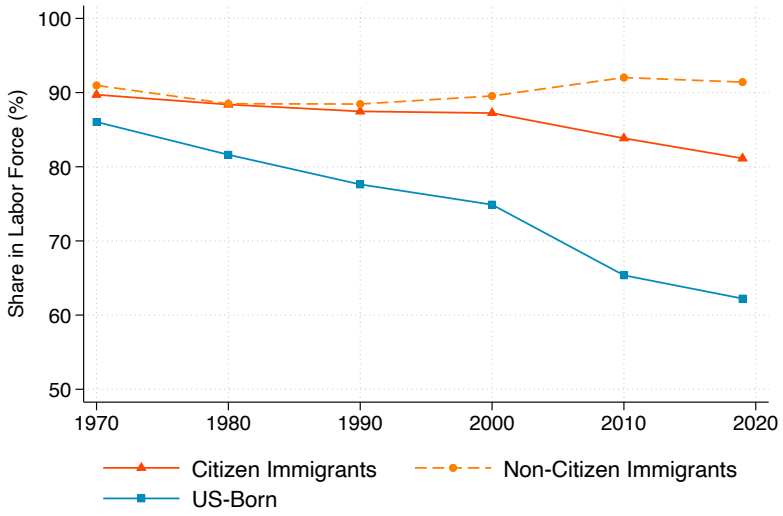
Notes: Each panel plots the gap between immigrants and US-born men with only a high school degree in employment rates, labor force participation rates, marriage rates, and the likelihood of living with children. The sample is men who are not institutionalized ages 18–40 in panels (a)-(c) and ages 30–50 in panel (d). The first series plots the estimated gaps including age fixed effects. The second series adds location fixed effects. For 1940, we include county-of-residence fixed effects. For 1970 and 1980, we include fixed effects for each county group. For 1990 onward, we include Public Use Metropolitan Area (PUMA) fixed effects. For more details, see the note to Figure 4 and the Online Appendix.

Figure A25: Employment and Labor Force Participation Rates of Citizen and Non-Citizen Immigrants and US-born Men Without a High School Degree

(a) Employment Rate

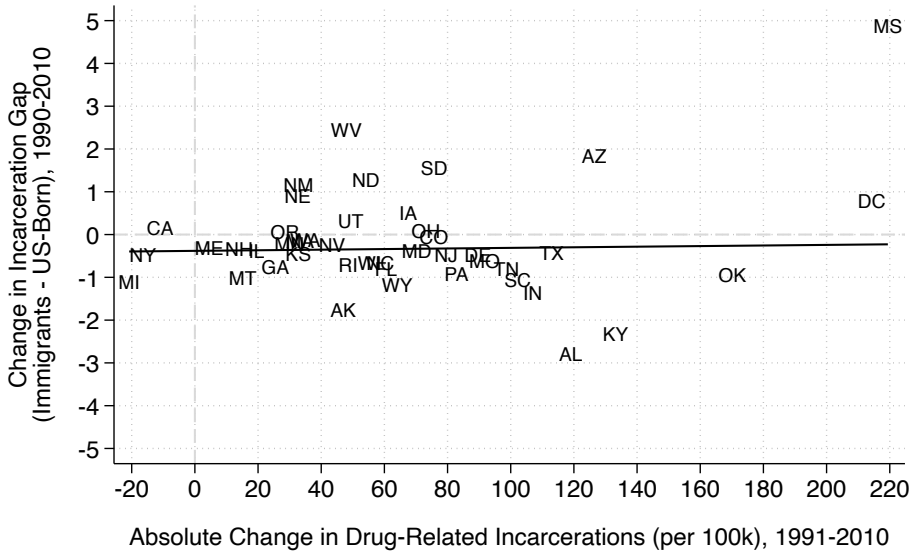


(b) Labor Force Participation Rate



Notes: This figure plots employment and labor force participation rates for citizen immigrants, non-citizen immigrants, and US-born men between 1970 and 2019. The sample is restricted to men ages 18–40 who are high school drop outs and are not institutionalized. Although the magnitude of the gaps between citizen migrants and the US-born are somewhat smaller in recent decades, the figure shows that less-educated citizen immigrants also have significantly higher employment and labor force participation rates than their US-born counterparts. It is thus unlikely that the availability of social insurance can explain the labor market difference between low-educated immigrant and US-born men.

Figure A26: State-Level Changes in Drug-Related Incarcerations and the Immigrant-US-born Incarceration Gap Between 1990 and 2010



Notes: This figure plots state-level (absolute) changes in the incarceration rate of individuals convicted of drug-related offenses between 1991 and 2010 (x-axis) against changes in the immigrant-US-born incarceration gap in that same state during this period (y-axis). We use data from the National Corrections Reporting Program to calculate incarceration rates for drug-related offenses (averaging incarcerations between 1991 and 1993 and between 2008 and 2010 to calculate differences over this time period). This figure is considering the potential role of drug crimes in explaining the widening of the immigrant-US-born incarceration gap: if US-born men are more likely to commit drug-related offenses and they are more likely to be incarcerated for these offenses than immigrants in the modern time period, then this difference could explain the relative decline of immigrants' incarceration. Put differently, if drug-related incarcerations are driving the increase, then we should find that the immigrant-US-born gaps are larger in states that experience large increases in drug-related incarcerations. This figure shows that, at that least when looking at state-level correlations, this does not seem to be the case.

Table A1: Sample Size for Immigrants and US-Born Men, by Year

	US-Born			Immigrants		
	Incarcerated	Total	Inc. (per 100k)	Incarcerated	Total	Inc. (per 100k)
	(1)	(2)	(3)	(4)	(5)	(6)
1870	10,836	5,299,875	204	3,573	1,667,878	214
1880	34,615	7,625,747	454	6,322	1,808,660	350
1900	53,626	11,761,318	456	8,623	2,826,309	305
1910	43,631	14,574,042	299	8,165	4,101,636	199
1920	51,132	16,339,910	313	9,624	3,661,154	263
1930	149,380	19,709,041	758	14,609	3,030,274	482
1940	165,699	23,081,996	718	6,826	1,458,866	468
1950	556	302,177	726	17	8,946	712
1960	11,515	1,244,704	925	132	42,800	308
1970	7,179	851,088	844	103	37,146	277
1980	17,992	1,900,112	947	461	136,617	337
1990	29,169	1,984,280	2,173	1,909	229,569	1,072
2000	-	-	-	-	-	-
2010	90,995	1,758,597	3,165	10,336	340,376	1,574
2019	97,028	1,892,429	2,790	8,284	326,127	1,203

Notes: This table presents the sample size and incarceration rates for US-born men and immigrant men. Whenever available, we use sample weights provided by IPUMS to calculate incarceration rates. The sample is restricted to men ages 18–40. For more information about each data source, see the Online Appendix.

Table A2: Overlap Between Alternative Incarceration Measures in the Full Count Censuses

	US-Born				Immigrants			
	GQ (1)	Preferred (2)	Both (3)	Share (%) (4)	GQ (5)	Preferred (6)	Both (7)	Share (%) (8)
1870	9,012	10,836	9,012	83	3,174	3,573	3,174	89
1880	28,613	34,615	28,262	82	5,006	6,322	4,970	79
1900	35,904	53,626	33,748	63	6,788	8,623	6,554	76
1910	–	43,631	–	–	–	8,165	–	–
1920	38,689	51,132	36,949	72	7,829	9,624	7,561	79
1930	125,993	149,380	122,197	82	13,077	14,609	12,672	87
1940	126,576	165,699	57,691	35	4,758	6,826	2,320	34

Notes: This table shows the number of incarcerated individuals in each Census year separately by nativity and by measure of incarceration. "GQ" refers to the number of men classified as incarcerated using the IPUMS group quarters variable. "Preferred" refers to the number of men classified as incarcerated using our preferred measure that combines information from the group quarters variable with the original strings of the "group quarters," "occupation," and "relationship to household head" variables. "Both" refers to the number of men classified as incarcerated under both approaches. "Share" refers to the share of incarcerated men under the preferred measure that would have also been classified as incarcerated using only using the group quarters variable (column 3 divided by column 2 and column 7 divided by column 6). For more details, see the Online Appendix.