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**The Impact of Incarceration on the Employment Outcomes of Former Inmates: Policy Options for Fostering Self-Sufficiency and an Assessment of the Cost-Effectiveness of Current Corrections Policy**

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## **Abstract**

This chapter documents recent incarceration trends, discusses the evidence pertaining to the employment effects of serving time, and discusses several policy options designed to limit the adverse collateral consequences of corrections policy on poor minority communities. Regarding policy proposals, I advocate for (1) the elimination of federal bans on the participation of certain convicted felons from participation in various public assistance programs, (2) for a rationalization of federal, state, and local government employment bans that allows for greater consideration of the particulars of individual cases, (3) for legislative guidance on how employers may and may not consider the criminal history record of an applicant, and (4) for state programs that incentivize the expunging of criminal history records for former inmates that exhibit sustained desistance from criminal activity and that meet other benchmarks of responsible post-release behavior. I also assess the likely effects on crime of reducing the U.S. incarceration rate below current levels. I conclude that incarceration has increased along the extensive margin to such an extent that there are certainly many men who are currently sentenced to serve time that pose a minimal threat to society.

## **1. Introduction**

The United States currently incarcerates its residents at a rate that is greater than every other country in the world. Aggregating the state and federal prison populations as well as inmates in local jails, there were 737 inmates per 100,000 U.S. residents in 2005 (International Centre for Prison Studies 2007). This compares with a world average of 166 per 100,000 and an average among European Community member states of 135. Of the approximately 2.1 million U.S. residents incarcerated in 2005, roughly 65 percent were inmates in state and federal prisons while the remaining 35 percent resided in local jails.

Moreover, current U.S. incarceration rates are unusually high relative to historical figures for the U.S. itself. For the fifty year period spanning the 1920s through the mid 1970s, the number of state and federal prisoners per 100,000 varied within a 10 to 20 unit band around a rate of approximately 110. Beginning in the mid 1970s, however, state prison populations grew at an unprecedented rate, nearly quadrupling between the mid 1970s and the present. Concurrently, the rate of incarceration in local jails more than tripled.

The incidence of these increases has not been evenly distributed across the population. In particular, these increases have been concentrated among men, among the less educated, and among minorities. Incarceration rates have increased by particularly large amounts for less educated African-American men. These disparate impacts are best illustrated by changes in the lifetime likelihood of serving prison time by birth cohort. The Bureau of Justice Statistics estimates the lifetime likelihood of serving time in a state or federal prison for a male child born in 1974 was 2.2 percent for whites, 13.4 percent for blacks, and 4 percent for Hispanics. By 2001, the corresponding likelihoods increased to 5.9 percent for whites, 32.2 percent for blacks, and 17.2 percent for Hispanics (Bonczar 2003). Moreover, estimates of the proportion of less

educated black men that have ever served time have yielded odds ratios of a prior prison spell of two or higher (Raphael 2005, Western 2006, Pettit and Western 2004).

These trends in incarceration rates do not bode well for the socioeconomic status of minority men, their potential partners, children, and more generally, their communities. There is growing evidence that prior incarceration and conviction adversely impacts the employment prospects of former inmates. In many instances state and federal policies compound the problems that formers inmates face when seeking employment or when, more generally, attempting to reenter non-institutionalized society. In addition, recent research links the increase in incarceration rates to poor marriage outcomes (Charles and Lough 2007), further impoverishment of low-income children (Johnson 2007), behavioral problems among the children of the incarcerated (Johnson 2007), and the spread of communicable diseases such as HIV-AIDS among disproportionately impacted communities (Johnson and Raphael 2006).

Any policy agenda intended to promote pathways to self-sufficiency among low-income minority communities must address these collateral consequences associated with recent incarceration trends. It is hard to imagine healthy communities where in some instances up to one-third of working age men may be incarcerated on any given day and considerably larger fractions are either under the jurisdiction of the criminal justice system in one form or another or have previously been incarcerated.

This chapter documents recent incarceration trends, discusses the evidence pertaining to the employment effects of serving time, and discusses several policy options designed to limit the adverse collateral consequences of corrections policy on poor minority communities. Regarding policy proposals, I advocate for (1) the elimination of federal bans on the participation of certain convicted felons from participation in various public assistance programs, (2) for a

rationalization of federal, state, and local government employment bans that allows for greater consideration of the particulars of individual cases, (3) for legislative guidance on how employers may and may not consider the criminal history record of an applicant, and (4) for state programs that incentivize the expunging of criminal history records for former inmates that exhibit sustained desistance from criminal activity and that meet other benchmarks of responsible post-release behavior. I also assess the likely effects on crime of reducing the U.S. incarceration rate below current levels.

Policy proposals designed to alleviate the collateral employment, social, and health consequences of incarceration must confront the potential tradeoffs between minimizing time served and public safety. In the policy discussion below, I highlight the likely impact of the proposed changes on criminal offending as well as the political feasibility of many of the proposed changes. In most instances, the proposed changes are unlikely to increase criminal offending, and may even aid successful reintegration and criminal desistance. Moreover, incarceration has increased along the extensive margin to such an extent that there are certainly many men who are currently sentenced to serve time that pose a minimal threat to society.

## **2. Recent incarceration trends**

Over the past three decades the U.S. prison incarceration rate has increased to unprecedented levels. Figure 1 displays the number of state and federal prison inmates per 100,000 U.S. residents. Prior to the mid 1970s, the incarceration rate was stable, hovering in a narrow band around 110 inmates per 100,000. Thereafter, however, the incarceration rate increases precipitously. Between 1975 and 2005, the prison incarceration rate more than quadrupled, from a rate of 111 to 488 per 100,000. The annual incarceration rate increased by an

average of 15.7 inmates per 100,000 per year during the 1980s, 16.8 inmates per year during the 1990s, and 4.3 inmates per year during the first few year of the new century. By 2005, the point-in-time population of state and federal prisoners stood at slightly over 1.4 million inmates.

State and federal prisons hold those convicted for a felony offense who are sentenced to a year or more, as well as parole violators and probation violators who may ultimately serve less than a year on any given prison admissions. In addition to these inmates, however, there are many who are held in local and county jails, either while awaiting adjudication, while serving time on a sentence of less than a year, or while serving time on a prison sentence in a local jail due to overcrowding in state facilities. Figure 2 presents the number of inmates per 100,000 held in jails. Between 1980 and 2005, the total population in U.S. jail quadrupled from 183,988 inmates to 747,529. Relative to the resident population, the jail population increased by slightly more than three times (an increase in inmates per 100,000 residents from approximately 81 in 1980 to 252 in 2005).

Behind this steady increase in incarceration rates are large flows of inmates into and out of the nation's prisons and jails. By construction, the annual flow out of U.S. jails should be several times the point-in-time jail population, given the many very short stays in local jails and the fact that longer terms are generally limited to inmates sentenced to less than a year. What is perhaps more surprising is the number of inmates that are released from and admitted to prison each year. While there are certainly many prisoners that are serving very long sentences in the nation's penitentiaries (inmates that are most likely to be captured by point-in-time snapshots of the prison population), there are many more U.S. residents who serve relatively short spells in prison and/or who cycle in and out of correctional institutions serving sequential short spells over substantial portions of their adult lives. As demonstrated by Travis (2005) nearly all inmates are

eventually released from prison, most within five years of admission. Most tellingly, annual admissions to U.S. prisons have consistently hovered around one-half the size of the prison population, while roughly half of all inmates are released in any give year. In recent decades, admissions have consistently exceeded releases, resulting in sustained increases in incarceration rates.

The increasing incarceration rates displayed in Figures 1 and 2 do not reflect a general increase in the likelihood of becoming incarcerated, but a concentrated increase in the incarceration risk for well defined sub-segments of the population. First, while incarceration rates have risen for both genders, the overwhelming share of these increases is accounted for by increasing rates for men (Raphael and Stoll 2007). This is not surprising considering that men consistently account for over 90 percent of the incarcerated population in current and past decades. Within the adult male population however, the increase in incarceration risk has been further concentrated among relatively young men (ages 25 to 40) and minority men (black men in particular).

Tables 1 through 3 demonstrate how the likelihood of incarceration has changed for adult males by race, level of educational attainment, and age. The figures in the table are based on tabulations of the 1980 and 2000 Public Use Microdata Samples (PUMS) of the U.S. Census of Population and Housing. The decennial census enumerates both the institutionalized as well as the non-institutionalized population. Within the institutionalized population, one can separately identify individuals residing in non-military institutions. This category includes inmates of federal and state prisons, local jail inmates, residents of inpatient mental hospitals, and residents of other non-aged institutions. I use residence in a non-military institution as the principal indicator of incarceration. In previous research (Raphael 2005), I have demonstrated that

estimates of the incarcerated population based on residents in non-military group quarters in the census are quite close to incarceration totals from alternative sources.<sup>1</sup>

Each table presents the proportion of the respective population that is engaged in a productive activity (either employed, in school, or in the military), the proportion that is not-institutionalized but idle (not employed, not in school, not in the military), and the proportion institutionalized. All figures pertain to men 18 to 55 years of age. Table 1 presents overall estimates for men for four mutually-exclusive race/ethnicity groupings. The proportion incarcerated increased for all groups of men between 1980 and 2000. However, the absolute increase is largest for non-Hispanic black men and Hispanic men. The 2000 census indicates that roughly nine percent of the adult black male population was incarcerated on any given day. The comparable figures for other groups are three percent for Hispanics, 1.4 percent for whites, and 0.6 percent for Asians.

Table 2 reveals that the proportion incarcerated has increased the most for the least educated men, and that this education-incarceration relationship differs substantially across racial groups. Among white men in 2000, those without a high school diploma are more than twice as likely to be institutionalized relative to those with a high school degree, with 4.5 percent of the former and approximately two percent of the latter institutionalized in 2000. Moreover, white male high school dropouts experienced the largest increase in institutionalization rates between 1980 and 2000 (2.4 percentage point change, compared with a 1.3 percentage point increase for

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<sup>1</sup> To gauge the validity of using the census data in this manner, in previous research (Raphael 2005) I compare estimates of the institutionalized population from the census to estimates of the incarcerated populations from other sources by race. While the census estimates are slightly larger than estimates of the incarcerated population from the Bureau of Justice Statistics, the disparities are quite small relative to the overall incarcerated population. The difference likely reflects the very small remaining inpatient population in U.S. mental hospitals.

white high school graduates, and a 0.4 percentage point increase for those with some college education).

These changes as well as the levels are small in comparison to what is observed for black men. Between 1980 and 2000, the proportion of black men with less than a high school degree that is institutionalized on any given day increases from 0.057 to 0.206. For black male high school graduates, the proportion institutionalized increases from 0.027 to 0.087. Even among black men with some college education, the incarceration increases by over two percentage points. In fact, the changes observed among this group of black men are comparable in magnitude to the changes observed among white high school dropouts.

By comparison, the changes in institutionalization rates among Asian men are small, as are the changes among Hispanic men. The relatively low institutionalization rates among Hispanic men are consistent with recent research by Butcher and Piehl (2006) demonstrating the relatively low levels of incarceration among recent immigrants (levels that are particularly surprising given the much lower levels of educational attainment).

Table 3 parses the data further for the least educated by age. For high school dropouts and those with a high school diploma, the table presents the distribution of each group across the three possible states by race/ethnicity and by three age groups (18 to 25 years of age, 26 to 35, and 36 to 45). While not true in all instances, the proportion institutionalized is greatest for men between 26 and 35 within each education/race group. The most startling figures are those for black men in 2000. Among black men, roughly one third of high school dropouts between 26 and 35 are incarcerated on a given day, a number comparable to the proportion of this sub-group employed. The comparable figure for black men with a high school degree is approximately 23

percent. More generally, the institutionalization rate increases for all of these sub-groups of less educated young men. However, the patterns for black males are particularly severe.

The patterns depicted in Tables 1 through 3 are conservative estimates of the changes in incarceration for these groups, given that I am limited to data from the 2000 census. Since the time period when the data underlying the PUMS was last collected (approximately April 1999), the prison and jail populations have continued to grow, albeit at a slower rate. Between 1999 and 2006, the point-in-time prison population increased by roughly 270,000 inmates (a 20 percent increase) while over the same period the local jail population increased by 160,000 inmates (a 26 percent increase). By contrast, the U.S. population grew by roughly 8 percent over this time period. Thus it is likely that the 2010 census will reveal even more stark patterns.

In addition, the figures in Tables 1 through 3 display only the proportion incarcerated on a given day. Another relevant set of figures for understanding the importance of a prior incarceration in impacting self-sufficiency is the proportion of men who have ever served time. Given the high turnover in U.S. prisons discussed above, the drastic increases in incarceration rates experienced over the last three decades has left in its wake an increasingly large population of former inmates. The Bureau of Justice Statistics estimates that approximately 3 percent of white male adults, 20 percent of black male adults, and 8 percent of Hispanic male adults have served prison time at some point in their lives (Bonczar 2003). In an analysis of administrative records from the California Department of Corrections, I have estimate that at the close of the 1990s, over 90 percent of black male high-school dropouts, and 10 to 15 percent of black male high school graduates have served prison time in the state. Pettit and Western (2004) estimate that for all African American men born between 1965 and 1969, the proportion who have been to

prison by 1999 was 20.5 percent for all men, 30.2 percent for black men without a college degree, and 58.9 percent for black men without a high school degree.

Thus, less-educated minority men are considerably more likely to be incarcerated currently than at any time in the past. Moreover, given the fluidity of prison populations, the population of non-institutionalized former inmates has grown continuously and now constitutes sizable minorities, and in some instances majorities, of certain sub-groups of U.S. men.

### **3. How does serving time impact one's employment prospects?**

The discussion of the patterns in Tables 1 through 3 focused primarily on the changes in incarceration rates occurring between 1980 and 2000. We saw marked increases in the proportion of men incarcerated on any given day for relatively young, less educated, minority men. Conversely, there are corresponding sizable declines in the proportions of men who are active in a productive activity (defined here as in school, employed, or in the military). For example, Table 2 reveals declines in the proportion of black men that are active between 1980 and 2000 of 23 percentage points for high school dropouts, 15 percentage points for high school graduates, and 7 percentage points for those with some college education. These declines are particularly large for the young and less educated minority men depicted in Table 3. In previous research (Raphael 2007), I have found that these declines were sufficient to drive black male employment rates below corresponding black female employment rates for all educational attainment groups with the exception of college graduates (where the inter-gender difference is zero). This pattern is not observed among African-Americans in previous years nor among any of the other racial/ethnic groups listed in the tables.

Figure 3 demonstrates directly the correspondence between the changes in the proportion employed/active and the changes in the proportion incarcerated. The figure plots the ten-year changes in the proportion active for the 1980s and 1990s against the corresponding ten-year changes in the proportion institutionalized for each of the demographic groups defined by the complete interaction of the four race/ethnicity groups and four education attainment groups displayed in Table 2 as well as four age groups corresponding to those used in Table 3 plus the group of men 46 to 55. There is a clear negative correlation between these two variables. The results from a simple bivariate regression suggest that a one percentage point increase in the proportion incarcerated is associated with a 0.83 percentage point decrease in the proportion active. If one were to interpret this coefficient as a causal effect, it would suggest that the 24 percentage point increase in the incarceration rate of male black high school dropouts between 26 and 35 caused an approximate 20 percentage point decline in the employment rate of this group (thus explaining almost 70 percent of the actual decline of 29 percentage points).

What causal pathways may link changes in incarceration rates to the employment outcomes of low-skilled men? First, there is a simple contemporaneous mechanical incapacitation effect of incarceration, in that institutionalized men cannot be employed in a conventional manner. If one were to randomly select a group of men and incarcerate them, the slope coefficient from a regression of the change in employment on the change in incarceration should equal the employment rate for men overall. To be sure, those admitted to prison are hardly a random sample of adult men and are likely to have employment rates substantially below that of the average male. Nonetheless, exogenous increases in incarceration will mechanically reduce the employment rate for those impacted to the extent that some of the newly

admitted inmates were employed at the time of arrest.<sup>2</sup> Seeing as the lion's share of the increase in incarceration since the mid 1970s reflects changes in sentencing policy rather than changes in behavior,<sup>3</sup> this short term contemporaneous effect will be particularly important for the most impacted sub-groups.<sup>4</sup>

Beyond this contemporaneous effect, incarceration is also likely to have a dynamic lagged impact on the employment prospects of former inmates as well as a contemporaneous impact on the employment outcomes of men who have not been to prison yet come from demographic sub-groups with high incarceration rates. The dynamic effects are derived from the failure to accumulate human capital while incarcerated as well as the stigmatizing effects (sometimes exacerbated by state and federal policy) associated with a prior felony conviction and incarceration. The alternative contemporaneous effect results from employers statistically discriminating against men from high incarceration demographic groups in an attempt to avoid hiring ex-offenders. All of these pathways are likely to suppress the current and future employment and earnings of men from demographic groups with high incarceration rates. This impact adversely affects the material well being of those men directly impacted as well as of those intimates and children whose welfare is determined interdependently.

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<sup>2</sup> A number of studies demonstrate that roughly one to two-thirds of inmates are employed at the time of the arrest leading to their current incarceration (See Kling 2007, Petit and Lyons 2007, Tyler and Kling 2007, and Sabol 2007.

<sup>3</sup> Blumstein and Beck (1999) as well as Raphael and Stoll (2007) demonstrate that most of the increase (80 to 85 percent) in state incarceration rates are attributable to increased sentence length conditional on being sent to prison and an increased propensity to punish felons with incarceration, holding offenses constant. Raphael and Stoll (2007) simulate the counterfactual crime rate that would have occurred had the state prison incarceration rate not increased above 1980 levels. The results suggest that a higher propensity to offend can explain no more than 15 percent of the overall increase.

<sup>4</sup> To be sure, causality may also run in the reverse direction – i.e., from declining employment prospects, to criminal activity, to incarceration. However, the evidence on this front is rather weak. First, the decline in wages of the least skilled men between 1980 and 2000 was heavily concentrated in the 1980s, with some low-skilled men regaining lost ground during the 90s and beyond. However, the increase in incarceration during the 90s was equal in magnitude to the increase occurring during the 1980s, and the incarceration rate continued to increase between 2000 and 2006. Second, evidence of a behavioral increase in criminal activity is scant, with most research suggesting that the propensity to commit crime actually declined during the 1990s even after accounting for the increase in incarceration.

*Incarceration and the accumulation of work experience*

Serving time interrupts one's work career. The extent of this interruption depends on both the expected amount of time served on a typical term as well as the likelihood of serving subsequent prison terms. The average prisoner admitted during the late 1990s on a new commitment faced a maximum sentence of three years and a minimum of one year (with many serving time closer to the minimum) (Raphael and Stoll 2005). If this were the only time served for most, then the time interruption of prison would not be that substantial.<sup>5</sup>

However, many people serve multiple terms in prison, either due to the commission of new felonies or due to violation of parole conditions post-release. A large body of criminological research consistently finds that nearly two thirds of ex-inmates are rearrested within a few years of release from prison (Petersilia 2003). Moreover, a sizable majority of the re-arrested will serve subsequent prison terms. Thus, for many offenders, the typical experience between the ages of 18 and 30 is characterized by multiple short prison spells with intermittent, and relatively short, spells outside of prison.

In prior longitudinal research on young offenders entering the California state prison system, I documented the degree to which prison interrupts the early potential work careers of young men. I followed a cohort of young men entering the state prison system in 1990 and gauged the amount of time served over the subsequent decade (Raphael 2005). This analysis found that the median inmate serves 2.8 years during the 1990s, with the median white inmate (3.09 years) and median black inmate (3.53 years) serving more time and the median Hispanic

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<sup>5</sup> Of course, I am not saying that a year in prison is not costly. However, a year absence from the labor market during the beginning of one's career would have only a small effect on accumulated experience.

inmate (2.23 years) serving less time.<sup>6</sup> Roughly 25 percent served at least 5 years during the 1990s while another 25 percent served less than 1.5 years.

However, as a gauge of the extent of the temporal interruption, these figures are misleading. Cumulative time served does not account for the short periods of time between prison spells where inmates may find employment, yet are not able to solidify the employment match with any measurable amount of job tenure. A more appropriate measure of the degree to which incarceration impedes experience accumulation would be the time between the date of admission to prison for the first term served and the date of release from the last term.

Using time lapsed between first admission and final release during the 1990s, I found that five years elapses between the first date of admission and the last date of release for the median inmate. For median white, black, and Hispanic inmates, the comparable figures are 6.2, 6.5, and 3.2 years, respectively. For approximately one quarter of inmates, nine years pass between their initial commission to prison and their last release. In other words, one quarter of these inmates spend almost the entire decade cycling in and out of prison.

Spending five years of one's early life (6.5 years for the median black offender) cycling in and out of institutions must impact one's earnings prospects. Clearly, being behind bars and the short spans of time outside of prison prohibits the accumulation of job experiences during a period of one's life when the returns to experience are the greatest.

*Does having been in prison stigmatize ex-offenders?*

The potential impact of serving time on future labor market prospects extends beyond the failure to accumulate work experience. Employers are averse to hiring former prison inmates and often use formal and informal screening tools to weed ex-offenders out of the applicant pool.

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<sup>6</sup> The California inmate population is roughly evenly distributed between whites, Hispanics, and Blacks and is overwhelmingly male.

Given the high proportion of low-skilled men with prison time on their criminal history records, such employer sentiments and screening practices represent an increasingly important employment barrier, especially for low-skilled African-American men.

Employers consider criminal history records when screening job applicants for a number of reasons. For starters, certain occupations are closed to felons under local, state, and in some instances, federal law (Hahn 1991). In many states employers can be held liable for the criminal actions of their employees. Under the theory of negligent hiring, employers can be required to pay punitive damages as well as damages for loss, pain, and suffering for acts committed by an employee on the job (Craig 1987). Finally, employers looking to fill jobs where employee monitoring is imperfect may place a premium on trustworthiness and screen accordingly.

In all known employer surveys where employers are asked about their willingness to hire ex-offenders, employer responses reveal a strong aversion to hiring applicants with criminal history records (Holzer, Raphael, and Stoll 2006, 2007; Pager 2003). For example, over 60 percent of employers surveyed in the Multi-City Study of Urban Inequality (MCSUI), indicated that they would “probably not” or “definitely not” hire applicants with criminal history records, with “probably not” being the modal response. By contrast, only eight percent responded similarly when queried about their willingness to hire current and former welfare recipients.

The ability of employers to act on an aversion to ex-offenders, and the nature of the action in terms of hiring and screening behavior, will depend on employer accessibility to criminal history record information. If an employer can and does access criminal history records, the employer may simply screen out applicants based on their actual arrest and conviction records. In the absence of a formal background check, an employer may act on their aversion to hiring ex-offenders using perceived correlates of previous incarceration, such as age,

race, or level of educational attainment to attempt to screen out those with criminal histories. In other words, employers may statistically profile applicants and avoid hiring those from demographic groups with high rates of involvement in the criminal justice system.

Such propensity to statistically discriminate is evident in the interaction effect of employers' stated preference regarding their willingness to hire ex-offenders, their screening behavior on this dimension, and their propensity to hire workers from high incarceration rate groups. This relationship is illustrated in Figure 4, which reproduces some of the key findings in Holzer, Raphael and Stoll (2006). The figure presents tabulations of employer survey data collected in 1993/1994 pertaining to the proportion of employers whose most recent hire is a black male by their self-reported willingness to hire ex-offenders interacted with a self-report regarding whether the employer uses criminal history background checks in screening their potential employees. Among employers who indicate that they are willing to hire ex-offenders, there is no statistically discernable difference in the proportion of recent hires who are black men between those who check and those who do not check criminal backgrounds. Among employers who indicate that they are unwilling to hire ex-offenders, however, checking criminal background is associated with 5.6 percentage point increase in the likelihood that the most recent hire is a black male (statistically significant at the 5 percent level).<sup>7</sup> Thus, among those most averse to hiring former inmates, checking backgrounds actually increases the likelihood that the firm hires black males. This patterns indicates that in the absence of such objective screening methods, employers use more informal screening tools (such as not hiring black males) to weed out potential former inmates. Holzer, Raphael and Stoll (2006) find similar patterns with regards

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<sup>7</sup> The 4.4 percentage point difference relative to firms who are willing to hire black males is statistically significant at the 10 percent level of confidence.

to employer willingness to hire other stigmatized groups of workers, such as those with large unaccounted for gaps in their employment histories.

With regards to the direct effect of stigma on former inmates themselves, the audit study by Pager (2003) offers perhaps the clearest evidence of employer aversion to ex-offenders and the stigma associated with having served time in prison. The study uses male auditors matched on observable characteristics including age, education, general appearance, demeanor, and race, to assess the effects of prior prison experience on the likelihood that each auditor is called back for an interview. The author finds consistently sizable negative effects of prior prison experience on the likelihood of being called back by the employer, with callback rates for the auditor with prior prison time one half that of the matched co-auditor.<sup>8</sup>

#### *Existing Research on the Employment Consequences of Incarceration*

In conjunction, the effects of stigma combined with the impact of incarceration on human capital accumulation, and perhaps depreciation, suggest that serving time is likely to adversely impact one's employment prospects. Moreover, for men from high incarceration sub-groups, the high rate of involvement with the criminal justice system may have a negative spillover effect to the extent that employers wish to screen out ex-offenders and do so using informal perceived signals of criminality such as race, or gaps in one's employment history.

A growing body of empirical research investigates the effects of being convicted and serving time on post release employment and earnings. In nearly all of these studies, researchers

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<sup>8</sup> Of course, the audit evidence is subject to the critique that the demonstration of the existence of employers who discriminate against former inmates does not necessarily imply a market-level effect of this discrimination. Former inmates can adjust their supply behavior by applying only to those firms willing to hire them. To the extent that the latter set of employers is large relative to the unwilling-to-hire group, the ultimate impact on employment and earnings may be negligible. However, Holzer, Raphael, and Stoll (2007) find that fairly large proportions of employers express reservations about hiring former inmates. Moreover, in labor market models with search frictions, such unwillingness may reduced the job offer arrival rate of former inmates, resulting in greater unemployment, lower wages when employed (to the extent that former inmates lower their reservation wage), and a higher proportion withdrawing from the workforce.

analyze the pre-post incarceration path of earnings and employment of those who serve time. To be sure, the principal empirical challenge in this research is to define the counterfactual path of earnings and employment for those who go to prison. Defining such a counterfactual path is considerably difficult considering that (1) men tend to go prison during a time in their lives (early to mid 20s) when labor force attachment and earnings are changing rapidly, and (2) those who serve time are quite different from those who do not, both on observable and unobservable dimensions.

The challenges to this line of research are illustrated in Figures 5 and 6. To construct these figures, I identified all young men in the 1979 National Longitudinal Survey of Youth (NLSY79) who were interviewed while incarcerated (the principal gauge of serving time in these data) for the first time at the age of 23 or later. I then matched each of these youth to one non-incarcerated male in the sample, defined as youth who never do time during the period covered by the NLSY79. In choosing matches, I identified all never-incarcerated youth who match each incarcerated youth exactly on age, region of residence in the country, education at 22 years of age, and race. From these exact matches, I then chose either the match with the closest Armed Forced Qualifying Test (AFQT) score when the AFQT was available for the incarcerated youth, or a random match (among those who exact matched on observable dimensions) for incarcerated youth with no AFQT score. Each figure presents the mean of an outcome for the group of incarcerated youth or the never-incarcerated youth for years relative to the year of first incarceration ( $t=0$ ). The figure compares outcomes for the five years preceding incarceration as well as the subsequent eight-year period.

Figure 5 compares annual weeks worked. During the pre-incarceration period, average weeks worked among future inmates and the never incarcerated are both increasing (by 5.5

weeks among future inmates and by 8 weeks among the comparison youth). At the point of first incarceration, however, the two series diverge sharply. Among the never incarcerated, average weeks worked continues to increase from approximately 33 weeks at year zero to 40 weeks at year five (followed by a decline in employment corresponding to the early 90s recession). Among the incarcerated, there is a sharp drop in weeks worked in the first survey year following the year of first observed incarceration (to 11 weeks). The pre-incarceration peak of 22 weeks is recovered five years post incarceration, but does not rise above the pre-incarceration level during the latter eight-year period. The departure between the incarcerated and comparison groups is illustrated by the difference in mean weeks worked during the pre-incarceration period and the post incarceration period. For the five pre-incarceration years, the never-incarcerated work roughly 9.5 more weeks per year than the group of future inmates. In the eight post-incarceration years, this average difference increases to 17.4 weeks.

Figure 6 shows similar patterns for average annual earnings. During the pre-incarceration period, the ratio of annual earnings for the comparison sample to the incarcerated sample is roughly 1.5. During the post-incarceration period, this ratio increases to an average of 2.6.

These two figures both illustrate the difficulties faced by research on this topic. As is evident from the employment and earnings path of the treatment group, incarceration occurs at a point in the age-earnings profile of young men where labor force attachment is strengthening and annual earnings are increasing. Simple before-after comparisons of earnings and employment among those who experience incarceration will under-estimate the true consequences of having served time to the extent that earnings and employment would have grown through this period in the absence of an incarceration spell.

The figure also reveals the large base-disparities between those who eventually serve time and those who don't even after having matched on a number of demographic and human capital dimensions. The comparison sample works nine more weeks and earns 50 percent more than the sample of future inmates even before the first incarcerated spell. Thus, while pre-incarceration employment and earnings dynamics are similar, this large pre-treatment disparity in average outcomes raises questions about whether the post-incarceration employment and earnings paths of non-inmates provide accurate counterfactuals for those who serve time.

Several researchers have employed a host of strategies to address these methodological challenges using data from the NLS79. To estimate the effect of previous incarceration on wages, Western (2002) uses the NLSY79 data to estimate a series of panel regression fixed-effect models where the analysis sample is restricted to those who serve time as well as the additional sub-sample of youth in the NLSY who are at high risk of incarceration as indicated by their self-described involvement in criminal activity. By limiting the study to high-risk youth, Western was able to show that it was not other factors, such as education or income, because all the youth, by being "high risk," shared these attributes to a certain degree. Western finds a sizable relative decline in the hourly wages of formerly incarcerated high-risk youth relative to those who did not serve time.

In previous research (Raphael 2007), I also employ panel regressions to estimate the effect of a previous incarceration spell on current annual weeks worked, after accounting for current incarceration, the effect of other time-varying covariates, and person-specific fixed effects. The principal empirical innovation in this study is to restrict the analysis sample to youth who eventually serve time. This restriction thus uses youth who serve time later in life as

a control group for youth who serve time earlier. I find a significant negative effect of prior incarceration on prior weeks worked on the order of 5 to 6 weeks.

Sweeten and Apel (2007) uses data from the more recent NLSY97 to estimate the effects of a prior incarceration spell on various employment, educational, and criminal justice outcomes using a methodological framework similar to those described in the construction of Figures 5 and 6. Specifically, using propensity score matching and a large set of covariates, the authors identify comparison samples for youth who are first incarcerated at 16 to 17 years of age and youth who are first incarcerated at 18 to 19 years of age and then compare the average outcomes for their treatment and comparison groups for a pre-incarceration year, the year of first incarceration, and the five post-incarceration years. The authors are able to closely match the treated group with good balance on observable covariates and quite comparable pre-incarceration outcomes for the treatment and comparison samples. The authors find sizable effects of a previous incarceration on the probability of employment five years following. The authors also find some evidence that a prior incarceration predicts future criminal activity and poorer post-incarceration educational attainment outcomes relative to the matched comparison sample.

A number of studies have used administrative data on arrest and incarceration matched to administrative earnings records to estimate the effects of involvement in the criminal justice system on employment outcomes. Waldfogel (1994) and Grogger (1995) are among the first to pursue this research strategy. Waldfogel uses data on people who are convicted in federal court and compares pre and post conviction employment outcomes culled from federal parole records. The author tests for differential effects of actually serving time and of being convicted of a crime involving a breach of trust. The largest earnings penalties occur for those who serve time and

those convicted of a “breach” crime. The author also provides evidence that the negative effects of conviction and incarceration on earnings are largest for more educated former inmates.

Grogger (1995) uses California administrative data to study the distributed lagged effect of arrest, conviction, probation, being sentenced to jail, and being sentenced to prison on subsequent earnings and employment using rap sheet information provided by the state attorney general’s office and earnings information from state ES-202 records. Using a series of fixed effect models, the author finds that arrest has a short lived negative effect on earnings, while serving a prison sentence has a more pronounced and longer-lasting negative effect on earnings. Regarding the latter finding, Grogger cannot assess whether this is a mechanical incapacitation effect of being incarcerated.

A number of recent studies have used state and federal prison administrative records combined with ES-202 earnings records to analyze the pre and post employment and earnings patterns of prison inmates. For example, Kling (2006) analyzes data for federal prisoners in California and state prisoners in Florida, Jung (2007) and Cho and Lalonde (2005) analyze data for state prisoners in Illinois, Petit and Lyons (2007) analyze data for prisoners in Washington state, while Sabol (2007) analyzes data for prisoners in Ohio. While these studies differ from one another in terms of the exact questions asked of the data and the methodological approach taken, there are several consistent findings across states. First, the ES-202 records exhibit extremely low levels of labor force participation and earnings among state-prison inmates prior to incarceration (with roughly one-third showing positive quarterly earnings in any given quarter for the two years period preceding incarceration). Kling (2006) is the only study that compares employment as measured by quarterly earnings records to inmate self-reported employment at the time of arrest. The author reports that while only 33 percent of inmates have positive

earnings in the typical pre-incarceration quarter, nearly 65 percent report being employed at the time of arrest. Based on analysis of CPS data for comparable men, Kling concludes that most of this disparity reflects the fact that inmates are employed in informal jobs where employers are not paying social security taxes or paying into the UI system.

Second, nearly all of the studies find that employment increases above pre-incarceration levels immediately following release and then declines to pre-incarceration levels or falls below pre-incarceration levels within a couple of years. The small post-release employment increase is likely driven by the fact that most released prisoners are conditionally released to parole authorities and must meet certain obligations, including employment search or even employment requirements, to remain in the community. To the extent that parole increases employment, or that parole increases the likelihood of being employed in a formal sector job that shows up in quarterly UI records, the post-released increase may be explained by the effect of post-release supervision.

Third, several studies (Cho and Lalonde 2005, Kling 2006, Jung 2007) find that the post-release increase in employment is larger for inmates who serve longer terms. However, Kling (2006) shows that this disparity does not survive controlling for differences in inmates characteristics and program participation differences between inmates serving shorter and longer terms. Particularly important are difference in the propensity to be involved with a work-release program at the time of the release from prison.<sup>9</sup>

While these studies are suggestive of the impact of conditional supervision on employment, they are generally unable to identify the effects of incarceration on the age-earnings and age-employment profiles of those who serve time. The reliance on quarterly UI records renders these results particularly sensitive to any factors that are likely to impact the probability

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<sup>9</sup> Describe patterns from the NCRP 2002 releases here.

of working for an employer that complies with labor market regulations. It seems reasonable to assume that the employers who participate in work-release programs or who have working relationships with labor market intermediaries that place former inmates have a high degree of compliance of workforce regulation. If this is the case, the pre and post incarceration employment outcomes as measured by UI earnings records may not be comparable.<sup>10</sup>

In addition, these studies do not identify a comparison group of inmates who do not serve time to whom we could compare the average earnings and employment paths of those who do. As is evident in Figures 5 and 6 above, many young men enter prison at a time when labor force attachment is strengthening and earnings are increasing. Failing to account for the slope of the age-earning profile at the time of incarceration seriously distorts inferences regarding the ultimate impacts of incarceration.

A final group of studies uses data from the U.S. census to estimate the partial correlation between the proportion of a given demographic that is incarcerated and the average employment outcomes of the non-incarcerated among the corresponding group (Raphael 2005, Raphael and Ronconi 2006). These studies show that those demographic sub-groups that experience the largest increase in incarceration rates also experience that largest decreases in employment among the non-incarcerated. To the extent that the change in the incarceration rate is correlated with the change in the proportion of the non-incarcerated in the group that has been to prison, these results are suggestive of a negative effect of incarceration. Raphael (2005) shows that changes in the incarceration rates explains sizable portion of the widening racial disparity in

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<sup>10</sup> Kornfield and Bloom (1999) provide a detailed comparison of earnings as measured by quarterly UI records to survey data earnings as measured in the JTPA training experiments and provide estimated program effects using the two sources of data. The authors show that earnings from the UI data are systematically lower than earnings from the survey records. However, relative program effects are similar in magnitude using the two sources of information. The one exception to this rule, however, is for young men with criminal records. The UI data yield larger program effect estimates than the survey records, suggesting that for this particular group, program participation is increasing the likelihood of working for an employer that complies with reporting and tax requirements.

employment rates while Raphael and Ronconi (2006) show the strong covariance between changes in incarceration rates and shifts in the earnings distribution.

#### **4. Policy Options that Could Improve the Employment Prospects of Former Inmates**

Spending time in prison or having a prior felony conviction in one's history is becoming an increasingly common characteristic of low-skilled workers, especially for low-skilled minority men. While the causes of this increased interaction with the criminal justice system are varied, the lion's share of this development is attributable to changes in sentencing policy that have both increased the average time that an offender spends behind bars as well as enlarged the scope of behavior punished by a spell of incarceration (Raphael and Stoll 2007). In a recent analysis of the declining employment rates of low-skilled minority men (Raphael 2007), I found that only a small part of these declines can be explained by declining wages, suggesting the limits of policies designed to boost take home earnings. Fully addressing the employment crises for these men requires directly addressing the barriers to employment created by one's official criminal past.

Facilitating the successful reentry of former inmates and prior felons into non-institutionalized society is an extremely complex problem that will most likely require substantial investments in training, social services, employment services, and post-release monitoring (see the discussions in Petersilia (2003) and Travis (2007)). The sheer size of this population, with roughly 600,000 inmates released each year and nearly five percent of the adult male population having served time, is indicative of the enormity of this challenge. Nonetheless, there are simple steps that the state and federal government could take that would not

compromise public safety yet would eliminate some of the challenges that former inmates and felons face in procuring employment and avoiding extreme poverty post-release.

*To begin, the summary disqualification of former inmates and those with felony convictions from participating in federal public assistance programs and from receiving financial aid for education should be reversed.* Currently, those with prior drug felony convictions are prohibited from receiving federal financial education assistance. Moreover, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act made drug felons ineligible for food stamps and cash assistance for life. States could adopt the federal ban on food stamps and cash assistance as is, or pass legislation to modify or eliminate the ban. States are not authorized to eliminate the ban on financial aid (Legal Action Center 2004).

The only possible rationale for such collateral punishment of drug offenders is that by enhancing punishment fewer people will engage in drug crimes. However, the deterrence effects of incarceration itself are hotly debated among those who study the determinants of crime (see for example Lee and McCrary (2005) and Levitt (1998)), with much research suggesting that the likely effects are quite small. With this in mind, the deterrent effects of much more removed, and perhaps less salient, punishments such as a lifetime ban on food stamps receipt or becoming ineligible for Pell grants must certainly generate very little by way of crime reduction. Such bans, however, do make it more difficult for released offenders to avoid extreme poverty and to turn their lives around. Financial aid through the Pell grant program is one of the main sources of assistance for those attending community college, an important source of training and secondary education for less skilled adults. Food stamps very effectively provide basic assistance to meet the most fundamental needs of the poor. Banning former felons from participating in these programs is frankly counter-productive. Those states who maintain

complete or partial bans on participation in public assistance should drop them, and the federal governments should reverse the ban on the drug offenders receiving educational assistance.

*Employment bans based on former convictions and occupational licensing restrictions should be based on the content of one's criminal history record and not applied in a blanket manner. Moreover, when used, employment bans should be based on conviction rather than arrest records. Any bans on the employment of felons mandated by law should be based on the content of one's previous behavior as well as the time that has elapsed.* In their analysis of the consideration by prior criminal history records, the Legal Action Center (2004) found that in nearly all states there is no standard governing the consideration of prior criminal history records by employers and occupational licensing agencies. In many states, employers can fire anyone who is found to have a criminal history record regardless of the gravity of the offense, the time since conviction, or the relevance of the past behavior to one's current job responsibilities. In addition, employers are generally free to consider and discriminate based upon one's criminal history in hiring, with most states allowing employers to consider arrests not leading to conviction.

Holzer et. al. (2006) demonstrate that most employers of low skilled labor check criminal history records in some manner (either by directly asking the applicant, paying a private firm, or by performing a direct query of the state criminal history repository), and that the proportion of employers that check has increased considerably over the decade of the 1990s. The high propensity to check, the complete discretion in considering past criminal history records, and the high proportion of men with prior convictions all indicate a need for some governing standard that addresses the interests of employers but also recognizes the employment needs of former inmates and those with prior convictions. With this in mind, states should prohibit the

consideration of prior arrests that did not result in a conviction in the hiring or firing of an employee. Moreover, publicly mandated employment bans of former felons for specific jobs as well as licensing bans should be based on the content of specific offenses or offender characteristics. In general, a more considerate and rational process for determining the suitability of former prisoners for employment in certain occupations is needed.

*We should invest more in labor market intermediaries that specialize in the reentry employment needs of recently released inmates.* When asked, many employers express an extreme reluctance to hire former inmates. However, a sizable minority indicate that they are indeed willing to hire offenders and actually do so as measured by recent hiring outcomes. Governmental as well as non-profit entities devoted to workforce development often serve an important informational role in matching clients to employers that greatly minimizes the search costs for both parties. For a specific group of clients who face substantial stigma problems in the searching for work, such job search assistance is likely to be particularly important.

Moreover, overtime such intermediaries establish long-term relationships and credibility with employers and are thus more effective in placing their clients in employment. Given the extensive increases in incarceration for relatively less serious offenses that characterize what has happened over the past decade, intermediaries should be able to identify the most job ready and offer up a steady supply of reentering former inmates who are pre-screened and likely to be solid employees, or in the least of comparable quality to an employer's average hire.

Given the scale of the flow of inmates out of prison each year (on the order of 600,000), there is a large potential role for agencies and non-profits devoted to minimizing employment search costs, pre-screening workers for employers, and aiding those who are re-entering in becoming ready for conventional employment.

*States should incentivize desistance from criminal activity by expunging certain criminal records after a fixed time period has elapsed.* In a recent analysis, Kurlycheck, Brame, and Bushway (2006) raise the important question of whether unfettered employer access to criminal history records can be justified by the legitimate concerns of employers and the public. They assess whether the rate at which young offenders desist from offending with time since the last offense merits limiting employer access to arrest and conviction information for sufficiently distant past offenses. The authors demonstrate that for a cohort of young men in Philadelphia the likelihood of a repeat offense declines precipitously with the time since the last offense. This pattern is consistent with both a causal effect of staying clean as well as a remaining population of former offenders that becomes increasingly selected with time since the last offense (to be specific, selection towards a low propensity to offend). For policy purposes, however, the exact source of this pattern is irrelevant. Based on this pattern, the authors argue that limiting employer access to criminal history records beyond a certain time period may effectively limit the collateral consequences of prison while not necessarily exposing employers and the public to sufficiently higher risk.

This simple proposal carries many advantages. Clearly, being able to procure and retain gainful employment is practically a necessary condition for the successful reintegration of former inmates into non-institutionalized society. The expunging of one's past offenses following a determined period of desistance will certainly improve the labor market as well as life prospects of former offenders. Moreover, the prospect of having one's record wiped clean after a given period of desistance provides an incentive for former inmates to change their behavior.

Nonetheless, this proposal may have negative unintended consequences if employers care about prior criminal activity and engage in indirect and imperfect screening practices. In other

words, limiting an employer's ability to access criminal history records or to ask about prior criminal convictions may not preclude employers from using potential signals of prior run-ins with the law in making hiring and promotion decisions. At a minimum, employers may be able to effectively identify ex-offenders via such signals as education, where one comes from, or through unaccounted-for gaps in one's employment history. At worst, employers may systematically discriminate against workers from groups that they *perceive* to have a high propensity to offend, such as young black men. This important issue of how employers may respond to limits on access is key to designing a policy that both allows employers to take into account aspects of an individual's history that are legitimately related to assessing potential job performance, while protecting those who, through the passage of time, have demonstrated the irrelevance of their past infractions to their future performance.

There are several key choice variables that should be considered in designing an information policy that balances both the ability of employers to access relevant information about applicants and employees as well as the interests of former offenders who have managed to stay out of trouble. First and foremost among these choice variables is the length of the time limit placed on criminal history inquiries. If the limit is set too short, employers will not have confidence in formal checks and thus will employ informal screens as a supplement, undoing much of the potential benefit to ex-offenders from suppressing such information in the first place. To the extent that the limit is too long, few offenders will benefit and there will be little added incentive to stay clean with an eye on the prospect of an expunged record. Kurlycheck et. al. (2006) focus on the seven year limit set in the federal statute pertaining to the trucking industry. Clearly, more research on employer hiring practices with a focus on this specific question would greatly inform this choice.

A second choice variable concerns the starting point for the time period framing the criminal history record. The authors implicitly advocate for a start date corresponding to the date of the most recent conviction, arguing that since few employers have access to incarceration information, time since incarceration is irrelevant. However, one can imagine that, with the knowledge that records are purged after seven years, employers may still downgrade the applications from young men who they suspect have served some time. Knowing that a clean criminal history record check is consistent with either (a) never having offended, or (b) having offended and potentially served time but no contact with the criminal justice system for the past seven years provides considerably more information than the alternative ignoring incarceration.

A third important choice variable concerns whether there are some offenses that should never be purged. One might make the argument that someone who has served time for a felony sex offense should never work with children, or that workers with prior serious violent offenses should not be placed in jobs involving security. Again, a better understanding of how employers consider such mitigating factors would provide useful information for forming a viable policy prescription.

Regardless, the growing numbers of non-institutionalized felons raise important policy questions regarding reintegration and manners in which society can ease and facilitate the transition of former offenders into productive and stable lives. Stable employment is clearly key. To the extent that we can improve the prospects of former offenders without substantially harming the interests of employers, and while providing a positive incentive to desist from criminal offending, we should do so.

## **5. Could We Reduce Incarceration Rates Without Increasing Crime Rates?**

The policy initiatives offered above are intended to cushion the reentry of former inmates into non-institutionalized society. By removing prohibitions on program participation, modifying and in some cases eliminating employment and licensing bans faced by former inmates, providing regulatory guidance pertaining to how the backgrounds of ex-inmates should and can be considered by employers in screening applicants, and providing an incentive to desist through a selective expungement effort, these policies would help former inmates rebuild their lives and perhaps avoid future criminal activity. Moreover, given the enormous racial and class disparities in the incidence of incarceration, such policies would impact those men who are the least likely to be on the path to self-sufficiency.

To be sure, these policy initiatives are all reactive in that at the heart of each proposal is the goal of minimizing and countering the adverse collateral consequences of having done time. A more proactive policy agenda might seek to lower the overall incarceration rate with an eye on halting growth in, or reducing the size of the population of former inmates. The fiscal savings from such a plan are obvious, as corrections spending per inmate averages around \$35,000 per year (Donohue 2007). Moreover, sending fewer men away would generate the additional benefits from reducing the negative externalities not accounted for by explicit fiscal outlays.

Of course, the social costs of such a change in direction would depend on the extent to which lowering the overall incarceration rate increases crime. Criminologists and economists have devoted considerably effort to studying and measuring the extent to which prison mechanically incapacitates the criminally active from offending as well as the extent to which the threat of prison deters potential offenders (Johnson and Raphael 2007, Nagin 1998, Levitt 1996, Raphael and Stoll 2005, Spelman 1994). This research reveals that on average, putting

someone a way for year reduces criminal activity. Thus the social costs of reducing incarceration can be potentially large. However, research has also revealed the marginal crime-abating effect of incarceration declines at a quite rapid rate as the incarceration rate increases (Johnson and Raphael 2007, Raphael and Stoll 2005, Liedka, Piehl, and Useem 2006). Moreover, there is some research that indicates that selective prison-release decisions that weigh the characteristics of the inmates may have very little to no effect on crime, especially in recent years (Raphael and Stoll 2005).

In this section, I explore whether there is room is to systematically reduce the incarceration rates of U.S. states without appreciably affecting crime rates. I begin by characterizing the marginal inmate admitted to prison and how this inmate has changed over the last twenty years. I then present some results on how the prison-crime effect has changed as the incarceration has increased.

*How have the characteristics of the marginal offender changed?*

Raphael and Stoll (2007) demonstrate several facts about the recent increase in U.S. incarceration rates. First, they find a substantial increase in the amount of time served conditional on being sentenced to prison and on the offense one commits. In fact, the increase in time served for like offenders explains between 25 and 30 percent of the increase in incarceration rates since 1980. Second, they find a substantial increase in the likelihood of being sent to prison conditional on committing a crime. This expansion along the extensive margin explains another 55 percent of the increase in incarceration. The study also finds that at most, an increasing propensity to offend explains 15 percent of the increase in incarceration rates. Thus, the 400 percent increase in incarceration rates is driven primarily by changes in sentencing policy (85

percent of the increase) rather than changes in criminal behavior (at most 15 percent of the increase).

The relatively small contribution of changes in behavior as well as the huge policy expansion of the use of incarceration along the extensive margin has resulted in the incarceration of increasingly less dangerous offenders. This is reflected in both changes in the characteristics of the marginal offender as well as changes in the relationship between crime and incarceration. Here, I use data from the admissions files of the National Corrections Reporting Program (NCRP) to document changes in the marginal prisoner admission. I only use data for the subset of states that consistently report admissions information to the NCRP for all years between 1984 and 2002. Fortunately, the 30 states that consistently report to the NCRP account for an average of 70 percent of annual prison admissions over this time period. Thus, I am able to characterize the overwhelming majority of prison admissions.

Figure 7 displays the percent of prison admissions in each year attributable to admissions that are not for a new felony commitment. Most of these admissions are driven by individuals returned to custody for parole violations. This category of admissions has become an increasingly important source of prison admissions over the past two decades, increasing from approximately 29 percent of admissions in 1984 to over 40 percent in 2002.

Figures 8 and 9 present the composition of prison admissions for new felonies and for parole violators by most serious offense. For those admitted on a new felony conviction, the proportion admitted for a violent or property crime declines considerably during the 1980s and then stabilize during the 1990s. While in 1984, roughly 75 percent of prison admissions are accounted for by offenders convicted of violent or property felony offenses, by 2002 this figure falls to below 60 percent. The proportional importance of drug offenders on the other hand

increases considerably, increasing from slightly over 10 percent in 1984 to over 30 percent by 1990, and fluctuating around 33 percent of admissions thereafter.

Similar changes are observed in the original offense composition of those returned to custody without a new felony. In 1984, almost 80 percent of former inmates returned to custody were originally committed to prison for either a violent or property crime (with those convicted of property crimes predominating). Drug offenders accounted for only 5 percent of this inflow. By 2002, the importance of property and violent offenders diminishes while the importance of drug offenders increases. By 2002, those originally convicted of drug offenses constitute approximately one-third of inmates returned to custody without a new term.

While I cannot characterize how the criminal propensities of those admitted to prison have changed over time using the NCRP data, there are a few dimensions of potential criminality and offense severity that permit an assessment of how newly-admitted inmates have changed on the margin. For example, the research on life-course involvement in criminal activity provides strong evidence that the criminally active desist from illegal activity as they age, with the late teens and early twenties being the most criminally active period.<sup>11</sup> Since the NCRP data includes nearly complete information on the age of prison admits, we can explore whether along this dimensions the U.S. has been admitting less criminally active persons to prison.

Figure 10 presents the 25<sup>th</sup> percentile, the median, and the 75<sup>th</sup> percentile of the age distribution of those admitted to prison for each year between 1984 and 2002. As can be seen, there have been striking increases in the age of prison admits throughout the age distribution.

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<sup>11</sup> The fact that criminal offending declines with age is a well known empirical pattern. Grogger (2000) demonstrates that the proportion of youth in the 1979 National Longitudinal Survey of Youth self-reporting involvement in criminal activity declines with age, a fact the author attributes to increasing legal opportunity costs. In a series of papers, Sampson and Laub (1993, 1997, 2003, 2005) find little evidence for a group of life-course criminal persisters in a long panel of offenders and individuals at high risk of offending as youth. Moreover, these authors find evidence that certain life events, such as getting married, having children, or being steadily employed correspond with desistance in adulthood via a “knifing-off” of the past from the present.

The age of the admit at the 25<sup>th</sup> percentile has increased by 2.2 years over this period, the median age has increase by 5.2 years, while the age at the 75<sup>th</sup> percentile has increase by over 6 years. Thus, to the extent that older inmates are less criminally active, the U.S. has been admitting less dangerous offenders in recent years.

We can also use the sentences received by offense category to characterize the severity of the offense and then use changes in this variable over time to characterize the change in prison admissions over time. Such an analysis, however, would have to account for the fact that sentencing may have changed over time. To perform such an analysis, I do the following. First, for each of 70 offense categories reported in the NCRP I tabulate the median maximum sentence handed down to prisoners admitted in 1984. Next, I assign this median value to each admission in 1984 and each admission in 2002. Assigning the typical maximum sentence in 1984 to those admitted in 2002 allows me to characterize the sentences these latter prisoners would have received under the earlier sentencing regime. Finally, I calculate the percentiles of this distribution for each year for comparison. If offenders in 2002 are admitted for less serious offenses (as judged by the courts), then the distribution of sentences should have shifted towards shorter prison spells.

Figure 11 presents the results of this exercise. The figure shows no change at the 10<sup>th</sup> percentile and an increase in sentence length at the 25<sup>th</sup> percentile (largely driven by the increased importance of drug offenders). For sentences at or above the median, however, offense severity (as measured by the maximum sentence that would have been handed down in 1984) diminishes by substantial amounts. In conjunction with the patterns in the age distribution, this suggests that indeed the average admit in 2002 was less criminally pre-disposed and had committed a less serious offense relative to the typical admit in 1984.

*How has the effect of incarceration on crime changed at the margin?*

The characteristics of the marginal prison admissions have shifted decisively towards less serious offenders. We are currently admitting increasingly older offenders for relatively less serious offenses than in years past. To what extent has this shift impacted the crime-abating effects of incarceration?

Criminologists posit that changes in incarceration impact crime through two avenues: through incapacitating the criminally active and through deterring the potentially criminal active. Estimation of these effects has proceeded in roughly two methodological veins. A large body of criminological research has attempted to estimate the incapacitation effect directly by using inmate surveys pertaining to previous offending prior to arrest to approximate the amount of the offending the inmate would have engaged in had he not been incarcerated (reviewed in Spelman 1994, 2000). A second smaller yet growing body of literature seeks to estimate the total effect of incarceration on crime (incapacitation plus deterrence) by studying the aggregate empirical relationship between changes in the incarceration rate and changes in the rates of reported crimes (Johnson and Raphael 2007, Liedka, Piehl, and Useem 2006, Levitt 1996). A comparison of the findings of from these two bodies of research suggests that the overwhelming effect of incarceration on crime is attributable to the incapacitation of the criminally active. With this in mind, a shift towards incarcerating, older, less serious, and perhaps less criminogenically inclined offenders is likely to translate into smaller effects of prison on crime on the margin.

Indeed, the studies that have analyzes the marginal effect of incarceration over time have found this to be the case (Johnson and Raphael 2007, Raphael and Stoll 2005, Liedka, Piehl, and Useem 2006). To illustrate this finding, Table 4 presents results from some of my research with Rucker Johnson (Johnson and Raphael 2007). The table presents estimates of the effect of a one

unit increase in the incarceration rate (expressed as inmates per 100,000) on the number of prevented reported crimes per 100,000 as well as the number of prevented total crimes per 100,000 accounting for incomplete reporting to the police for two time periods: 1978 to 1990 and 1991 to 2004. The table is based on a series of state-level panel data regressions of the change in crime rates on the change in incarceration rates that uses an instrumental variables strategy to identify exogenous variation in incarceration that is not driven by reverse causal effects of changes in crime on change in prison population.<sup>12</sup> The key characteristics distinguishing these two periods that should be kept in mind is the difference in the average incarceration rate. Between 1978 and 1990, the population-weighted average state-level incarceration rate was approximately 186. By contrast, the comparable average incarceration rate between 1991 and 2004 is 396.

Table 4 reveals enormous declines in the amount of crime averted for the average prison year served across these two time periods. A one unit increase in the number of people incarcerated per 100,000 U.S. residents prevented approximately 30 crimes per 100,000 during the earlier period. The comparable figure for the latter period is 8.3 crimes. Note further that the composition of the crimes prevented shifts decisively towards less serious crimes. While violent crime prevention (the aggregation of murder, rape, robbery and assault) accounts for 15 percent of the roughly 30 crimes prevented per inmate during the 80s, violent crime accounts for only 7 percent of the 8 crimes prevented per inmate during the 90s and early 2000s. In fact, the lion's share of crimes prevented through incarceration during the latter period is attributable to the effect of incarceration on larceny, or non-burglary theft without contact.

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<sup>12</sup> Specifically, we use variation along the dynamic adjustment path of prison between equilibria to identify variation in incarceration that would occur despite contemporaneous variation in crime rates. Our results for the 1978 to 1990 time period are similar in magnitude to those reported in Levitt (1996) who analyzes a similar time period yet uses the effects of court orders to relieve prisoner overcrowding occurring during the 70s and 80s as an instrument. For details on our instrumental variables strategy, see Johnson and Raphael (2007).

In this study, we also found that the elasticity of crime with respect to prison declines across these two time periods (from -0.8 to -0.2 for violent crime and from -0.43 to -0.25 for property crime). If we make the conservative assumption that the crime prison elasticity remained constant throughout the 1990s and early 2000s (an assumption that would bias the marginal crime-abatement upwards), we can use the latter elasticity estimate to forecast what the marginal crime fighting effect of a one unit increase in the incarceration rate is for these latter years. Since with a constant crime-prison elasticity the marginal absolute effect of a one-unit increase in incarceration declines with increases in incarceration,<sup>13</sup> the increases in the incarceration rate through the late 1990s and early 2000s suggest that the crime abating effects of prison have likely declined beyond what is depicted in Table 4.

In 2004, the national incarceration rate stood at 484 inmates per 100,000. Also, there were 465 violent crimes and 3,517 property crimes reported per 100,000 U.S. residents. My research with Rucker Johnson finds that a one percent increase in the incarceration rate (equivalent to an increase in the incarceration rate of 4.84 inmates per 100,000 in 2004) should yield a -0.2 percent decrease in reported violent crime and a -0.25 percent decrease in reported property crime. Given the crime rate levels in 2004 and the magnitude of a one percent increase in the incarceration rate, these elasticity estimates imply that the effect of a one-unit increase in the incarceration rate would be to reduce reported violent crimes by 0.2 incidents and reported property crimes by 1.5 incidents. Accounting for the under-reporting of crimes to the police suggests and the total effect of a one-unit increase in the incarceration rate would be prevent 0.38 violent crime per 100,000 and 4.3 property crimes per 100,000. In other words, the increases in incarceration occurring over the past decade have served to reduce the likely marginal effect of

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<sup>13</sup> With a constant crime-prison elasticity,  $\epsilon$ , the relationship between incarceration and crime can be written as  $\ln C = \epsilon \ln P$ . Solving for the level of  $C$  yields the equation  $C = P^\epsilon$  which will be decreasing in  $P$  so long as  $\epsilon < 0$ .

prison and crime by half relative to the estimates presented for the latter period in Table 4. Thus, the available evidence suggests that the effect of incarceration on crime rates has declined considerably as the incarceration rate has increased.

### *Summary*

The large expansion of the prison population along the extensive as well as the intensive margin has corresponded with noted changes in the composition of who is admitted to prison. We are currently admitting more non-violent drug offenders, more parole violators, and considerably older men than we admitted in years past. All of these characteristics are generally associated with lower levels of offending, suggesting that the composition of our prison admissions has shifted decisively towards less serious offenders.

Consistent with these patterns, I have also shown that the effect of incarcerating the average prisoner on crime declines sharply as the incarceration increases. Comparisons of the crime-prison effects during the late '70s/early 80's to the comparable effects for the '90s and early 2000's reveal that in recent years we have gotten less bang for our buck in terms of crime reduction. Moreover, extending the elasticity estimates to the most recent years suggests that incarcerating the marginal prisoner is currently preventing very little crime.

The lion's share of this essay has focused on the adverse social consequences of incarceration for prior inmates in terms of the impact on their future employment prospects and their ability to be self-sufficient and productive members of society. The essay has devoted less attention to some of the other social externalities of incarceration, such as the impact of incarceration on the spread of HIV/AIDS and other communicable diseases (Johnson and Raphael 2006), the effects on the material wellbeing, behavioral outcomes, and intergenerational impacts on children (Johnson 2007), as well as the impact on political participation (Manza and

Uggen 2006). In conjunction with the annual fiscal outlays on corrections and the deadweight loss associated with raising the needed funds, the implicit costs of these social externalities indicate that the costs of incarceration are currently quite high. The analysis of the change in the composition of prison admits as well as the direct analysis of the effects of prison on crime both indicate that the social benefits are generally quite low. Hence, it is most likely the case that we are currently beyond the socially optimal level of incarceration.

Moreover, the effects on crime of reducing incarceration below current levels would likely be lower than the already low marginal effects discussed above. These marginal effects above should be interpreted as the likely effect on crime associated with selecting an inmate at random and releasing them to non-institutionalized society for a year. A reduction in the use of incarceration that was targeted towards less serious offenders should result in even smaller impacts on crime than that suggested by the figures above. Such considerations further exacerbate the current disparity between the actual and optimal level of incarceration.

Finally, one could reanalyze the question with a focus on the opportunity cost of public resources devoted to crime abatement. Specifically, given the many alternative public investments that may have crime-preventing effects (such as investments in early childhood development, or education) is the current allocation of public funds across these investments such that the marginal impacts on crime of these investments are equal? The analysis presented in Donohue and Siegelman (1998) suggest that this is not the case, and that greater investment in early childhood development could yield higher reductions in crime per dollar spent in comparison to the effect of marginal corrections expenditures.

## **6. Conclusion**

The U.S. currently incarcerates its residents at a rate which is considerably higher than every other industrialized country in the world. The incidence of this policy choice falls disproportionately on young minority men, in particular black men. I have argued that the experience of serving time interrupts the work careers of young men and likely compounds the employment problems that many of these men were already experiencing prior to their incarceration. Moreover, the large proportions of minority men who pass through the nation's prisons suggest that the impact on poor minority communities more generally is likely to be quite large.

I have offered several policy suggestions that would aid the reentry transition for former inmates and perhaps help prevent further criminal involvement among these men. However, I have also argued that policy makers should be more proactive in preventing men from entering prison in the first place. Given the likely small effects of incarceration on crime at current levels, there is room to reduce the use of incarceration and increase the use of alternative sanctions without impacting the levels of serious crime.

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Figure 1



Figure 2

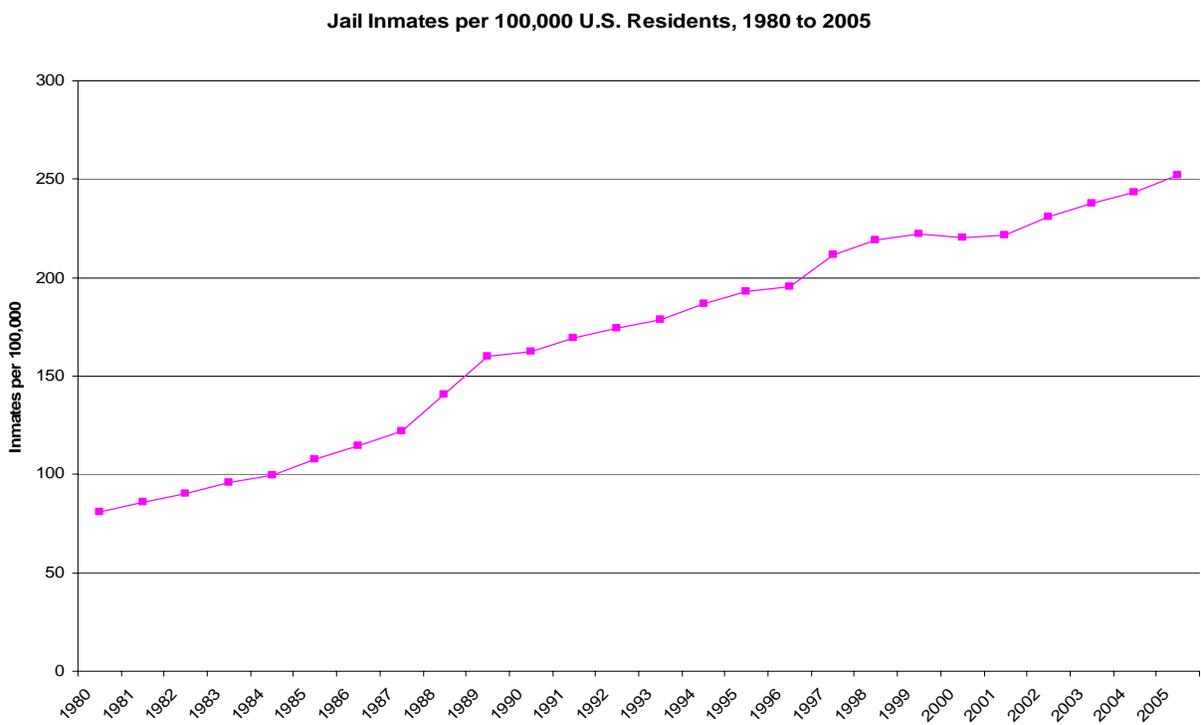


Figure 3

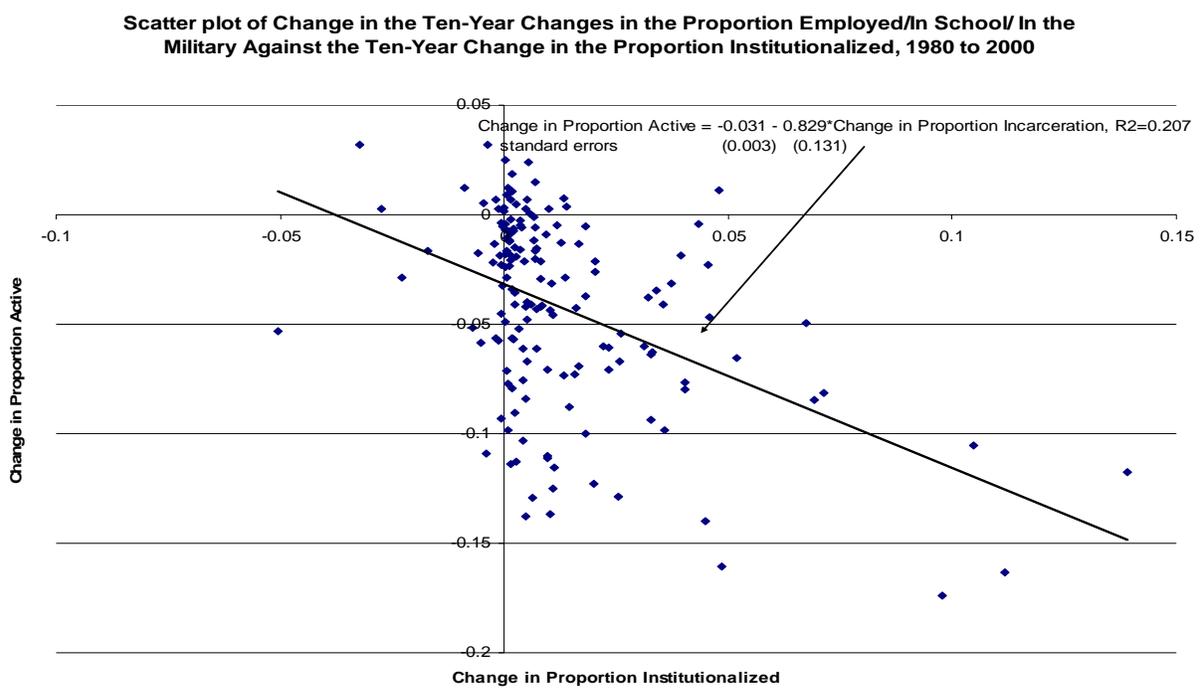


Figure 4

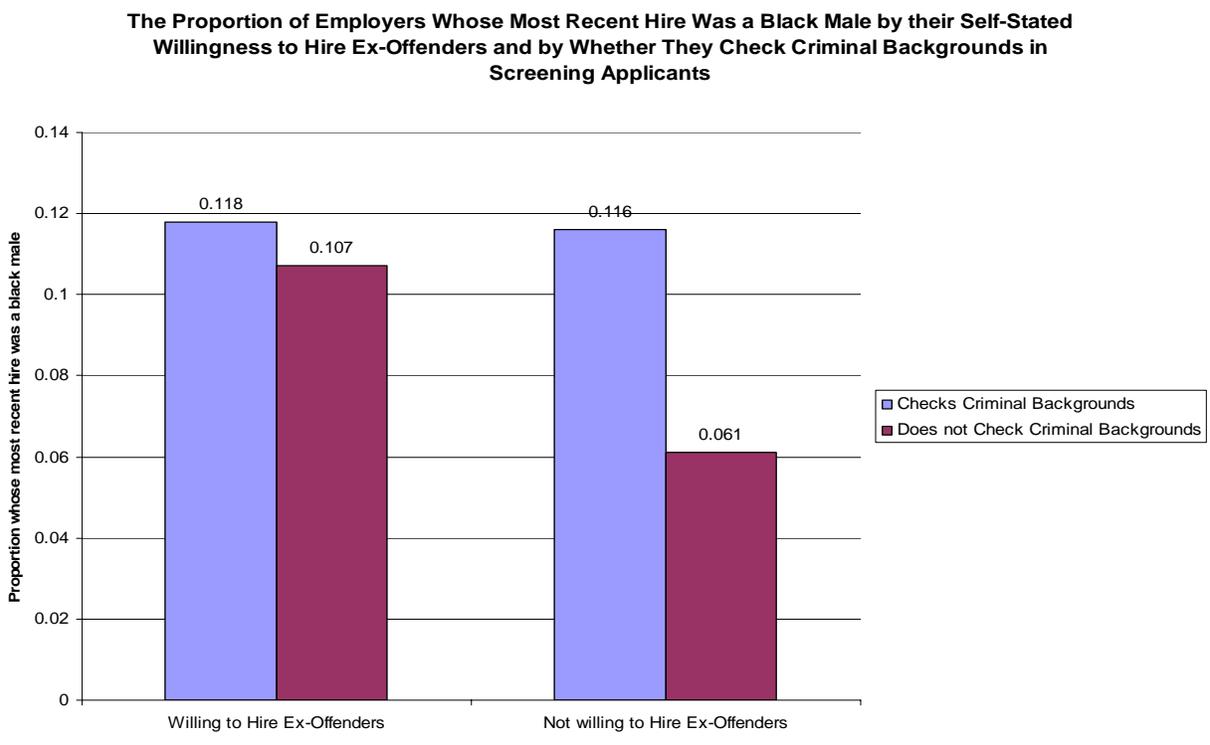


Figure 5

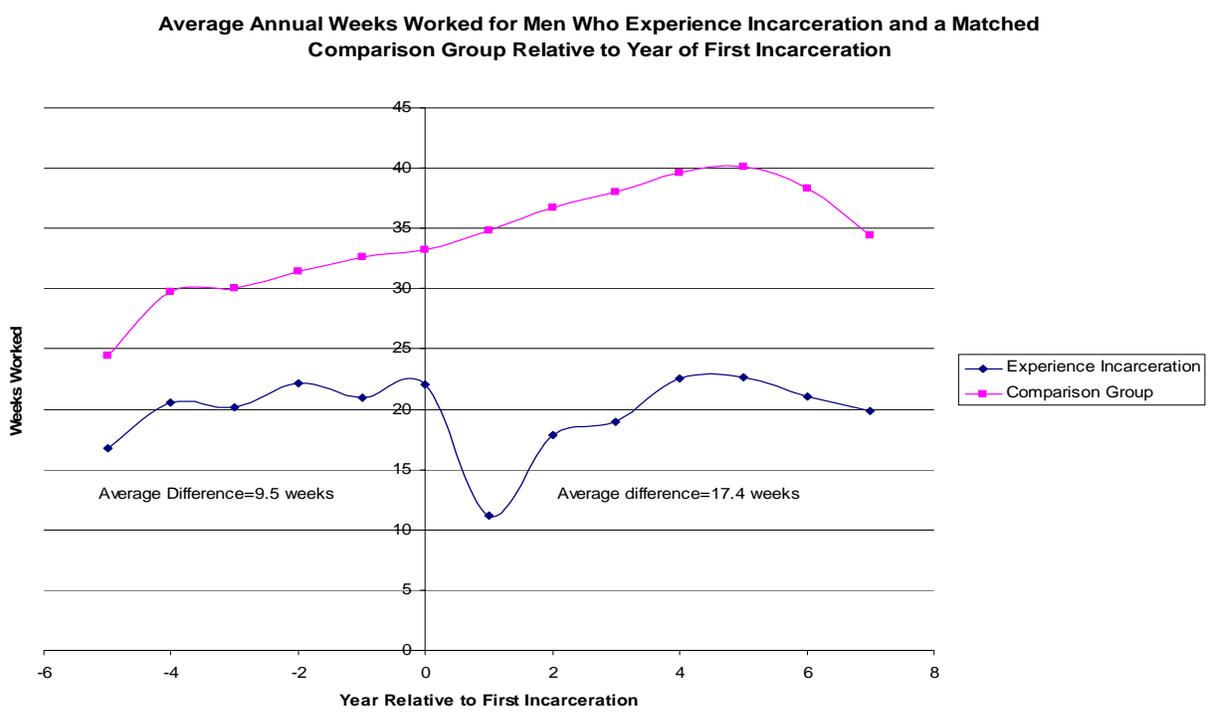


Figure 6



Figure 7

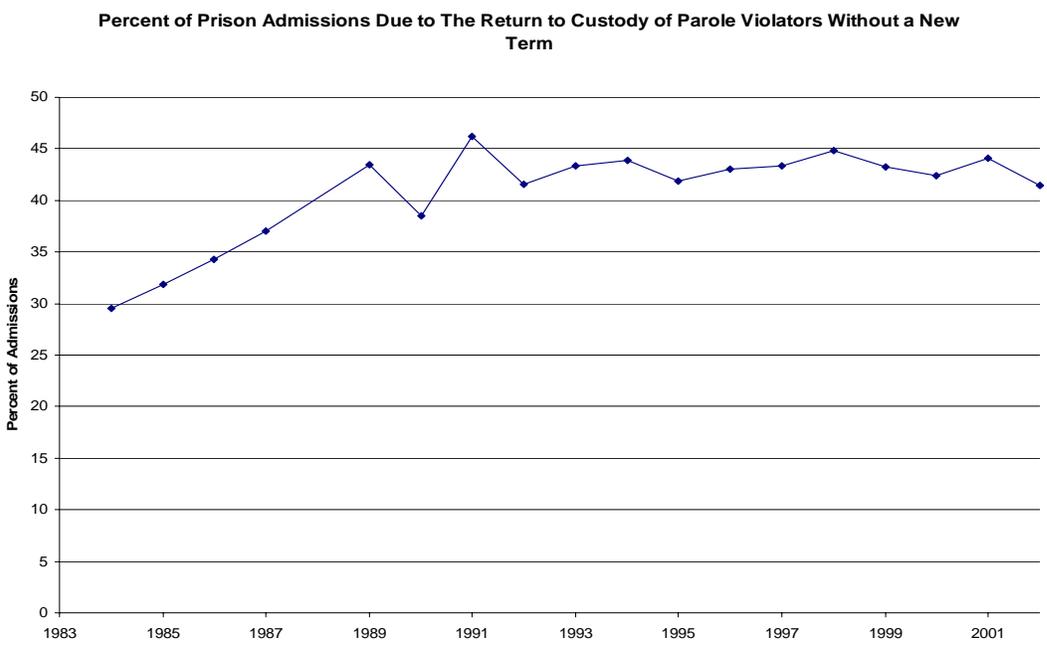


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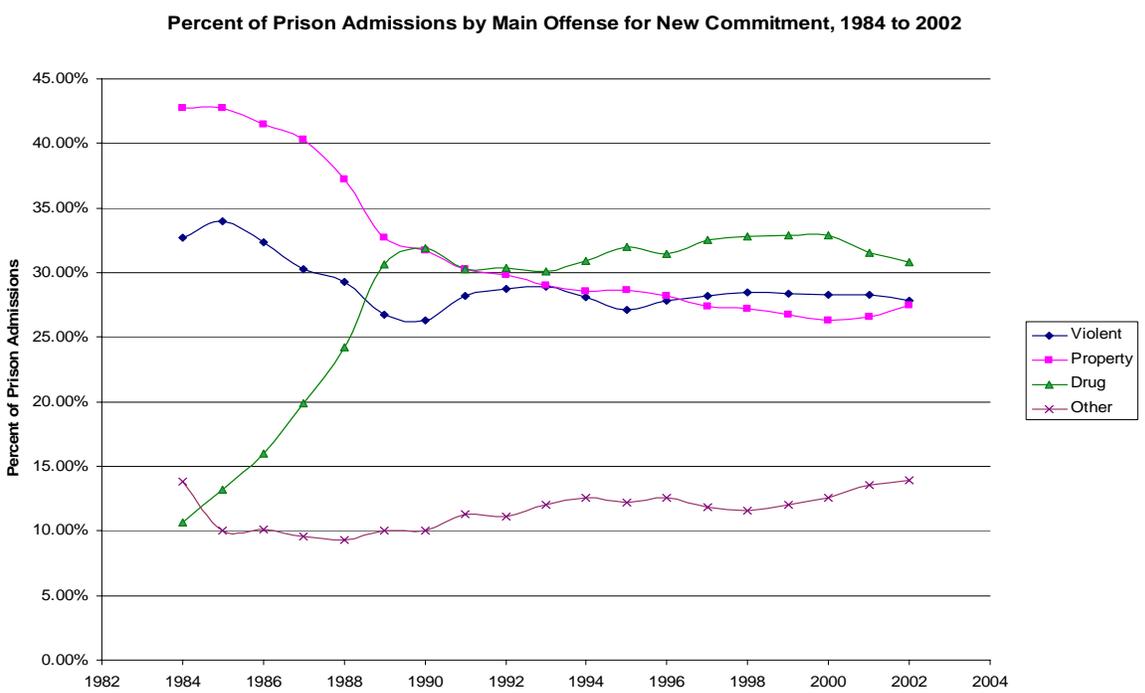


Figure 9

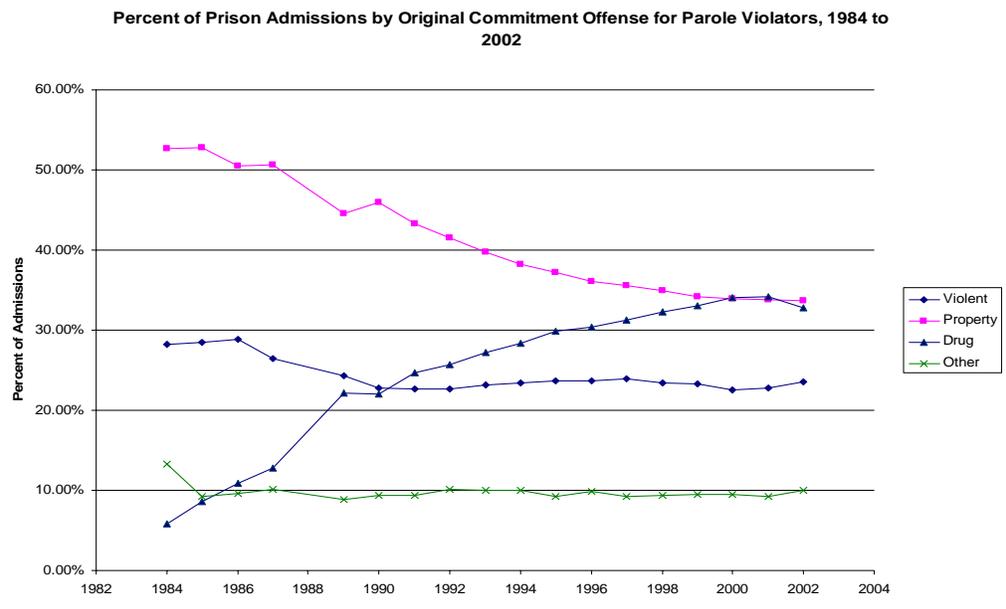
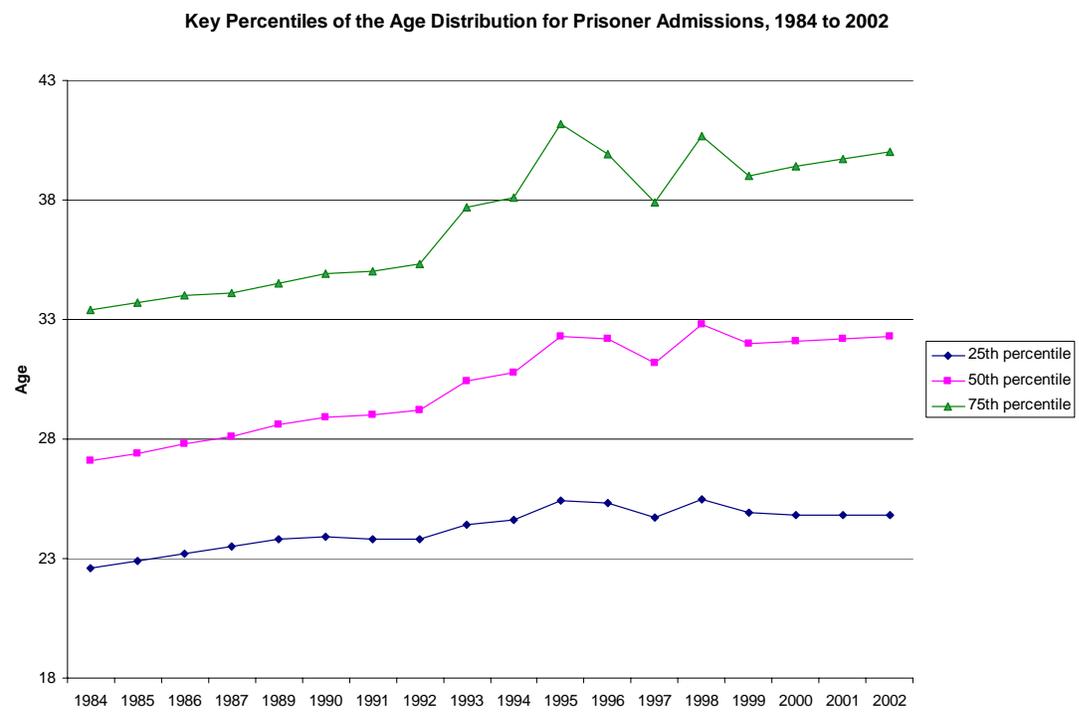
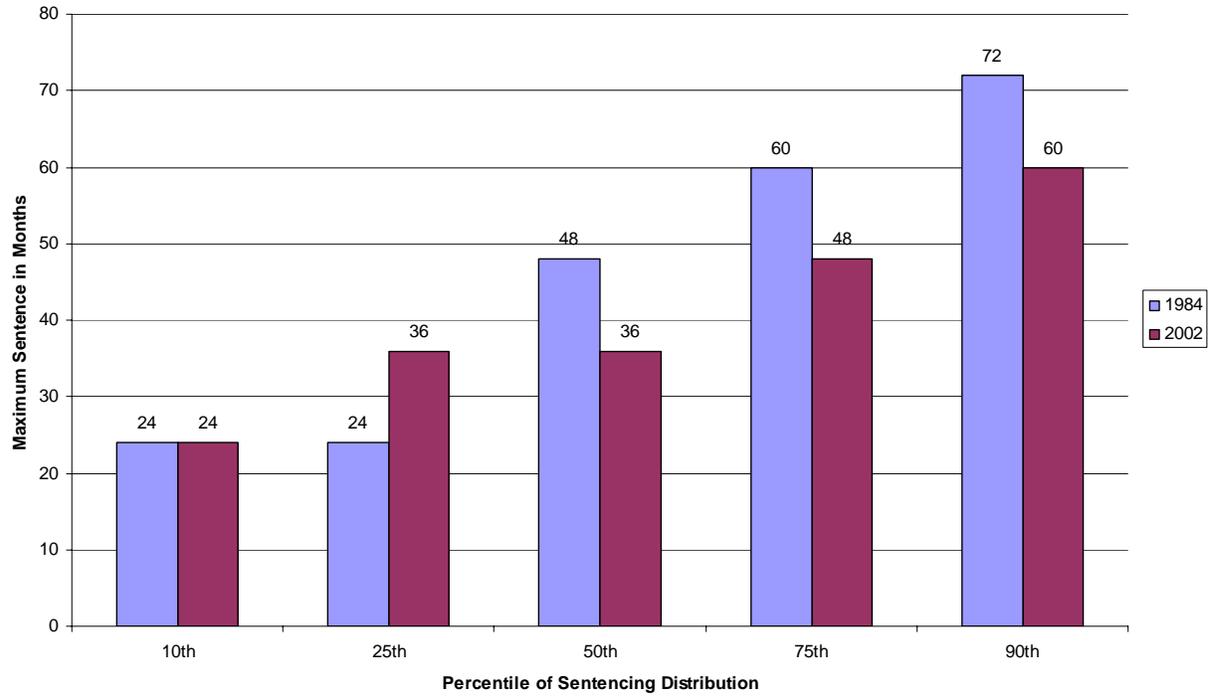


Figure 10



**Figure 11**

**Distribution of Maximum Sentences Assigning the Median Sentence For each of 70 Offense Categories Handed Down in 1984 to Each Admission in 1984 and Each Admission in 2002**



**Table 1**  
**Estimates of the Proportion of Men 18 to 55 Engaged in a Productive Activity, Non-Institutionalized and Idle, and Institutionalized by Race/Ethnicity from the 1980 and 2000 PUMS Files**

	1980	2000	Change, 2000 – 1980
Non-Hispanic White			
Employed/in school	0.899	0.878	-0.021
Idle	0.093	0.109	0.016
Institutionalized	0.008	0.014	0.006
Non-Hispanic Black			
Employed/in school	0.758	0.673	-0.085
Idle	0.206	0.239	0.033
Institutionalized	0.037	0.089	0.052
Non-Hispanic Asian			
Employed/in school	0.918	0.859	-0.059
Idle	0.079	0.135	0.056
Institutionalized	0.003	0.006	0.003
Hispanic			
Employed/in school	0.845	0.744	-0.101
Idle	0.140	0.226	0.086
Institutionalized	0.014	0.030	0.016

Tabulated from the 1980 and 2000 Census Public Use Microdata Samples. Men in the armed forces are included in the “Employed/ In School” category.

**Table 2**

**Estimates of the Proportion of Men 18 to 55 Engaged in a Productive Activity, Non-Institutionalized and Idle, and Institutionalized by Race/Ethnicity and Education from the 1980 and 2000 PUMS Files**

	Non-Hispanic White		Non-Hispanic Black		Non-Hispanic Asian		Hispanic	
	1980	2000	1980	2000	1980	2000	1980	2000
Less than high school								
Employed/in school	0.794	0.698	0.658	0.430	0.804	0.699	0.793	0.667
Idle	0.185	0.257	0.285	0.364	0.186	0.278	0.188	0.297
Institutionalized	0.021	0.045	0.057	0.206	0.010	0.023	0.020	0.036
High school grad								
Employed/in school	0.895	0.835	0.776	0.630	0.889	0.793	0.864	0.734
Idle	0.099	0.146	0.197	0.284	0.106	0.195	0.124	0.232
Institutionalized	0.006	0.019	0.027	0.087	0.005	0.012	0.011	0.035
Some college								
Employed/in school	0.941	0.911	0.866	0.794	0.952	0.880	0.927	0.855
Idle	0.054	0.079	0.110	0.156	0.046	0.115	0.065	0.126
Institutionalized	0.005	0.009	0.024	0.050	0.002	0.005	0.007	0.019
College Plus								
Employed/in school	0.963	0.947	0.917	0.890	0.958	0.913	0.943	0.892
Idle	0.035	0.051	0.073	0.096	0.041	0.087	0.053	0.101
Institutionalized	0.002	0.002	0.011	0.014	0.000	0.000	0.004	0.007

Tabulated from the 1980 and 2000 Census Public Use Microdata Samples. Men in the armed forces are included in the "Employed/ In School" category.

**Table 3**  
**Estimates of the Proportion of Men 18 to 55 Engaged in a Productive Activity, Non-Institutionalized and Idle, and Institutionalized by Race/Ethnicity and Education from the 1980 and 2000 PUMS Files**

	Less than High School							
	Non-Hispanic White		Non-Hispanic Black		Non-Hispanic Asian		Hispanic	
	1980	2000	1980	2000	1980	2000	1980	2000
Age 18 to 25								
Employed/in school	0.784	0.797	0.604	0.473	0.791	0.794	0.760	0.703
Idle	0.188	0.161	0.314	0.307	0.192	0.164	0.212	0.257
Institutionalized	0.028	0.041	0.081	0.221	0.017	0.043	0.028	0.039
Age 26 to 35								
Employed/in school	0.783	0.683	0.634	0.343	0.783	0.655	0.807	0.672
Idle	0.186	0.249	0.281	0.336	0.207	0.311	0.170	0.289
Institutionalized	0.032	0.069	0.085	0.321	0.010	0.034	0.023	0.039
Age 36 to 45								
Employed/in school	0.823	0.666	0.726	0.423	0.845	0.685	0.824	0.645
Idle	0.161	0.286	0.240	0.387	0.150	0.301	0.165	0.318
Institutionalized	0.016	0.047	0.034	0.191	0.005	0.013	0.011	0.038
	High School Graduates							
	Non-Hispanic White		Non-Hispanic Black		Non-Hispanic Asian		Hispanic	
	1980	2000	1980	2000	1980	2000	1980	2000
Age 18 to 25								
Employed/in school	0.872	0.843	0.742	0.634	0.871	0.848	0.844	0.760
Idle	0.121	0.136	0.229	0.281	0.123	0.140	0.145	0.206
Institutionalized	0.007	0.021	0.029	0.084	0.007	0.012	0.012	0.034
Age 26 to 35								
Employed/in school	0.900	0.845	0.780	0.624	0.888	0.769	0.874	0.726
Idle	0.093	0.131	0.184	0.259	0.104	0.213	0.111	0.231
Institutionalized	0.007	0.024	0.036	0.117	0.008	0.019	0.015	0.043
Age 36 to 45								
Employed/in school	0.926	0.845	0.827	0.635	0.913	0.785	0.898	0.725
Idle	0.069	0.137	0.156	0.280	0.085	0.208	0.094	0.244
Institutionalized	0.005	0.018	0.017	0.085	0.001	0.007	0.008	0.032

Tabulated from the 1980 and 2000 Census Public Use Microdata Samples. Men in the armed forces are included in the "Employed/ In School" category.

**Table 4**  
**Estimates of the Crime-Abating Effects of a One-Unit Increase in the Incarceration Rate (Measured per 100,000 Residents) on Reported Part-1 Felony Offenses (per 100,000 Residents) and on All Part-1 Felony Offenses Accounting for the Under-reporting of Crime to the Policy from Johnson and Raphael (2007)**

	Effect on Crimes Reported to the Police	Effect on All Crimes Accounting for Under-Reporting
<b>Panel A: 1978 to 1990</b>		
Violent Crime		
Murder	-0.038	-0.038
Rape	-0.200	-0.615
Robbery	-2.555	-4.467
Assault	0.262	0.474
Property Crime		
Burglary	-6.769	-13.484
Larceny	-2.627	-6.553
Motor Vehicle Theft	-2.018	-2.564
Total	-13.945	-30.247
<b>Panel A: 1978 to 1990</b>		
	Effect on Crimes Reported to the Police	Effect on All Crimes Accounting for Under-Reporting
Violent Crime		
Murder	-0.006	-0.006
Rape	-0.021	-0.065
Robbery	-0.257	-0.449
Assault	-0.037	-0.067
Property Crime		
Burglary	-0.514	-1.024
Larceny	-1.674	-6.087
Motor Vehicle Theft	-0.505	-0.642
Total	-4.182	-8.340

The figures in the table are estimates of the crime-abating effect of a one-unit increase in the incarceration rate on the number of crimes per 100,000 residents. These estimates come from state level panel data regressions that model the year-to-year change in crime rates as a function of the year-to-year change in state incarceration rates. The models are estimated using variation along the dynamic adjustment path of incarceration to underlying shocks to identify as an instrument for the inter-year change in incarceration rates. See Johnson and Raphael (2007) for estimation details.