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Objective, rigorous, and useful research to understand the post-Katrina school reforms.

POLICY BRIEF

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WHAT EFFECT DID THE NEW ORLEANS SCHOOL REFORMS HAVE ON YOUTH CRIME?

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Overview

Almost two decades have passed since the start of the post-Katrina school reforms. During this time, a large body of evidence has shown the positive effects of these reforms on academic outcomes—including test scores, high school graduation rates, college entry, and college graduation. However, we know little about other possible outcomes outside the classroom. This brief examines how New Orleans' series of school reforms may have affected a significant non-academic outcome: youth crime.

Corresponding technical paper: Stephen Barnes, Douglas N. Harris, and Lan Nguyen. "The Effects of Hurricane Katrina and the New Orleans Charter School Reforms on Youth Crime." Education Research Alliance for New Orleans, 2022.

Specifically, our analysis compares trends in criminal convictions and juvenile adjudications in New Orleans to similar districts throughout the state of Louisiana, using data from the state justice system on students enrolled in publicly funded schools from 2001-2018. We use conviction data for two different samples of students alongside matched comparison groups and analyze these data using multiple statistical analyses. We also collected data from media reports, public reports, focus groups, and interviews to ensure that our quantitative analyses truly isolate the effects of the school reforms. From the combination of these analyses, we draw two main conclusions:

- The New Orleans school reforms did not increase youth crime and probably reduced youth crime among students attending publicly funded schools.
- We find particularly consistent conviction rate reduction effects in the property crime and crimes in other categories, and less clear effects on violent and drug crime.

We say that the reforms "probably" reduced youth crime due to factors that make this kind of analysis complex. First, our data only allow us to observe crimes that resulted in adjudications or convictions—a common problem in studies of crime. Second, we had to separate the effect of the reforms from other factors affecting crime in the wake of Hurricane Katrina. We addressed these problems by comparing youth adjudications and convictions to those of adults. To further address possible differences between convictions and crime itself, we also interviewed community leaders with expertise in the criminal justice system. While our analyses generally suggest that the changes in convictions and adjudications reflect changes in crime due to the school reforms, the complexities involved in this type of analysis lead us to be somewhat cautious in our conclusions. Despite some uncertainty about the effects, this analysis is important because it helps to get beyond common metrics like test scores to understand schools' wide-ranging effects on students and their communities.

Background

In 2005, after Hurricane Katrina, the state took over almost all the city's schools and eventually turned them all into charter schools, which are privately managed, publicly funded, and publicly governed. Since then, parents have been able to have a greater say in which schools their children attend. Also, these schools have been held strictly accountable for student test scores and high school graduation rates. School funding also increased. We view the school reforms as a package of related changes, and we are studying the effect of that entire package.

Prior research has shown that these reforms contributed to improvements on a variety of academic outcomes. That prior research also shows that, while New Orleans students are disadvantaged by very high poverty rates and systemic racism, these disadvantages remained relatively stable before and after Katrina. The city's population did become more socio-economically advantaged and added more white residents, but this did not carry over to the demographics of students attending publicly funded schools in New Orleans.

This brief focuses on the far-reaching benefits of education beyond academics. In particular, we focus on youth crime as one outcome that has a significant impact on students' advancement in life and on the communities where they live.

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School reforms could have both positive and negative effects on youth crime. On the one hand, if these policies improve academic outcomes, we might expect higher achievement to translate into other positive outcomes. In this case, since more New Orleans students improved academically, we might expect that this will open up other life opportunities that shift young people away from crime.

On the other hand, the reforms also reduced focus on the arts and extracurricular activities, which might have led students to disengage from school and be more likely to commit crime. Research also suggests that students do better when they have some teachers who are of the same race and the New Orleans reforms displaced large numbers of Black teachers. In addition, there is also the national trend of strict disciplinary responses to student infractions, which may contribute to the school-to-prison pipeline. While research suggests that the New Orleans reforms increased suspensions and expulsions only temporarily, schools still often use the threat of discipline, which could also affect students even if they are never actually punished.

What Have Been the Effects of the New Orleans Reforms on Overall Youth Crime?

Understanding the effects of the post-Katrina school reforms on youth crime requires more than just comparing New Orleans' youth conviction rates before and after the storm. We use a technique called "synthetic control" that creates a comparison group made up of other Louisiana school districts that almost exactly mirrors the pre-reform patterns in New Orleans' youth conviction rate. This comparison group provides a sense of what New Orleans' rates would have been in the absence of the reforms. Therefore, the difference in the youth conviction rate between New Orleans and the comparison group can be interpreted as the effect of the reforms.

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We focus on the *conviction rate*, or the number of convictions and adjudications divided by the number of students, for two groups:

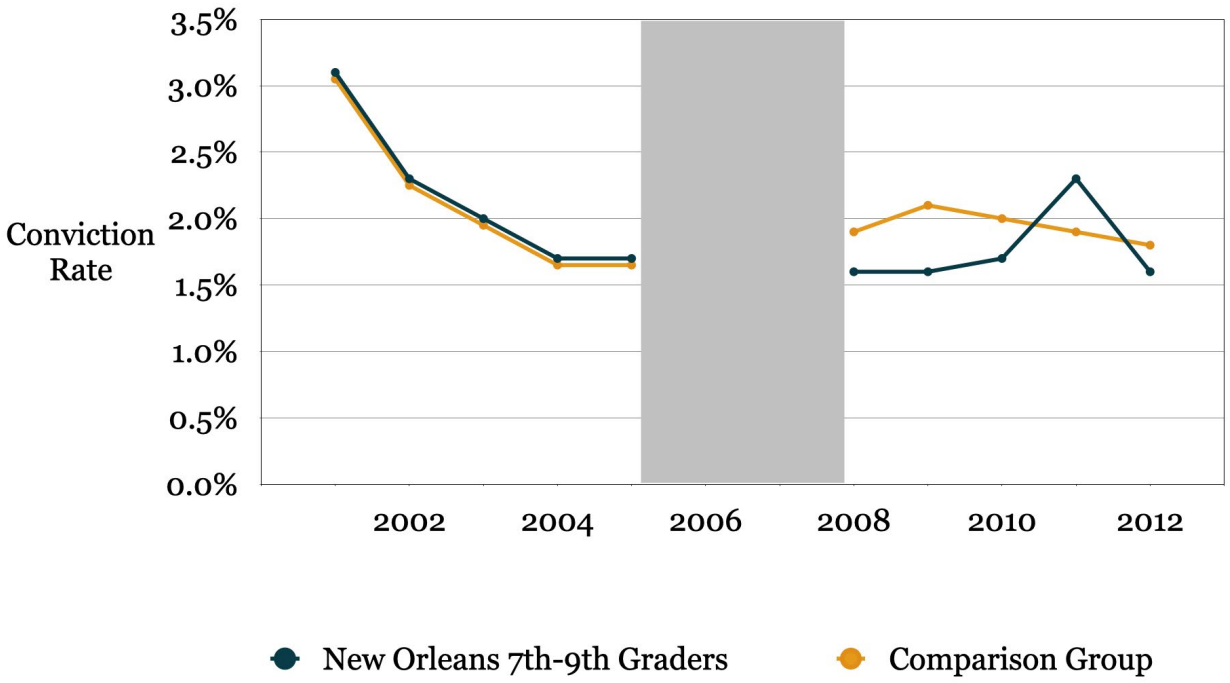
- *Middle grades analysis*. Here we focus on 7th-9th graders pre- and post-Katrina. The middle grades analysis helps us understand how the reforms affected students while they were still in school. We focus on grades 7-9 because we know the reforms also increased the high school graduation rate, which may have affected the conviction rate for students in grades 10-12. Had we included higher grades in this part of the analysis, we would then be including students who would have likely dropped out pre-Katrina, which would tend to give the false impression that the reforms increased crime.
- *Returnee analysis*. Here we focus on students who were in 4th-6th grade the year of Hurricane Katrina who returned to New Orleans publicly funded schools for at least three years in the post-storm period. The returnee analysis gives us insight into how the reforms affected one group of students as they progressed through school and until they were 23-25 years old. The disadvantage of the returnee analysis is that it is more difficult to identify a valid comparison group. We therefore rely on the combination of results across the two methods to draw conclusions.

We emphasize that we can only study effects through the year 2018, which precedes COVID. This also precedes the city's recent crime wave, which is part of a national trend. To our knowledge there is no data available about whether the current crime wave is driven disproportionately by New Orleans youth.

In Figure 1, the middle grades analysis, we show the differences between New Orleans and the comparison group from pre-Katrina through 2012. The dark green and orange lines overlap before Katrina because the two groups had virtually identical patterns, as intended. We can therefore view the departure between the two lines as evidence of the effects.

This figure shows reductions in New Orleans youth crime in all but one year (2011). The year 2012 is most relevant because this is when the school reforms had taken shape and when the more direct effects of Katrina had faded; this is also the only year we find the possible crime reduction effect of the school reforms to be statistically significant. Specifically, in 2012, we estimate that the reforms reduced the conviction rate by 0.25 percentage points or 14.55% from the pre-Katrina level.

Figure 1: Crime was lower in almost every year for New Orleans 7th-9th graders.



Note: When we examine differences in the years where New Orleans' conviction rate is lower than the comparison group, we find a statistically significant reduction in 2012. The x-axis refers to the spring of the relevant academic year, e.g., 2002 is the 2001-02 school year. We do not show results for the spring of 2006 and 2007 because most students were still evacuated from the city for most of this period.

One disadvantage of the middle grades analysis above is the limited number of years available. Also, this only focuses on students while they are still in school. To look at longer term outcomes and the effects on students of other ages, we also studied a sample of 4th-6th graders before the storm who returned to their school districts after Hurricane Katrina. By tracking this fixed group of "returnees" over time, including beyond high school, we can account for changes in the city's population post-Katrina.

In Figure 2, we show the conviction rate of New Orleans relative to a matched comparison group of districts. Both New Orleans and the comparison districts are limited to students who returned to their own pre-Katrina districts. Note that the conviction rate tends to increase as these students get older each year, which is why both lines gradually increase. The question is, which line increases faster?

We see a consistent pattern of crime reduction effects, and the conviction rates for New Orleans returnees were statistically significantly lower than those for the comparison group for most years. For instance, the New Orleans returnees' 2010

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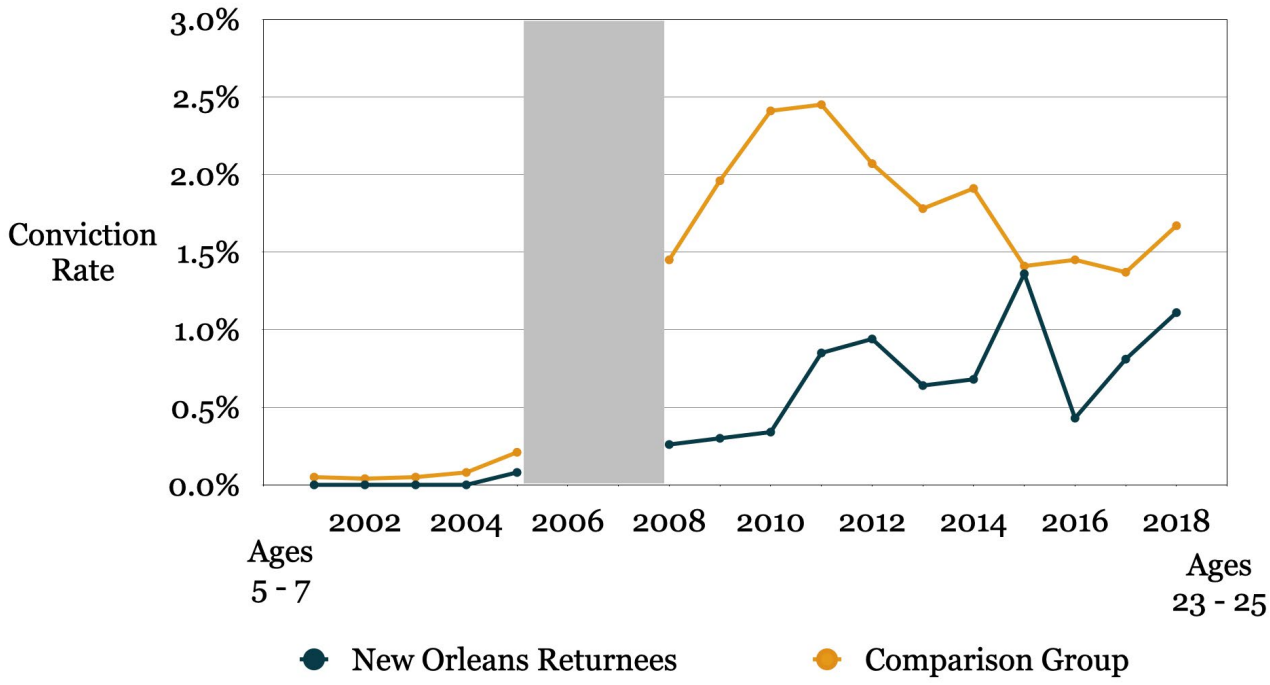
Figure 2: Crime was lower at every age for New Orleans returnees relative to the comparison group after 2005.



Note: The "New Orleans Returnees" group includes roughly 2,400 students who were in 4th – 6th grade during the 2004-2005 school year. The panel shows their conviction rate from ages 5-7 through ages 23-25. Differences between the New Orleans group and the comparison group are statistically significant in 2010-2014, 2016, and 2017. We do not show results for the spring of 2006 and 2007 because most students were still evacuated from the city for most of this period.

conviction rate of 0.34% was statistically significantly lower than the comparison group's conviction rate of 2.4%. Therefore, we can say that the New Orleans school reforms reduced the conviction rate by 2.06 percentage points in 2010. However, we see again that the effects taper off and become closer to zero over time. This gradual decline in effects is one reason why it appears that the school reforms "probably" reduced crime.

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One potential issue with this analysis is that we are interested in the *crime* rate, but we can only measure the *conviction* rate. The conviction rate depends on the crime rate, but also on how police pursue crimes and how they are prosecuted. While we are really interested in the school reforms, Katrina might have changed policing, prosecution, and other factors that affect conviction rates in ways that have little to do with school reform.

We addressed these problems in two ways: First, we carried out additional analysis of the ratio of youth convictions to young adult convictions. This is useful because young adults (ages 25-34) in our analysis never experienced the school reforms, but they did experience changes in policing, prosecution, and the criminal environment. Also, some changes in policing would affect school-age children and young adults in similar ways.

Second, we carried out qualitative analysis of media stories, public reports, focus groups, and semi-structured interviews with community leaders who had expertise in the criminal justice system during the time period we studied. The purpose of this extensive qualitative analysis was to explore whether policing and prosecution changed in ways that affected New Orleans youth more or less than youth in the rest of the state during 2001-2018. If so, this might suggest that the trends in youth conviction rates reflect factors other than the school reforms.

Findings from these two approaches—the use of the conviction ratio and qualitative analyses—generally reinforce that the changes in New Orleans youth convictions were mainly due to the school reforms. We found only one example of a change in criminal justice that might have reduced New Orleans youth conviction rate more than other districts/ parishes: the implementation of a pretrial risk assessment program in New Orleans and four other parishes starting in 2006. This program allowed some arrested youths to remain in the community instead of being detained while awaiting trial, and detentions tend to increase the likelihood of convictions. Other possible changes are not expected to affect our results or would have increased youth conviction rates in New Orleans. The results of these additional analyses can be found in the accompanying technical report

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What Have Been the Effects of the New Orleans Reforms on Different Types of Crime?

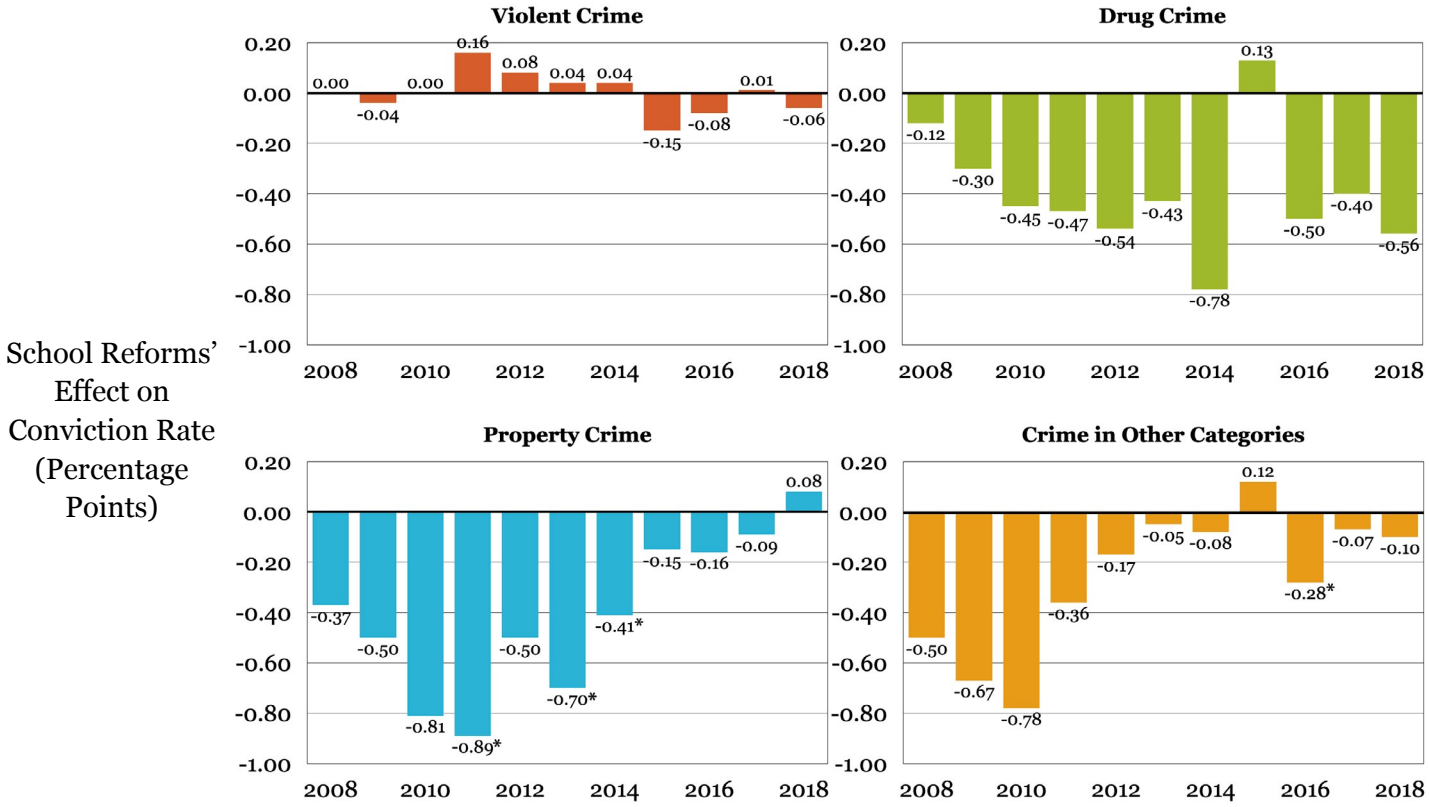
One concern with the above analysis is that policing and prosecution might have changed more in New Orleans compared with other parts of the state. To test this, and to learn more about crime effects, we carried out the same returnee analysis where crimes are broken down into different categories. We looked specifically at four types of crime: violent, property, drug, and crimes in other categories (Figure 3). Research suggests that violent crime is more likely to be consistently reported, prosecuted, and convicted. Separating out violent crime therefore helps isolate the possible role of the school reforms from other factors.

We see fairly consistent evidence of a reduction in convictions for drug, property, and crimes in other categories, especially in the years that students were still of school age. The reduction in drug crime convictions seems to persist years after students left school.

We do not find evidence of reduction in violent crime. Given the more consistent policing and prosecution of violent crime, this adds an element of uncertainty to the overall results. This is another reason we say that the reforms “probably” reduced crime.

Additionally, we conduct the middle grades analysis for these four types of crime and also find statistically significant reductions in property crime and crime in other categories in the most recent year available, 2012.

Figure 3: Drug and property crime dropped the most, and violent crime was largely unchanged.



Note: These are conviction rates for New Orleans returnees, which includes roughly 2,400 students in 4th – 6th grade during the 2004-2005 school year. The panel shows their conviction rate from ages 12-14 in 2008 through ages 23-25 in 2018. We examine statistical significance in those years where New Orleans' conviction rate is lower than the comparison group and note these years with an asterisk (*). One disadvantage of breaking the results into these groups is that it makes it less likely we will find statistically significant results even where they exist.

How Did We Carry Out the Analysis of Convictions?

To track trends in youth crime, we combined conviction and adjudication rates. Criminal convictions come from the adult criminal justice system, but some juveniles may be tried as adults. Juvenile adjudications include (1) families in need of services (FINS) petitions (e.g., truancy) and (2) delinquent acts (e.g., theft, which is a crime if committed by an adult). We accessed person-level data provided by the Louisiana Department of Corrections and the Louisiana Office of Juvenile Justice. The first step was to combine these data sources together so that we could measure both criminal convictions and juvenile adjudications for each student in every year. Since the state keeps track of all such convictions, there is good reason to believe that we have accurately captured the convictions of all students included in the study. (These data were anonymized so that we did not know the names of any individuals.)

Our main results are based on comparisons in the conviction rate trends in New Orleans relative to a combined comparison group of school districts throughout the state. This method is called Synthetic Control Group (SCG) analysis. With SCG,

the comparison group is constructed to have the same pre-reform trend on a specific outcome as New Orleans, so that we can interpret the post-reform differences in this outcome as effects of Hurricane Katrina or the school reforms. For the middle grade analysis, we were able to use conviction rate trends to identify a comparison group. However, for the returnee analysis, we could not use conviction rate to create the comparison group, as the conviction rate for students from Kindergarten through 4th grade is essentially 0%. We were able to use students' expulsion rates to identify a comparison group that approximated the New Orleans returnees' conviction rate before Hurricane Katrina.

There are many ways to test for statistical significance in SCG analyses. We focus on testing whether New Orleans' conviction rate is lower than the comparison group's rate. To do this, we apply the SCG method to each of the other Louisiana school district and obtained "effect" estimates the same way we did with New Orleans. We indicate that a result is significant when there are not many Louisiana school districts that experienced a conviction rate reduction effect bigger than what we find for New Orleans in a given year. On the other hand, if we do find many districts with larger effects, then the crime reduction effects in New Orleans are not significant, and we cannot say that the post-Katrina school reforms reduced conviction rate.

How Did We Separate Education Reform from Policing Reform and Other Factors?

To understand whether the results shown in these figures were due to changes in policing and prosecution, we carried out extensive analysis of media reports and analyses by government agencies and advocacy groups; we also carried out a focus group with 13 representatives of organizations involved in criminal justice and then followed this with structured interviews with three leaders: one who was in a leadership role in the District Attorney's office soon after Katrina, another one was in a leadership role in the New Orleans Police Department right after Katrina, and one community advocate with considerable expertise in the history of policing and prosecution in the city.

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These interviews focused on whether the effects we observed on the conviction rate reflected changes in crime or changes in policing and prosecution. In this way, we could avoid simply assuming that the convictions and crimes followed the same pattern. We asked about the policy changes we were aware of from the focus groups and media reports. We also followed up with interviewees about topics raised by other interviewees.

Another possible factor that could affect the crime rate is changes in the population. However, we showed in prior research that the changes in the New Orleans population of students in publicly funded schools were minimal during this period.

A Final Note on Crime and Systemic Racism

Systemic racism affects our country's education and criminal justice systems profoundly, and it is important to note that a majority of New Orleans' population—and a large majority of the students in the city's publicly funded school—is Black.

This is important to any analysis of crime given the considerable national evidence of discrimination against Black people in every part of the criminal justice system, from arrests and charges to prosecutions and sentencing. One study of 100 million traffic stops found that Black people are more likely to be pulled over when their race is clearly visible. Though they use illegal drugs at about the same rate as whites, Black people are about five times as likely to go to prison for drug possession. Prosecutors push for, and receive, longer sentence against Black defendants even after controlling for many other aspects of the crime. Finally, Black prisoners convicted of murder are about 50% more likely to be innocent than other convicted murderers.

We see related evidence of discrimination in Louisiana. While we do not have similar evidence specific to New Orleans specifically, we do note that racial discrepancies in imprisonment are no better in New Orleans than the nation as a whole, and the city's police department has been operating under a federal consent decree since 2012, due to alleged civil rights violations and other misconduct.

How is this Research Related to Other ERA-New Orleans Studies?

At the Education Research Alliance for New Orleans, we have sought to understand how the city's reforms have affected students and through what mechanisms those effects emerged. The "Key Conclusions" page on our website provides much more detail on these questions. Below, we highlight three studies that are closely related to the above discussion:

In their 2015 study *The Effects of the New Orleans School Reforms on Student Achievement*, Douglas N. Harris and Matthew F. Larsen offered a first look at the post-Katrina school reforms' effects on student outcomes based on the test score data available at that time (through 2012). Harris and Larsen's 2018 study, *What Effects Did the New Orleans School Reforms Have on Student Achievement, High School Graduation, and College Outcomes?*, provides more recent data, across a wider range of outcomes.

In *The Effects of the New Orleans School Reforms on Exclusionary Discipline Practices*, Mónica Hernández found that there was a large spike in the expulsion rate (1.5-2.7 percentage points, a 140-250% increase) in New Orleans schools after Hurricane Katrina. The rate returned to pre-Katrina levels after public pressure and legal challenges.

About the Education Research Alliance for New Orleans

The mission of the Education Research Alliance for New Orleans (ERA-New Orleans) is to produce rigorous, objective, and useful research to understand the post-Katrina school reforms and their long-term effects on all students. Based at Tulane University, ERA-New Orleans is a partnership between university-based researchers and a broad spectrum of local education groups. Our Advisory Board includes (in alphabetical order): the Louisiana Association of Educators, the Louisiana Association of Public Charter Schools, the Louisiana Federation of Teachers, the Louisiana Recovery School District, New Schools for New Orleans, NOLA Public Schools, Orleans Public Education Network, and the Urban League of Greater New Orleans. For more information, please visit the organization's website.

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