Can Better Classrooms Lead to Empty Cells?

AN ANALYSIS OF SCHOOL FUNDING AND INCARCERATION RATES

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The United States prison system garners significant attention from the media, policymakers, and the American public. The appropriate response to criminal behavior is a contested issue, and the trajectory of US criminal justice policy has shifted dramatically over the country's history. Societal responses to crime can be divided into four broad categories: containment, revenge, deterrence, and rehabilitation. The last category recently gained popularity among policymakers as an effective method to decrease criminal activity.[1] Although incarceration and rehabilitative programs have proved effective, they are nevertheless reactive solutions to a broader societal problem.

A more proactive approach is to stop crimes before they are committed by addressing the underlying factors at the source of illegal activity. Numerous studies show that institutional corruption, lack of access to good education, and poverty lead to an increase in crime rates.[2] Furthermore, empirical research shows that the quality of public schools is closely tied to the amount of funding the schools receive and that increased funding allows for higher-quality teachers, smaller class sizes, and other vital student supports.[3]

Using secondary prison data from the National Corrections Reporting Program (NCRP) 2000–16 and county-level public school funding, I conduct econometric analysis to measure the hypothetical relationship between per-pupil school funding and county-level incarceration rates for specific crimes. This relationship bears important implications for the development of criminal justice policy primarily because it supports proactive community development instead of retributive incarceration to reduce crime rates. More specifically, the correlation may help support the appropriate reallocation of prison funds toward restorative educational programs. This study's primary goal is to add to the rapidly growing body of literature that claims that equitable, high-quality educational systems are an essential aspect of successful crime prevention.

Literature Review

The United States criminal justice system has shifted in institutional structure and policy multiple times since the 1950s. When closely examined, these changes appear idiosyncratically different to their respective states, cities, or counties of implementation. But adopting a wider scope illuminates an overarching societal trend: a shift in power from the individual to the institution. Institutional policy and rigid adherence to uncompromising rules have gradually supplanted a system that once fostered space for nuance and discretion.

Although education is a vital preventative measure for reducing crime, particularly among youth populations, rehabilitation efforts made in the prison system remain an equally important means of reducing future crime rates and recidivism. It is important to examine the prison system's broader context and how the institution trended away from rehabilitation toward a harsher set of zero-tolerance policies. This zero-tolerance atmosphere originally stemmed from policies introduced at the beginning of the war on drugs, but it has continued to spread across other institutions such as the education system. The following section briefly explores trends in the prison and education systems and how their operations are intertwined.

Rehabilitation programs began to gain significant traction during the 1950s and '60s. However, the trajectory of the criminal justice system changed dramatically during the 1970s and '80s, as public sentiment toward criminal rehabilitation became increasingly pessimistic. Robert Martinson's 1974 paper hallmarked the beginning of a more punitive era of criminal justice policy.[4] The paper, now infamous for its foundational proposition that "nothing works," helped set the tone of prison policy for the following 20 years, a tone that abandoned the former goals of inmate rehabilitation for more retributive policies.

The public and policymakers from both sides of the political aisle held disdain for rehabilitation programs that appeared to have no tangible benefit. Crime rates were on the rise, and spending taxpayer money was the only apparent outcome of what appeared to be the government's waste of time and misappropriation of funds. Martinson laid the foundations for a prison policy centered on isolating those who engaged in illegal activity, instead of individual reintegration into society.[5]

In 1992, Malcom Feeley and Jonathan Simon conducted an in-depth analysis of the growing trend of penal language in criminal justice policy, which began in the 1970s.[6] The study claims that the language shift in the 1970s and '80s embraced the need for a mass incarceration system. But more importantly, it shifted the public concern from "punishing individuals to managing aggregates of dangerous groups."[7] According to Feeley and Simon, the old mantra of the criminal justice system was primarily focused on an individual's actions and the consequences associated with his or her illegal activity. If an individual commits a crime, he or she is responsible for this action, but simultaneously, other factors such as intent, past behavior, and psychological state carried more weight in the sentencing process.

The criminal justice process following the 1960s and early '70s has become increasingly more systemized and procedural. Feeley and Simon claim that the individual is no longer viewed as an independent agent but rather the output of a series of demographic variables. The criminal justice system's function has shifted from distributing individual justice to quarantining high-risk populations. It is easier and far more efficient to minimize crime risk by separating high-risk populations from the rest of society. However, this carries dangerous implications for the future of criminal justice reform. By shifting the language surrounding criminal justice from morality to statistics, the system's purpose shifts from individual responsibility to demographic control.

Only in the past 25 years has US criminal justice policy readjusted to a more proactive perspective. In this case, being proactive means minimizing factors that incentivize crime in the first place, such as limited access to quality education and high levels of economic inequality. This perspective still maintains threads of hard statistics and demographic analysis, but it simultaneously acknowledges the need for a broader, more nuanced response toward criminal activity.

Recidivism continues to remain high in the United States, making it all the more imperative to seek solutions that prevent individuals from engaging in criminal activity in the first place. In the current body of literature, significant research has been conducted concerning prisoner recidivism and the variables that affect it, specifically wages, education, and rehabilitation programs. In 2002, the Bureau of Justice Statistics (BJS) conducted one of the most comprehensive studies on recidivism. The special report, "Recidivism of Prisoners Released in 1994," "tracked 272,111 former inmates for 3 years after their release in 1994."[8]

The data, pulled from 15 states, represented two-thirds of all prisoners released in the United States that year. The study concluded that over two-thirds of prisoners were arrested for a new crime in the three-year time horizon.

The BJS published a similar report in 2014 that estimated "the recidivism patterns of 404,638 persons released in 2005 from state prisons in 30 states."[9] A representative sample of inmates was generated from the initial population of 404,638 people, resulting in a working sample of 68,597 people.[10] The same initial population of 404,638 people, withholding 3,350 individuals who died during the nine-year follow-up period, was sampled in 2018 for an additional follow-up study. The resulting representative sample included 67,966 prisoners from 30 states. The study tracked the sample inmates' criminal records to measure recidivism rates in the nine-year period after release. The study concluded that "83% of prisoners released in 2005 across 30 states were arrested at least once during the 9 years following their release."[11] The primary takeaway from each report is that recidivism among United States prisoners is incredibly high and has consistently remained at high levels for the past three decades.

Multiple studies have been conducted regarding the effect a criminal record can have on future employment. Devah Pager, a former professor of sociology and public policy at Harvard University, published a compelling study, "The Mark of a Criminal Record," in 2003.[12] Its goal was to evaluate how a criminal record affected an individual's search for employment. Data points were collected via audit method by having four applicants, two black and two white, apply to various entry-level job openings in the Milwaukee area. The study concluded that for the white subjects,

> there is a large and significant effect of a criminal record, with 34% of whites without criminal records receiving callbacks, relative to only 17% of whites with criminal records. A criminal record thereby reduces the likelihood of a callback by 50%.[13]

Race, in addition to having a criminal record, played a significant role in callback rates. According to the study, "Among blacks without criminal records, only 14% received callbacks, relative to 34% of white noncriminals ($P < .01$). In fact, even whites with criminal records received more favorable treatment (17%) than blacks without criminal records (14%)."[14] The study concluded that possessing a criminal record decreased the likelihood of receiving a callback from potential employers. The negative effect is amplified among racial minorities. This finding, combined with the knowledge that minorities are already significantly more likely to go to prison in the first place, poses serious concerns for minority populations and the US labor market.

Activists and policymakers are making significant efforts to minimize the debilitating effect a criminal record has on a person's ability to find future employment. One such initiative, known as "ban the box," seeks to prohibit employers from asking about a person's criminal history on a job application. The "box" refers to the common checkbox found at the bottom of almost all job applications that forces an applicant to disclose any previous criminal activity. Although this initiative may seem radical on paper, more often than not the checked box simply prohibits reformed prisoners from finding valuable employment opportunities, a crucial element to stop the pattern of recidivism commonly found in released inmates.

The *Journal of Public Economics* published a study in 2017 on the effects of local labor markets on criminal recidivism. The author, Crystal Yang of the National Bureau of Economic Research, used "administrative prison records on four million offenders released from 43 states between 2000 and 2013" to discover the impact of wages on recidivism rates.[15] She concluded:

> Being released to a county with higher low-skilled wages significantly decreases the risk of recidivism. The impact of higher wages on recidivism is larger for both black offenders and first-time offenders, and in sectors that report being more willing to hire ex-offenders.[16]

Criminal activity and high recidivism levels have social and economic costs that higher wages after prisoner release could counteract. Furthermore, higher levels of education provide increased future earnings and disincentivize an individual from engaging in illegal activity. If higher wages help lower recidivism rates, it follows that better education will do the same.

As the criminal justice process becomes increasingly systemized, its unique relationship with the public school system has grown out of proportion. The link between education and incarceration rates is a well-studied subset of the literature concerning the criminal justice system. Numerous studies show there is a significant negative relationship between the quantity and quality of education an individual receives and the likelihood the same individual engages in illegal activity.

Education plays an equally important role inside prison walls. Correctional facilities' education programs have long been regarded as an essential element of the rehabilitation process.[17] Programs that increase inmate education levels have proved to reduce recidivism and increase prisoners' economic circumstances after release.[18] Better-educated prisoners are less likely to return to prison after release.[19] Regular school attendance results in individuals committing less-severe crimes and with less frequency.[20] Better education reduces crime.

From a psychological perspective, education has been shown to reduce an individual's likelihood to commit a crime in several ways. First, education teaches individuals patience.[21] An educated person is more likely to place a higher value on the rewards of long-term goals, such as pursuing a career or secondary education, rather than the immediate reward of committing a crime. Additionally, educated individuals come in close contact with other educated people through schools and social circles and are more likely to form healthy relationships with them.[22] These types of relationships form positive feedback loops that promote good social behavior and discourage undesirable actions such as crime.

There is also established evidence that the quantity of education an individual receives lowers crime rates among student populations. In 2004, Lance Lochner and Enrico Moretti used data from the FBI Uniform Crime Reporting Program and the National Longitudinal Survey of Youth to support the correlation between years of schooling and incarceration rates.[23] Their study found that "one extra year of schooling results in a 0.10-percentage-point reduction in the probability of incarceration for whites, and a 0.37-percentage point reduction for blacks."[24] Lochner and Moretti estimated that a just 1 percent increase in male high school graduation rates would generate approximately $1.4 billion in social savings.[25] This significant amount of social saving, extrapolated over decades, would likely have a dramatic effect on communities across the United States, especially those with lower-than-average graduation rates.

A more recent study by Randi Hjalmarsson, Helena Holmlund, and Matthew Lindquist compared crime rates among Swedish school systems that gradually implemented new policies extending the minimum compulsory school years from seven to nine.[26] By analyzing populations that were born in the same generation and labor market, a period from the 1960s through the '70s, the study could control many factors that typically blur the correlation between education and crime. The authors found that the reforms increased the average years of schooling by 0.33 years for males and 0.20 years for females.[27] The analysis suggested that one additional year in school decreases the likelihood of criminal conviction by 6.7 percent and incarceration by 15.5 percent.[28]

Even more encouraging were the findings of Costas Meghir, Mårten Palme, and Marieke Schnabel: The same policy reform affected the crime rates of the next generation.[29] The sons of the fathers who were in school at the time of the reform saw a 0.8 percent reduction in conviction rates.[30] These two studies provide valuable insights into the relationship between education quality and crime rates. They are two strong cases among a growing body of literature that affirms the same claim: More education reduces incarceration rates.

Educational quality also plays an important role in youth crime reduction. Commonly, neighborhoods

with the highest incarceration rates also have the most underfunded school programs.[31] David Deming evaluated the differences in criminal involvement between students who won a preferred-school lottery and those who lost the lottery.[32] Deming established that many of the preferred schools had better test scores or teaching characteristics compared to the default school option. His study found that students who won the lottery and attended a better school were significantly less likely to engage in criminal activity. The effect was most pronounced for African American males, who committed 50 percent less crime than students who lost the lottery and had attended the generally lower-quality schools.

One of the most concerning aspects of the United States public school system is the school-to-prison pipeline, which many scholars believe contributes substantially to the cycle of high incarceration rates often found in communities with poor education systems. Repeatedly, students are introduced to the criminal justice system before graduating high school through harsh disciplinary measures such as suspension, expulsion, and court referral, which have dramatically increased since the early 1990s.[33] These forms of discipline are commonly referred to as "zero-tolerance policies," in which minor infractions are punished on a similar level to major violations.[34] The result of such extreme measures: Students are pushed away from the opportunities education provides toward a path where they are significantly more likely to engage in criminal activity. The school-to-prison pipeline is a systemic pattern responsible for funneling disenfranchised students directly into the prison system.

Consider for a moment a student who acts out in school. Maybe he or she gets into a fight with another student or is disruptive in class. If the student poses a realistic danger to the other students or faculty, it may be appropriate for the administration to suspend or, in extreme cases, expel the student for his or her behavior. The problem with zero-tolerance policies is these harsh disciplinary methods are used far too readily and often in cases when the student is engaging in disruptive, but not dangerous, patterns of behavior.

Daniel Losen of the Civil Rights Project at the University of California, Los Angeles, conducted a study in 2015 that estimated public school students lost approximately "18 million days of instruction in the 2011–12 school year due to exclusionary discipline policies."[35] According to the Department of Education's Civil Rights Data Collection, 2.7 million students were suspended during the 2016–17 school year,[36] which translates to approximately one out of every 20 students when compared to the total student population from the same year.[37] Russell Skiba's comprehensive analysis of the literature surrounding zero-tolerance policy found suspension was among the most widely used disciplinary techniques and was frequently used for minor cases such as disobedience or disrespect.[38]

Despite the common use of suspension, discipline measures that remove students from school likely do more harm than good. Previous research shows that antisocial behavior among students can manifest as early as elementary school in the forms of disruption and disrespect for authority.[39] Early undesirable behavior alienates a student from his or her teachers and peers and often marks the child as a troublemaker in the school system. As a result, teachers become more prone to distribute harsher punishment to students who repeatedly act out. Skiba proposed that, unfortunately, punishments centered on social isolation, specifically suspension and expulsion, merely accelerate the student further down a road of antisocial behavior.[40] By abandoning the student and forcing his or her separation from the positive influences commonly found in the school system, bad behavior perpetuates instead of being corrected.

In addition to these remarkably high figures, zero-tolerance policies are implemented more consistently for minority students, often for less-severe infractions than their fellow white students.[41] African American students account for 37 percent of suspensions and 35 percent of expulsions despite comprising only 17 percent of the student population.[42] This unusual lean of the data toward minority students is a concerning reflection of the incarceration system, which is overwhelmingly composed of minority populations.

Table 1. Crime Code Categories

Category	BJS Crime Codes
Murder and Manslaughter	10–32
Sexual Offenses	50–82
Robbery	90–102
Violent Offenses	120–180
Burglary	190–192
Auto Theft	210–212
Larceny	220–282
Drug Offenses	340–350
Weapon Offenses	480–482
Driving Under the Influence	560–570

Source: Author.

Understanding the student-to-prison pipeline remains an essential facet to understanding the deep-rooted problems ingrained in the criminal justice system. To this day, students are restricted from schools through severe zero-tolerance policies that leave them more alone and ill-equipped than they were before engaging in the undesirable behavior. Other forms of discipline, such as detention or counseling, that do not remove the student from school are more successful at keeping students safe and out of criminal activity. On top of this, the literature shows that better education, higher wages, and more comprehensive rehabilitation are a more holistic approach to reducing crime rates, and ultimately incarceration levels, in the United States.

Data and Methodology

This analysis' primary purpose is to add to the growing body of literature that supports the potential correlation between education funding and incarceration rates. All crime-related variables included in the study are calculated using data collected from the NCRP 2000–16, which includes descriptive data points such as the type of crime committed, sentencing length, and the county where the prison sentence was carried out for each individualprisoner. The data are formatted on an individual-prisoner level, and each prisoner is paired with up to three of his or her criminal offenses ranked in order of severity, determined by the prison sentencing length assigned to each criminal offense. For the analysis, all data on prisoners are collected from the years 2001 through 2008.

All crimes included in the analysis have an assigned BJS offense code that is included in the dataset. The BJS codes are used to group similar crimes into 10 broad categories for the purpose of the study (Table 1).[43] There are hundreds of unique codes, and although individual regression analysis for each crime code would be undoubtedly interesting, that task lies outside the scope of this particular study.

For simplification's sake, the categories are based on the broad segmentation used by the National Incident-Based Reporting System.[44] For example, instead of identifying second-degree manslaughter as its own unique variable, it is paired with other crimes that share comparable characteristics, such as other manslaughter charges and murder. Certain more unique crime codes that are more difficult to group with other crimes into an overarching category, such as those associated with arson, are excluded because of the relatively low sample size of offenses included in the NCRP dataset.

All data regarding school financial information are collected through the National Center for Education Statistics database.[45] The data are sourced from two national surveys, the Local Education Agency's (School District) Universe Survey and (School District) Finance Survey (F-33). School revenues and expenditures before the analysis are formatted on the school-district level from the fiscal years 1997 through 2004. The advantages of higher school funding likely do not take full effect until after students have graduated and entered adult life. For this reason, these particular years are selected for school funding to act as a leading variable for the offense count data.

The variables control for student population by formatting all financials on a per-pupil basis. For counties that contained more than one school district, I take the average of all-school-district, per-pupil values in the county. Although the averaging is not ideal, the values do not vary much across school districts from the same county, and it proves to be the most expedient method to format data on the county level.

To successfully pair the NCRP dataset with the data on school revenue and expenditure, the individual-prisoner data are reformatted to the county level. The NCRP dataset includes two county variables: the county where the prison sentence was imposed and the prisoner's last known county address. Due to the latter's low observation count in the dataset, the county where the prison sentence was imposed is selected to be the key geographical attribute for each prisoner.

Offense counts are sorted into the previously mentioned crime code categories, in which they are totaled based on the year of the sentencing and the county where the sentence was imposed. The result is a reformatted dataset that shows the offenses that resulted in an individual receiving jail time during a particular year and specific county.

County-level data for unemployment rate, poverty rate, poverty rate for those under age 18, median household income, and civilian labor force are all collected from the United States Census Bureau data bank.[46] County-level gross domestic product (GDP) data are collected from the Bureau of Economic Analysis data bank.[47] All variables expressed in dollar values are converted into 2010 dollars using the consumer price index reported on the US Census Bureau website.[48]

A few important distinctions need to be addressed regarding the data selected for the final regressions. Individual crime counts from the NCRP dataset are used instead of county-level crime rates to keep an element of the prison system included with the scope of the project. Raw crime statistics are useful across various studies that examine the criminal justice system, but they fail to specifically encapsulate the portion of the population that ends up incarcerated after engaging in criminal activity. Individuals may commit crimes and not serve jail time, and the primary goal of the study requires the analysis to focus specifically on the relationships between school revenue and incarceration rates, not just crime rates.

To evaluate the relationship between incarceration rates and school funding, 50 individual ordinary least squares regressions are conducted, each with a sample size of 21,516 individuals. The models use the following equation for the analysis:

$$Crime\ Rate\ of\ Interest_{it} = \beta 0 + \beta_1 Revenue_{it} + X^T\gamma + \delta_{it} + \varepsilon_{it.}$$

Each of the 10 crime variables is used as the dependent variable for five of the 50 regression models, in which the *Crime Rate of Interest* variable represents one of the 10 associated crime categories (Table 2). All independent variables (Table 3) remain the same across the 50 regressions except for the per-pupil funding variables, which are cycled through five iterations: total expenditures and total, local, state, and federal revenues. The control variables—unemployment rate, poverty rate, poverty rate under age 18, median household income, and GDP per member of the civilian labor force—are represented with $X^T\gamma$. The 41-state fixed effects and all 50 models are statistically significant at the 1 percent level. The adjusted R-squared values range from 0.07 to 0.56.

Results

Across all 50 models, only five generated a per-pupil coefficient that was statistically significant and returned a positive coefficient. Conversely, 23 models returned a coefficient that was statistically significant and negative, which contradicts the null hypothesis. Out of the 23 models that align with the study's initial assumptions, 19 had a per-pupil coefficient that was statistically significant at the 1 percent level.

According to the regression analysis, school funding appears to particularly affect property-related crimes. Per-pupil revenue and expenditure coefficients were negative and statistically significant at the 1 percent level for all 10 models that used auto theft and robbery rates as the dependent variable. This was the same for four of the five models from the larceny category and three of the five models from the burglary category (Table 4).

There could be many reasons for this correlation, but one possible explanation is the much larger sample size offered by property-related crimes. For example, property crimes are consistently some of the most

Table 2. Dependent Variables

Dependent Variables	Definition	Calculation
Murder and Manslaughter Rate	Number of murder and manslaughter counts per 100,000 members of the civilian labor force	Murder and Manslaughter Count / Civilian Labor Force x 100,000
Sexual Offense Rate	Number of sexual offense counts per 100,000 members of the civilian labor force	Sexual Offense Count / Civilian Labor Force x 100,000
Robbery Rate	Number of robbery counts per 100,000 members of the civilian labor force	Robbery Count / Civilian Labor Force x 100,000
Violent Offense Rate	Number of violent offense counts per 100,000 members of the civilian labor force	Violent Offense Count / Civilian Labor Force x 100,000
Burglary Rate	Number of burglary counts per 100,000 members of the civilian labor force	Burglary Count / Civilian Labor Force x 100,000
Auto Theft Rate	Number of auto theft counts per 100,000 members of the civilian labor force	Auto Theft Count / Civilian Labor Force x 100,000
Larceny Rate	Number of larceny counts per 100,000 members of the civilian labor force	Larceny Count / Civilian Labor Force x 100,000
Drug Offense Rate	Number of drug offense counts per 100,000 members of the civilian labor force	Drug Offense Count / Civilian Labor Force x 100,000
Weapon Offense Rate	Number of weapon offense counts per 100,000 members of the civilian labor force	Weapon Offense Count / Civilian Labor Force x 100,000
DUI Rate	Number of DUI counts per 100,000 members of the civilian labor force	DUI Count / Civilian Labor Force x 100,000

Source: Author.

common crimes in the United States and occur much more often than violent crimes. According to the FBI's Uniform Crime Reporting Program, approximately 7.2 million property-related offenses were reported in 2018, compared to the 1.2 million violent offenses that were reported in the same year.[49] The larger sample size likely plays a significant role in helping establish the correlation between school funding and property crime.

There was also an extreme variance in adjusted R-squared values across the regressions. The R-squared values remained incredibly consistent in the five regressions conducted for each crime category. The variance occurred when the dependent variable, the crime rate, was changed. Auto theft had a relatively large R-squared of 0.52, while sexual offenses had a much lower value of 0.07.

Although this variance is unusual, one possible explanation could be that violent and sexual crimes are less affected by increases to education spending. The R-squared for murder and manslaughter, sexual offenses, violent offenses, and drug offenses was in

Table 3. Independent Variables

Independent Variables	Definition
Unemployment Rate	Percentage of civilian labor force unemployed
Poverty Rate	Percentage of people of all ages in poverty
Poverty Rate Under Age 18	Percentage of people under age 18 in poverty
Median Household Income, Real	Median household income of the county in 2010 dollars
GDP per Civilian Labor Force	Annual county-level GDP per member of the civilian labor force
Total County School Revenue per Pupil, Led for Four Years	The district's total general revenue divided by the fall membership as reported on the district finance file. The average of all district values in the county was taken to calculate county-level values. Total general revenue is the total revenue from federal, state, and local sources, led for four years.
School Local Revenue per Pupil, Led for Four Years	The district's total revenue from local sources divided by fall membership as reported on the district finance file. Local revenues include revenues from such sources as local property and non-property taxes, investments, and revenues from student activities, textbook sales, transportation and tuition fees, and food-service revenues. The average of all district values in each county was taken to calculate county-level values, led for four years.
School State Revenue per Pupil, Led for Four Years	The total revenue from state sources divided by fall membership as reported on the district finance file. State revenues include direct funds from state governments and revenues in lieu of taxation. The average of all district values in each county was taken to calculate county-level values, led for four years.
School Federal Revenue per Pupil, Led for Four Years	The district's total revenue from the federal government divided by fall membership as reported on the district finance file. The average of all district values in each county was taken to calculate county-level values, led for four years.
Total School Expenditures per Pupil, Led for Four Years	Total expenditures made by school districts divided by fall membership as reported in the district finance file. The total expenditures are first reduced by current expenditures made on behalf of students not included in the fall membership. The average of all district values in each county was taken to calculate county-level values, led for four years.
STATE IDXX	Dummy variable used to control for state
YEAR DXXXX	Dummy variable used to control for year

Source: Author.

Table 4. Regression Results by Type of Crime

	Total	Local	State	Federal	Expenditures
Murder and Manslaughter					
Per-Pupil Funding	0.00017	0.00042*	–0.00021**	–0.00012	0.0002
Standard Error	0.00015	0.00023	0.00009	0.00027	0.00014
N	21,516	21,516	21,516	21,516	21,516
R^2	0.1084	0.1099	0.1082	0.1079	0.1086
Sexual Offenses					
Per-Pupil Funding	–0.00019	–0.00033*	0.00001	0.00014	–0.00017
Standard Error	0.00014	0.00017	0.00025	0.00081	0.00012
N	21,516	21,516	21,516	21,516	21,516
R^2	0.0705	0.0706	0.0704	0.0704	0.0705
Robbery					
Per-Pupil Funding	–0.00068***	–0.00041***	–0.00076***	–0.00254***	–0.00063***
Standard Error	0.00009	0.00013	0.00015	0.00038	0.00009
N	21,516	21,516	21,516	21,516	21,516
R^2	0.1576	0.1553	0.156	0.1569	0.157
Violent Offenses					
Per-Pupil Funding	0.00062	0.00079	–0.00051	0.00611	0.00052
Standard Error	0.00065	0.00073	0.00079	0.00439	0.00066
N	21,516	21,516	21,516	21,516	21,516
R2	0.1238	0.1238	0.1236	0.1245	0.1237
Burglary					
Per-Pupil Funding	–0.00093***	–0.00033	–0.00143***	–0.0036**	–0.00107***
Standard Error	0.00027	0.00042	0.00045	0.00149	0.0002
N	21,516	21,516	21,516	21,516	21,516
R^2	0.1688	0.1683	0.1688	0.1687	0.169
Auto Theft					
Per-Pupil Funding	–0.00055***	–0.04633***	–0.00049***	–0.00145***	–0.00047***
Standard Error	0.00008	0.00006	0.00014	0.00033	0.00008
N	21,516	21,516	21,516	21,516	21,516
R^2	0.5632	0.5602	0.5595	0.5599	0.5616
Larceny					
Per-Pupil Funding	–0.00198***	–0.00013	–0.00379***	–0.00901***	–0.00207***
Standard Error	0.00041	0.00065	0.0006	0.00226	0.00037
N	21,516	21,516	21,516	21,516	21,516
R^2	0.2592	0.2581	0.2595	0.2593	0.2592
Drug Offenses					
Per-Pupil Funding	–0.00112	0.00484***	–0.00768***	–0.02249***	–0.00109
Standard Error	0.00109	0.00016	0.00133	0.00454	0.00119
N	21,516	21,516	21,516	21,516	21,516
R^2	0.1317	0.1324	0.1328	0.1331	0.1317

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Table 4. Regression Results by Type of Crime (Continued)

	Total	Local	State	Federal	Expenditures
Weapon Offenses					
Per-Pupil Funding	0.000118	0.000305	–0.00014	–0.00032	0.000116
Standard Error	0.00012	0.00037	0.00019	0.00072	0.00024
N	21,516	21,516	21,516	21,516	21,516
R^2	0.1801	0.1803	0.1801	0.1801	0.1801
DUI					
Per-Pupil Funding	0.00066*	0.00164***	–0.0008**	–0.00103	0.00066*
Standard Error	0.00066	0.00048	0.00033	0.00158	0.00037
N	21,516	21,516	21,516	21,516	21,516
R^2	0.2617	0.2638	0.2614	0.261	0.2616

Note: R-squared was adjusted for all models. Controls for unemployment rate, poverty rate, poverty rate under age 18, median household income, GDP per member of the civilian labor force, and state and year fixed effects are included in all regressions. The single, double, and triple asterisks denote 10, 5, and 1 percent statistical significance, respectively.
Source: Author.

the bottom 50 percent of generated R-squares among the regressions. This assumption aligns with Stephen Machin, Olivier Marie, and Sunčica Vujić's previous research, which found an average one-year increase in schooling decreases property crime by 20–30 percent and violent crime by less than half the same amount.[50]

Conclusion

The current analysis and the established body of literature support the claim that there is a correlation between school funding and crime rates. However, the model could certainly be improved with additional studies. This particular analysis focuses on the effect school funding has on incarcerations, not crime rates as a whole. Because of this, the sample includes only individuals who were charged guilty of their respective crimes and sentenced to some amount of prison time, not those who engaged in illegal activity and either got away with the act or did not receive prison time. The time horizon could be extended to include a much larger sample size as more data become available.

More importantly, one of this dataset's weakest aspects is its geographical ambiguity. The crime variables were generated using offense counts of incarcerated individuals that were assigned a county based on the incarceration location, not the county where the offense was committed. This limitation contributes a significant level of vagueness to the models' overall results. I believe the models could be dramatically improved by including the counties where the crimes were committed. However, the contents of the NCRP dataset prevented this improvement from becoming a reality.

The majority of the statistically significant coefficients for school financials are negative. According to the regression analysis for larceny, an increase of $111 in per-pupil federal school revenue would reduce larceny counts by one per 100,000 members of the civilian labor force. Although this increase may appear inefficient, the change becomes more cost-effective when one considers that the average annual cost of incarceration per individual is approximately $47,000, according to the Vera Institute of Justice.[51] This funding increase also does not take into account the potential decrease in other crime counts outside of larceny, which would further increase the social savings of having fewer incarcerated individuals. Communities may be able to recoup the increase in education spending through the decrease in incarceration costs.

As policymakers, academics, and concerned citizens explore alternative possibilities for criminal justice reform, effective methodology and accurate data

will continue to play a crucial role in discovering what works to reduce criminal activity. Transparency across institutions remains absolutely essential. Individuals who can access accurate, up-to-date information about the criminal justice system will have a much easier time developing studies to improve a flawed system that is out-of-date, inefficient, and rigid.

The past has shown deterrence does not always work, and rehabilitative methods can be more effective at reducing crime while contributing to the restoration of crime-ridden communities. The literature supports that factors such as better education and social cohesion can go a long way toward healing neighborhoods that have been riddled with crime for years despite the efforts of law enforcement and the prison system.

The process has not been, and will never be, perfect. Some levels of crime will always exist. But new approaches to criminal justice reform will continue to reduce illegal activity's damage to the United States and the lives of its citizens.

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