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CRIME REDUCTION AND REFORMATION IN SOUTH CAROLINA: AN
ANALYSIS OF SB 1154

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ABSTRACT

This thesis evaluates the policy response to the criminal justice crisis of South Carolina, Senate Bill (SB) 1154, dubbed the Omnibus Crime Reduction and Sentencing Reform Act of 2010. SB 1154 adopted a series of "common sense" reforms, including new charges constituting as violent crimes, redefined sentences in the form of reduced penalties and harsher penalties for nonviolent and violent crimes respectively, mandated supervision of individuals on probation or parole, and credit programs for early release of inmates among other provisions intended to reduce inmate population, recidivism and violent crime rates.

I examine three key factors: inmate, imprisonment and violent crime rates on a per 100,000 people basis. I examine incarceration rates associated with violent and nonviolent crimes, comparing this metric to yearly observations prior to SB 1154's implementation. I identify changes in inmate, imprisonment and violent crime rates that can be attributed to SB 1154's policy guidance using a difference-in-differences OLS regression, using Virginia and Georgia as baseline comparisons.

There is supporting evidence of SB 1154's impact in reducing inmate population and imprisonment rates, and possibly influencing violent crime rates downwards in South Carolina during the 2010-2015 policy period, some of which demonstrate large magnitudes of change. Revisiting the policy with current criminal justice statistics could detail the longstanding effect of SB 1154 on reducing the prison population and recidivism rates in South Carolina.

DEDICATION

To my mother and stepfather, thank you both for your support every step of the way. I couldn't have made it this far without you two.

ACKNOWLEDGEMENTS

CRIME REDUCTION AND REFORMATION IN SOUTH CAROLINA

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INTRODUCTION

SB 1154, The Omnibus Crime Reduction and Sentencing Reformation Act of 2010, introduced a series of reformations in criminal justice policy to combat a growing inmate population, rising recidivism rates, and violent crime rates that were nation-leading (The Pew Center on the States [Pew], 2010). South Carolina's inmate, incarceration and violent crime rates faced downward trends during the 2010-2015 period. I am interested in estimating the true effect of SB 1154 on reversing problematic criminal justice trends in South Carolina.

South Carolina was experiencing a criminal justice crisis in 2009, one in which the state was reporting national highs in violent crime, coupled with a growing inmate population that would absorb state resources due to rising costs in housing incarcerees (Pelletier et al., 2014). This was accompanied by growing recidivism rates, as many released inmates would soon find themselves behind bars again. The inmate population was experiencing exponential growth, having tripled over the years of 1983 to 2009; meanwhile, 49% of the prison population was composed of nonviolent offenders (Pew, 2010). The Pew Center conducted analyses related to the costs South Carolina would face as a result of inaction, providing a 5-year projection (2009-2014) that would see an additional 3,200 inmates to the inmate population that already housed 24,612 incarcerees under state jurisdiction; the state would lose upwards of $450 million in capital to accommodate inmate population growth (Pew, 2010). South Carolina's expansive track record in housing additional inmates had subjected state residents to higher taxes to account for the correctional population. According to the Pew, spending on state

correctional facilities increased 500% since 1983, reaching approximately $400 million by 2009 (2010).

Despite allocating hefty financial capital to state prisons, South Carolina was among the worst in the nation in violent crime rates with recidivism rates expected to further rise. The FBI Uniform Crime Reporting (UCR) Program found South Carolina maintained the highest violent crime rate between the years of 2002-2008, registering ~721 violent crimes per 100,000 people in 2008; far above the national average of ~456 violent crimes per 100,000 (UCR, 2010). Investigating recidivism over four-year examination periods, the UCR Program found that of the inmates released in 1999, 27.6% of released offenders were reincarcerated within three years; in 2003, this figure grew to 32.7% (Pew, 2010).

State legislators found the allocation of taxpayer resources were inefficient in addressing criminal justice concerns. With projected growth of almost 14% in the inmate population, national highs in violent crime, and rising costs in housing incarcerees, legislators opted for a comprehensive policy package that would revamp criminal justice procedures in South Carolina to mitigate the crisis. Drafting of Senate Bill (SB) 1154, the Omnibus Crime Reduction and Sentencing Reform Act of 2010 began in 2009 and went into effect in 2010.

Policy Response

Sanctioned by Governor Mark Sanford, SB 1154 overhauled criminal justice policy in the state of South Carolina. Criminal sentences were restructured for violent

offenders, increasing the length of sentences for incarcerees found to have involved the use of force to commit a crime. The list of violent crimes expanded by 24 additional crimes and new charges were created, such as the "attempted murder" charge associated with a maximum penalty of 30 years (Pew, 2010). Post-release supervision of released inmates was mandated, and offenses related to low-level, nonviolent crimes held reduced penalties in the form of probation and suspended sentences whilst supporting early releases through merit programs such as work release and good conduct (Pelletier et al., 2017). Correctional resources would be focused on high-risk offenders following release, holding former incarcerees accountable with the goal of minimizing the likelihood of a return to prison.

The policy response aimed to reduce the prison population by freeing up beds held by low-level, nonviolent offenders and reallocating space to hold violent perpetrators for a sustainable amount of time. In doing so, South Carolina would be freeing up resources in several departments: housing that would be formerly occupied by nonviolent, low-level offenders would now be allocated to the growing violent offender population, ultimately reducing the total prison population. Rising costs associated with a larger inmate population would be restricted relative to initial projections without the policy guidance of SB 1154. These savings could thereby be reinvested into supporting rehabilitation of current inmates or further violent crime prevention efforts.

An effective policy response would see a reduced prison population, lower violent crime rates, and more financial capital to reinvest in more efficient methods of controlling crime in the correctional system. The Pew found that SB 1154's policy

guidance would cut the expected prison population growth of 3,291 inmates from 2009 to 2014 down to 1,505 additional inmates housed in 2014 (2010). This would be accompanied with savings of $241 million over the 5-year projection period.

Research Objective

Accounting for the effect of time and location, I will estimate how much change in inmate, imprisonment and violent crime rates can be attributed to SB 1154's impact in South Carolina. In doing so, I will identify whether SB 1154 held significance in controlling the prison population and violent crime, or if there were extraneous variables that led to changes in South Carolina criminal justice metrics.

A recent policy analysis of SB 1154 on curbing recidivism rates in South Carolina will be discussed, in which I will look for similar results through the form of reduced prison population and incarceration rates in South Carolina following its enactment. I will also investigate a systematic review on past research that was conducted on the preventative effects of rehabilitative and punitive methods on crime, and its implications on the effectiveness of SB 1154 in remedying the correctional systems crisis. A study on the relationship between unemployment and crime will be reviewed. I will then examine empirical data of South Carolina, Virginia and Georgia from the years of 2005-2015, and interpret the results. Evidence supporting SB 1154's role in reducing the South Carolina inmate population, incarceration and violent crime rates will be displayed in the results. I will then evaluate the limitations and extensions of this research study, followed by a discussion of the results and its implications.

LITERATURE REVIEW

Pelletier et al. (2017) analyzed the impact of SB 1154's administrative support in place for post-release supervision of former inmates. Through effective use of administrative responses to violation of parole and probation, South Carolina could face lower rates of recidivism. Lower recidivism rates would create additional resources for the state through a reduced prison population and associated maintenance costs.

Analyzing data of individuals on parole and probation from before and after SB 1154's passing, Pelletier et al. investigated trends in the use of administrative responses and recidivism rates associated with released individuals. This five-year study measured recidivism rates on a one, two and three-year basis, between 2010 and 2015.

The authors found reduced rates of recidivism of people on post-release supervision as a result of SB 1154's policy guidance. After controlling for demographics, case-specific factors and number of responses imposed, there was still evidence for reduced likelihood of returning to prison for individuals under supervision following SB 1154's passage.

Cook (1977) conducted a systematic review in which he examined studies seeking to gauge the rehabilitative and punitive methods of the criminal justice system and its effectiveness in reducing crime. He reviewed empirical data presented in descriptive, correlational, quasi-experimental studies related to correctional methods in curbing crime rates. He dissects crime into two effects; the special effect, the effect punishment has on

reducing future crime of the person subjected to the punishment, and the general effect, which relates to the threat level posed towards everyone else (Cook, 1977, p. 165).

Cook found the following: rehabilitative efforts have largely appeared unsuccessfully, but there is potential to reduce recidivism through providing released inmates with a steady income; deterrence of crime through punishment is effective and can lead to large magnitudes of reduced crime rates; the long term effects of deterring crime through punishment remains uncertain (1977, p. 204). Punishment as an effective long-term deterrent is confounded by replacement theory and the special preventative effect.

Replacement theory places crime on a supply and demand scale. When there is an increase in the severity of punishment for a crime, the supply of criminals is subject to a general effect. The amount of potential criminals in the short-run decreases and law-abiding citizens experience a shift in behavior that incentivizes crime. The equilibrium shifts slightly upwards relative to where the new equilibrium would have been without a change in societal behavior, inhibiting the full effect of policy changes to be realized (Cook, 1977, pp. 170-171).

The special preventative effect, or the direct punishment inflicted on the offender, is not enough to deter future crimes in convicts; crime is more elastic with respect to the probability of being punished than the severity of punishment itself (Ehrlich, 1973, p. 186). Thus, recidivism rates cannot be mitigated by dealing harsher sentences. The general preventative effect of crime, society's interpretation of the increase in threat

levels, is what holds more power in deterring crime, but can be undermined in both the short-run and long-run by replacement theory.

Petersilia (2014) investigated the ramifications of California's Public Safety Realignment Act of 2011. California overhauled its criminal justice policies in 2011 in response to a federal court order to reduce the prison population to no more than 137.5% of the prison system's capacity (Petersilia, 2014, p. 327). The overcrowding crisis was markedly similar to South Carolina's dilemma in 2009, in which much of the prison population consisted of low-level, nonviolent offenders, such as the 20% of inmates held under state jurisdiction on drug charges in 2005 (Petersilia, 2014, p. 357). The state had also reported an extraordinary 64% recidivism rate, with 6 out of 10 released convicts returning to prison within three years (Petersilia, 2014, p. 327).

California Governor Jerry Brown signed the Public Safety Realignment Act that would see the transfer of state prisoners and respective authority to the county level. County jails were given funds to accommodate the influx of convicts from state prisons and given discretion in developing plans for holding and releasing prisoners. Day Reporting Centers were created, a place where offenders have access to educational, therapeutic, and employment programs along with being able to meet with their probation officers (Petersilia, 2014, p. 340). Defense attorneys believed they had more leverage in negotiations with prosecutors. During the first full year of the Realignment Act in 2012, total admissions to California's prison system declined 65%, from 96,700 admissions in 2011 to 34,300 admissions in 2012 (Petersilia, 2014, p. 333). Admissions to prison on violations of parole fell by 87%, from 60,300 admissions in 2011 to 8,000 admissions in

2012. By 2014, the number of prisoners held on drug charges had fallen to 8.7%, a reduction of over 13%. Property crime increased by 8% during this three year period, but crime rates appeared to be largely inelastic with respect to the amount of offenders released from prison (Petersilia, 2014, p. 346).

The policy changes made by the Public Safety Realignment Act demonstrate significant power in reducing reentry to the prison systems and incarceration rates in California. The reallocation of jurisdiction to the county level created more flexibility in the rehabilitation and reentry to society of released offenders. The Realignment Act increased responsibility and funding of county jails, provided alternatives to imprisonment, and improved rehabilitation of inmates, leading to a reduced inmate population and incarceration rate while violent crime rates were not impacted.

Raphael (2001) examined the relationship between unemployment and crime rates. Raphael analyzed state-level panel data on unemployment rates and seven felony offenses from the years of 1971-1997, with observations from all 50 states. Controlling for state and time fixed effects, demographic and economic factors, Raphael was able to identify a relationship between unemployment and crime.

Raphael found unemployment to be an important determinant of property crime, and an insignificant determinant of violent crime (Raphael, 2001, p. 280). He concluded the magnitude at which unemployment correlates with property crime to be large, while the relationship between unemployment and violent crime lacked consistency. His tests on violent crime found no relationship when instrumenting for unemployment, while the

lack of an instrument produced a positive correlation between unemployment and violent crime (Raphael, 2001, p. 280).

The literature suggests that while punitive measures display some level of deterrence in crime, policy should not rely on punishment as an effective method to reduce crime, imprisonment rates, and the prison population. Rehabilitative programs coupled with increased supervision of high-risk offenders should support changes to punitive measures if crime is to be addressed effectively. However, short-run and long-run effects of policy changes may be undermined by replacement theory as long as society shifts behavior with respect to changes in crime rates, and long-term estimations of the effects of changes to criminal justice policy should be approached with caution and skepticism.

This analysis of SB 1154 draws from the findings of the aforementioned literature. I find evidence of reduced rates of inmates, incarcerations and violent crimes in South Carolina as a result of SB 1154. The findings are largely consistent with the reviewed literature and provide insight into how past literature has guided the provisions included in criminal justice policy changes.

RESEARCH DESIGN AND METHODS

Difference-in-Differences Approach

Combining South Carolina, Virginia and Georgia panel data from the years 2005 to 2015, I will seek to estimate the effect SB 1154 had on the inmate population, incarceration, and violent crime rates of South Carolina following its implementation in

2010 using a difference-in-differences (DID) approach. I will regress the variables of interest against the control states in three different regressions: regressions with Virginia and Georgia as independent baseline comparisons and one in which they will jointly be controlled for.

Virginia and Georgia were selected as controls due to similarities in pre-SB 1154 trends, geographic location, and having not been subjected to major changes in criminal justice policy during the SB 1154 period. Virginia was most similar to South Carolina in inmate and imprisonment rates, while Georgia was most similar to South Carolina in violent crime rates. The anomalistic nature of South Carolina's criminal justice trends rendered a single control for all measured variables unobtainable, barring the use of a synthetic control. As a result, the following figures will depict trends where a single control state is relatively incongruent to South Carolina trends.

The natural log of inmate, incarceration and violent crime rates will be regressed against dummy variables controlling for state and policy period, an interaction variable between state and policy period, the natural log of unemployment rate, and the natural log of total fall enrollment in post-secondary education. The independent control equation models use the control state as the baseline and are as follows:

$$log(Inmates\ per\ 100,000\ People) = \beta_0 + \beta_1 SC + \beta_2 Policy + \beta_3 SC{*}Policy + \beta_4 log(Unemployment) + \beta_5 log(Education) + u$$

$$log(Imprisonment\ per\ 100,000\ People) = \beta_0 + \beta_1 SC + \beta_2 Policy + \beta_3 SC{*}Policy + \beta_4 log(Unemployment) + \beta_5 log(Education) + u$$

$$log(Violent\ Crimes\ per\ 100,000$$

$$People)=\beta_0+\beta_1 SC+\beta_2 Policy+\beta_3 SC*Policy+\beta_4 log(Unemployment)+\beta_5 log(Education)+u$$

The joint control regression models:

$$log(Inmates\ per\ 100,000$$

$$People)=\beta_0+\beta_1 SC+\beta_2 VA+\beta_3 Policy+\beta_4 SC*Policy+\beta_5 log(Unemployment)+\beta_6 log(Education)+u$$

$$log(Imprisonment\ per\ 100,000$$

$$People)=\beta_0+\beta_1 SC+\beta_2 VA+\beta_3 Policy+\beta_4 SC*Policy+\beta_5 log(Unemployment)+\beta_6 log(Education)+u$$

$$log(Violent\ Crimes\ per\ 100,000$$

$$People)=\beta_0+\beta_1 SC+\beta_2 VA+\beta_3 Policy+\beta_4 SC*Policy+\beta_5 log(Unemployment)+\beta_6 log(Education)+u$$

Where "SC" denotes South Carolina, "VA" denotes Virginia, and Georgia is used as the baseline. The results will highlight how much change in inmate, incarceration and violent crimes per 100,000 people can be attributed to SB 1154's enactment; its effectiveness in reducing the prison population and violent crime crisis.

Source of Observations in Panel Data

The data used in the panel will draw from five primary sources: the FBI UCR Program, the Bureau of Justice Statistics, the U.S. Census Bureau, the South Carolina Revenue and Fiscal Affairs (RFA) Office, and the University of Virginia Demographics Research Group. The FBI UCR Program will provide the statistics on violent crime per 100,000 people in South Carolina and Georgia for each year under examination. The data related to inmate and imprisonment rates is drawn from the Bureau of Justice Statistics. Data on imprisonment rates is retrospectively limited to 2007. Unemployment rates were obtained from the Bureau of Labor Statistics. Fall post-secondary education enrollment statistics were taken from the National Center for Education Statistics. State population estimates for each year were taken from the intercensal reports provided by the U.S. Census Bureau, South Carolina RFA Office, and University of Virginia Demographics Research Group for the purposes of breaking down inmate population, imprisonment and violent crime rates to a per 100,000 people basis.

RESULTS

Summary Statistics

Table 4.1 Summary Statistics of South Carolina, Virginia, and Georgia by Pre-SB 1154 and Post-SB 1154 Periods of Examination

Summary Statistics of States by Policy Period

	South Carolina		State Virginia		Georgia	
	Before	After	Before	After	Before	After
Mean						
Inmates per 100,000	539.20	467.84	480.3	457.72	558.01	547.89
	(6.35)	(29.89)	(10.13)	(9.16)	(18.64)	(27.54)
Imprisonment per 100,000	518.33	452.5	486.33	456.67	554.67	531.83
	(6.03)	(29.44)	(5.51)	(9.63)	(12.74)	(18.02)
Violent Crimes per 100,000	739.39	544.09	262.74	198.45	463.42	381.32
	(43.99)	(46.17)	(21.93)	(7.64)	(26.18)	(10.90)
Unemployment Rate	.079	.094	.04	.06	.061	.089
	(.017)	(.024)	(.01)	(.01)	(.018)	(.017)
Post-Secondary Education	223568.2	256468.5	483813.4	581198.3	464771	545804.8
	(15067.2)	(3858.83)	(41168.9)	(7465.39)	(41927.27)	(17429.96)
Population	4438195	4752810	7763319	8212945	9511240	9954503
	(128433.5)	(97387.33)	(131006.4)	(136685.7)	(272846.6)	(190991.6)
Year	2007	2012.5	2007	2012.5	2007	2012.5
	(1.58)	(1.87)	(1.58)	(1.87)	(1.58)	(1.87)
Observations	11 observations per state for each variable, except imprisonment rate which has 9 observations per state, beginning in 2007					

Table 4.1 displays the summary statistics of the data used in this research study, broken into pre-SB 1154 and post-SB 1154 enactment with standard deviations in parentheses. As previously mentioned, there are differing counts of observations amongst the variables included in the panel data. While there are six observations of all variables in the policy period, the pre-SB 1154 period will display varying observation counts. Since data related to imprisonment rates is limited to 2007 retrospectively, imprisonment

rate per 100,000 people will only maintain three counts of observations in the pre-policy period.

Examining the mean values of South Carolina criminal justice metrics, I can identify lower averages of all measured criminal justice statistics in the policy enactment period relative to the pre-SB 1154 period. Violent crimes per 100,000 people fell from an average of ~739 in the pre-policy period to an average of ~544 violent crimes per 100,000 people under the guidance of SB 1154. Virginia and Georgia experienced smaller magnitude reductions in mean inmate, imprisonment and violent crime rates relative to South Carolina.

In comparison to South Carolina, Virginia experienced smaller decreases in mean inmate and imprisonment rates in the policy period relative to the pre-policy period. Virginia's mean inmate rate held a slight decrease of approximately 23 inmates in the policy period, falling from an average of ~480 to ~458 inmates per 100,000 people. This strongly contrasts with South Carolina, which fell by over triple the difference of Virginia's mean inmates rate in the pre-policy period relative to the policy period.

Georgia's mean violent crime rate fell by 82 violent crimes per 100,000 people in the post-policy period. South Carolina's mean violent crime rate fell by approximately 201 violent crimes per 100,000 people post-policy, nearly triple Georgia's difference in average violent crime rate relative to the pre-SB 1154 period.

Control Selections and Comparisons

Figure 4.1 Inmate Population per 100,000 People (2005-2015)
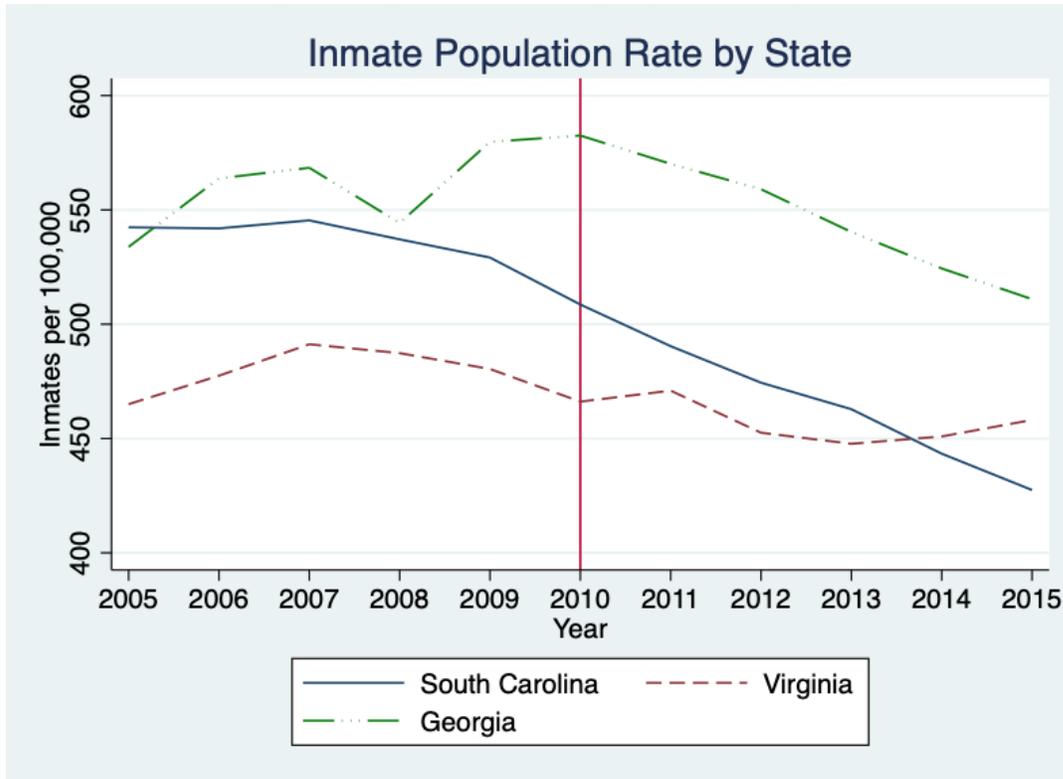
Figure 4.1 displays the inmates per 100,000 people trends for South Carolina,

Virginia, and Georgia across all observations recorded in the panel data with a vertical

line to separate pre-policy from post-policy periods. Examining the years prior to SB

1154's policy guidance, 2005-2009, there are strikingly similar trends between South

Carolina and Virginia while Georgia displays a differing trend. The three states maintain

different levels of inmates per 100,000 people, which is accounted for in the

difference-in-differences regression via including state fixed effects in the model.

Observing the period in which SB 1154 went into effect, 2010-2015, evidence for

SB 1154's effectiveness in reducing the inmate rate in South Carolina can be found.

South Carolina carries a consistent downward trend, experiencing no yearly observations in which the state inmate rate increased. South Carolina faces an average decrease of approximately 98 in inmates per 100,000 people, a ~19% reduction in inmates per 100,000 people from 2009 to 2015. This is a stark contrast to Virginia's inmate rate, which experienced more rises than falls over the policy period, which faced a reduction of 22 inmates per 100,000 people, a ~1% reduction in the inmate rate from 2009 to 2015. Despite maintaining a lower level of inmate rate pre-SB 1154, Virginia overtakes South Carolina in state inmate rate in 2014, and the disparity continues to grow in the 2015 year of observation, a difference of approximately 30 inmates per 100,000 people, or 8%.

Similar to South Carolina, Georgia experienced a downward inmate trend in the policy window. Georgia's inmate rate fell by 11.9% from 2009 to 2015, a smaller magnitude reduction relative to South Carolina. The disparity in inmate rates between South Carolina and Georgia steadily widens until 2013, then begins to grow again afterwards.

Figure 4.2 Imprisonment Rate per 100,000 People (2007-2015)
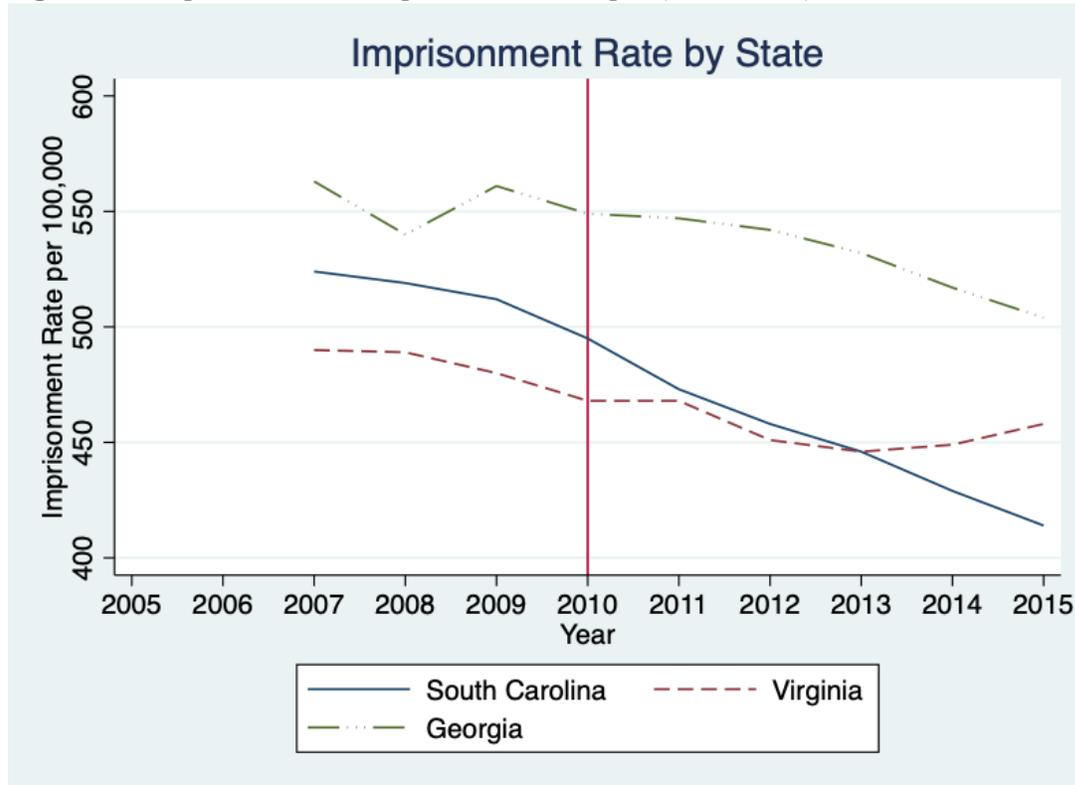
Figure 4.2 captures the imprisonment rate per 100,000 people in South Carolina, Virginia, and Georgia over the 2007-2015 years of observation. Observing the pre-SB 1154 period, there are distinctly similar trends in South Carolina and Virginia imprisonment rates. In the post-policy period, South Carolina and Georgia maintain a consistent downward trend, with South Carolina facing a steeper slope relative to Georgia. Virginia is stagnant, decreases, and then reaches an inflection point in 2013.

The post-policy period shows a reducing disparity in the levels of imprisonment rates in South Carolina and Virginia from 2010 to 2013. In 2010, South Carolina had ~5% more incarcerations per 100,000 people relative to Virginia. The disparity was closed in 2013, and Virginia concluded with a ~10% higher imprisonment rate relative to

South Carolina in 2015. South Carolina's imprisonment rate fell on average by ~19%

between 2009 and 2015. During this same period, Virginia's imprisonment rate decreased

by an average of 2%, a much weaker magnitude change relative to South Carolina.

Georgia experienced a weaker downward trend in imprisonment rates relative to

South Carolina, falling by approximately 10.2% from 2009-2015. The disparity in

imprisonment rates between Georgia and South Carolina widened dramatically in 2011,

then continues to steadily grow in the years following.

Figure 4.3 Violent Crimes per 100,000 People (2005-2015)
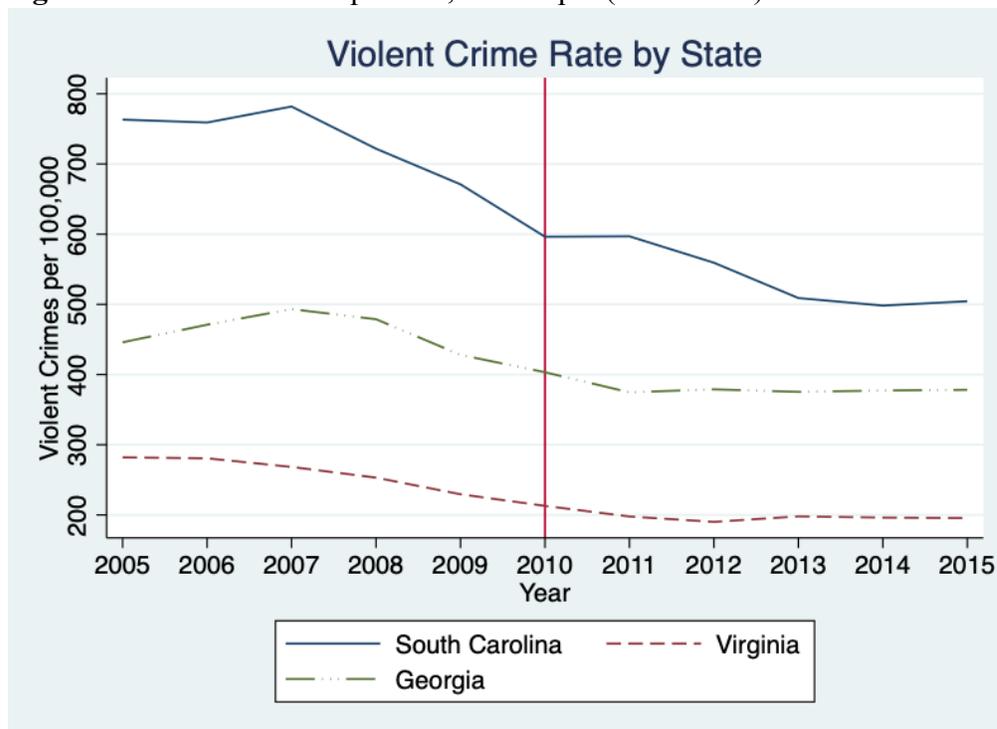

Figure 4.3 highlights the violent crime trends in South Carolina, Virginia and

Georgia over the 2005-2015 years of examination. Prior to SB 1154 enactment in 2010,

there are similar trends in violent crimes per 100,000 people between South Carolina,

Georgia and Virginia. There are large differences in levels of violent crimes per 100,000 people during the pre-policy period.

The difference in levels began to close at the start of the policy period, having substantially closed the gap in violent crimes per 100,000 people rates between South Carolina and Georgia by the 2015 year of observation. In 2010 South Carolina's violent crime rate was 33% higher than Georgia. By 2015, South Carolina's violent crime rate fell nearly 16% from 2010 and only 25% higher than Georgia. South Carolina's imprisonment trend was largely downward sloping, with a slight increase in the violent crime rate only in 2015; during this same period, Georgia remained relatively stagnant in its violent crime rates.

In the 2009-2015 time span, South Carolina's violent crime rate decreased at an average rate of ~25.2%. Georgia's violent crime rate decreased at an average rate of ~11.7 percent during this six year period. At the same time, violent crime rates in Virginia fell at an average rate of ~14.8%.

Difference-in-Differences Regressions

Table 4.2 Difference-in-Differences Regression on Inmates per 100,000 People

Linear regression

Inmates per 100k	Virginia Coef.	Sig	Georgia Coef.	Sig	Both Coef.	Sig
South Carolina	-.067		-.215		-.133	
	(.18)		(.178)		(.125)	
Virginia					-.112	***
					(.023)	
SB 1154	-.07	*	-.057	**	-.07	***
	(.035)		(.027)		(.022)	
South Carolina*SB 1154	-.073	**	-.09	***	-.083	***
	(.027)		(.027)		(.023)	
Unemployment	.112	**	.175	***	.123	***
	(.051)		(.045)		(.041)	
Education	-.138		-.183	***	-.078	
	(.198)		(.211)		(.15)	
Constant	8.339	***	9.211	***	7.697	***
	(2.675)		(2.831)		(2.038)	
Number of obs	22		22		33	
R-squared	0.848		0.889		0.895	
F-test	35.126		29.171		39.018	

*** $p<.01$, ** $p<.05$, * $p<.1$

     Table 4.2 displays the difference-in-differences regression output of inmate rates. The interaction between SB 1154 and South Carolina is significant in all three regressions. The state and policy interaction variable shows a decrease in South Carolina inmate rates during post-SB 1154. In the singular control regressions: South Carolina during SB 1154 is associated with an additional 7.3% and 9% decrease in inmates per 100,000 people relative to Virginia and Georgia in the policy period, respectively. In the joint control regression, South Carolina during the policy period is associated with an additional 8.3% decrease on average in inmates per 100,000 people relative to the control states.

Table 4.3 Difference-in-Differences Regression on Imprisonment Rate per 100,000 People

Linear regression

Imprisonment per 100k	Virginia Coef.	Sig	Georgia Coef.	Sig	Both Coef.	Sig
South Carolina	-.73 (.228)	***	-.715 (.204)	***	-.7 (.161)	***
Virginia					-.021 (.03)	
SB 1154	-.021 (.031)		-.029 (.017)		-.028 (.017)	
South Carolina*SB 1154	-.057 (.027)	*	-.062 (.029)	*	-.06 (.024)	**
Unemployment	.189 (.051)	***	.232 (.049)	***	.201 (.043)	***
Education	-.851 (.254)	***	-.8 (.24)	***	-.782 (.198)	***
Constant	17.969 (3.454)	***	17.433 (3.258)	***	17.117 (2.693)	***
Number of obs	18		18		27	
R-squared	0.869		0.947		0.939	
F-test	22.116		41.204		70.867	

*** $p<.01$, ** $p<.05$, * $p<.1$

The imprisonment rate regression shows significance at the 5% level interaction variable only in the joint regression. Thus, South Carolina in the post-SB 1154 period is associated with an additional 6% decrease on average in imprisonment rate per 100,000 people, relative to Virginia and Georgia in the post-policy period. The singular control regressions display significance at the 10% level, supporting SB 1154's impact on incarceration rates in South Carolina following its enactment.

Table 4.4 Difference-in-Differences Regression on Violent Crimes per 100,000 People

Linear regression

Violent Crimes per 100k	Virginia Coef.	Sig	Georgia Coef.	Sig	Both Coef.	Sig
South Carolina	-.032 (.217)		-.071 (.283)		-.241 (.212)	
Virginia					-.516 (.033)	***
SB 1154	-.128 (.051)	**	-.135 (.05)	**	-.133 (.033)	***
South Carolina*SB 1154	-.04 (.044)		-.1 (.049)	*	-.073 (.04)	*
Unemployment	.182 (.06)	***	.137 (.078)	*	.13 (.06)	**
Education	-1.223 (.252)	***	-.686 (.35)	*	-.896 (.255)	***
Constant	22.163 (3.385)	***	15.478 (4.707)	***	18.216 (3.446)	***
Number of obs	22		22		33	
R-squared	0.995		0.961		0.989	
F-test	911.747		151.538		637.775	

*** $p<.01$, ** $p<.05$, * $p<.1$

Table 4.4 shows insignificance of the state and policy interaction variable at the 5% level in each stage of the regression. At the 10% significance level, the interaction variable in the Georgia and joint control regressions display an effect of SB 1154 on violent crime in South Carolina, suggesting a 10% additional decrease in violent crime rates relative to Georgia and a 7.3% additional decrease in violent crime relative to the control states, respectively. With more observations, the interaction variable may have achieved significance at the 5% level in the Georgia and joint control regressions.

The regression outputs suggest SB 1154 was significant in reducing inmate and incarceration rates in South Carolina to a noticeable degree of an additional ~8% less

inmates per 100,000 people and 6% less incarcerations per 100,000 people relative to

Virginia and Georgia.

There appears to be a link between SB 1154 and reduced rates of violent crime in

South Carolina. The interaction variable in the Georgia and joint control regressions

slightly miss significance at the 5% level, but with more observations, significance at this

level may have been achieved. The 2010-2015 period is associated with considerably

lower rates of violent crime in all examined states. The regressions attribute an average of

~13% less violent crimes per 100,000 people in the post-SB 1154 period relative to the

pre-SB 1154 period.

Limitations and Extensions

Virginia's 2011 upward spike in inmates and incarcerations per 100,000 people

could artificially inflate the magnitude at which SB 1154 reduced inmate and

incarceration rates during the 2010-2015 years of observation. Virginia displayed the

strongest congruence to South Carolina inmate and imprisonment trends prior to SB

1154's passing whilst undergoing no major changes in criminal justice policy during the

policy period. However, the 2011 spike may have been centralized to Virginia, and

revisiting this analysis with a synthetic control state may prove useful in obtaining more

accurate estimates with respect to SB 1154's impact on inmate, imprisonment and violent

crime rates.

Potentially active replacement of incarcerated criminals contributed to the

inconclusiveness of punishment as an effective deterrent of crime. Despite this, Cook

maintains the belief that punishment does hold significance to some preventative power through the general effect. Given the literature on recidivism rates as a result of SB 1154 and the Public Safety Realignment Act conducted by Pelletier et al. and Petersilia respectively, analysis of this policy with more recent observations could detail how much strength SB 1154's policy holds in mitigating the inmate population, incarceration and violent crime rates in the long-run. Post-release supervision in conjunction with harsher penalties for violating parole or probation address Cook's concerns of correctional systems relying on the severity of punishment as a deterrent of crime. However, replacement theory could undermine these results as long as society experiences changes in behavior relative to the amount of crime they are exposed to. Measures that increase the likelihood of potential convicts being convicted for their crimes would be needed to counteract the replacement effect; if South Carolina has properly utilized the resources gained through the enactment of SB 1154, such as increased surveillance of high-risk areas for crime, I would be able to identify relatively sustained effects of SB 1154 in the long-run.

The model is likely imperfect, and could be expanded upon with factors that control for recognized drivers of crime, such as age. Having more observational data on violent crime could help in identifying a more reliable significant effect of SB 1154 on violent crime rates in South Carolina.

CONCLUSION

SB 1154's enactment was expected to cut into inmate population growth, incarceration and violent crime rates. What I find in an analysis of criminal justice metrics of South Carolina as compared to states that followed similar trends during the pre-SB 1154 period of enactment is evidence in support of SB 1154's role in reducing the inmate population and imprisonment rate relative to if the policy had not been passed. Reducing the inmate and incarceration rate to a statistically significant level yielded a lower inmate population in South Carolina, altering the initial trends of inmate population growth provided by the Pew in absence of a policy response.

There appears to be a link between SB 1154 and reduced rates of violent crime. While the interaction variable was significant only at the 10% level in the Georgia and joint control regressions, more observations may have yielded coefficients significant at the 5% level. The magnitude is smaller relative to the impact on inmate and incarceration rates; SB 1154 is estimated to have reduced violent crime rates by ~6%. I determine that there is a relationship between SB 1154 and reduced violent crime rates in South Carolina that was confounded by observation counts.

There is a relationship between unemployment, inmate and imprisonment rates. The magnitude at which unemployment rises and falls with inmate and imprisonment rates is small, but consistent with Raphael's findings in the relationship between unemployment and overall crime. There is a strong link between education and violent crime, suggesting average reductions of ~0.8% in violent crimes per 100,000 people when fall post-secondary enrollment increases by 1%.

The evidence I have found suggests SB 1154 did have a role in reducing inmate population and incarceration trends in South Carolina, possibly influencing violent crime rates as well. The evidence is largely consistent with past literature. SB 1154's role in mitigating the criminal justice crisis in South Carolina can be observed in a difference-in-difference analysis using Virginia and Georgia as baseline comparisons, and revisiting this analysis with more minute observations may detail further the true magnitude of its impact.

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