

The Impact of the ACA Medicaid Expansions on Crime Rates  
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## **Introduction and Background**

The economic costs of crime are large. According to the Government Accountability Office, some researchers have estimated the annual costs of crime to be as high as \$3.41 trillion. According to Bureau of Justice statistics data from 2015, the combined spending on the justice system totaled \$284 billion during 2015. This number does not include the other costs such as damages to property, medical expenditures, or even the changes in people's behavior to avoid crime. Estimates of these costs widely vary due to the many different methodologies that produce the estimates. Though there is not a consensus on the exact cost of crime to society, everyone agrees that the cost of crime is large, and it has a significant negative impact on society.

Crime and substance use and abuse are no doubt related. Billions are spent every year trying to reduce drug use in an effort to promote public health and reduce criminal behavior. A 2010 survey found that 85 percent of prison inmates were found guilty of crimes that involved an illegal drug. In 2006, alcohol or drugs were involved with 78% of violent crimes, 83% of property crimes, and 77% of public order, immigration or weapons offenses and probation/parole violations. While there is little doubt that crime and drugs are linked, it is not clear which one causes the other.

The same survey found that only 11 percent of all inmates with addictions received any treatment for their addictions. Access to and complete addiction treatment can help people live a productive life, free of criminal activities, and in some cases be more effective than punishing drug users. For this reason, expanded access to treatment may be a more productive way to reduce crime than incarceration and treatment for drug users should be a national priority.

Health insurance coverage may also have an impact on crime through reducing the healthcare costs. This may represent a positive income effect because there would be less of an incentive to commit crimes (Becker 1968). The Affordable Care Act (ACA) Medicaid expansion provided new coverage to over 12 million people who were previously ineligible for these benefits. This expansion likely helped many become more financially secure by reducing healthcare costs, and this may have helped to play a role in decreasing crime. Multiple studies such as Finkelstein et al. (2012), Simon, Soni, and Cawley (2016) have shown that the ACA Medicaid expansion improved the financial wellbeing of individuals. This improvement in financial wellbeing may help to reduce crime if the positive income effect meant there was less incentive for people to commit crimes.

In 2010, the Patient Protection and Affordable Care Act was signed into law, and had three main goals: increase access to affordable health insurance through subsidies, expand Medicaid coverage to all people whose income is below 138% of the federal poverty line, and to support medical care delivery methods to lower the costs of healthcare. The effect of the passage of this law was to expand healthcare coverage to large numbers of people who had previously been living without health insurance. In *National Federation of Independent Business v. Sebelius* (2012), the Supreme Court “concluded that the Medicaid expansion provisions was unconstitutionally coercive as written. Congress does not have authority under the Spending Clause to threaten the states with complete loss of Federal funding of Medicaid, if the states refuse to comply with the expansion.” This ruling allowed states to decide whether they would expand Medicaid or not without risk of losing federal funding. Since the ruling, 36 states and Washington D.C. have expanded their Medicaid programs and 14 states have not. By increasing health insurance coverage rates through Medicaid expansion, more people are able to get

treatment for their substance use disorders, which should decrease their reliance on crime that was funding their substance abuse. Thus, the increase in health coverage may be linked with lower crime rates.

This paper examines the relationship between Medicaid expansion and crime. Medicaid expansion has granted access to drug use treatment that people previously did not have access to, and expanded healthcare coverage as well, which was the main goal of expanding Medicaid access. It is expected that Medicaid expansion has led to decreased crime in the states that have expanded Medicaid and little to no changes in crime in states that have not expanded Medicaid. Because not all states have expanded Medicaid, it has created an opportunity to test the relationship between Medicaid expansion and crime. This paper uses a difference-in-differences approach to examine the relationship between Medicaid expansion and crime in order to determine if Medicaid expansion led to decreased crime. If the results show that Medicaid expansion is related to decreased crime, then there are more benefits to Medicaid expansion than decreasing the rate of uninsured people. The goal of Medicaid expansions was to increase access to healthcare coverage, not reduce crime, but if there is a link between the two, then it may show another unintended positive externality associated with the Medicaid expansions. If this paper shows no link between the two, then it reveals that there may not be any links, or that crime is impacted by all different sorts of influences. It is also possible this paper reveals only temporary benefits but does not show any long-lasting effects from the Medicaid expansion. This paper does not study the effectiveness of Medicaid expansion, but only seeks to expand upon the knowledge of the impacts that Medicaid expansion had on other areas of life besides increased access to healthcare.

## **Literature Review**

### **Medicaid Impact**

Finkelstein et al. (2012) reports on the Oregon Health Study, where the state of Oregon expanded its Medicaid program by adding 10,000 spots through a lottery system for adults who were previously ineligible for Medicaid. The results show that receiving insurance caused a 4.8 percent decrease in the odds of having a bill sent to collections. The study also discovers a 35 percent decrease in out-of-pocket medical costs due to receiving insurance through Oregon's Medicaid expansion. Finally, the study estimates that Oregon's Medicaid expansion caused a 40 percent decrease in the need for people to borrow money in order to pay medical bills.

Simon, Soni, and Cawley (2016) examines the early impacts of the 2014 Medicaid expansion. The study finds that the expansions increased health insurance coverage overall by 9 percent, while low income childless adults, the main target of the expansion, had a 17 percent increase in insurance coverage. In addition, this research shows that the expansions increased the use of preventative care as well. This is similar to Finkelstein et al. (2012), which also found that there was an increased amount of preventative care utilization.

Brevoort, Grodzicki, and Hackmann (2017) studies the impact of the Medicaid expansion on household financial health. Using credit data from over five million individuals in the United States, its findings indicate that in addition to fewer unpaid medical bills, the Medicaid expansion also reduced the amount of medical bills sent to collections and improved credit scores. Overall, the results of their study show that the overall financial benefits of the Medicaid expansion double when the indirect effects are also taken into account.

Hu et al. (2016) also examines the financial impact of the ACA Medicaid expansion. Using a large number of credit reports, the study shows that the ACA Medicaid expansion led to

lower rates of debt collections. This impact also had an effect on third party credit agencies, because they were likely to have less bad debt, meaning they would not lose nearly as much money compared to people unable to pay down their debts. This study argues that it is not just those who gain coverage under Medicaid expansion, but it also those involved in the financial side of the healthcare and insurance industry. This means that there may be more credit available to those who gained coverage, allowing them to improve their lives and be less likely to resort to financially motivated crime. Overall, the Medicaid expansion helps in ways that may not be obvious since its benefits can go beyond those who receive health insurance.

### **Drug Enforcement**

It is also important to examine the success or failure of other efforts to reduce crime and drug use, specifically drug enforcement policy. The connection between drugs and crime are well documented. Medicaid expansion provides more resources for curtailing drug use, so it may also have been effective in reducing crime.

Kuziemko and Levitt (2003) found that there could be a 5 to 15 percent decrease in consumption of cocaine, as well as a 5 to 15 percent increase in the price of cocaine if there is a 15 fold increase in funding towards drug related incarcerations. However, this is not cost effective. The study uses estimates of world quantities of cocaine and spending on enforcement to find that in order for these enforcement efforts to be effective, the negative externalities associated with cocaine would need to be \$270 per gram of cocaine. This number is extraordinarily high, and even the highest estimates of other studies do not come close to this number. Therefore, drug enforcement efforts have not been successful in reducing drug use, and may not even be worth it because they may not lead to a more socially optimal situation.

Kleiman and Reuter (1986) is a well-known study that examines the effectiveness of the levels of drug enforcement, as well as trying to understand the difficulties and obstacles that can impact its effectiveness. The study finds that most of the retail price of illegal drugs come after the drugs have already passed into the country; very little of the overall price of drugs comes from the production of the drugs themselves. It also shows that increased enforcement by the federal government is unlikely to be successful, and only local enforcement for heroin seems to be effective. The study also mentions the violence associated with the illegal drug industry, and states that “Thus increased enforcement pressure will tend to increase the capacities for violence of drug-dealing” (Reuter and Kleiman 1986, 305). Based on this study, federal enforcement is not very effective in accomplishing its goal to reduce drug use, while local enforcement may only increase violence. The government’s strategy to reduce drug use may not be the best situation, and could also be causing more problems than it is solving.

It is also important to examine how drug enforcement has impacted crime. If drug enforcement has been effective at reducing drug use, then logically there would be a reduction in crime. Resignato (2000) studies the relationship between drug use, drug enforcement, and the crime rates in 24 metropolitan statistical areas. The results of the study indicate a stronger association between crime and drug enforcement than between crime and drug use. This means that drug enforcement may actually be increasing crime and drug enforcement may be creating more negative externalities than benefits. Shepard and Blackley (2005) explore statistics from New York state and find similar results. This analysis looks at both violent and property crimes, and finds that no negative relationship between drug enforcement and overall crime levels, but there are some positive relationships between drug enforcement and crime. This again shows that although drug enforcement may not be increasing crime, it is definitely not reducing crime.

Therefore, drug enforcement that attempts to reduce use by punishing people has not been effective in reducing use or crime.

### **Medicaid Expansion and Drug Overdoses**

Medicaid expansion has increased the number of insured Americans, but that may not be a good thing. Some people believe the increased access to healthcare has only made the opioid epidemic worse by increasing the availability of opioids. Venkataramani and Chatterjee (2018) examine the impacts on drug overdose mortality in states, namely Arizona, Maine, and New York, that expanded Medicaid before the passage of the Affordable Care Act. The study uses a difference-in-differences approach, and compare the drug overdose mortality rates in the early expanding states and the non-expanding states. The results find that drug overdose mortality rates rise less in the states that expanded Medicaid compared to states that did not. Furthermore, when limiting the control states to only those which bordered the early expansion states, they saw a similar trend in drug overdose mortality rates. Therefore, it is not likely that Medicaid expansion is the cause of the increased opioid deaths in the states that expanded Medicaid access.

Another study Carlone (2019) analyzes the relationship between Medicaid expansion and the opioid epidemic. Using a difference-in-differences approach, the results find that the Medicaid expansion may have actually increased the numbers of overdose deaths. However, these results do not suggest that the Medicaid expansion was the sole cause of the increase in drug overdoses. Carlone notes that Medicaid expansion may have led to increased access to opioids or that it has reduced the opportunity cost of abusing drugs because people have more access to other treatment options. The paper does not make the conclusion that the Medicaid

expansion was a bad thing, and that there may be other benefits without causing any of the negative consequences associated with the Medicaid expansion.

### **Medicaid Expansion and Crime**

Vogler (2018) analyzes the relationship between Medicaid expansion and crime using a difference-in-differences model, similar to the plan for this paper. The results of this study show that states that expanded Medicaid experienced a 3.3 percent drop in crimes relative to the non-expansion states. The study also breaks down the decrease in crime between property and violent crimes. Those results showed between a 5.2 percent and 6.0 percent reduction in the violent crime rate in expansion states relative to non-expansion states. It also shows a decrease by 3.1 percent in the property crime rate in expansion states relative to non-expansion states. Overall, the study reveals decreased crime rates in states that expanded Medicaid compared to the states that did not expand it.

Wen, Hockenberry, and Cummings (2017) assess the impacts of early Medicaid expansion on the levels of crime. The results show that the Medicaid expansion reduced the rates of robbery, aggravated assault, and larceny theft. The study also estimates that a 10 percent increase in substance use disorder treatment, which costs about \$1.6 billion, yields a net benefit of between \$2.9 billion and \$5.1 billion. These benefits show that reducing crime by increasing substance use disorder treatment may save society a large amount of money. By expanding Medicaid, more people would be able to access substance use disorder treatment, and therefore, expanded Medicaid may be a way to reduce crime and its costs to society.

He and Barkowski (2018) finds similar results to the previous two studies that Medicaid expansions have decreased crime. The results are stronger for violent crimes compared to

property crimes, which the authors attribute to violent crimes carrying more severe punishments. The authors conclude that these effects offset the public costs by implementing the expanded Medicaid systems in the states.

Finally, a 2020 study conducted by Jacob Vogler found that there appeared to be no statistically significant effects for total crime and property crime but did find a statistically significant impact for violent crime. Vogler's study went deeper and found a large portion of the reduction in violent crime was due to a reduction in aggravated assaults. This study showed that there can be large cost savings associated with the reduction in crime, but it also recognizes some of the drawbacks as well. Crime is something that is hard to study because it is impossible to know about all crime, meaning there may be changes in crime that are unknown to authorities. Nevertheless, the study did find at least some reductions in crime, and that is the hope of this study as well.

As Medicaid expansion is a recent development, there are likely fewer than five studies that examine the relationship between crime and the widespread Medicaid expansion following the passage of the Affordable Care Act, but literature related to Medicaid expansion is a rapidly expanding field. Many studies investigate the impacts of increased access to treatment, but very few have looked at the impact on crime rates. This paper would help to further reveal the impacts of the Medicaid expansions on crime rates and would help to show the benefits that may exist beyond just expanding Medicaid and increasing the rate of people who are insured. The goal is to reveal that the Medicaid expansion, and increased access to substance use treatment has many unrecognized successes beyond just expanding healthcare coverage to a greater portion of the population, and that the benefits may appeal to a broader group of people who do not see the other benefits that the expansions have achieved in some states.

## **Data and Methods**

This project uses state level data (including Washington D.C.) from 2008-2018 to capture the period of time before and after the Medicaid expansion. The data for crime are from the FBI's Uniform Crime Report (UCR), which includes crime data broken down by state and year. Data on gender, race, age, and population density are from the U.S. Census Bureau. Unemployment rates are from the National Bureau of Labor Statistics and state GDP per capita measures (in 2012 dollars) are from the Bureau of Economic Analysis. The data identifying states that expanded Medicaid comes from the Kaiser Family Foundation.

Property crime is defined by the UCR program as burglary, larceny-theft, motor-vehicle theft, and arson. Violent crime is defined as murder and non-negligent manslaughter, rape, robbery, and aggravated assault. All other crime such as embezzlement, fraud, forgery, etc. is not included in either property or violent crime. It is important to note that the UCR crime data are only estimates of criminal behavior. These figures are based on reported crime by local jurisdictions and some do not participate. If a law enforcement agency does not provide a full 12 months of data, the FBI will use the data they were provided with to calculate estimates for that jurisdiction, and if no data or very little data is provided, the FBI will use crime rates and totals from similar areas within the same state in order to calculate estimates for the area with no reporting. The use of estimates by the FBI will help to deal with the lack of reporting by local law enforcement agencies, but it is important to recognize that the crime data is not a completely accurate count of all the crime that occurs in a state. The estimates help to reduce the effects of the underreporting by local agencies but do nothing to deal with crime that is unreported to law enforcement.

The crime data only includes crimes that are reported to law enforcement, meaning there may be much more crime that is unknown by local law enforcement agencies. Langton and Truman (2014) estimated that less than 50% of violent crime and less than 40% of property crimes are reported to police. This issue means that the data and the use of estimates to account for lack of reporting from local agencies may still greatly undercount the amount of crime in an area. Therefore, this data is the best available, but it is important to note that it is not a completely accurate representation of all crime in every

state. The estimates deal with the lack of reporting from local law enforcement, but there is no way to deal with the lack of reporting crime to law enforcement.

It is important to note these two limitations that exist in all crime research and understand that the results do not show a truly accurate representation of all crime, but the use of estimates by the FBI aims to reduce the effects of the under reporting by law enforcement agencies. The lack of reporting crime to law enforcement agencies is something that is much more difficult to deal with, so this study only represents the effects of the Medicaid expansion on reported crime as opposed to all crime that occurs within the United States.

### **Description of Data**

Table 1 displays the summary statistics broken down by both expansion and non-expansion states as well as pre-expansion and post-expansion. It is important for the data to be similar between the expansion and non-expansion states in order for the difference in differences approach to be effective.

The violent crime rate in the pre-expansion period for expansion states is about 406 per 100,000 people and 362 per 100,000 people in the pre-expansion period for non-expansion states. Meanwhile, the property crime rate in the pre-expansion period for expansion states is roughly 2,847 per 100,000 people and 3,043 per 100,000 people in the pre-expansion period for non-expansion states. These statistics indicate little difference in criminal behavior between expansion and non-expansion states. Much of the other data are also similar in the pre-expansion period. The percentage of the population that is male in the pre-expansion period is 49.0 percent in expansion states and 48.9 percent in non-expansion states. The unemployment rates are also similar, as the pre-expansion data shows that the unemployment rate was 7.84 percent in expansion states and 7.44 percent in non-expansion states. The percentages of each race are also similar in expansion and non-expansion states. The percentage of people that are white, African American, and Hispanic are 69.9, 9.70%, and 11.16% in expansion states in the pre-expansion period and 72.70%, 12.70%, and 9.18% in non-expansion states in the pre-expansion period. Finally, the age data is also similar. In expansion states in the pre-expansion period, the percentage of people 18-25 was 9.27%

and the percentage of people 26-34 was 11.94%. In non-expansion states in the pre-expansion period, the percentage of people 18-25 was 9.28% and the percentage of people 26-34 was 11.79%.

GDP per capita and population density do not share the same similarities across states. The GDP per capita is about \$55,765 in expansion states in the pre-expansion period while the GDP per capita in non-expansion states in the pre-expansion period is \$45,874. Meanwhile, population density is roughly 533 people per square mile in expansion states in the pre-expansion period while it is only about 100 people per square mile in non-expansion states in the pre-expansion period. The nearly \$10,000 difference in GDP per capita and the nearly 400 people per square mile distance should not impact the overall results of the regressions. It may also provide another possible area of study by removing some of the states that are outliers in the data for either GDP per capita or population density.

### **Method**

This project uses a difference-in-differences approach to examine the impact of Medicaid expansion on crime. Each state had the choice to expand or not expand Medicaid and not all chose to do so. Currently, 36 states and Washington, D.C. have expanded their Medicaid programs, while the remaining 14 states have not. This creates a quasi-experiment where the treatment group is the states that have expanded their Medicaid programs and the control group is the states that did not expand their Medicaid programs. The difference-in-differences estimator is calculated in a controlled regression framework by using a fixed effects model in Stata:

$$Y = \beta_0 + \beta_1(\text{Expansion}) + \beta_2(X) + \varepsilon$$

In this equation, Y represents the crime rate in a given state and year. I estimate this equation for both violent crime and property crime rates. Expansion, the term of interest, equals zero when Medicaid expansion was not in effect, and one when the Medicaid expansion was in effect in the expansion states. This means  $\beta_1$  represents the marginal impact of expanding Medicaid on criminal behavior. The variable X represents the other covariates that may impact on crime, and include state-level GDP per capita, the

unemployment rate, the percentage of people who are white, Hispanic, and African American, the percentage of the population that is male, the percentages of the population who are 18-25 years old and 26-34 years old, and the population density. The use of fixed effects regressions is to take into account state specific factors that may play a role in influencing crime in a state, so the use of fixed effects helps to eliminate those outside, state-specific influences on crime.

Fixed effects regressions will be done with no covariates as a baseline to test the relationship between crime rates and expansion on the most simple level, and a full set of covariates to create a more accurate representation of the Medicaid expansion's impact on crime when taking into account other factors that may increase or decrease overall crime rates in a given state. These covariates will help to control for any changes in crime that are not associated with Medicaid expansion, but are instead associated with other factors.

In addition, I will look at time cross-sections in order to identify any possible temporary effects of the Medicaid expansion that may not be captured in a full regression. These cross-sections will reveal any temporary benefits to Medicaid expansion, and may reveal more about how access to healthcare may impact behavior for a short period of time. It may reveal whether access to healthcare has a long-term effect on people's criminal behavior, or whether it is only a temporary effect that disappears as time goes on.

## **Results**

### **Property Crime**

Table 2 presents the results from a fixed effects regression without any controls for property crime rates. The results show a statistically significant decrease in property crime by 412 crimes per 100,000 people for states that expanded Medicaid. The overall r-squared value is only 6.25, which suggests there are many other forces that impact property crime. Nevertheless,

this regression serves as a baseline to examine the relationship between Medicaid expansion and property crime rates.

Table 3 shows the results from the fixed effects regression for property crime with controls for macroeconomic and demographic forces. As shown in the table, Medicaid expansion does not have a statistically significant impact on property crime rates. The overall r-squared value is roughly 18.35 percent. While this roughly triple the explanatory power of the previous estimation, it also illustrates that much of the variation in property crime is unexplained. This result is not surprising, because there are many factors that influence criminal behavior, and some crime cannot be explained as rational behavior.

Because fixed effects were used to control for state specific factors, it is possible that some of the benefits of Medicaid expansion have been absorbed into the fixed effects or the other control variables. For example, if Medicaid expansion increases incomes, then its effects will be obscured by the income control. Likewise, Medicaid expansions impacts on employment will not translate to the separate dummy variable if it is encompassed by lower unemployment rates. In addition, it is possible that the effects on Medicaid expansion on crime were only temporary. The expansion variable equals one in all years post-Medicaid expansion, and this modeling may dilute the fit of the estimate assuming the impacts only occurred immediately after the policy shift.

### **Violent Crime**

Table 4 displays the results of the fixed effects regression without any controls for violent crime rates. The results indicate that there is no statistically significant correlation between violent crime and Medicaid expansion. Just like above, this regression serves a baseline to

examine the simple relationship between expansion and violent crime rates. The overall r-squared values are very low at near zero percent, suggesting that Medicaid expansion and state-level fixed effects do not shed any light on the level of violent crime within a state.

Table 5 displays the results of the fixed effects regression for violent crime with macroeconomic and demographic controls. As before, there is no statistically significant impact of expansion on violent crime rates. The overall r-squared of 28.87 percent suggests that a small percentage of violent crime can be explained with the additional controls, which highlights the complicated nature of violent crime. This is not surprising as violent crime behavior is difficult to model, as many of these crimes are not done for economic reasons.

Like property crime, it is possible that the effects of Medicaid expansions are absorbed into other covariates, and does not show up in the expansion variable itself. Nevertheless, it is still possible that Medicaid expansion had an impact on crime by influencing income or unemployment, but it is not possible to tell in the estimation at Table 5. If expansions changed incomes or had an effect on unemployment rates, then it is possible that the effects of the expansions are seen in the control variables rather than the expansion variable.

### **Single Year Cross Sections**

I also estimate annual regressions for both violent crime and property crime to identify any temporary effects due to the Medicaid expansion. There are no statistically significant effects of expansion on either property crime or violent crime, but there are still some interesting takeaways. For each year of violent crime, unemployment rates are statistically significant while its coefficients are positive, meaning an increase in unemployment corresponds to higher amounts of violent crime. For property crime, income is statistically significant while the

coefficients are negative, meaning that an increase in income are associated with a decrease in property crimes. Statistically significant impacts of unemployment rates and incomes reveals that economic factors play a role in criminal behavior.

Overall, these results show little impact of the Medicaid expansions on crime. This may be due to several factors, such as impacts of Medicaid expansion being absorbed in other independent variables or the Medicaid expansions not changing the criminal behavior. Although these results do not reveal a statistically significant link between crime rates and Medicaid expansion, that was not the goal of the expansions which intended to provide health care to uninsured and low-income Americans.

## **Conclusions**

The goal of this paper is to examine an unintended consequence of the ACA Medicaid expansions had on society beyond expanding healthcare coverage. Specifically, I investigate whether criminal behavior was decreased in states that expanded Medicaid. Assuming that crime is done for economic reasons, Medicaid expansion should reduce healthcare costs and thus decrease economic pressure to commit crime. However, there does not appear to be a statistically significant relationship between crime and the Medicaid expansion, but that does not mean the Medicaid expansion was a failure. The goal of the Medicaid expansion was to increase healthcare access, and it appears that the goal has been achieved. According to the Kaiser Family Foundation, 14.83 million more people have enrolled for Medicaid since expansion; 12 million of those people were newly eligible under Medicaid expansions. The Medicaid expansion has improved many aspects of life, and even if it has not had an impact on crime, the other benefits of expansion have been a positive for society.

It is possible the impact of Medicaid expansion on crime is obscured by other independent variables in my model. For example, using a fixed effects regression to control for state and year specific factors may have absorbed much of the impact, and the control variables may also absorb some of the impacts of the Medicaid expansions on crime. If the Medicaid expansion changed economic factors, which is likely, then there may have been impacts of the expansions that are reflected in some of the control variables. Another limitation of crime research are the issues relating to crime reporting and the lack of reporting of crime. Studies such as Langton and Truman (2014) found that up to 50% of crime may be unreported, so using crime data may not be the best way to study the effects of the Medicaid expansions on crime. Victimization surveys and clearance rates may be other possible methods of approaching the question, so there is room for future research. Another limitation is that it can be difficult to explain crime and determining which factors should be included is difficult. Ultimately, it is difficult to study the impacts on crime of policies with goals that are not related to crime, but it is still valuable to learn about all the impacts of certain policies. Medicaid expansion is currently in its sixth year, and data is only widely available for about three years when Medicaid expansions occurred. Medicaid expansion research is only in the beginning stages, and there will be many studies that attempt to examine its impact in the years to come.

Crime is very costly, and the negative impacts expand to just the victims themselves. When considering policies, it is important to examine the impacts on crime, whether they are positive and reduce crime or whether they are negative and increase crime. The cost of crime is great on society, and one of the most important policies a government can take is to reduce crime. It is important to target crime itself, but it may be more effective if governments target the factors that impact crime, whether that be through healthcare access, substance use disorder

treatment, or other factors that impact crime rates. Although the Medicaid expansions may not have reduced crime rates, society should consider alternatives to increased policing in order to reduce crime, to both save money and improve lives throughout society.

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**Table 1: Summary Statistics**

| <b>Table 1</b>             |                         |             |                             |             |
|----------------------------|-------------------------|-------------|-----------------------------|-------------|
| <b>Variables</b>           | <b>Expansion States</b> |             | <b>Non-Expansion States</b> |             |
|                            | <b>Pre</b>              | <b>Post</b> | <b>Pre</b>                  | <b>Post</b> |
| <b>Violent Crime Rate</b>  | 394.2296                | 394.6727    | 345.8658                    | 358.8921    |
| <b>Property Crime Rate</b> | 2786.572                | 2472.248    | 2956.245                    | 2545.67     |
| <b>Percent Male</b>        | .4904                   | .4913       | .4891                       | .4896       |
| <b>Unemployment Rate</b>   | .0784                   | .0504       | .0744                       | .0464       |
| <b>GDP Per Capita</b>      | 55765.43                | 58338.13    | 45873.55                    | 47660.83    |
| <b>Population Density</b>  | 533.131                 | 613.2128    | 100.1668                    | 103.1617    |
| <b>Percent White</b>       | .6941                   | .6734       | .7214                       | .7089       |
| <b>Percent Black</b>       | .0977                   | .0946       | .1274                       | .1288       |
| <b>Percent Hispanic</b>    | .1133                   | .1288       | .0954                       | .1013       |
| <b>Percent 18-25</b>       | .0926                   | .0904       | .0921                       | .0908       |
| <b>Percent 26-34</b>       | .1201                   | .1233       | .1179                       | .1176       |
| <b>Observations</b>        | 114                     | 95          | 153                         | 199         |

Note: Universe is state-level data from 2008-2018. Data for Percent Male, Unemployment Rate, GDP Per Capita, and Population Density are from 2010-2017. All other data is for 2008-2018. The pre period includes data from 2008-2013 for most states. Some states expanded after 2014, which is accounted for in the dataset. If a state did not expand, their post period began in 2014. Violent crime rate, property crime rate are measured per 100,000 people. Population density is people per square mile. GDP per capita is measured in 2012 dollars.

**Table 2: Property Crime with No Controls**

| <b>Table 2</b>   |                    |                   |          |                 |                                |          |
|------------------|--------------------|-------------------|----------|-----------------|--------------------------------|----------|
| <b>Variables</b> | <b>Coefficient</b> | <b>Std. Error</b> | <b>t</b> | <b>P&gt; t </b> | <b>95% Confidence Interval</b> |          |
| <b>expansion</b> | -412.1886          | 31.32978          | -13.16   | 0.000           | -473.7403                      | -350.367 |
| <b>_cons</b>     | 2823.035           | 14.9279           | 189.11   | 0.000           | 2793.707                       | 2852.363 |
| <b>r-square</b>  |                    |                   |          |                 |                                |          |
| <b>Within</b>    | .2538              | <b>Number</b>     | 561      | <b>of Obs</b>   |                                |          |
| <b>Between</b>   | .0133              |                   |          |                 |                                |          |
| <b>Overall</b>   | .0625              |                   |          |                 |                                |          |

**Table 3: Property Crime with Full Controls**

| <b>Table 3</b>      |                    |                       |          |                 |                                |           |  |
|---------------------|--------------------|-----------------------|----------|-----------------|--------------------------------|-----------|--|
| <b>Variables</b>    | <b>Coefficient</b> | <b>Standard Error</b> | <b>t</b> | <b>P&gt; t </b> | <b>95% Confidence Interval</b> |           |  |
| <b>expansion</b>    | 21.458             | 31.65589              | 0.68     | 0.498           | -40.80356                      | 83.71957  |  |
| <b>male</b>         | -924.9339          | 3375.851              | -0.27    | 0.784           | -7564.64                       | 5714.772  |  |
| <b>unemployment</b> | 9948.907           | 925.7706              | 10.75    | 0.000           | 8128.079                       | 11769.73  |  |
| <b>income</b>       | -0.0058361         | 0.0060014             | -0.97    | 0.331           | -0.0176398                     | 0.0059676 |  |
| <b>popdensity</b>   | -0.1557333         | 0.1853676             | -0.84    | 0.401           | -0.5203188                     | 0.2088521 |  |
| <b>white</b>        | -22.22081          | 1966.267              | -0.01    | 0.991           | -3889.522                      | 3845.081  |  |
| <b>black</b>        | -4913.781          | 2734.997              | -1.8     | 0.073           | -10293.04                      | 465.4763  |  |
| <b>hispanic</b>     | -2845.665          | 2540.945              | -1.12    | 0.264           | -7843.257                      | 2151.928  |  |
| <b>youngadult</b>   | 1398.344           | 2471.868              | 0.57     | 0.572           | -3463.386                      | 6260.073  |  |
| <b>twenties</b>     | 2292.441           | 2296.996              | 1        | 0.319           | -2225.347                      | 6810.228  |  |
| <b>_cons</b>        | 3331.416           | 2469.187              | 1.35     | 0.178           | -1525.04                       | 8187.872  |  |
| <b>R-square</b>     |                    |                       |          |                 |                                |           |  |
| <b>Within</b>       | 0.5652             |                       |          |                 |                                |           |  |
| <b>Between</b>      | 0.3102             |                       |          |                 |                                |           |  |
| <b>Overall</b>      | 0.1835             |                       |          |                 |                                |           |  |

**Table 4: Violent Crime with No Controls**

| <b>Table 4</b>   |                    |                   |          |                 |                                |          |
|------------------|--------------------|-------------------|----------|-----------------|--------------------------------|----------|
| <b>Variables</b> | <b>Coefficient</b> | <b>Std. Error</b> | <b>t</b> | <b>P&gt; t </b> | <b>95% Confidence Interval</b> |          |
| <b>expansion</b> | -7.926221          | 5.021247          | -1.58    | 0.115           | -17.79114                      | 1.938699 |
| <b>_cons</b>     | 387.8421           | 2.392505          | 162.11   | 0.000           | 383.1417                       | 392.5425 |
| <b>r-square</b>  |                    |                   |          |                 |                                |          |
| <b>Within</b>    | .0049              | <b>Number of</b>  | 561      |                 |                                |          |
|                  |                    | <b>Obs</b>        |          |                 |                                |          |
| <b>Between</b>   | .0081              |                   |          |                 |                                |          |
| <b>Overall</b>   | .0008              |                   |          |                 |                                |          |

**Table 5: Violent Crime with Full Controls**

| <b>Table 5</b>      |                    |                       |          |                 |                                |            |  |
|---------------------|--------------------|-----------------------|----------|-----------------|--------------------------------|------------|--|
| <b>Variables</b>    | <b>Coefficient</b> | <b>Standard Error</b> | <b>t</b> | <b>P&gt; t </b> | <b>95% Confidence Interval</b> |            |  |
| <b>expansion</b>    | 9.21684            | 6.15846               | 1.5      | 0.135           | -2.895766                      | 21.32945   |  |
| <b>male</b>         | -166.6135          | 656.7512              | -0.25    | 0.8             | -1458.328                      | 1125.101   |  |
| <b>unemployment</b> | -1.980668          | 180.103               | -0.01    | 0.991           | -356.2116                      | 352.2503   |  |
| <b>income</b>       | -0.0017076         | 0.0011675             | -1.46    | 0.145           | -0.0040039                     | 0.0005888  |  |
| <b>popdensity</b>   | -0.152181          | 0.0360621             | -4.22    | 0               | -0.2231089                     | -0.0812532 |  |
| <b>white</b>        | -469.8164          | 382.5253              | -1.23    | 0.22            | -1222.176                      | 282.5435   |  |
| <b>black</b>        | 158.048            | 532.0769              | 0.3      | 0.767           | -888.4537                      | 1204.55    |  |
| <b>hispanic</b>     | -341.1598          | 494.3254              | -0.69    | 0.491           | -1313.411                      | 631.0912   |  |
| <b>youngadult</b>   | -926.1278          | 480.8868              | -1.93    | 0.055           | -1871.948                      | 19.69192   |  |
| <b>twenties</b>     | -603.3536          | 446.8666              | -1.35    | 0.178           | -1482.261                      | 275.5543   |  |
| <b>_cons</b>        | 1114.351           | 480.3652              | 2.32     | 0.021           | 169.5574                       | 2059.145   |  |
| <b>R-square</b>     |                    |                       |          |                 |                                |            |  |
| <b>Within</b>       | 0.1039             |                       |          |                 |                                |            |  |
| <b>Between</b>      | 0.3026             |                       |          |                 |                                |            |  |
| <b>Overall</b>      | 0.2887             |                       |          |                 |                                |            |  |