What Have We Learned about Incarceration and Race?

Lessons from 30 years of Research

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Introduction

America’s prisons disproportionately house African American males. Incarceration has become almost a norm for the experience of many blacks. One common explanation for the high concentration of black males in prisons and jails is the rise of drug use and drug sales – particularly of low-priced crack cocaine – in the 1980s. This explanation proffered by Fryer, et al. ¹ and in the popular media undermines an alternative causal explanation for the rise of black incarceration explored in a series of co-authored books and articles over the past 30 years by Myers that argue that there are clear labor market equilibrating effects of black male incarceration and that explicit discrimination in the criminal justice system explains some if not most of the racial disparity in incarceration.² The discrimination comes in the form of discrimination in stops and frisks, in arrests, in bail setting and release while pending trial, in conviction rates and guilty pleas, in sentence lengths and ultimately in time served. The main distinction between the conventional wisdom – that blacks disproportionately sell and use drugs and therefore are disproportionately arrested and convicted – and the alternative view that racial disparities in incarceration serves a functional purpose in labor markets is a distinction between behavioral explanations for the rise in incarceration vs. structural explanations.

This paper reviews the stylized facts about black incarceration rates from 1970 to the present and explores the variety of explanations for the growth in black imprisonment. Two specific empirical tests are conducted in this review. One is a test of the hypothesis that there is an efficiency justification for the racial differential in imprisonment. Using decades-old federal prison data I show the existence of substantial racial discrimination in sentencing that cannot be attributable to racial differences in anticipated recidivism rates. A second test examines the hypothesis that the rise in racial disparities in incarceration is due to increases in arrests for drugs. Surprisingly and quite contrary to popular opinion, I find that increased arrests for drugs had a larger impact on white arrests than on black arrests.

The paper then summarizes some of the consequences of the huge racial disparity in incarceration and suggests implications for future research.


Stylized Facts about Black Incarceration Rates, 1970s to Present

Incarceration rates in the United States are the second highest in the world.\(^3\) Figure 1 shows that incarceration in the USA is higher than it is in Cuba, Russia, Thailand and many smaller countries like Panama. Only the tiny island nation of Seychelles has a higher incarceration rate. There is a distinct racial dimension to this high rate of incarceration. Black incarceration rates are six to seven times that of whites.\(^4\) It has not always been so. Prior to emancipation, prisons in America were largely white. Racial disparities in imprisonment date to post-reconstruction years but nonetheless were a part of a relatively sparse use of imprisonment in the United States. There were less than 200,000 persons housed in federal and state prisons in 1970. Incredibly, incarceration rose from 200,000 in the 1970s to more than 1.5 Million in 2010.\(^5\) Table 1 shows the dramatic increase in imprisonment from 1980 to 2000. The number more than doubled in the decade between 1980 and 1990; it more the quadrupled between 1980 and 2000. What is also apparent, though, is that the black share of those imprisoned first rose from 45.7 percent to 47 percent and then actually dropped to 46.2 percent during this period. By 2010, the black share had dropped once again to 37.9 percent. As Figure 2 reveals, the drop in the black share of those incarcerated is associated with the rise in the white incarcerations in after 2000, which I will show later to be attributable to white drug arrests.

\(^3\) Institute for Criminal Policy Research, World Prison Brief, [http://www.prisonstudies.org/highest-to-lowest/prison_population_rate?field_region_taxonomy_tid=All](http://www.prisonstudies.org/highest-to-lowest/prison_population_rate?field_region_taxonomy_tid=All)


Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number</th>
<th>Percent Black</th>
</tr>
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<tbody>
<tr>
<td>1974</td>
<td>229,721</td>
<td>47.0%</td>
</tr>
<tr>
<td>1980</td>
<td>328,695</td>
<td>45.7%</td>
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<tr>
<td>1990</td>
<td>774,375</td>
<td>47.0%</td>
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<tr>
<td>2000*</td>
<td>1,321,200</td>
<td>46.2%</td>
</tr>
<tr>
<td>2010*</td>
<td>1,550,600</td>
<td>37.9%</td>
</tr>
</tbody>
</table>

US Department of Justice, Office of Justice Programs
Bureau of Justice Statistics
There is no dispute, however, that incarceration rose dramatically during the 1970s to the 1990s. The 1990s saw black numbers increasing above white numbers of those incarcerated until the 2000s when black numbers peaked and white numbers continued to rise. Before entertaining a model to explain these changes, we consider the long list of possible explanations offered in the literature for the substantive growth in incarceration during the period.

### Catalogue of Explanations

The array of social and economic explanations for the growth in imprisonment in America can be divided into those that offer structural explanations and those that offer behavioral explanations. The structural explanations look at labor market distortions, the role of poor schools and the use of suspensions as pipelines to first the juvenile justice system and then to the adult criminal justice system. The structural explanations examine the role of segregated housing, discrimination in real estate and credit markets that can produce segregated islands of isolation and discrimination within the criminal justice system.

Behavioral explanations explore the role of drug sales and drug use, the rise of theft and larceny as rational alternatives to legal labor market pursuits, and the pathology of thrill-seeking and anti-authoritarianism suggesting that criminal participation is a form of social dysfunction.

Myers and Sabol have explored empirically the Rusche and Kircheimer structural thesis that prisons act as labor market equilibrating devices. When there is superfluous labor, prisons drain off unwanted
workers. When there are labor market shortages, prisons release workers into the labor pool to keep wages from rising. This hypothesis suggests a positive relationship between unemployment rates and incarceration rates, something evident in Figure 3, which plots unemployment rates against incarceration rates over the period from 1960s to the late 1990s. Although there is clearly a positive and statistically significant trend line, there are glaring deviations from the trend in the early 1990s.

Conventional behavioral explanations posit that high unemployment produces high incentives to engage in criminal activities and that high rates of criminal involvement produce high arrest rates and high incarceration rates. The difficulty of testing this hypothesis, however, is that crime rates are unobserved, imperfectly captured by offenses reported to police, and very possibly endogenous to police and law enforcement activities. Many of the major studies adopting the Becker rational choice model as a starting point use the FBI’s Uniform Crime Reports and arrest data failing to account for the underreporting of crimes and/or the inaccuracy of measuring criminal activities by arrest rates.\(^6\)

Conventional behavioral explanations for racial disparities in incarceration look more explicitly at alleged offender decisions that result in higher rates of traffic stops, arrests, and failure to post bail, guilty pleas, longer sentences and lower probabilities of probation or parole. The point of these models is to establish whether the racial disparity is “efficient” or rationally based on the desire to minimize social costs or maximize arrests or convictions of guilty offenders.

In the case of traffic stops, Mason has provided a thorough critique of the existing models that putatively show that it is offender behavior (e.g. drug carrying) that explains the racial differences in stops. Similar critiques can be levied against the behavioral models that predict racial differences in arrests and convictions. The central limitation of the empirical tests of these models, however, is that the available information – until recently – largely has been limited to characteristics of the offender and the offense, excluding critically important information on the arresting officer, prosecutor or judge.

Nevertheless, it is possible to use indirect methods to differentiate between the structural and behavioral explanations for the racial disparities in incarceration and to test the efficiency hypothesis.

**The (in) Efficiency of Racial Disparities in Incarceration**

In a largely overlooked treatise produced at the invitation of Alfred Blumstein, then the president of the American Society of Criminology, I argued against the prevailing wisdom among mainstream criminologists that the observed racial disparity in incarceration was due to racial disparities in criminal involvement. The alternative hypothesis, I argued, that the disparity was due to discrimination in sentencing, had not been properly tested. The correct test is to estimate separately equations for time served for blacks and whites and then to compute “equal treatment” values of the sentences served for blacks. If there is no difference between the actual time served and the equal treatment values, then

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there is no discrimination. The results using federal prison data showed that there are statistically significant and legally meaningful disparities in sentences served that cannot be explained by observed characteristics of offenders or characteristics of the crimes or offenses. In short, there is discrimination in sentencing.

One can take this model one step further and ask this question: what would recidivism of blacks be had they faced equal-treatment (and thus shorter) sentences? The mechanism for this change in sentencing is release on parole. Persons who are released sooner serve shorter sentences than those who are not released on parole, all other things being equal. Assuming that there is a deterrent effect of longer prison sentences, the model suggests that releasing blacks sooner may result in additional crime in a bias-free sentencing world. This is the efficiency argument, although it is an entirely empirical issue of just how much additional crime is likely to occur by ridding the parole release mechanism of racial discrimination. The results are compelling: the coefficients of the sentencing variable are small and statistically insignificant; the effect of eliminating disparities in parole release results in one extra recidivist for every 222 releases.

Are racial disparities in incarceration due to racial disparities in drug arrests?

A second claim worth investigating is the claim that racial disparities in incarceration are due to racial disparities in drug arrests. Blacks are more likely to be arrested than whites and are also much more likely to be incarcerated as Figures 4 and 5 show. But to establish a causal link between the black-white disparity in arrests and the black-white disparity in incarceration requires a bit more legwork.

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This is known as the standard Blinder-Oaxaca-Duncan residual discrimination methodology. Denoting black and white by superscripts \( B \) and \( W \), and defining the effects of \( Z \) and \( X \) on outcomes as the coefficients \( \alpha, \beta, \) and \( \gamma \), we have:

\[
\begin{align*}
Y^B &= \alpha^B + \sum \beta^B_i Z^B_i + \gamma^B_i X^B_i, \\
Y^W &= \alpha^W + \sum \beta^W_i Z^W_i + \gamma^W_i X^W_i,
\end{align*}
\]

with no assumptions made about the relationship between the \( \alpha \)'s, \( \beta \)'s, and \( \gamma \)'s for blacks and whites. We compute the following residual difference:

\[
D = \hat{Y}^B - Y^B,
\]

where

\[
\hat{Y}^B = \alpha^W + \sum \beta^W_i Z^B_i + \gamma^W_i X^B_i.
\]
In the appendix, I detail a model that estimates the impacts of drug arrests on incarceration rates. This is done separately for blacks and whites for the years 1980 to 2012. A separate model estimates the effects of differences in drug arrest rates on differences in incarceration. Independent variables include: unemployment rates (by race, gender, age-group and year); arrest rates by race by type; offence rates by type, overall arrest rates, overall unemployment rates and overall drug incarceration rates. Alternative specifications include lagged and current values of these variables and determinants of incarceration rates. The main finding of the model estimation is that there are larger impacts of lagged white drug arrests on white incarceration rates than lagged black drug arrests on black incarceration rates. This finding is robust across alternative model specifications and counters the conclusion that the cause of the racial gap in incarcerations is the racial gap in drug arrests. Figure 6 reports the coefficients on the lagged drug arrest rates in the estimates of the ln-incarceration rates. The interpretation of these coefficients is the percentage change in incarceration rates due to a change in drug arrest rates. The effects are larger for whites than for blacks, consistent with the finding that racial disparities in drug arrests alone are not the causal factor explaining the racial gap in incarceration.

One can argue about whether other factors, such as the persistent racial disparity in arrests for virtually all crimes, contribute more directly to the long-term pattern of imprisonment of blacks in America. What is not in dispute is the dire consequences for the heavy representation of black males in America’s prisons and jails.
Dire Consequences

The list of unintended consequences of disproportionate imprisonment of blacks is enormous. The most widely cited consequence is political disenfranchisement. As of 2014, felons could not vote in Alabama, Arizona, Delaware, Florida, Iowa, Kentucky, Mississippi, Nevada, Tennessee, Virginia, or Wyoming. There are labor market consequences as well. Convicted felons in most states are prohibited from holding a host of occupational licenses and thus cannot hold particular jobs. In Texas, for example, convicted felons cannot be employed in work with children (childcare, education), with the elderly (home care) and cannot hold licenses as locksmiths, barbers, electricians, or pharmacists. In Minnesota, convicted felons cannot be employed as mortgage originators, insurance agents, nursing or home care assistants, audiologists, physical therapists, dentists or veterinarians.

Darity and Myers have argued, moreover, that another unintended consequence of disproportionate incarceration is destabilization of black families through the reduction of the supply of marriageable black males. The increase in the share of black families headed by females lies behind the widening racial gap in family incomes in the decades between 1980 and 2000.

Implications for the Future

What have we learned over the past 30 years about the relationship between race and incarceration? If anything, we should have learned that it was not until white incarceration rates soared, notably due to increased drug arrests, that economists paid much attention to the unsustainable expansion of imprisonment as a policy solution to problems of crime. Indeed, the long-term drop in crime rates that accompanied the expansion of imprisonment has often been cited as a compelling rationale for increased punishment via incarceration.

Still unresolved after 30 years is the explicit role that labor market disequilibrium plays in structurally promoting changes in incarceration. The weak findings about the relationship between unemployment and imprisonment in the past 30 years may well be due to the fact that the cyclical fluctuation in economic activities relevant to the pre-1990s no longer prevails. The mapping of the relationship between unemployment rates and incarceration rates during the 1990s shows significant deviations from the long-term trend.

Now that millions of inmates have completed their sentences and are returning to their communities, there is a crisis of what to do about these persons who have languished in prisons often for decades.

The policy proposals offered include: Increased training and expansion of jobs for returning ex-offenders; social services and counseling to promote re-integration into communities; subsidies for hiring ex-offenders; investment in family support services; training for entrepreneurship opportunities; promotion of small business ownership; apprentices for skilled trades (e.g. electricians, plumbers, painters); and rethinking licensing restrictions. The main problem with these policy proposals is that there are other claimants for precisely these same investments: returning veterans; graduations of welfare-to-work programs; displaced blue color workers in manufacturing industries; and recent high school graduates and other youth entering the labor market. There appears to be little political support for the very investments that could remedy the problems that ex-offenders will face when they re-inter the labor market. There seems to be even less political support for investments that could remedy the problems that black ex-offenders face. In short, over the past 30 years we have created a new class of unwantedness among black males that leaves us worse off than we were when we initiated the dramatic expansion of imprisonment as an apparent solution to the problem of unwantedness and superfluous black labor.
Appendix

Determinants of racial differences in incarceration rates

Model Specification

Equation 1
\[
\ln \left( \frac{I_t^B}{I_t^W} \right) = \beta_0 + \sum \beta_{it-1} \ln \left( \frac{X_{it-1}^B}{X_{it-1}^W} \right) + \sum \gamma_{it} Z_{it} + \varepsilon_t
\]

Equation 2
\[
\ln[I_t^B] = \beta_0^B + \sum \beta_{it-1}^B \ln[X_{it-1}^B] + \sum \gamma_{it}^B Z_{it} + \varepsilon_t^B
\]

Equation 3
\[
\ln[I_t^W] = \beta_0^W + \sum \beta_{it-1}^W \ln[X_{it-1}^W] + \sum \gamma_{it}^W Z_{it} + \varepsilon_t^W
\]

Where:

I = incarceration rates (by race, by year)

X = unemployment rates (by race, gender, age-group and year); arrest rates by race by type

Z = offence rates by type, overall arrest rates, overall unemployment rates and overall drug incarceration rates.

Data

Population data was obtained from Census Bureau Historical Data.

Number of violent and property crimes and violent and property crime rates was obtained from the Uniform Crime Reporting Statistic from the US Department of Justice Federal Bureau of Investigation website.

Number of arrests by race and type of crime (violent or property crime) was obtained from the ICPSR Inter-university Consortium for Political and Social Research. Uniform Crime Reporting Program [United States]: Arrests by Age, Sex, and Race for Police Agencies in Metropolitan Statistical Areas, 1960–1997 and from the Arrest Data Analysis Tool of the Bureau of Justice Statistics.

Persons incarcerated in state and federal prisons were obtained from National Prisoner Statistics, 1978-2013 archived within Inter-university Consortium for Political and Social Research.

Total arrests for drug offenses by race was obtained from Arrest Data Analysis Tool of the Bureau of Justice Statistics.

Unemployment rates were obtained from the Bureau of Labor Statistics and the Current Population Survey.12

12 Data Sources
United States Census Bureau, Population Estimates
https://www.census.gov/popest/data/intercensal/st-co/characteristics.html
https://www.census.gov/popest/data/intercensal/state/state2010.html

United States Census Bureau, Vintage 2011: National Tables

United States Census Bureau, QuickFacts United States
http://www.census.gov/quickfacts/table/PST045214/00

US Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting Statistics

ICPSR Inter-university Consortium for Political and Social Research. Uniform Crime Reporting Program [United States]: Arrests by Age, Sex, and Race for Police Agencies in Metropolitan Statistical Areas, 1960–1997
http://www.icpsr.umich.edu/icpsrweb/NACJD/studies/2538?paging.startRow=1&fundingAgency=United+States+Department+of+Justice.+Office+of+Justice+Programs.+Bureau+of+Justice+Statistics&keyword%5B0%5D=drug+abuse&fundingAgency%5B1%5D=United+States+Department+of+Justice.+Federal+Bureau+of+Investigation

Bureau of Justice Statistics, Arrest Data Analysis Tool
http://www.bjs.gov/index.cfm?ty=datool&surl=/arrests/index.cfm#


http://www.bls.gov/cps/#data

Appendix Table 1: OLS Estimates of Determinants of Racial Differences in Incarceration Rates

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<th>(2)</th>
<th>(3)</th>
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<td>ln(black unemployment rate)t-1/ white unemployment rate)t-1</td>
<td>-0.0193</td>
<td>1.0629***</td>
<td>0.7859***</td>
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<td></td>
<td>(0.0708)</td>
<td>(0.1470)</td>
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<td>ln(black arrest rate by property crimes)t-1/ (white arrest rate by property crimes)t-1</td>
<td>-</td>
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</tr>
<tr>
<td></td>
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<tr>
<td>ln(black arrest rate by violent crimes)t-1/ (white arrest rate by violent crimes)t-1</td>
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<td>0.0002</td>
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<td>Unemployment rate</td>
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<td>Drug arrest rate</td>
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<td>ln(violent crime rate)t-1</td>
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<td>Ln(violent crime rate)t-1</td>
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<td>N</td>
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<td>33</td>
<td>33</td>
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<tr>
<td>adj. $R^2$</td>
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<td>0.6266</td>
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</table>

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
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<th>(2)</th>
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<td>-1.5452***</td>
<td>1.6384***</td>
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<td>(0.1106)</td>
<td>(0.3153)</td>
<td>(0.3333)</td>
</tr>
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<td>ln(black unemployment rate)t-1</td>
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<td>-1.5452***</td>
<td>1.6384***</td>
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<tr>
<td></td>
<td></td>
<td>(0.3153)</td>
<td>(0.3333)</td>
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<td>Ln(black arrest by property crimes)t-1</td>
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<td>Ln(black arrest by violent crimes)t-1</td>
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<td>0.7103***</td>
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<td>(0.0001)</td>
<td>(0.1151)</td>
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<tr>
<td>Black arrest by drugs</td>
<td>0.0006***</td>
<td>-0.6413***</td>
<td>-0.0528***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0999)</td>
<td>(0.0083)</td>
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<td>High Black unemployment rate</td>
<td>-0.0330</td>
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<td>-0.0528***</td>
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<td></td>
<td>(0.0491)</td>
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<td>ln(black drug arrest rate)t-1</td>
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<td>(0.1151)</td>
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<td>adj. (R^2)</td>
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<td>0.9078</td>
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Standard errors in parentheses
* \( p < 0.05 \), ** \( p < 0.01 \), *** \( p < 0.001 \)
Appendix Table 2: OLS Estimates of Coefficients in Model of White Incarceration Rates

<table>
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<td>White arrest rate by drugs</td>
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<td>(0.0006)</td>
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<tr>
<td>High white unemployment rate</td>
<td></td>
<td>0.0932</td>
<td>0.0457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0596)</td>
<td>(0.0348)</td>
</tr>
<tr>
<td>ln(white drug arrest rate)t-1</td>
<td>1.2516***</td>
<td>(0.1726)</td>
<td>0.8401***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.1054)</td>
<td></td>
</tr>
<tr>
<td>Ln(offense rate)t-1</td>
<td></td>
<td>0.0519</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.1974)</td>
<td></td>
</tr>
<tr>
<td>Ln(offense rate before 1990)t-1</td>
<td></td>
<td></td>
<td>-0.0283***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0064)</td>
</tr>
<tr>
<td>_cons</td>
<td>2.6195</td>
<td>-2.5527</td>
<td>0.3962</td>
</tr>
<tr>
<td></td>
<td>(1.8665)</td>
<td>(2.6226)</td>
<td>(0.6401)</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>adj. $R^2$</td>
<td>0.9046</td>
<td>0.8883</td>
<td>0.9335</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
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