The Effect of Mandatory Minimum Sentencing Reform on the Racial Disparities in Length of Time to Exoneration

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Abstract

Mandatory minimum sentencing laws have been in place across the United States since 1984; however, restrictions are slowly easing up. Existing criminal justice literature focuses little on what happens after someone is wrongfully convicted of a crime. Using a dataset of reported US exonerations from 1989-2020, I investigate the effect of minimum sentencing law reform policy on racial disparities within the length of time between when a person was wrongfully convicted and then exonerated. I find that even after reforming minimum sentencing implementation, Black people spend more time wrongfully in prison than White people.

Introduction

In the last 3 decades, more than 400 million people have been sent to prisons across the United States (Initiative and Wagner). Since 1989, over 2,600 Americans have been exonerated, or absolved of their crimes after new evidence proving their innocence comes to light. A contributing factor to the US's mass incarceration problem is mandatory minimum sentencing laws in place for the last 35 years. Minimum sentencing can lead to disparities, especially racial ones, in jail time earned among equivalent offenders. Mandatory minimum sentencing also leads to high costs to prisons and inmates.

While some literature regarding exonerations exist, they do not analyze data from recent years. (Gross et al., 2004) has written about exonerations from 1989-2003, and again from 1989-2012. However, now, data up to 2020 is available for public use. New insights should be observed since now more people than ever are getting convicted of crimes. A record 600,000 Americans go to prison every year (Initiative and Wagner, n.d.). (Bjerk and Helland, 2020) look at racial disparities among DNA exonerations in particular for murder and rape cases. They find that DNA evidence favors Black defendants more powerfully than White defendants in rape cases, though the time to exoneration is still longer. I wanted to analyze time to exoneration for all cases.

Literature on mandatory minimum sentencing laws is even more antiquated. The most credible papers are from the 1990's. (Oliss, 1994) provides a brief history on sentencing laws. (Bjerk, 2005) found that prosecutors take on a different composition of cases in response to mandatory minimum sentencing laws. (Gaskins, 2004) analyzed how women loosely involved in drug trafficking are hit the hardest by mandatory sentencing laws. Exonerations and mandatory minimum sentencing legislation are

inherently related. I wanted to analyze the inflow and outflow of the incarcerated, all through a racial lens. Policymakers, judges, and prosecutors can use this information to learn from past biases and make adjustments to existing minimum sentencing reforms.

I investigate the effect of minimum sentencing law reform on racial disparities within the length of time between when a person was wrongfully convicted and then exonerated. For this experiment, I used the most comprehensive dataset of exonerated Americans from 1989-2020, as distributed by the National Registry of Exonerations. I use a panel event study design, an extension to the difference-in-difference approach, to estimate the treatment effect of time of policy implementation. I find that after minimum sentencing reform, Black people will spend 2.083 more years wrongfully in prison than White people. Hispanics, however, spend almost a year less in prison, though this is not statistically significant. The paper is outlined as follows: Section I discusses the background and where the data has come from. Section II overviews the empirical design and identification strategies. Section III discusses results and key findings. I conclude in Section IV.

1 Background and Data

1.1 Minimum Sentencing Laws

Common required penalties include habitual offender laws (typically these are "Three Strike" policies) and mandatory minimum sentencing. These penalties result in a strict window of incarceration for a certain crime, if necessary criteria are met. Such criteria includes: the type of offense, a previous record of committing felonies, distance from a school, and presence of firearms. In drug cases, the quantity and level of harm the drug can cause is also a factor (Subramanian and Delaney). Judges cannot lower sentences for outstanding circumstances or special cases either. The US officially mandated minimum sentencing in the 1984 Comprehensive Crime Control Act, following Congress' steps to lengthen sentences in the decade leading up. The hope was to reduce crime rates during the peak of the war on drugs. The law also eliminated federal parole. By 1994, all 50 states had some sort of mandatory minimum sentencing legislation in place (Travis, n.d.). By 1996, restrictions tightened. 5 year mandatory minimum sentences would be required for possession of crack cocaine, regardless of for sale or personal use. Eventually, some states found that minimum sentencing could do more harm than good. A 2011 report from the United States Sentencing Commission found that often these sentences are too harsh for the crime committed (Subramanian and Delaney). The law was treating most types of offenses with a "one size fits all" mindset.

In the early 2000's, many states started taking action to reform minimum sentencing requirements after little reduction in crime rates. These actions took form in a number of ways. The first is called a "safety valve" provision in which the minimum sentencing laws remain in place, but judges have more leniency over whether or not they apply to a case. The second is limiting the criteria for automatic sentencing enhancements, which automatically add extended jail time if the case is a repeat offender or the crime was close to a school. And the third most aggressive approach is repealing the sentencing requirements altogether. According to the Vera Institute of Justice, 29 states have taken steps to roll back current mandatory minimum sentencing within their own borders since the year 2000 ((Subramanian and Delaney, n.d.). Changes came at the federal level under the Obama Administration. In 2010,

Congress passed the Fair Sentencing Act. The piece of legislation eliminated mandatory minimum sentencing for first time possession of crack cocaine. The law also reduced disparities in sentencing for possession of different types of cocaine. The law helped promote equity in the criminal justice system; previously, Black non-violent drug offenders were facing the same amount of jail time as White violent drug offenders. Long term effects on this policy have yet to be measured, however.

1.2 National Registry of Exonerations

Data largely comes from the National Registry of Exonerations. The Registry seeks to document all past exonerations in hopes of halting wrongful convictions in the future. This is the most comprehensive dataset of all exonerations within the United States. Reported exonerations from 1989-early 2020 have been included. Data is described at the individual level, with key details coded such as race, gender, state, worst crime, year convicted/exonerated, and more.

The dataset has roughly 2,656 entries, each indicating a separate exoneration. Black Americans comprised 49% of exonerations; White people made up 37% of exonerations, and Hispanics 11.53%. Males made up 91% of exonerations. Wrongful convictions of murder made up nearly 40% of exonerations, drug possession or sale made up 13%, and sexual assault and child sex abuse made up 12% and 10%, respectively. The age group that disproportionately had the most exonerations were people aged 17-26. Hispanics and Black people are getting wrongfully convicted earlier on in life compared to White people. Convictions most frequently occurred in a few particular areas: Texas, Illinois, and New York. The average length of time between a person's getting convicted and then exonerated was a little over 11 years. Hispanics, White people, and Black Americans spend an average of 8.88, 9.5, and 13 years, respectively, wrongfully in prison.

1.3 Summary of Data

I have merged the dataset from the National Registry of Exonerations with 4 columns to signal when policies seeking to reform minimum sentencing were proposed or implemented in each state. If the state has individually no action, the default year for first reform is 2010. This year indicates Congress passing the Fair Sentencing Act. For the 29 states that have taken independent actions, the years in which the legislation is passed is encoded. I have also created a new variable length_exoneration to represent the difference in years between the conviction and exoneration. I chose to use this particular data because the National Registry of Exonerations has the most comprehensive dataset on exonerations within the US. To properly estimate the effect of mandatory minimum sentencing, I also had to include data on when states made reforms and in what years. This is best summarized by the Vera Institute of Justice (Subramanian and Delaney).

2 Design

2.1 Identification Strategy

I chose to use a panel event study, related to the difference in differences approach, to answer my research question. This proved to be the best strategy since I am looking at the effect of policy implementation across many different states across many time periods. A few threats to this strategy, however, are worth mentioning. A key assumption in this model is still the standard difference in difference parallel trends assumption. The control group and treated group would have the same outcomes if it were not for the policy. Event leads do, however, allow for examination of trends in pre-treatment period. I also include fixed effects to account for state differences. to Because of the Fair Sentencing Act of 2010, technically all 50 states received some sort of treatment. This should not pose too much of a problem, since I can treat the states that just have reform in 2010 as the control group and the states that implemented policy earlier as the treated group. There are just no pure controls. Each policy is also not identical and has its own state provisions, which is why I define the treatment as general reform to mandatory minimum sentencing. The next threat is that the timing of the treatment is likely not random. Policy generally comes as a response to problems within society. Perhaps crime rates were consistently increasing in states that took action prior to 2010, so they decided to take matters into their own hands. I attempt to account for non-random timing by including the lags and leads in my model. Despite these challenges, I believe this identification is best suited since I evaluate the effect of a policy change on a number of regions at varying times.

2.2 Empirical Details

I take advantage of the EVENTDD stata command for this difference in difference estimation. The dependent variable of interest is length_exoneration, which again indicates the time in years between when a person was convicted and exonerated. Then I add all the controls for my estimation. I focus on demographic controls since I am looking at racial disparities. This includes controls for whether or not someone is Black, Hispanic, or Native American. Thus the baseline group is considered to be White people. I also add a control for gender, with the baseline group set to be male. Because exonerations were most common among young folks aged 17-26, I also added a control for age to see whether or not someone lies in this range when convicted. There are large differences among the type of crime, so I add crime fixed effects to control for some of these differences. The same can be said for each state. Each state is quite different in terms of population, crime rate, legacy of racism. I add state fixed affects to capture these disparities. The default for EVENTDD is using a standard OLS estimation. I chose to stick with this default since I already accounted for fixed effects in my controls. I also use robust heteroskedastic errors in case of large variance among the error terms. The timevariable has the standardized value to show when the policy is implemented. I defined a variable Time_policy which is equal to 0 when the year of the conviction is the same as the year the policy was implemented in that state. Time_policy = −1 if the conviction occurs one year prior to the policy implementation. This is known as a lag. A lead is demonstrated with time_policy = 1 if the conviction occurs one year after the policy implementation. I wanted equal lags and leads to be included; so, I chose 17, or the max number of leads. For more on EVENTDD specification, see (Clarke and Schythe, n.d.).

3   Results

First, I find that on average exonerations are longer before the policy reform compared to after. See Figure I for details. However, there still seems to be inequity along demographic lines, particularly race. Black people and Native Americans still fare poorly after policy implementation. They spend 2.083 and 5.598 more years, respectively, wrongfully in prison than White people. Both of these are significant at the 99.9% level. The results are far less robust for Native Americans compared to Black Americans since the former group only comprises 0.72% of US exonerations. Still, the results indicate racial disparities in time to exoneration for the Black community have widened after policy implementation. This may be due to increasing racial tensions and micro-aggressions within the 21st century. Perhaps this is also inherently tied to income or education, which I was unable to obtain. If a person has more knowledge of the criminal justice system or the resources to afford a top-notch lawyer, they may get exonerated faster. Hispanics fare slightly better after minimum sentencing reform. They spend on average .8 fewer years wrongfully in prison compared to their White counterparts; however, this is not statistically significant. Even after policy implementation, young people between 17-26 will spend 1.76 more years wrongfully in prison compared to people out of that age range. This is significant at the 99.9% level. Women fare better than men after policy implementation as well. The average length between conviction and exoneration is 1.29 fewer years than their male counterparts, again at the 99.9% level. The `R^2` value is 0.47. Regression coefficients and T statistics can be viewed in Table I.

4   Conclusion

Minimum sentencing laws were originally mandated to reduce crime rates and crack down on drug offenses during the peak of the war on drugs. However, decades of research showed that the legislation does very little to reduce crime. In fact, they increase costs and widen racial disparities among convictions. Several states then elected to amend their current minimum sentencing statutes. Meanwhile, almost half of the reported exonerations in the US have been since 2000, disproportionately affecting Black Americans. Very little research has been previously done on connecting the two ideas together. I used a panel event study approach to estimate the effect of minimum sentencing reform policy (among many states at different times) on racial disparities within the length of time between a conviction and an exoneration I find that minimum sentencing reform does decrease the overall time spent wrongfully in jail on the whole. However, this number is inflated by certain racial groups. Even after minimum sentencing reform, Black people will spend 2.083 more years wrongfully in prison than White people. Perhaps the biggest limitation of this research is that timing of the treatment was not randomly assigned. Overall, these findings may be more evidence that more needs to be done to protect people of color within the criminal justice system. Prosecutors and Judges may be inclined to learn from their biases and reevaluate why Black Americans had to spend extra time wrongfully in prison. Minimum sentencing amendments may need to be further adjusted. Such reforms could include more provisions to better serve a community historically marginalized for centuries on end.

Figure 1: Change in years between conviction and exoneration pre and post policy reform
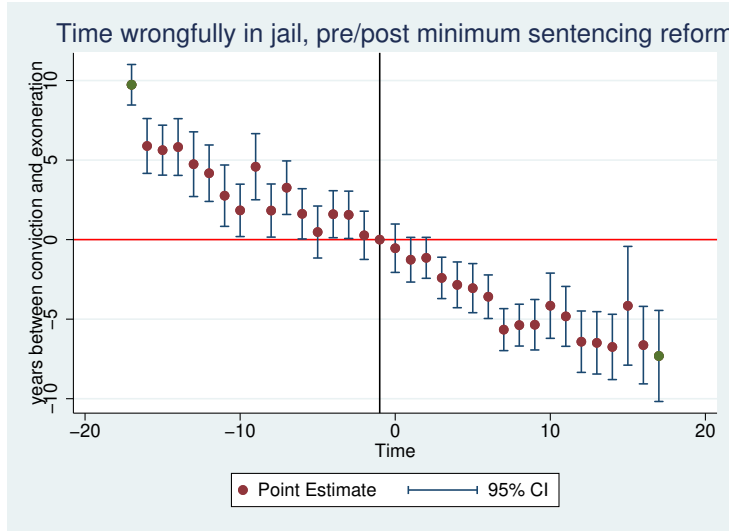

Table 1: Regression results (crime and state fixed effects, leads/lags omitted)

	(1)
	Length_exoneration
young_age	1.630***
	(5.39)
Black	2.083***
	(6.16)
Hispanic	-0.811
	(-1.72)
NA	5.598***
	(5.96)
Female	-1.293**
	(-3.02)
_cons	1.229
	(1.18)
N	2649

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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