Comparing crime rates between undocumented immigrants, legal immigrants, and native-born US citizens in Texas

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We make use of uniquely comprehensive arrest data from the Texas Department of Public Safety to compare the criminality of undocumented immigrants to legal immigrants and native-born US citizens between 2012 and 2018. We find that undocumented immigrants have substantially lower crime rates than native-born citizens and legal immigrants across a range of felony offenses. Relative to undocumented immigrants, US-born citizens are over 2 times more likely to be arrested for violent crimes, 2.5 times more likely to be arrested for drug crimes, and over 4 times more likely to be arrested for property crimes. In addition, the proportion of arrests involving undocumented immigrants in Texas was relatively stable or decreasing over this period. The differences between US-born citizens and undocumented immigrants are robust to using alternative estimates of the broader undocumented population, alternate classifications of those counted as "undocumented" at arrest and substituting misdemeanors or convictions as measures of crime.

undocumented immigration | crime | violence

The tripling of the undocumented population in recent decades is one of the most consequential and controversial social trends in the United States (1). Backlash regarding the criminality of undocumented immigrants is at the fore of this controversy and has led to immigration reforms and public policies intended to reduce the crimes associated with undocumented immigration (2). As recently as June of 2020, the debate on undocumented criminality made its way to the US Supreme Court, where the US solicitor general sought to invalidate California's "sanctuary" policies because "[w]hen officers are unable to arrest aliens—often criminal aliens—who are in removal proceedings or have been ordered removed from the United States, those aliens instead return to the community, where criminal aliens are disproportionately likely to commit crimes" (3, p. 13).

Indeed, concerns over illegal immigration have arguably been the government's chief criminal law enforcement priority for years, to the point where the federal government now spends more on immigration enforcement than all other principle criminal law enforcement agencies combined (4, 5). These policies, practices, and pronouncements, however, have far outpaced our empirical understanding of undocumented criminality. That is, while research suggests that immigrants generally tend to be less crime prone than their native peers (6), we still lack basic information on fundamental questions specific to undocumented immigrants and crime. How does the criminality of undocumented immigrants compare to legal immigrants or native-born citizens? Does this differ by the type offense, such as property, violent, or drug crimes? And how has undocumented immigrant criminality changed over time?

Each of these questions represents remarkable gaps in our scientific and policy understanding of undocumented immigration. This dearth is largely due to data limitations. Calculating group-specific crime rates is straightforward: It is the number of arrests within a particular group divided by its population (expressed per 100,000). In the case of undocumented immigrants, however, for years we lacked reliable estimates for both the numerator and the denominator required for such calculations. Regarding the number of undocumented immigrants (the denominator), data quality has improved in recent years as the Center for Migration Studies and the Pew Research Center now produce annual state- and national-level estimates of the undocumented population, ranging from 10.5 to 10.7 million in 2017 (1, 7).* Data on undocumented criminality (the numerator), however, have actually gotten worse over time. Despite the increasing centrality of local police in immigration enforcement (9), information on immigration status is remarkably scarce in most crime databases. Among the most widely utilized crime data sources, neither the Uniform Crime Reports, the National Crime Victimization Survey, nor the National Incident-Based Reporting System record information about immigration status. In addition, California stopped reporting the number of noncitizens in their custody to the Bureau of Justice Statistics (BJS) in 2013 and in 2017 became a "sanctuary state" by limiting information sharing between local criminal justice officials and federal immigration authorities (10). In 2016, they along with Nevada, New Hampshire, North Dakota, and Oregon did not

Significance

Despite its centrality to public and political discourse, we lack even basic information on fundamental questions regarding undocumented immigrants and crime. This stems largely from data constraints. Going beyond existing research, we utilize data from the Texas Department of Public Safety, which checks and records the immigration status of all arrestees throughout the state. Contrary to public perception, we observe considerably lower felony arrest rates among undocumented immigrants compared to legal immigrants and native-born US citizens and find no evidence that undocumented criminality has increased in recent years. Our findings help us understand why the most aggressive immigrant removal programs have not delivered on their crime reduction promises and are unlikely to do so in the future.

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*The Department of Homeland Security also produces estimates of the undocumented immigrant population, but these figures have not been updated since 2015 (8).

report information on citizenship in their prison populations, and the BJS speculates that other states "likely provided undercounts" (11, p. 13).

This article is a notable exception to this trend in that, after review for scientific merit, the Texas Department of Public Safety (DPS) granted our research team access to case processing information for all arrests recorded between 2012 and 2018. The DPS data are unique in that they fully cooperate with the Department of Homeland Security (DHS) to check and record the immigration status of all arrestees throughout the state, including their legal status (21). Using these data, we address the empirical shortcomings that have hampered prior work in this area by accomplishing three interrelated objectives.

First, we offer a detailed contemporary assessment of the comparative criminality between native-born US citizens, legal immigrants, and undocumented immigrants. The limited information we do have about undocumented criminality is not only conspicuously scant but also highly inconsistent. A 2018 report from the Cato Institute found that arrest and conviction rates for undocumented immigrants are lower than those of native-born individuals (12). Research by the Crime Prevention Research Center in that same year, however, reached the exact opposite conclusion (13). Neither of these studies was peer-reviewed, and thus, their data and methodologies have not been subject to scientific scrutiny. Given the salience of this research for informing contemporary public and political dialogue, the time has come for a thorough inquiry into the nexus between undocumented immigrants and crime.

Second, going beyond general differences in crime, we calculate comparative crime rates across multiple offense types. These distinctions are essential for both theoretical and empirical reasons. Though the evidence linking immigrants (generally) to violent crime is markedly thin (14), there are compelling theoretical reasons to think that undocumented immigrants may have divergent effects on violent and nonviolent crime. Most notably, lacking legal status limits their legitimate economic opportunities, and thus, undocumented immigrants may turn to illegitimate economic pursuits (15). From an empirical perspective, the federal government's increasing reliance on collaborations with state and local law enforcement complicates the picture of immigrant criminality because many immigrants held in local jails are booked on federal immigration charges, not local criminal charges. A focus on the overall rates of crime obscures this critical distinction.

Last, we examine the overall and relative crime trends among the undocumented. The fact that we currently cannot answer how undocumented criminality has changed in recent years with even a directional statement (increasing or decreasing) is highly problematic, particularly in light of the substantial enforcement initiatives implemented under Presidents Obama and Trump to decrease the burden of immigrant crime (4, 5). Using visual plots, linear regressions, and time series techniques (augmented Dickey–Fuller [ADF] tests), we provide a longitudinal assessment of the relative involvement of undocumented immigrants in crime.

Foreshadowing our results, we find that undocumented immigrants have considerably lower crime rates than native-born citizens and legal immigrants across a range of criminal offenses, including violent, property, drug, and traffic crimes. We also report no evidence that undocumented criminality has become more prevalent in recent years across any crime category.

Materials and Methods

The primary data source for this analysis is the Texas Computerized Criminal History (CCH) database provided by the Texas Department of Public Safety. The focus on Texas is warranted for several reasons. First, Texas has the second-largest immigrant population in the United States, with roughly 4.8 million foreign-born individuals (~17% of the population), of which an estimated 1.6 million are undocumented (16). Second, Texas processes large numbers of immigrants through their criminal justice system. In 2012, Texas had the third-highest number of reported noncitizens in their prison systems (17), and the DHS estimates that there were more noncitizens arrested in recent years by local police in Texas than any other criminal justice system in the United States, save California (18).[‡] Third, Texas is a site of intense federal immigration enforcement as evidenced by the fact that the federal government paid more to house criminal aliens in local jails in Texas than all other states except New York and California (19).

Unlike the voluntary nature of the Uniform Crime Reports collected by the FBI, the CCH reporting system is statutorily mandated for every jurisdiction in the state of Texas. By law, all arresting agencies in Texas must report information to the DPS within 7 d of the arrest for all class B misdemeanors or greater.[§] The only arrests that are not required in the CCH data are misdemeanor class C offenses, which are ineligible for jail or prison sanctions in Texas and often handled with citations rather than arrests.

The requirements for the CCH data also specify that agencies must report several key variables, including the criminal statute, the level of the offense (e.g., first-degree felony, second-degree felony, etc.), the date of arrest, the arresting agency, and demographic information for the individual. Critical for our purposes, the booking process mandates inquiries into an arrestee's place of birth and citizenship, and the Texas Commission on Law Enforcement (TCOLE) requires training on conducting intake interviews to be a licensed jailer in the state of Texas.[¶]

The consequence of these strict training and reporting requirements is the extremely low rate of missingness in the dataset. According to the DPS, the compliance rate for these CCH data from 2011 through 2015 was 96%, and citizenship information is missing in only 3% of felony arrests. In sum, the CCH database contains case processing information for every jailable arrest in the state of Texas, with detailed information on both the criminal conduct and the arrested individuals.

One key variable missing from the CCH database is the individuals' immigration status, which requires the use of a second data source. In 2011, the Texas DPS started participating in the Secure Communities Program (S-COMM). As part of S-COMM, starting in June of 2011 the DPS sends the fingerprints of every arrested individual to the Department of Homeland Security's Automated Biometric Identification System (IDENT) database, where Immigration and Customs Enforcement (ICE) determines their immigration status.[#] The DHS reports the immigration status back to the Texas DPS for all individuals with a known immigration status (reported as either "legal" or "illegal"). While the cross-referencing of criminal records with the IDENT database is common practice across state and local jurisdictions (20), the DPS is unique in that they retain the immigration status information from the DHS in their records. We obtained this immigration status dataset from the Texas DPS as part of our request for the CCH database.

We combine data from the DHS on immigration status with the citizenship and place of birth data in the CCH to record felony arrestees into one of the three categories: 1) native-born US citizens, 2) legal immigrants, and 3) undocumented immigrants. Any individual deemed "illegal" by the DHS is considered to be an undocumented immigrant. Legal immigrants comprise three groups: those identified as "legal" immigrants in the IDENT database, non-US citizens who were not designated "illegal," and foreign-born US citizens (i.e., naturalized citizens). We examine the crime patterns of

[‡]According to DHS's Criminal Alien Population Projection Analysis, between 2011 and 2014 there were an estimated 749,554 noncitizens arrested in California by local police, 428,566 noncitizen arrests in Texas, and only 374,222 noncitizen arrests by the federal government.

[§]A class B misdemeanor in Texas is punishable up to 180 d in county jail and a $2,000 fine.

[¶]Section 6.7.2 of the TCOLE "Basic County Corrections Course" and section 2.2.3 of the TCOLE "Basic Jail Certification Course for Sworn Texas Peace Officers" deal specifically with the "processing of persons of foreign nationality." The following relevant text is found in both courses: 1) It is imperative that the determination of citizenship be on your department's record. 2) Determine the defendant's citizenship. This can be established by asking place of birth of the defendant, whether the defendant was born out of the United States, or whether the defendant has been naturalized under the Constitution and laws of the United States. In the absence of other information to the contrary, assume this is the country on whose passport or other travel document the foreign national travels.

[#]S-COMM was suspended in November 2014 and replaced by the Priority Enforcement Program. S-COMM was since reactivated in January 2017 by an executive order from President Trump to "ensure the public safety of the American people in communities across the United States." Critical for our purposes, these program changes did not affect the collection of information on immigration status for the Texas Department of Public Safety.

naturalized citizens separately in *SI Appendix*, section VII. Our coding of the legal immigrant population merits attention. Prior work examining the differences between legal and undocumented immigrants in Texas relied solely on the DHS information to determine legal status (12). However, the DHS variable is incomplete because many legal noncitizen and foreign-born arrestees are not recorded in the IDENT database. In 2018, for example, there were nearly 60,000 legal immigrant arrests in the CCH data based on our coding, compared to about 37,000 legal immigrant arrests when using only the DHS data. Thus, the exclusive reliance on the DHS information in Nowrasteh's (12) report almost certainly undercounted the number of legal immigrant arrests and misclassified many legal immigrants as "native born." In our analysis, the category of native-born citizens comprises all individuals who were born in the United States, are US citizens, and are not recorded as a "legal" or "illegal" immigrant by the DHS. We return to this issue of misclassification in the IDENT database in *Sensitivity Analyses*.

To our knowledge, Texas is the only state that requires the determination and documentation of immigration status as part of its standard criminal justice records practice. Combined with the fact that we have complete information for every jailable arrest in Texas, our dataset is ideal for comparing the criminality between undocumented immigrants, legal immigrants, and native-born citizens. Simply put, no other data source in the United States could accomplish this task with the same degree of breadth, rigor, and detail.

Our crime rate analysis focuses on all felonies in the years 2012 to 2018 (an analysis of misdemeanors is shown *SI Appendix*, section VI); 2012 was the first full year immigration information was recorded by the DPS, and the most current estimates of the undocumented population are from 2018. In calculating the number of crimes, we count each arrest charge as a separate crime incident, which is common practice in the calculation of crime rates (often referred to as incident-based reporting). Most arrests in Texas (83%) have only one arrest charge. To ensure consistency with published reports, we report offense categories using the same arrest offense codes as those reported by the DPS (21). Given the relevance of both status offenses and income-generating crimes for our inquiry, we also supplement the DPS coding by further examining drug and traffic offenses. Detailed descriptions for all offense categories are shown in *SI Appendix*, section I.

It is important to note how we dealt with the nexus between state and federal authorities. More than 39,000 individuals in the CCH data were booked for "federal offenses," the majority of whom (70%) were undocumented immigrants.[‖] Based on conversations with local authorities, we determined that these individuals were temporarily held in local facilities for various federal agencies, including ICE, the Bureau of Prisons, and the US Marshalls. Because these individuals are not held on local criminal charges, but rather as an administrative accounting for local jails, we exclude them from our analysis.

Our population data come from two sources. Annual information on the total population, the population of US-born citizens, the foreign-born population, and the number of naturalized citizens in Texas come from the US Census Bureau's American Community Survey (ACS) 1-y estimates. Estimates of the undocumented population come from the Center for Migration Studies (CMS), one of the most reliable, respected, and peer-reviewed sources on the undocumented immigrant population (22, 23). Stated briefly, the CMS uses a residual methodology based on Census Bureau data, whereby the number of authorized immigrants is subtracted from the foreign-born population. The remainder, or residual, is then the estimated number of potentially undocumented immigrants. Several features of the CMS estimates are noteworthy. First, the CMS applies logical edits when calculating residuals (22) that serve as tools to identify as many legal residents as possible. These edits are derived from survey responses that are unlikely to apply to someone who is undocumented, such as occupations that require legal status or those that receive public benefits restricted to legal residents. Second, the CMS adjusts for factors that influence yearly fluctuations in the immigrant population such as emigration and mortality and calculates independent population controls by country of origin (22, p. 308). This is important because the percentage of undocumented immigrants among the foreign-born population can vary considerably based on national origin. Third, utilizing the population controls from step 2, final selections are made of individual respondents to be classified as undocumented. Last, these estimates are adjusted for underenumeration, whereby the undercount rate decreases with length of residence (i.e., the most recent entrants are assumed to have the highest undercount rates) (22, 23). These data serve as the undocumented denominator for the main analysis. In line with previous research, the legal immigrant population is calculated as the total foreign-born population minus the undocumented population (24).

All data and replication materials for this analysis are available on openICPSR (https://www.openicpsr.org/openicpsr/project/124923/version/V1/view).

Results

Examining Crime Rates. We begin by presenting aggregate crime rates from 2012 to 2018. Fig. 1 presents violent, property, drug, and traffic arrest rates of native-born citizens, legal immigrants, and undocumented immigrants. The consistency of the comparative rates is notable. Relative to native-born citizens and legal immigrants, undocumented immigrants have the lowest felony arrest rates across all four crime types. For violent, property, and drug offenses, legal immigrants occupy a middle position between undocumented immigrants and US-born citizens. The gaps between native-born citizens and undocumented immigrants are substantial: US-born citizens are over 2 times more likely to be arrested for violent crimes, 2.5 times more likely to be arrested for drug crimes, and over 4 times more likely to be arrested for property crimes. These latter two findings are noteworthy. Previous research suggests that immigrants with marginal economic prospects are more heavily involved in property crime (25–27), and it is plausible that drug markets may offer undocumented immigrants opportunities denied in the legitimate labor market. However, we find no evidence that undocumented immigrants are more heavily involved in property or

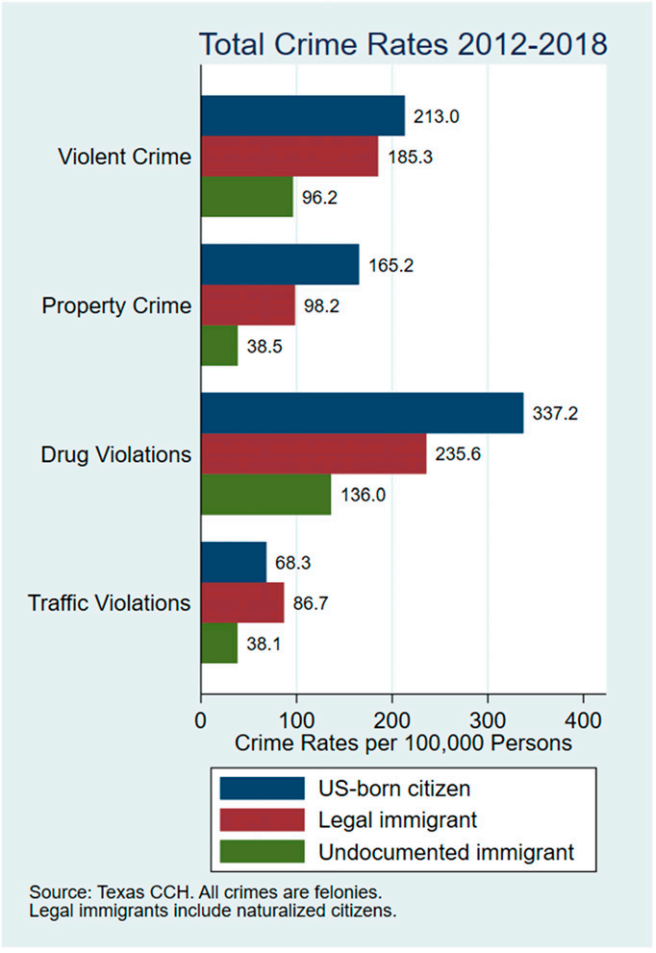

Fig. 1. Felony arrest rates, Texas (2012 to 2018).

[‖]The literal disposition code for these offenses is "Transferred for Federal Prosecution." Legal immigrants accounted for an additional 22% of these offenses. Only 9% of individuals booked on "federal offenses" were native citizens.

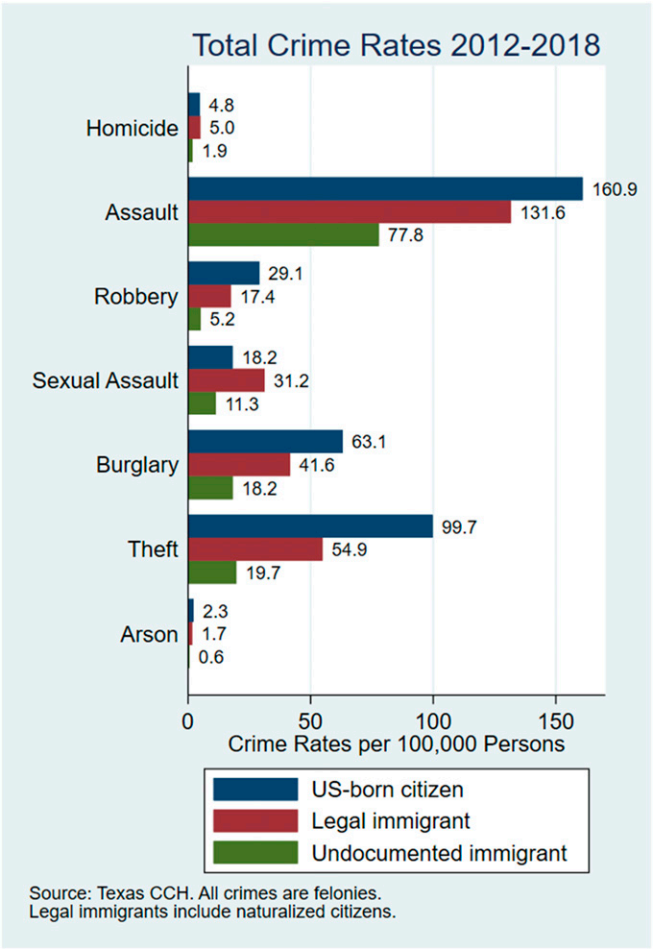

Fig. 2. Felony arrest rates by detailed measures of violent and property crime, Texas (2012 to 2018).

drug offenses in Texas. It is possible, however, that these crime categories may paint with too broad a brush and the picture of undocumented criminality may look different when examining specific criminal offenses. We thus turn to our more detailed offense categories in Fig. 2.

Fig. 2 shows the rates for homicide, assault, robbery, sexual assault, burglary, theft, and arson. Without exception, undocumented immigrants have the lowest crime rates. Compared to native-born citizens, undocumented immigrants are roughly half as likely to be arrested for homicide, felonious assault, and sexual assault. The gaps for robbery, burglary, theft, and arson are considerably larger, whereby native-born citizens are between 3 and 5 times more likely to be arrested for these criminal offenses. For most crimes, the criminality of legal immigrants tends to be less than that of native-born citizens. The exceptions to this pattern are homicide, where the rates are roughly equal, and sexual assault, where arrest rates for legal immigrants are considerably higher.

If a snapshot of undocumented criminality is scant, evidence on undocumented crime trends is virtually nonexistent. Fig. 3 shows the trends in felony arrest rates for each group (arrest counts for each group are shown in *SI Appendix*, section I). Two patterns are noteworthy. First, in line with the aggregate crime rates, we observe the same relative pattern in felony arrests over time. That is, native-born citizens tend to have the highest rates, undocumented immigrants have the lowest, and legal immigrants are in between. In general terms, the felony arrest rates were ~1,000 per 100,000 among US-born citizens, 800 per 100,000 among legal immigrants, and 400 per 100,000 among undocumented immigrants. Second, the comparative gaps between native-born citizens and immigrants have widened slightly over time due to small increases among US-born citizens and relative stability among legal and undocumented immigrants.

The patterns for violent felonies shown in Fig. 4 are remarkably similar. Compared to native-born citizens, legal immigrants and, especially, undocumented immigrants have lower rates of violent crime, and the relative gaps between immigrants and US-born citizens have increased modestly. The trends for property crime observed in Fig. 5 are slightly different. While the relative position of each group is the same for property crime (e.g., legal and undocumented immigrants have lower rates), the gaps between groups have shrunk somewhat as a result of larger absolute decreases in property crime among US-born citizens. The trends for more detailed felony classifications are shown in *SI Appendix*, section II and Figs. S1 and S12.

Felony drug crimes are of particular interest given the focus in public discourse and prior scholarly work on the potential relationship between immigration and drug crimes (15). However, our analysis in Fig. 6 shows that the felony drug rate for undocumented immigrants is less than a half of the drug rate for US-born citizens. Moreover, during this time period the felony drug rate for undocumented immigrants appears stable, whereas the rate for US-born citizens increases nearly 30%. Thus, not only do undocumented immigrants have substantially lower felony drug rates, but their relative contribution to drug crime rate appears to be decreasing. The same general trends are true of legal immigrants, who had a slightly lower rate of felony drug arrests in 2012 compared to US-born citizens. By 2018, however, this gap increased substantially due to the increase in drug crime among native-born citizens.

The last crime category we explore is felony traffic arrests, which includes crimes such as driving while intoxicated, fleeing an accident involving an injury, and undocumented use of a vehicle. It is worth noting that these figures do not include the lesser traffic offenses that are more prevalent for undocumented immigrants, such as driving without a license. The analysis demonstrates, as with other areas of crime, undocumented immigrants have substantially lower rates compared to US-born citizens. Fig. 7 shows that the felony traffic rates dropped for both undocumented immigrants and native citizens, while the rate for legal immigrants remained relatively stable from 2012 to 2018. The gap between legal immigrants and US-born citizens decreased over this period, whereas the gap between undocumented immigrants and citizens is relatively constant over time.

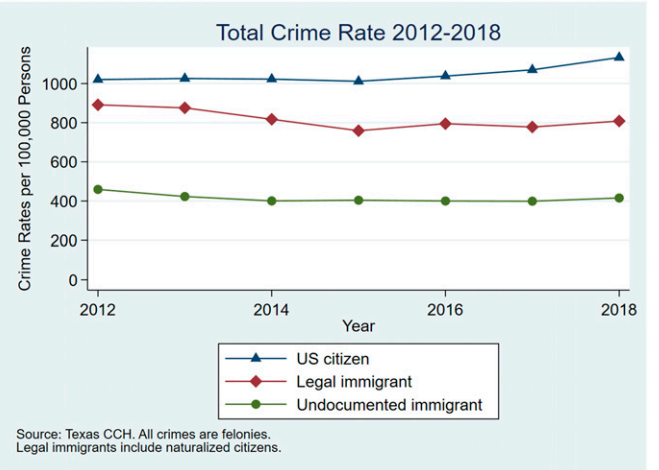

Fig. 3. Trends of total felony crime rates by citizens, legal immigrants, and undocumented immigrants.

Sensitivity Analyses. Given the legitimate concerns regarding the accuracy of the estimated size of the undocumented population, we undertake several additional sensitivity analyses. First, to ensure our findings are not dependent on idiosyncrasies in the CMS estimation technique, we replicate our results in *SI Appendix*, section III (*SI Appendix*, Figs. S13 and S14) using undocumented figures derived from the Pew Research Center. The results using this alternative data source are substantively unchanged. It bears mentioning, however, that both the Pew and CMS use variants of the residual methodology. Although independent research using multiple methods of triangulation, including death and birth records, have substantiated the general accuracy of the residual methodology (28, 29), it is not without critics.

A particular concern for our analysis would be if the Pew and CMS overestimate the size of the undocumented population because an inflated denominator would artificially decrease the observed crime rates. To examine this potential source of bias, we gauge the extent to which the undocumented population would have to be reduced to change our findings. By our calculations, in order to reach parity with US-born citizens for violent crimes, the actual undocumented population would have to be less than half (45%) the current estimate in Texas. To reach parity for property crimes, it would have to a quarter (23%) of the current estimate.

In our assessment, these are highly implausible scenarios given that extant research suggests that, if anything, the CMS and Pew produce undercounts. In 2015, for instance, the Department of Homeland Security's estimate of the undocumented population was higher than the Pew and CMS by nearly 1 million, partially due to different assumptions regarding the degree of undercount in the ACS (8). Recent research by Fazel-Zarandi et al. (30) suggests each of these estimates is too low. They estimated the size of the undocumented population in 2016 to be more than double the CMS and Pew estimates, at 22.1 million. In sum, the available evidence suggests that if our estimates of the undocumented population are biased, they are biased in the direction of undercounting this population. In the presence of such bias, the undocumented crime rates reported in this article would represent substantial overestimates of the true scale of undocumented criminality.

There is also the issue of misclassification in the IDENT database. While the combination of CCH and DHS data substantially improves our picture of undocumented criminality, the integrity of the IDENT database warrants discussion. In *Gonzalez v. ICE* (31), the Central District of California ruled in 2019 that ICE could not issue detainers based solely on electronic databases (including IDENT) due to misclassification errors. The implications of such errors are important to consider. To the extent that US citizens and legal immigrants are incorrectly classified as undocumented, our analysis would overestimate the arrest rates for undocumented immigrants. In other words, the gap between native-born US citizens and undocumented immigrants would actually be larger than reported here. However, given the concerns regarding undocumented criminality, it is also important to consider the possibility that many undocumented immigrants were not flagged by the IDENT system. In this scenario, our coding may misclassify some undocumented immigrants as legal immigrants. We examine the most extreme interpretation of this possibility by recalculating the crime rates assuming that all noncitizens who were not explicitly designated as "legal" by the DHS are undocumented. In this scenario, the crime rates for "undocumented immigrants" by definition increase, but they never reach parity with US-born citizens in violent, property, or drug offenses.**

Last, it is important to note that arrest rates represent only one metric of criminality, and our results could be influenced by differential policing behavior. For example, the increasing reliance on local criminal justice officials to funnel immigrants to federal immigration authorities (9) may alter arrest statistics in ways that do not actually track shifts in underlying criminality. We thus repeat our main analysis in the *SI Appendix*, section IV using conviction rates, rather than arrest rates. Without exception, the core findings replicate using this alternative crime measure, thus bolstering our empirical inferences (*SI Appendix*, Figs. S15 and S16). Taken together, the battery of sensitivity analyses buttresses the finding that criminality among the undocumented is considerably lower than that of US-born citizens.

Trend Analysis. Going beyond the visual inspection of criminality over time, we provide formal statistical tests of the extent to which the prevalence of undocumented crime has changed in recent years. Specifically, we use both a linear trend analysis and the augmented Dickey–Fuller (ADF) test to examine changes in the percentage of undocumented arrest charges from 2012 to 2018. To do so, we first calculate the undocumented proportion of crime by dividing the number of undocumented arrests by the number of total arrests (multiplied by 100) in a given month for all

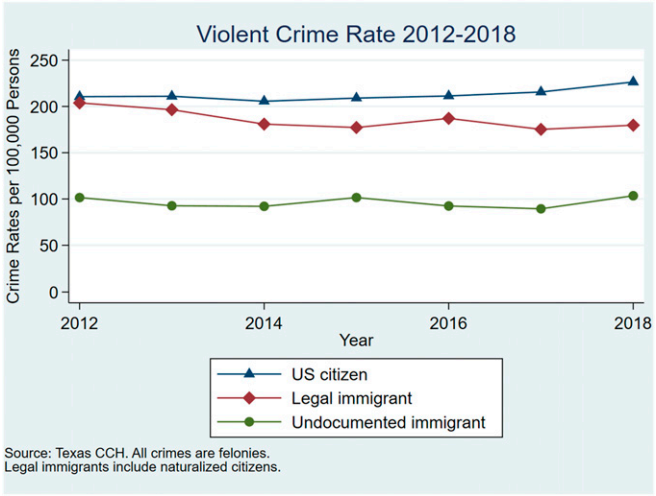

Fig. 4. Trends of violent crime rates by citizens, legal immigrants, and undocumented immigrants.

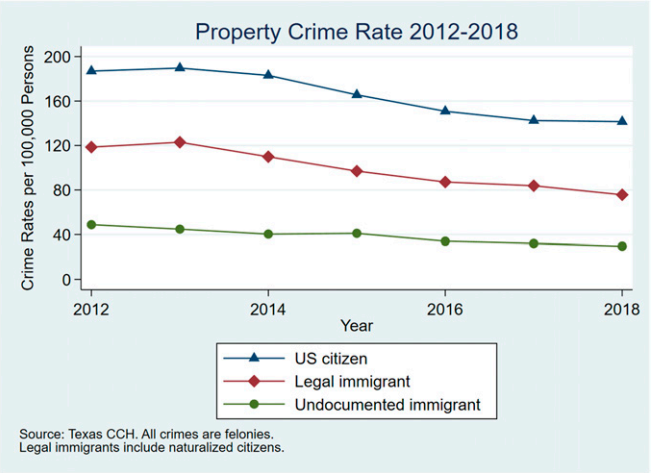

Fig. 5. Trends of property crime rates by citizens, legal immigrants, and undocumented immigrants.

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**In this hypothetical scenario, the felony crime rate from 2012 to 2018 is 761 (per 100,000) for "undocumented immigrants," 607 (per 100,000) for legal immigrants, and 1046 (per 100,000) for US-born citizens.

felonies, violent crimes, property crimes, drug crimes, and traffic crimes. Rather than examining trends in crime counts, our approach examines the contribution of undocumented immigrants to the problem of felony crime in Texas over time, a common metric of disparity in criminological research. (For a similar approach examining racial disparities, see 32.) In line with prior studies (33, 34), we log transform the percentage of undocumented immigrant arrests to reduce skewness in the distribution. We confirm the results are not dependent on this methodological choice in *SI Appendix*, section VIII, where we report substantively similar findings using untransformed percentages.

For the linear trend test, we specify a linear regression model to regress the undocumented crime percentage, $P(t)$, on the monthly time indicator, t. The coefficient of t indicates the basic trend in the prevalence of undocumented immigrant crimes over time. A positive effect suggests a growing prevalence of undocumented immigrant crime, while a negative coefficient suggests a diminishing prevalence of undocumented criminality over time. An insignificant coefficient indicates a lack of a definite trend.

Next, the ADF analysis provides a more robust test of the long-term trend of a time series by removing the influence of short-term shocks and autocorrelation. In order to adjust for autocorrelation, it is necessary to control for a sufficient number of lag terms. Consistent with prior research, we determine the optimal number of lag terms by examining the lag order selection statistics, including final prediction error, Akaike's information criterion, Schwarz's Bayesian information criterion, and the Hannan and Quinn information criterion. We then use the dfuller command in Stata to specify the optimal number of lag terms flexibly. In Table 1, we report the coefficient on the time trend terms after accounting for lag terms, as well as the t score of the ADF test for stationarity following the recommendations of O'Brien (33) and LaFree et al. (34).

The results of both the linear trend analysis and the more robust ADF test reported in Table 1 demonstrate that the monthly trends in undocumented immigrant criminality are either a random walk or decreasing for each offense type (full results reported in *SI Appendix*, Tables S6 and S7). In the linear trend analysis, the time coefficients are all negative and statistically significant, with the exception of the violent crime model, which is negative but not significant. This suggests that during the observation period, the undocumented immigrant share of arrests for all felonies, property, drug, and traffic crimes systematically decreased.

The ADF tests produced similar results. The prevalence of undocumented immigrants among total felony arrests and violent felonies was trendless or a random walk. Meanwhile, the ADF tests for property, drug, and traffic offenses suggest a decrease in the prevalence of undocumented criminality. Combined, there is no evidence that the prevalence of undocumented immigrant crime has grown for any category. If anything, the trend analyses suggest the opposite.

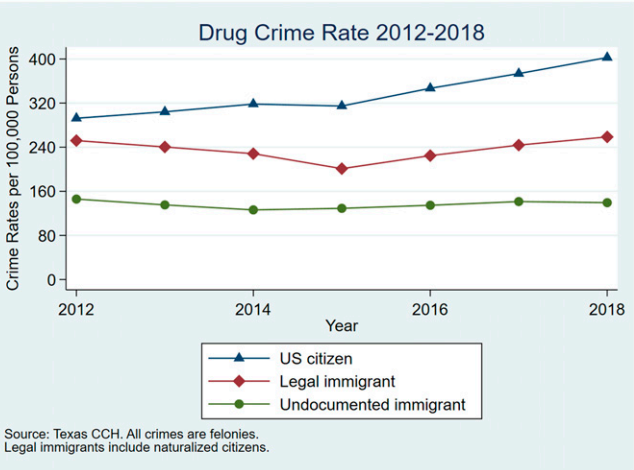

Fig. 6. Trends of drug crime rates by citizens, legal immigrants, and undocumented immigrants.

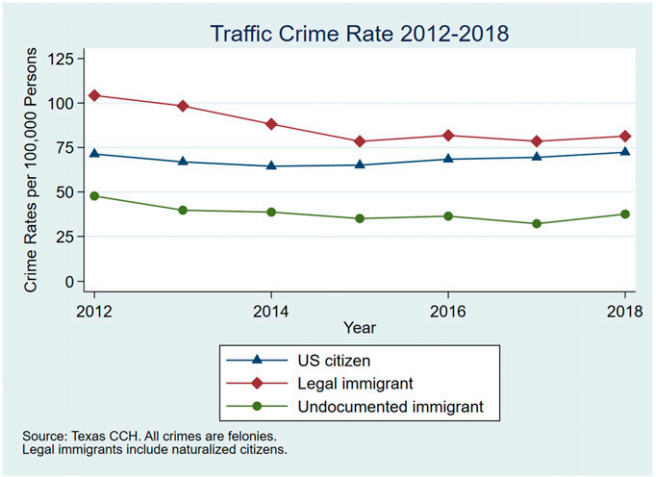

Fig. 7. Trends of traffic crime rates by citizens, legal immigrants, and undocumented immigrants.

Discussion

Criminality among the undocumented is a paramount social science concern. Yet despite substantial public and political attention, extant research has established surprisingly few empirical findings on the criminological impact of undocumented immigration. Leveraging a unique combination of data from the Texas Department of Public Safety and the Department of Homeland Security, this study sheds light on this understudied area of inquiry. Our analysis reveals two broad conclusions about the criminality of undocumented immigrants. First, undocumented immigrants have substantially lower rates of crime compared to both native US citizens and legal immigrants. Second, over the 7 y period from 2012 to 2018, the proportion of arrests involving undocumented immigrants in Texas was relatively stable or decreasing.

Taken together, these results have important theoretical and policy implications. Regarding public policy, these findings clearly run counter to some of the basic assumptions behind strict immigration enforcement strategies. Debates about undocumented immigration will no doubt continue, but they should do so informed by the available evidence. The results presented here significantly undermine the claims that undocumented immigrants pose a unique criminal risk. In fact, our results suggest that undocumented immigrants pose substantially less criminal risk than native US citizens.

More specifically, this analysis helps explain why immigration enforcement programs have largely failed to deliver on their public safety claims. Prior research examining the Secure Communities Program, for example, found that it had no discernable impact on crime rates despite the fact that it was active in nearly every county by 2013 and it substantially increased the number of undocumented immigrants deported from the United States (20, 35). Such findings are unsurprising in light of our results. That is, removing those with relatively low felony crime rates is unlikely to reduce the overall risk of criminal victimization. It is likely precisely for this reason that the significant surge in immigration enforcement in Texas under President Trump (36) has not yielded significant crime reductions.[††]

[††]Comparing the 2017 to 2018 period to the 2015 to 2016 period, the felony crime rate in Texas increased by 67 (per 100,000). For drug and violent felonies over this same period, the rates increased by 52 and 8 (per 100,000), respectively.

Table 1. Trends in the log-transformed undocumented percentage of arrest charges: Augmented Dickey–Fuller time series test and linear trend test results

Test Type and Crime Category	Estimated value	Trend	Type	No. of lag terms
ADF test				
Total felony	−0.002	Trendless	Random walk	3
Violent	−0.001	Trendless	Stationary	0
Property	−0.002*	Decrease	Stationary	0
Drug	−0.003*	Decrease	Random walk	3
Traffic	−0.003**	Decrease	Stationary	1
Linear trend test				
Total felony	−0.002***	Decrease		
Violent	−0.001	Trendless		
Property	−0.002**	Decrease		
Drug	−0.004***	Decrease		
Traffic	−0.003***	Decrease		

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$.

Despite substantial barriers to economic mobility coupled with considerable criminological risk factors such as low educational attainment and high poverty, the fact that we observe lower crimes rates among undocumented immigrants has important implications for current theorizing on immigration and crime. Although our data cannot identify the mechanisms driving this relationship, we think insights from theories of assimilation, selection, and deterrence are each potentially relevant.

Regarding assimilation theory, assimilation often refers to the tendency for immigrants to adopt the cultural and social values of their host country, particularly as their amount of exposure to the country's social and cultural context increases. The term "assimilation" has been critiqued in recent years, but the general findings regarding the tendency of immigrants to gradually look more like the native citizens of their host country over time remain (37). In particular, one persistent finding in criminology is that first-generation immigrants tend to be less crime prone than their native peers, whereas second- and third-generation immigrants look more like their native peers in their criminal behaviors (6). Another common finding in the literature is that immigrants brought to the United States as younger children tend to have higher rates of adolescent and adult criminality than those brought as older children (38). In a criminological context, assimilation theory suggests that as immigrants become more assimilated to the US culture, they adapt to the criminal behaviors of native citizens. Since undocumented immigrants are, by definition, first generation and, on average, have fewer years of residence in the United States compared to legal immigrants, assimilation theory would predict lower crime rates for undocumented immigrants.

Our findings are also consistent with research on the selective nature of migration, which suggests that immigrants tend to fare better on multiple social indicators than would be expected by their level of socioeconomic disadvantages (39). In addition, many undocumented immigrants are driven by economic and educational opportunities for themselves and their families, and the decision to migrate necessarily requires a considerable amount of motivation and planning. As such, undocumented immigrants may be selected on qualities such as motivation to work and ambition to achieve, attributes that are unlikely to predispose them toward criminality (40).

The consequences of criminal sanctions due to their precarious legal status may also be relevant. Far more than legal immigrants, undocumented immigrants have strong incentives to avoid criminal involvement for fear of detection and deportation. In this regard, lower rates of crime for undocumented individuals are consistent with a deterrence-based argument, whereby undocumented immigrants face considerably harsher sanctions (mainly deportation) from criminal wrongdoing compared to their citizen and legal immigrant counterparts.

Taken together, these perspectives—assimilation, selection, and deterrence—help us understand why the observed crime rates for undocumented immigrants were considerably lower than those for legal immigrants and native-born citizens. Each, in turn, offers a fruitful avenue for further research on undocumented immigration and crime.

Data Availability. Anonymized state data files and replication materials have been deposited in OpenICPSR (https://www.openicpsr.org/openicpsr/project/124923/version/V1/view).

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1. J. Manuel Krogstad, J. S. Passel, D'Vera Cohn, "5 facts about illegal immigration in the US" (Pew Research Center, Washington, DC, 2019).
2. S. Bohn, M. Lofstrom, S. Raphael, Did the 2007 Legal Arizona Workers Act reduce the state's unauthorized immigrant population. *Rev. Econ. Stat.* **96**, 258–269 (2014).
3. Petition for writ of certiorari of petitioner United States of America, United States of America v. State of California, 590 U. S. _ 2020 (No. 19-532). https://www.supremecourt.gov/docket/docketfiles/html/public/19-532.html. (2020). Accessed 19 November 2020.
4. R. Capps, M. Chishti, J. Gelatt, J. Bolter, A. G. Ruiz Soto, "Revving up the deportation machinery: Enforcement and pushback under Trump" (Migration Policy Institute, Washington, DC, 2018).
5. D. Meissner, D. M. Kerwin, M. Chishti, C. Bergeron, *Immigration Enforcement in the United States: The Rise of a Formidable Machinery* (Migration Policy Institute, Washington, DC, 2013).
6. B. E. Bersani, An examination of first and second generation immigrant offending trajectories. *Justice Q.* **31**, 315–343 (2014).
7. R. Warren, US undocumented population continued to fall from 2016 to 2017 and visa overstays significantly exceeded illegal crossings for the seventh consecutive year. *J. Migr. Hum. Secur.* **7**, 19–22(2019).
8. B. Baker, "Estimates of the illegal alien population residing in the United States: January 2015" (Department of Homeland Security, Washington, DC, 2018).
9. I. V. Eagly, Criminal justice for noncitizens: An analysis of variation in local enforcement. *NYU Law Rev.* **88**, 1126–1223 (2013).
10. I. V. Eagly, Criminal justice in an era of mass deportation: Reforms from California. *New Crim. Law Rev.* **20**, 12–38 (2017).
11. A. E. Carson, "Prisoners in 2016" in *NCJ 251149* (Bureau of Justice Statistics, Washington, DC, 2018).
12. A. Nowrasteh, "Criminal immigrants in Texas" in *Immigration Research and Policy Brief No. 4* (Cato Institute, Washington, DC, 2018).
13. J. Lott, R. John, Undocumented immigrants, U.S. citizens, convicted criminals in Arizona. https://www.ssrn.com/abstract=3099992 (10 February 2018).
14. G. C. Ousey, C. E. Kubrin, Immigration and crime: Assessing a contentious issue. *Annu. Rev. Criminol.* **1**, 63–84 (2018).
15. G. C. Ousey, C. E. Kubrin, Exploring the connection between immigration and violent crime rates in U.S. Cities, 1980-2000. *Soc. Probl.* **56**, 447–473 (2009).
16. Pew Research Center, U.S. unauthorized immigrant population estimates by state, 2016. https://www.pewresearch.org/hispanic/interactives/u-s-unauthorized-immigrants-by-state/. Accessed 1 April 2020.

17. A. E. Carson, D. Golinelli, "Prisoners in 2012" in *NCJ 242467* (Bureau of Justice Statistics, Washington, DC, 2013).
18. Department of Homeland Security, The Criminal Alien Population Projection Analysis (CAPPA) (2010). https://www.ice.gov/doclib/foia/reports/cappa-projected-arrests-releases-aor-level.xls. Accessed 10 March 2020.
19. Bureau of Justice Assistance, State Criminal Alien Assistance Program (SCAAP) (2016). https://bja.ojp.gov/redirect-legacy/funding/SCAAP-FY-2016-Award-Details.xlsx. Accessed 10 March 2020.
20. T. J. Miles, A. B. Cox, Does immigration enforcement reduce crime: Evidence from secure communities. *J. Law Econ.* **57**, 937–973 (2014).
21. Texas Department of Public Safety, Texas criminal illegal alien data (2020). https://www.dps.texas.gov/administration/crime_records/pages/txcriminalalienstatistics.htm. Accessed 3 June 2020.
22. R. Warren, Democratizing data about unauthorized residents in the United States: Estimates and public-use data, 2010 to 2013. *J. Migr. Hum. Secur.* **2**, 305–328 (2014).
23. R. Warren, J. R. Warren, Unauthorized immigration to the United States: Annual estimates and components of change, by state, 1990 to 2010. *Int. Migr. Rev.* **47**, 296–329 (2013).
24. M. T. Light, T. Y. Miller, Does undocumented immigration increase violent crime? *Criminology* **56**, 370–401 (2017).
25. B. Bell, S. Machin, "Crime and immigration: What do we know?" in *Lessons from the Economics of Crime: What Reduces Offending? P. J. Cook, S. Machin, O. Marie, G. Mastrobuoni, Eds.* (MIT Press, Cambridge, MA, 2013), pp. 149–174.
26. J. L. Spenkuch, Understanding the impact of immigration on crime. *Am. Law Econ. Rev.* **16**, 177–219 (2014).
27. S. R. Baker, Effects of immigrant legalization on crime. *Am. Econ. Rev.* **105**, 210–213 (2015).
28. J. D. Bachmeier, J. Van Hook, F. D. Bean, Can we measure immigrants' legal status? Lessons from two U.S. Surveys. *Int. Migr. Rev.* **48**, 538–566 (2014).
29. J. Van Hook, Counting 11 million undocumented immigrants is easier than you think. The Conversation (2016). http://theconversation.com/counting-11-million-undocumented-immigrants-is-easier-than-you-think-67921. Accessed 15 April 2020.
30. M. M. Fazel-Zarandi, J. S. Feinstein, E. H. Kaplan, The number of undocumented immigrants in the United States: Estimates based on demographic modeling with data from 1990 to 2016. *PLoS One* **13**, e0201193 (2018).
31. Gonzalez v. ICE, 416 F. Supp. 3d 995 (C.D. Cal. 2019).
32. D. Steffensmeier, B. Feldmeyer, C. T. Harris, J. T. Ulmer, Reassessing trends in black violent crime, 1980-2008: Sorting out the 'Hispanic effect' in Uniform Crime Reports arrests, National Crime Victimization Survey offender estimates, and US prisoner counts. *Criminology* **49**, 197–251 (2011).
33. R. O'Brien, Measuring the convergence/divergence of "serious crime" arrest rates for males and females: 1960–1995. *J. Quant. Criminol.* **15**, 97–114 (1999).
34. G. LaFree, R. O'Brien, E. P. Baumer, "Is the gap between black and white arrest rates narrowing" in *The Many Colors of Crime: Inequalities of Race, Ethnicity, and Crime in America.* R. Peterson, L. J. Krivo, J. Hagan, Eds. (New York University Press, New York, NY, 2006), pp. 179–198.
35. E. Treyger, A. Chalfin, C. Loeffler, Immigration enforcement, policing, and crime. *Criminol. Public Policy* **13**, 285–322 (2014).
36. K. Bialik, "ICE arrests went up in 2017, with biggest increases in Florida, northern Texas, Oklahoma" (Pew Research Center, Washington, DC, 2018).
37. R. Alba, V. Nee, *Remaking the American Mainstream: Assimilation and Contemporary Immigration* (Harvard University Press, Cambridge, MA, 2003).
38. L. Berardi, S. M. Bucerius, "Immigrants and their children: Evidence on generational differences in crime" in *The Oxford Handbook of Ethnicity, Crime, and Immigration.* S. M. Bucerius, M. Tonry, Eds. (Oxford University Press, New York, 2014), pp. 551–583.
39. R. Sampson, Rethinking crime and immigration. *Contexts* **7**, 28–33 (2008).
40. K. F. Butcher, A. M. Piehl, "Why are immigrants' incarceration rates so low? Evidence on selective immigration, deterrence, and deportation" (Tech. Rep. w13229, National Bureau of Economic Research, 2007).