How does incarceration affect where people live after prison, and does it vary by race?

Michael Massoglia, Glenn Firebaugh, and Cody Warner

The United States has the highest incarceration rate in the world. Since the mid-1970s the U.S. prison population has quadrupled, reflecting one of the largest policy experiments of the twentieth century. Researchers and policymakers are just beginning to understand the effect that this dramatic expansion has had on U.S. society. Because African Americans and Hispanics are incarcerated at a higher rate than whites, it is reasonable to assume that rising imprisonment has contributed to existing racial inequalities in U.S. society. Earlier work has generally corroborated this assumption, concluding that imprisonment has in fact disproportionately disadvantaged nonwhite ex-inmates, their families, and their communities. For one, the incarceration rate for blacks is over six times that of whites, and incarceration has become an increasingly common fact of life, especially for black males with low levels of education. Disproportionate incarceration has been identified as a factor in racial variation in earnings, and in certain aspects of health. Additionally, felon disenfranchisement, or the restriction of voting rights among ex-offenders, disproportionately affects blacks, which has had major implications for state and federal elections. Finally, although fathers account for over 90 percent of all incarcerated parents, large racial discrepancies in incarceration rates mean that black children are actually more likely to have an incarcerated mother than white children are to have an incarcerated father.

Where is “home” after prison?

Recent research finds that racial and ethnic minority ex-inmates may also be disadvantaged in another critical life domain—residential attainment—as many of them live in poorer and more disadvantaged neighborhoods after prison as compared to white ex-inmates. However, these studies were not able to account for neighborhood of origin; this is a key piece of information because the neighborhood of origin for the typical prisoner of color is likely much worse socioeconomically than the neighborhood of origin for the typical white prisoner. For example, in 1980 (the year after our longitudinal data set began), 9 of 10 whites lived in neighborhoods with lower poverty than the neighborhood resided in by the typical (median) person of color.

Given the magnitude of the neighborhood racial divide, it is reasonable to assume that whites will generally have more to lose than minorities from being imprisoned. It is also the case that incarceration is much more unusual in white communities than in black communities. Because neighborhoods where incarceration is unusual are less likely to welcome their straying members, whites might be less inclined than blacks to return to their pre-imprisonment neighborhood. Whether this disinclination will typically result in a move to a poorer neighborhood is unknown. Although it is clear that blacks reside in the poorest neighborhoods after prison, we do not know whether this reflects an incarceration effect or existing racial residential inequalities. So the time is ripe for a study of the effect of incarceration on residential attainment that controls for these important preexisting differences in neighborhood quality. Specifically, we ask: After accounting for neighborhood of origin, what is the effect of incarceration on residential attainment, and does it vary by race? To answer these questions, we use a unique nationally representative longitudinal data set that allows us to track individuals as they transition between prisons and communities across roughly 30 years.

Our examination of incarceration’s residential consequences focuses on neighborhood disadvantage as an indicator of neighborhood quality. As a group, individuals with a history of incarceration live in less desirable neighborhoods than do individuals without a history of incarceration. The best evidence of this comes from the Returning Home Project, in which researchers tracked released offenders across several metropolitan areas. For example, more than half of the released inmates followed in Chicago settled in just seven of 77 total neighborhoods; these seven neighborhoods were typified by high rates of poverty and disadvantage.

Little is known, however, about the processes that channel ex-inmates into these disadvantaged neighborhoods. Do inmates come from and simply return to the same disadvantaged neighborhoods upon release? Or do prisons push released offenders into more disadvantaged areas? This gap in our knowledge is notable for several reasons. First, the sheer magnitude of mass incarceration is hard to ignore, with approximately 700,000 people now being released from prison each year. Successful reentry of a stigmatized population of this size depends largely on where ex-inmates settle. There is evidence, for example, that post-prison neighborhood environment affects recidivism. This evidence, combined with more general evidence that life
is shaped by one’s residence, suggests the importance of knowing ex-inmates’ residential destinations. Indeed, given the large racial disparities in confinement, it is possible that growth in the prison population has important implications for racial inequalities across a number of dimensions tied to neighborhood context, such as health and labor market outcomes, as an outgrowth of its presumed effect on neighborhood attainment itself.

Note that the observed association between incarceration and neighborhood attainment does not necessarily reflect a causal relationship. Ex-inmates are not a random sample of U.S. adults. Compared to the rest of the U.S. adult population, a prisoner is more likely to be male, young, poor, unemployed, a racial or ethnic minority, and have a low level of education. Many of these characteristics, especially socioeconomic characteristics and race and ethnicity, are also correlated with residence in disadvantaged neighborhoods. Quite possibly, then, any association between incarceration and neighborhood quality would disappear if we controlled for such individual-level characteristics.

Ex-inmates are more likely to reside in disadvantaged neighborhoods before prison. We need to know where convicted offenders resided prior to prison in order to determine if the post-release residential conditions they face represent the causal effect of incarceration or simply a reproduction of the neighborhood disadvantage they faced prior to prison. Controlling for individual characteristics alone is thus insufficient to determine incarceration’s effect on neighborhood attainment.

Prior studies of incarceration effects have focused on disentangling causal effects of incarceration from causal effects of individual characteristics, but have largely ignored the effect of neighborhood context prior to incarceration. We depart from prior studies on incarceration and neighborhood outcomes by employing a modeling strategy that accounts for both individual traits and neighborhood of origin prior to prison. By utilizing a combination of individual data from the 1979 National Longitudinal Survey of Youth (NLSY79) and tract-level data from the U.S. Census, our results provide more reliable estimates of the causal effect of incarceration on neighborhood attainment than previously available.

**Neighborhood attainment patterns**

Residential location is an established marker of social standing, so it is not surprising that Americans are willing to pay more for residence in more desirable neighborhoods. The question of how households sort themselves (or are sorted) into neighborhoods of varying quality is the subject of a longstanding and extensive research literature.

Although incarceration is rarely considered in studies of neighborhood attainment, there are a number of reasons to expect that incarceration affects neighborhood attainment patterns. For example, incarceration, at least temporarily, forcibly removes individuals from their communities. Upon release, ex-inmates might experience constrained residential options stemming either directly or indirectly from their spell of incarceration. Inmates suffer from fractured social ties and an increased likelihood of divorce, meaning residences prior to prison may not be available upon release. Incarceration can also limit employment opportunities and depress wages, which means ex-inmates often lack the socioeconomic resources necessary for residence in desirable neighborhoods. Finally, their status as a socially marginalized group suggests that ex-inmates might be explicitly targeted and excluded from some neighborhoods or communities.

Nearly 80 percent of prisoners are released on parole supervision. Thus, the close monitoring of ex-inmate living arrangements may create additional barriers to finding adequate and stable housing. Correctional agencies often require preapproval of housing choices, and in many respects housing discrimination against former inmates is now legally sanctioned. For example, some ex-inmates—notably sex offenders, but increasingly other offenders as well—are restricted from living in certain places. Individuals convicted of drug crimes can be banned from public housing, which, ironically, is specifically intended to provide assistance to those most in need of housing. Ex-inmates may also encounter commercial rental agencies that simply refuse to rent to them. Faced with such overt discrimination and increasing legal restrictions, many ex-inmates may have few options outside the most disadvantaged neighborhoods. We expect the combined effects of legal, financial, and institutional barriers to securing housing will restrict ex-inmates’ residential options more than if they had not gone to prison. Thus, we would expect that controlling for neighborhood of origin and other determinants of residential location, ex-inmates will tend to reside in more disadvantaged neighborhoods following release from prison. However, racial disparities in patterns of residential attainment and rates of incarceration may complicate this general expectation. In particular, blacks traditionally do not achieve residence in the same quality neighborhoods as comparable whites, with high-socioeconomic status blacks typically falling short of even low-socioeconomic status whites. Furthermore, incarceration is becoming so commonplace among black males that it now often constitutes a distinct phase in the life course. At current rates, approximately 60 percent of black males without a high school degree will experience a spell of imprisonment at some point in their lives. Coupled with high rates of racial residential segregation, the male incarceration rate in some inner-city areas approaches 25 percent.

Given these racial disparities in neighborhood attainment and exposure to incarceration, it is reasonable to ask if the consequences of imprisonment will be greater for individual whites or for individual minorities. It may be that incarceration does little to actually change the neighborhood trajectories of minority ex-inmates. Whites, on the other hand, have more to lose given their advantaged
starting points, so the effect of incarceration might be more pronounced for them.

**Racial variation in post-prison neighborhoods**

We use descriptive statistics for a preliminary examination of ex-inmate neighborhood conditions; Figure 1 plots disadvantage scores broken down by ex-inmate status and race and ethnicity. Because we use a standardized index, the zero point on the x-axis reflects the sample mean, with scores above zero reflecting higher-than-average levels of disadvantage. Two findings stand out. First, there are striking racial disparities in neighborhood attainment, with blacks and Hispanics who have never served time in prison living, on average, in more disadvantaged neighborhoods than whites who have been in prison. Second, there appears to be a detrimental effect of incarceration; that is, whites, blacks, and Hispanics who have served time in prison generally live in more disadvantaged neighborhood environments than do individuals who have not (the differences are statistically significant in each case). To determine if these observed relationships between incarceration and neighborhood disadvantage are driven by the incarceration experience—rather than individual characteristics or pre-prison neighborhood conditions—we turn to results from our fixed-effects models.

First, looking at effects of ex-inmate status and time out of prison on neighborhood disadvantage for all ex-inmates collectively, we find insufficient evidence to conclude that ex-inmates on the whole reside in more disadvantaged neighborhoods following prison, compared with the types of neighborhoods they resided in before prison. These results are noteworthy because we controlled for effects of ex-inmates’ prior neighborhood environment. Previous research, by failing to measure pre-prison neighborhood conditions, may have overestimated incarceration’s impact on neighborhood disadvantage. Because these results are for all respondents, they may still mask important racial variation in the relationship between incarceration and neighborhood disadvantage. From Figure 1 we know that, in each of the three groups, ex-inmates live in more disadvantaged neighborhoods than their never-incarcerated counterparts. To determine if this association reflects a causal effect of incarceration for any subgroup, we estimate race-specific fixed-effects regression models.

Taking into account race, we do find significant racial variation in the effect of incarceration on neighborhood attainment. Specifically, results indicate that incarceration has a significant impact on neighborhood disadvantage only for white ex-inmates, and is unrelated to neighborhood attainment for either blacks or Hispanics. This is notable for at least two reasons. First, it suggests that the association between incarceration and neighborhood disadvantage observed in Figure 1 is—for blacks and Hispanics but not for whites—attributable to the individual traits or pre-prison neighborhood histories of the ex-inmates themselves. Second, it suggests that the nonsignificant effect of incarceration on neighborhood disadvantage for all ex-inmates collectively masks the significant effect of incarceration for whites.

The NLSY79 data show that incarceration’s effect on neighborhood disadvantage does vary by race, but not necessarily in the way one might expect from the results of prior studies. Our results show that, after accounting for neighborhood of origin, it is whites, not blacks or Hispanics, whose neighborhood environments are most affected by a prison spell. Based on our estimates, a prison sentence boosts the neighborhood disadvantage index score by more than one-fourth of a standard deviation for whites, but has no statistically significant effect on the index score for blacks or Hispanics. Also noteworthy, for whites, the magnitude of the effect of incarceration on neighborhood disadvantage is more than five times larger than the effect of employment, four times larger than the effect of marital status, three times larger than the effect of homeownership, and more than twice the size of the family poverty effect.

We used various sensitivity analyses to test these results, and consistently found: (1) for whites, the effect of incarceration is always adverse, and the coefficient is always statistically significant; and (2) for blacks and Hispanics, effects never reach statistical significance. By employing a research design that accounts for neighborhood of origin, we find that incarceration’s causal impact on neighborhood disadvantage is realized entirely for whites.

**A “more to lose” explanation**

Incarceration likely results in downward residential mobility for whites and no downward mobility for blacks because, in terms of neighborhood quality, whites have the most

---

**Figure 1. Neighborhood disadvantage by race and ex-inmate status, OLS specification.**


**Notes:** Ordinary least squares specification. * indicates probability value at or below the 0.05 level.
to lose, and blacks the least to lose. This explanation is plausible because disparities in pre-prison neighborhood environments for whites, Hispanics, and blacks are massive: on average, blacks are 0.82 standard deviations above the mean on the standardized disadvantage scale, Hispanics are 0.62 standard deviations above the mean, and whites are 0.27 standard deviations below the mean, so whites and blacks differ by more than one standard deviation.

Indeed, if we replicate Figure 1, but this time use a fixed-effects specification to remove the effect of pre-prison neighborhood context, we see in Figure 2 that incarceration does not create significant within-person change in neighborhood attainment for either blacks or Hispanics. Note that this figure is based on a model that does not control for marital status, poverty, homeownership, education, and other individual characteristics that are predictive of neighborhood disadvantage. Even without taking important time-varying predictors of neighborhood attainment into account, we can effectively rule out incarceration as a predictor of neighborhood quality for minorities. White ex-inmates, on the other hand, live in significantly more disadvantaged neighborhoods following prison, over and above pre-prison neighborhood disadvantage.

Our finding that whites have more to lose from a spell of incarceration than do blacks raises an important question: Why is the incarceration penalty not more severe for whites than for blacks in other domains where whites are also more advantaged, such as wages? The answer, we suspect, is that blacks and whites differ much more with regard to neighborhood environment than they do with regard to wages or employment. In 2008, for example, the difference in the average hourly wage for blacks and whites in the NLSY79 data was less than one-third of the overall standard deviation in wages. Contrast this with the racial difference in neighborhood disadvantage: as we noted earlier, the average black lives in a neighborhood that is more than one standard deviation higher on the disadvantage scale than the neighborhood where the average white lives. In short, the more there is to lose, the more the “more to lose” hypothesis pertains.

### Discussion and conclusions

Given the dramatic swelling of the ex-inmate population in the United States in recent decades, understanding the lasting effects of incarceration on ex-inmates, their families, and their communities is critical. Most research on collateral consequences of incarceration focuses on individual and family outcomes. We know much less about incarceration’s effect on residential outcomes such as neighborhood quality. In particular, we do not even know whether ex-inmates tend to reside in more disadvantaged neighborhoods after prison than they did before prison.

By using nationally representative longitudinal data to examine within-person change in neighborhood attainment across time, we discovered that white ex-inmates live in significantly more disadvantaged neighborhoods after a prison spell than they did before the spell. We found no effect for neighborhood characteristics of ex-inmates as a group, or for black or Hispanic ex-inmates.

What remains to be determined is whether the pre- and post-prison disparity for whites is a pure incarceration effect. The NLSY79 data are relatively limited in terms of measures of arrests and criminal convictions, so we cannot separate out effects of a criminal history from effects of incarceration, at least not directly. Would we see the same downward neighborhood trajectory for whites who are convicted of the same offenses but do not spend time in prison? The weight of the evidence suggests that the pre- and post-prison difference we observed for whites reflects primarily (although perhaps not entirely) the effect of a prison spell, not the effect of criminal offending or a criminal record. Incarceration automatically removes individuals from their neighborhoods; a criminal record does not. In our sample, among individuals uprooted from their neighborhoods by a prison spell, only one in five return to and remain in their pre-prison neighborhoods, and our sensitivity analyses suggest it is those who do not return to their former neighborhoods after leaving prison who account for the downward residential mobility among whites. In other words, the causal chain appears to operate as illustrated in Figure 3.

What if conviction does not lead to a prison spell? The chain of events would be different. Because conviction itself does not necessarily, or even likely, uproot an individual from his neighborhood, rates of mobility will be dramatically lower. Among individuals who do choose to move, such a decision is more likely to be voluntary, and thus more likely to result in lateral or upward residential mobility. There is reason to

---

**Figure 2. Neighborhood disadvantage by race and ex-inmate status, fixed-effects specification.**


**Notes:** Fixed-effects specification. * indicates probability value at or below the 0.05 level.
believe, then, that conviction without incarceration will not lead to the downward residential mobility that we observe for formerly incarcerated whites in this study. It remains for future research to verify our findings, and to collect data on offending and convictions as well, to determine how much (if any) of the pre- and post-prison difference is attributable to the effect of a criminal history independent of the effect of incarceration.

In addition to setting an agenda for future research, our results demonstrate the importance of accounting for neighborhood of origin when studying incarceration’s effect on neighborhood attainment. Some research in other substantive areas has accounted for pre-prison conditions, but our study clearly demonstrates the empirical pitfalls of not accounting adequately for pre-prison context when investigating incarceration’s effects generally. In addition, our finding of racial variation in incarceration’s impact on neighborhood attainment provides further evidence that a spell of incarceration does not have universal effects across different demographic groups. Finally, given that recidivism rates are higher in disadvantaged areas, our results illuminate a process—incarceration leading to downward mobility, at least for whites—that likely bears on the high rates of recidivism among ex-inmates.

By including the U.S. felon class—an expanding population that currently constitutes about 7 percent of the U.S. adult population—in the analysis of neighborhood attainment, this study also contributes to the literature on neighborhood sorting and attainment. Virtually all inmates are eventually released from prison, and each year more than 700,000 released offenders join more than 16 million current or former felons already residing in neighborhoods across the country. The penal system’s stratifying effects are now well recognized in other areas, but they have not been fully incorporated into the literature on neighborhood attainment. Our findings here, along with those in recent related analyses, provide a starting point for an earnest investigation of incarceration’s enduring effects on imprisoned felons and on the neighborhoods where they reside after exiting the prison gates.

Policy implications

Our findings also have a number of policy implications. To say that incarceration tends to harm whites more than blacks with respect to neighborhood attainment is not to say that incarceration’s effects always tend to be greater for whites or are always inconsequential for blacks. Rather, we emphasize that there is substantial and meaningful racial variation in incarceration’s effects across different life domains. In some cases incarceration apparently contributes to racial and ethnic inequalities. In other cases, such as the results presented here, the incarceration effect is more pronounced for whites. There is evidence that this is also the case for mortality and labeling effects on recidivism. Policymakers should be attentive to these differences in fashioning policies to temper the societal costs of mass incarceration.

We noted earlier that the steep rise in the prison population is largely policy-driven, rather than being tied to any dramatic increase in criminal activity. Therefore it follows that reductions in the use of incarceration must also be driven by policy. Clearly a balance needs to be struck between public safety and the costs of incarceration. In a time when federal and state budgets are strained, many observers have started to question the current balance, noting that increased public funds directed to the correctional system come at the expense of funds for education, health, or any number of other public goods and services. Even if the prison boom has peaked, the consequences of that boom will be felt for decades to come, as large numbers of prisoners are reintegrated into U.S. society. Results presented in this article provide a strong reminder of the need for effective policies concerning that reintegration process.

References


Calculated from U.S. Census data for the 53,138 census tracts in U.S. metropolitan areas.


For employment opportunities, see Massoglia, Remster, and King, “Stigma or Separation?”; for wages, see Western, “The Impact of Incarceration on Wage Mobility and Inequality.”


