

**Is Downsizing Prisons Dangerous?
The Effect of California's Realignment Act on Public Safety**

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Is Downsizing Prisons Dangerous? The Effect of California's Realignment Act on Public Safety

Research Summary

Recent declines in imprisonment raise a critical question: Can prison populations be reduced without endangering the public? This question is examined by testing the effect of California's dramatic efforts to comply with court-mandated targets to reduce prison overcrowding using a pretest-posttest design. The results showed that California's Realignment Act had no effect on violent or property crime rates in 2012, 2013, or 2014. When crime types were disaggregated, a moderately large, statistically significant association between Realignment and auto theft rates was observed in 2012. By 2014, however, this effect had decayed and auto theft rates returned to pre-Realignment levels.

Policy Implications

Significant reductions in the size of prison populations are possible without endangering public safety. Within just 15 months of its passage, Realignment reduced the size of the total prison population by 27,527 inmates, prison crowding declined from 181% to 150% of design capacity, approximately \$453 million was saved, and there was no adverse effect on the overall safety of Californians. With a mixture of jail use, community corrections, law enforcement and other preventive efforts, California counties have provided a comparable level of public safety to that previously achieved by state prisons. Nevertheless, sustaining these policy objectives will require greater attention to local implementation, targeted crime prevention, and sentencing reform.

Key Words

California Public Safety Realignment Act; Prison downsizing; Regression point displacement design; Prison population; Brown v. Plata

Is Downsizing Prisons Dangerous? The Effect of California's Realignment Act on Public Safety

In the mid 1970s, the United States prison population began a steady climb that continued until 2010 when, for the first time in thirty years, the number of inmates declined (Guerino, Harrison, and Sabol, 2011). The prison buildup was based on the premise that incarceration improves public safety. This argument was succinctly voiced in 1992 by US Attorney General William Barr who said the nation had a “clear choice”—build more prisons or tolerate higher rates of violent crime (Fletcher, 2000). Confidence in the utility of incarceration was so great that policies to increase sentence lengths and punish a broader range of crimes with imprisonment were pursued with vigor over several decades by every jurisdiction in the US (Clear, 1994; Travis, Western, and Redburn, 2014). Thus, the recent decline in the size of the prison population raises a critical question. Can prison populations be reduced without endangering the public?

This question is examined by testing the effect of California's dramatic efforts to lower its prison population and comply with court-mandated targets to reduce prison overcrowding (*Brown v. Plata*, 2011). California exemplifies the confluence of fiscal, political, and social changes that are reopening the debate about the value of incarceration. Most important for our purpose, the implementation of the California Public Safety Realignment Act is a natural experiment that allows us to test one of the most important crime policy questions of our time.

The California Experience

Perhaps more than any other state, California exemplifies the fiscal and social consequences of policies that exponentially increased the prison population by 572% in the thirty years

between 1980 and 2010 (Lawrence, 2012). California's embrace of "total incapacitation" led Simon (2014) to argue that, "California is to incarceration what Mississippi was to segregation" (p. 17). Although California's incarceration and crime rates have largely mirrored those of the nation, the sheer size of the California prison population and a management strategy of "hyper-overcrowding" and neglect are exceptional manifestations of the excesses of mass incarceration (Simon, 2014).

At its peak in 2006, close to 175,000 inmates were incarcerated in California's 33 prisons (Sabol and West, 2008) and in 2008 California was ranked 2nd nationally in per capita spending on corrections (Lawrence, 2012). Like other states, the growth of California's prison population was primarily driven by policies that increased sentence lengths and broadened the range of offenses punishable by imprisonment (Simon, 2014). California's parole system also contributed significantly to the size of the prison population. Between 1980 and 2010, the parole population in California increased by 708% (the US parole population increased 204% during this time period) (Lawrence, 2012). Expansive use of parole combined with minimal provision of reentry and rehabilitative programs led to one of the highest revocation and recidivism rates in the US (Pew Charitable Trusts, 2011).

California has invested heavily in corrections and prison construction. Nevertheless, California's prisons are notoriously overcrowded, surpassing 200% of capacity at various times with some facilities at a shocking 300% of capacity (Simon, 2014). Simon argues that overcrowding was an intentional governance strategy characterized by crisis management and indifference to the provision of basic health services and the conditions of confinement. By the end of the 1990s, the California Department of Corrections and Rehabilitation (CDCR) was in a "permanent state of chaos" (Simon, 2014: 113).

On October 4th, 2006 Governor Arnold Schwarzenegger proclaimed a “Prison Overcrowding State of Emergency” outlining numerous safety and health hazards. For instance, 29 prisons were so overcrowded that more wastewater was produced than could be treated, resulting in water and sewage system failures. Indeed, “thousands of gallons of sewage spills and environmental contamination,” occurred, putting the general public’s drinking water supply in jeopardy across the state (Office of the Governor of the State of California, 2006: paragraph 10).

Over 15,000 inmates in the 29 severely overcrowded prisons were kept in “bad beds,” double and triple bunks placed in areas not designed for housing (i.e., gymnasiums, dayrooms, and program rooms). The extent of crowding substantially increased the likelihood of violence and made the provision of medical and mental health care nearly impossible. Conditions inside the prisons became so harmful, and in fact deadly, that approximately one inmate per week committed suicide and countless more died of preventable causes (Simon, 2014). These conditions and the failure to remedy them lead a Three-Judge Court to rule that inmates had been subjected to cruel and unusual punishment, a violation of the Eighth Amendment. Although the state appealed, on May 23, 2011 the U.S. Supreme Court in *Brown v. Plata* affirmed the lower-court’s decree to reduce the prison population to 137% of capacity, or by approximately 33,000 inmates at the time.

The California Public Safety Realignment Act

In response to the *Plata* decision, Governor Jerry Brown signed into law Assembly Bill 109, otherwise known as the California Public Safety Realignment Act. In order to achieve the mandated reduction in the state prison population, three core policy changes were prospectively

implemented beginning October 1, 2011. First, AB 109, or “Realignment,” moved the imprisonment of felons convicted of non-serious, non-violent, non-sexual crimes (so called “non-non-nons”) from state prison to county jails. Second, Realignment made significant changes to parole supervision by shifting responsibility for post-release supervision of the “non, non, nons” to local county jails and probation. In addition, the minimum length of post-release supervision was reduced from 1 year to 6 months. Third, Realignment changed the way technical violations of parole and probation are punished by shortening the maximum sentence from 1 year to 6 months and by requiring that the sentence be served in a local jail or under community supervision, rather than served in a state prison cell (see Petersilia, Snyder, and Greenlick, 2013, for a fuller discussion of AB 109).

The depopulation of the state’s prison system has largely been a success according to the California Department of Corrections and Rehabilitation (CDCR, 2013). By the end of 2014, the California prison population stood at 115,088 and overcrowding was 139% of design capacity (CDRC, 2015). California’s violent crime rates, as measured through the FBI’s Uniform Crime Report hovered just over 400 crimes per 100,000 in the three years after the passage of Realignment. Over the same three-year period, the property crime rates first rose between 2011 and 2012 to approximately 2,800 crimes per 100,000 and then dropping slightly to about 2,700 crimes in 2013. Still, questions remain about the extent to which crime rates were affected by the rapid and massive reduction in the prison population.

Lofstrom and Raphael (in press) examined this question by analyzing the effect of changes in county-specific incarceration rates in California following the passage of Realignment and by comparing state-level changes in California’s average crime rate using a synthetic-cohort analysis. They concluded that the large reduction in incarceration following the

passage of Realignment modestly increased property crimes, primarily by increasing the rate of auto theft, but the reduction in the incarceration rate had little effect on violent crime. More specifically, they estimated that each year realigned offenders were “free on the streets” resulted in 1 to 2 property crimes, although county-level and state-level models were not statistically significant. More certain was the estimate that each year realigned offenders were incarcerated prevented 1.2 auto thefts. The effect of Realignment on auto theft was robust and statistically significant across various model specifications and units of analysis. As we show below, this effect appears to be temporary and decayed over time.

Although Lofstrom and Raphael (in press) examined how Realignment influenced incarceration rates, it would be a mistake to characterize the law as a decarceration effort and overlook the other sweeping changes made to the criminal justice system. Similarly it would be a mistake to think of Realignment as a justice reinvestment law even though the timing of Realignment coincided with such reform efforts across the country, largely through the launching of the Justice Reinvestment Initiative in 2010 by the U.S. Bureau of Justice Assistance and The Pew Charitable Trusts. Rather, the central goal of Realignment was to *decentralize* the jurisdiction and funding of a large proportion of the low-risk inmate population from the state to the county level (Schlanger, 2013; Taylor-Nicholson and Russi, 2012). In fact, the front page of the CDCR’s website cogently confirms in boldface print: “No inmates in state prison have been or will be transferred to county jails or released early.” By shifting state government responsibility to local jurisdictions across California, the state effectively devised a plan to reduce its population by the legally mandated standard, while simultaneously expecting to use 10,000 empty jail cells to incarcerate offenders locally (Petersilia et al., 2013; Schlanger, 2013).

Prisons and Public Safety

The utility of prison as a tool for crime control is based on two theories of punishment—deterrence and incapacitation. Deterrence argues that the threat of certain, swift, and severe punishment dissuades rational actors from committing crimes. In effect, we may be “scared straight” by the risk of or experience of being locked-up. Incapacitation is the deceptively simple idea that incarceration can prevent crime by removing offenders from the community. Or, as Ben Wattenberg infamously quipped, “A thug in prison cannot mug your sister” (1999: paragraph 6).

Studies that examine the effect of incarceration rates on crime rates do not specifically distinguish between deterrent and incapacitative effects. Instead, they test the total effect of incarceration on crime. Research in this tradition typically employs regression models to estimate an elasticity, or the predicted change in the crime rate for a 1% increase in the rate of imprisonment (Spelman, 2000; Travis et al. 2014). Attempting to unravel the relationship between prisons and public safety is complex, in part because crime and punishment are reciprocally related (i.e., imprisonment rates are predicted to affect crime rates; crime rates are predicted to affect imprisonment rates). Specification errors arise from the failure to successfully model this simultaneity and from the omission of variables causally related to the dependent variable and to one or more independent variables in the model. For the incarceration-crime relationship, this means successfully controlling for all causes of both crime and imprisonment or using an instrumental variable that can control for either crime or imprisonment (see Spelman, 2013).

Reviews of the prisons and public safety literature find widely different elasticity estimates. On the low side of estimates, Liedka, Piehl, and Useem (2006) find that additional

incarceration beyond levels seen in 2000 will actually increase crime. On the high side, Levitt (1996) finds an elasticity of $-.7$ for robbery. The lack of consensus in the research record led Donohue (2009) to conclude that his “best guess for the elasticity of crime with respect to incarceration is highly uncertain; it is perhaps most likely to be between the -0.10 to -0.15 range, but it is conceivably within the broader interval between -0.05 and -0.40 ” (p. 283).

Lofstrom and Raphael (in press) placed their findings within the context of this literature, arguing that the implied effect sizes from the largest estimates in their analysis are consistent with previous research on total effect of incarceration on crime. Reported as crimes prevented per prison year, they suggest that 2.2 property crimes and .5 violent crimes were avoided as a result of incarcerating realigned offenders. Their fully specified county-level models and the estimates from the synthetic-cohort analysis, however, were nonsignificant, indicating an effect size of approximately zero for the population of realigned offenders.

Although there is substantial uncertainty about the total effect of prison on public safety, there is agreement among systematic reviews of this literature that the issues are complex, the models are sensitive to assumptions and other specification decisions, and the findings have limited policy utility (Donohue, 2009; Spelman, 2000; Travis, et al. 2014; Useem and Piehl, 2006). These observations argue strongly for the need for alternative methods for examining the relationship between prisons and public safety. In addition, this literature is of limited practical utility. Notably, the imprisonment rate is not a policy but the outcome of a myriad of sentencing laws, correctional practices, and discretionary decisions made by prosecutors, judges, and correctional professionals (Simon, 2014; Travis, et al., 2014). Moreover, it makes little practical sense to ask how much crime is prevented through incarceration compared to what might happen if offenders were “free on the streets.” The more relevant question to ask is whether policies

achieve their intended effects and whether they are more, less, or equally effective as other policies for addressing crime.

Research Strategy

Here, we test the effect of the California Realignment Act, which substantially reduced the size of the prison population by shifting responsibility for certain groups of offenders to local jurisdictions. In doing so we attempt to illuminate the ongoing public debate surrounding what has been called “one of the great prison experiments in American incarceration policy” (*The Economist*, May 11, 2013). Three predictions have been advanced about the potential effect of California’s great prison experiment.

First, opponents of prison downsizing worry that reducing the prison population is dangerous. Any reduction in the number of inmates incarcerated has the potential to weaken incapacitation effects and reduce the deterrent effect of punishment by lowering the severity and certainty of punishment. It was this fear that led Justice Alito to worry that ordering California to reduce its prison population would create “a grim roster of victims” (*Brown v. Plata*, p.17, Alito dissenting). According to this perspective, we can predict that California’s Realignment Act will increase crime.

Second, advocates of justice reinvestment and evidence-based practices argue that prison downsizing can be done safely and may improve public safety. Adherents of this view maintain that prisons are marginally effective at best and at worst may increase offending by weakening prosocial ties and legitimate opportunities. Investing savings from prison downsizing in scientifically sound strategies to lower recidivism and prevent offending through better policing

practices and social programs will reduce both crime and imprisonment. According to this perspective, we can predict that California's Realignment Act will reduce crime.

Third, advocates of decentralization argue that offenders can be punished and treated under local jurisdiction more efficiently and as effectively as they can be punished and treated by the state. As articulated by the Legislative Analyst's Office (2011a), under Realignment "decentralization of program delivery and authority could promote innovation, efficiency, and responsiveness to local conditions" (p. 4). According to this perspective, we can predict that California's Realignment Act will have no effect on crime.

This study extends previous research on the effect of Realignment on public safety conceptually and methodologically. Conceptually, the study attempts to test whether Realignment was more, less, or equally effective as the set of policies that predated the law. In addition, we examine whether any effects associated with Realignment are immediate, gradual, permanent, or temporary by estimating effects in 2012, 2013, and 2014. This strategy allows us to explore more fully the range of predictions advanced about the law's potential effects. Finally, we introduce an experimental design to the criminal justice literature that is intuitively powerful, overcomes methodological problems found in existing research on the effect of imprisonment, and has strong internal validity.

Methods

Research Design

A regression point displacement design (RPDD) was used to examine the effect of California's Realignment Act on violent and property crime rates. The RPDD is a pretest-posttest, quasi-experimental design based on a simple, but compelling idea: The posttest

measure of a treatment group is compared to a pre-post regression line of the population. “There is evidence for a treatment effect when there is a posttest (vertical) *displacement* of the treated group *point* from the control group *regression* line (thus leading to the name ‘regression point displacement’)” (Trochim and Campbell, 1996:5; emphasis in original). Thus, RPDD allows us to test the effect of a treatment on the posttest that is not predicted from the pretest.

The design used in the present study is illustrated in Table 1. Using standard experimental notation, NR represents the non-random units in the experiment and control groups, O represents an observation, and X represents a treatment condition. The treatment group consists of just one unit or “point” (California) and the control group consists of 49 units (the remaining US states). Three posttests were examined to test whether treatment effects were immediate, delayed, permanent, or temporary.

-Insert Table 1-

RPDD belongs to a class of experimental designs that have been described as “noise reduction” strategies for the fact that they attempt to remove variation in the dependent variable not attributable to the treatment. RPDD is most closely related to Regression Discontinuity (Trochim, 2006). Although RPDD is new to criminology and criminal justice research, it is not a new design and appeared in Cook and Campbell’s classic book on experimentation under the title “Quantified Multiple Control Groups, Posttest Only Design” (also see Shadish et al. p. 213-14).

RPDD addresses the two common and seemingly intractable methodological problems found in existing studies of the total effect of incarceration on crime rates: simultaneity and specification errors. Experimental designs have a distinct advantage over correlational designs because they are better able to control unmeasured influences on the dependent variable and

establish temporal order through experimental control rather than statistical modeling. RPDD, for instance, can effectively control for many confounding influences because it does not require pretest equivalence, or “balance,” between the control group and the treatment group. More precisely, the full range of variability in the study units is captured in the *observed regression line of the population*, which is then employed to test whether the treatment unit departs from its *predicted position in the population*. Thus, a primary strength of RPDD is that it does not require us to make any assumptions about the comparability of US states, to match the treatment and comparison group, or to use changes in crime rates over time as a benchmark of comparison.

As long as we are confident that the treatment group belongs to the population and that the control group will provide an unbiased estimate of the true population regression line—conditions clearly met in the current study which includes all 50 states—RPDD approximates a true experimental design in its ability to yield internally valid results (Trochim and Campbell, 1996). This is a particularly important design advantage for studying sentencing policy and statewide prison policies because randomized experiments are unfeasible and specification decisions can have large effects on the estimates obtained in statistical models attempting to unravel the relationship between imprisonment and crime (Donohue, 2009; Travis et al. 2014; Western, 2006).

The primary source of bias in RPDD is the method used to assign the treatment to a particular unit (Linden, Trochim, and Adams, 2006). In a natural experiment, such as the one reported here, any treatment effects associated with California’s Realignment Act could be due to an interaction between the “treatment” and crime rates. The fact that Realignment was implemented as a direct result of the *Plata* decision and not due to real or perceived changes in

the crime rate reassures us that the interaction of the treatment and the dependent variables is an unlikely threat to internal validity in this study.

Local history effects are another potential threat to the internal validity of RPDD. Factors unique to California that affect crime rates and occurred at roughly the same time as the implementation of Realignment are considered rival explanations for any observed treatment effects and cannot be ruled out with this research design.

Treatment Condition and Possible Treatment Effects

Realignment went into effect in October of 2011. Between September 30, 2011 and December 31, 2012, the total California prison population decreased by 27,527 inmates, a decline of 17% (CDCR, 2011, 2012). In addition, total admissions to California prisons decreased by 65%, from 96,669 in 2011 to 34,294 in 2012 (Carson and Golinelli, 2013). During 2013 and 2014, the total California prison population stabilized at approximately 134,400 inmates, a slight increase from 2012 (CDRC, 2014, 2015).

California was not the only state to reduce the use of imprisonment during this time period. Eight other states reduced their prison populations by more than 1,000 inmates between 2011 and 2012 (Caron and Golinelli, 2013). This problem is analogous to treatment diffusion, a threat to the internal validity of experiments where units in the control group are exposed to the treatment condition. Treatment diffusion may make it more difficult to detect an effect associated with Realignment. The magnitude of the change in the California prison population and the fast pace of implementation helps to militate against this limitation.

Importantly, California's Realignment Act also made substantial changes to the use of parole, probation, jails, and decentralized responsibility for non-violent offenders (see Petersilia

and Synder, 2013). Between 2010 and 2012, the California parole population declined by 46%, the jail population increased 12%, and the probation population increased 34% (Petersilia and Cullen, 2014). Further, the law altered local criminal justice agencies and their interrelationships—particularly the relationship between judges and sheriffs—as counties adjusted to the massive influx of realigned offenders (Petersilia, 2014; Schlanger, 2013). These changes were unique to California and remind us that any effects associated with Realignment reflect a complex set of policy changes and their interactions, not only a change in the incarceration rate.

In addition to the size and direction of effect, the form of an effect is also of importance. Treatment effects may be immediate or delayed and may be temporary or permanent or any combination of these two qualities. Thus, it is consistent with deterrence theory to predict that Realignment will have an immediate and permanent effect on crime rates by rapidly lowering the severity of punishment and the certainty of imprisonment. Drawing on incapacitation theory we might predict that Realignment will have an immediate, permanent effect that reaches full impact gradually as more potential offenders spend longer periods of time in the community with the opportunity to commit crime. In contrast, supporters of justice reinvestment might predict that the effect of Realignment will be to gradually and permanently reduce crime rates as diverted offenders graduate from rehabilitation programs and crime prevention programs reach maturity. And advocates of decentralization might predict that Realignment will have no effect or will have an immediate but temporary effect as local governments adapt to new demands and develop strategies for meeting the public safety needs of their communities.

Measurement

The independent variable, or treatment condition, was measured as a dummy variable where 1 = California's Realignment Act and 0 = other state prison policy.

Dependent measures of violent and property crime rates were obtained from the Uniform Crime Reports for 2010, 2012, 2013, and 2014. The violent crime rate consists of the number of homicides, aggravated assaults, robberies, and rapes per 100,000 population. The property crime rate includes burglaries, motor vehicle thefts, and larcenies per 100,000 population. The violent and property crime rates for each time period have an approximately normal distribution. The definition for rape was changed between 2010 and 2014. To maintain measurement reliability, the historic definition of rape was used.

The sensitivity of RPDD increases with the reliability of the pretest posttest measures (Bausell and Li, 2002). Excluding California, Chronbach's alpha and test-retest reliability coefficients were calculated for each of the measures examined. A table of these results is reported in Appendix A. For each measure, reliability was high ($\geq .9$), increasing the sensitivity of the test to detect treatment effects and precluding concerns about instrumentation effects (i.e., changes in the measurement of crime between 2010 and 2014). In addition, California did not change its UCR reporting practices between 2010 and 2014, reassuring us that any treatment effects associated with Realignment were not due to changes in reporting practices (Federal Bureau of Investigation, 2015).

Spelman (2005) argues in favor of the use of smaller aggregation units for studying the prison/public safety question when using econometric models due to gains in measurement variability and sample size. In contrast, the pre-post test design used here means that the stronger measurement reliability associated with larger aggregation units and the use of ANCOVA improves our ability to detect treatment effects (Bausell and Li, 2002). This is a

particular advantage when using official measures of crime, which can suffer from large, systematic measurement error at lower levels of aggregation (Malz and Targonski, 2002; Martin and Legault, 2005). In addition, RPDD is robust with small numbers of observations (Trochim and Campbell, 2012).

Method of Analysis

The size and statistical significance of the treatment effect for the RPDD designs were estimated using Analysis of Covariance (ANCOVA) (Trochim, 2001; Trochim and Campbell, 1996). ANCOVA has two important uses in pretest-posttest designs. First, it reduces within-group error variance and as a result increases the precision of estimates. Second, it allows for the adjustment of group differences by eliminating the influence of confounding variables. In the present study, crime rates in 2012-2014 are adjusted by removing the influence of crime rates in 2010. Additional detail is provided in Appendix B.

ANCOVA differs from gain scores or difference-in-difference scores, which estimate the effect of the treatment by comparing the average gain for the treatment group to the average gain for the control group. In contrast, the ANCOVA model here tests whether the posttest for the treatment group differs from its predicted location in the population, controlling for the pretest measure. Knapp and Schafer (2009) discuss the advantages of ANCOVA relative to gain scores noting that the former “may not be very reliable, power is usually greater for ANCOVA, the gain scores are negatively correlated with the pretest, and the assumptions of linearity and homogeneity in and of themselves are interesting and may be tested” (p. 2). Moreover, Shadish et al. (2002, p. 307) maintain ANCOVA is preferable to matching strategies for controlling

extraneous variance when the pretest has a linear relationship to the posttest, as is the case with state-level crime data (see Figures 1 and 2 below).

Results

California's Realignment Act was intended to reduce overcrowding in the state's prison system without adversely affecting public safety. To examine the effect of Realignment, California's crime rates in 2012, 2013, and 2014 were compared to the population of crime rates using a quasi-experimental design. These results are presented in detail below. We begin with an examination of violent crime rates and then discuss the effect of Realignment on property crime rates.

Violent Crime

A scatterplot of the 2010 and 2012 violent crime rate coordinates for each state is displayed in Figure 1. A regression line was fit to the data and the treatment unit, California, was represented by a solid dot. The pre-post violent crime rate measures were strongly linear, with cases closely and evenly distributed about the regression line. This pattern is ideal for detecting treatment effects. A visual inspection of the data suggested that Realignment was not associated with a change in California's 2012 violent crime rate.

- Insert Figure 1-

- Insert Table 2 -

This visual interpretation was confirmed in the ANCOVA model, which is reported in Table 2. Controlling for the violent crime rate in 2010, implementation of Realignment was associated with an increase of approximately 4 violent crimes/100,000 population, plus or minus

51 violent crimes based on a 95% confidence interval. The ANCOVA estimate of the treatment effect for Realignment on violent crime rates in 2013 was nonsignificant ($t = 0.172$; $p = .862$). Thus, there is no evidence that the Realignment Act had an immediate effect on violent crime rates.

The experiment was conducted a second and third time with posttest data from 2013 and 2014. Controlling for the violent crime rate in 2010, Realignment was associated with a decrease of 9.5 violent crimes/100,000 population, plus or minus 60 violent crimes based on a 95% confidence interval. The ANCOVA estimate of the treatment effect for Realignment on violent crime rates in 2013 was nonsignificant ($t = -0.318$; $p = .752$). Similarly, Realignment was associated with a decrease of approximately 15 violent crimes per/100,000 population in 2014, a finding that does not achieve statistical significance ($t = -.404$; $p = .69$). Thus, there is no evidence that Realignment had a delayed or gradual effect on violent crime rates.

Violent crime rates were disaggregated to explore whether California's Realignment Act affected crime types differentially. The ANCOVA estimate of effects for murder, rape, robbery, and aggravated assault rates for 2012-2014 appear in Table 2. None of the models found statistically significant treatment effects for Realignment. Effect sizes, as measured by partial eta squared, ranged from .000 to .01. After controlling for crime in 2010, none of the posttest observations of murder, rape, robbery, or aggravated assault in California differed from their predicted place in the population.

Property Crime

The pre-post bivariate distributions of property crime rates in 2012 are presented in Figures 3. Again, California was denoted as a solid dot and the scatterplot confirms that the data

are strongly linear with cases evenly distributed along the regression line of the population. There appeared to be a small posttest increase in California's property crime rates in 2012.

- Insert Figure 2 -

Controlling for property crime rates in 2010, the treatment effect associated with California's Realignment act on 2012 property crime rates was nonsignificant ($\beta_2 = 154.86$; $t = .979$; $p = .332$). Similarly, the effect of Realignment on 2013 property crime rates ($\beta_2 = 172.159$, $t = .979$; $p = .332$) and 2014 property crime rates ($\beta_2 = 102.46$; $t = .473$; $p = .638$) was nonsignificant.

- Insert Table 3 -

The ANCOVA estimates of effect for the disaggregated property crime types are reported in Table 3. The effects associated with burglary and larceny were nonsignificant in all three time periods. However, a statistically significant displacement from the control group was observed for motor vehicle theft ($\beta_2 = 74.295$; $t = 2.64$; $p = .01$) in 2012. Based on a 95% confidence interval, a posttest increase of between 18 and 130 auto thefts per 100,000 residents was associated with Realignment in 2012. The proportion of the variance in the 2012 motor vehicle theft rate explained by the treatment was 13%. This effect weakened in 2013, with a posttest increase of approximately 66 auto thefts associated with Realignment ($t = 1.861$; $p = .07$). The proportion of variance in the 2013 rate of motor vehicle theft declined to 7%. This pattern of attenuation was confirmed for 2014. Controlling for 2010 rates, Realignment had no effect on auto theft rates in 2014 ($\beta_2 = 25.9$; $t = .625$; $p = .54$; $\eta_p^2 = .01$). Together the findings suggest that Realignment had an immediate effect on rates of auto theft that decayed between 2012 and 2013 after which rates of auto theft in California returned to pre-Realignment levels.

Discussion and Policy Recommendations

The worst fears about the effect of California's Realignment Act on public safety have not been realized. Indeed, early results indicate that Realignment was a significant success: Within just 15 months of its passage, Realignment reduced the size of the total prison population by 27,527 inmates, prison crowding declined from 181% to 150% of design capacity (CDCR, 2012), approximately \$453 million was saved in 2012 (Legislative Analyst's Office, 2011b), and there was no adverse effect on the overall safety of Californians. Three years after the passage of Realignment the California prison population stabilized and crime rates were unaffected.

The results of this study showed that California's Realignment Act had no effect on violent or property crime rates in 2012, 2013, or 2014. When crime types were disaggregated, a moderate to large, statistically significant association between Realignment and auto theft rates was observed in 2012. In 2013, however, this relationship weakened and by 2014, auto theft rates returned to pre-Realignment levels. The findings here are largely consistent with those of Lofstrom and Raphael (in press), except that we found the positive effect of Realignment on auto theft decayed by 2014 whereas they examined the effect of Realignment on the average of 2012 and 2013 crime rates.

Although Lofstrom and Raphael (in press) suggest that lower rates of incarceration caused an increase in auto thefts between 2012 and 2013, we recommend interpreting this finding cautiously. Auto theft is not temporally stable and large year-to-year variations occur periodically in the state-level time series as a matter of course, particularly in states like California, Arizona, and Washington that have major international ports of entry (Clarke and Harris, 1992; Roberts, 2012; Walsh and Taylor, 2007). In addition, it is not clear why auto theft, but not other types of property crime, would be affected uniquely by Realignment, especially in

light of research that shows that offenders who engage in instrumental crime tend not to specialize but commit a variety of property crimes (see e.g., Youngs, Ioannou, and Eagles, 2014). Moreover, other changes in the operation of California's criminal justice system during this time period are possible rival explanations. For example, a spokesperson for the National Insurance Crime Bureau speculated that increases in California's 2011 auto thefts, prior to the passage of Realignment, were due to cutbacks in police and prosecutors specializing in auto theft (Edgerton, 2011). In brief, the qualities of the data, knowledge about motor vehicle theft, and research on offense diversification warn against making strong causal inferences.

More broadly, the findings are most consistent with the predications advanced by advocates of decentralization, namely that Realignment would have no effect on crime and that counties would be able to safely supervise realigned offenders within the community. These results are also consistent with research that finds that incapacitation is sensitive to diminishing returns (Liedka et al., 2006), although this phenomenon is not tested here and we cannot reasonably assume that realigned offenders were "free on the street." Importantly, research by Gerlinger and Turner (2015) suggests as well that realigned offenders are not necessarily low-risk. They find that 23% of a group of inmates who would have qualified for realignment prior to the passage of the law were classified at high-risk for recidivism, 23% as "high violent," and 52% were reconvicted of a new offense within three years of their release. Finally, to the extent that auto theft increases in 2012 and 2013 may be attributed Realignment, our findings indicate that effects associated with large shocks to the criminal justice system observed in one year may not be generalizable to subsequent years. Generalizing to other time periods, states, units, or policy changes should be done with due caution.

Perhaps the most important weakness of this analysis is that it obscures important local variation and tells us nothing about the mechanisms that lie behind the results. We cannot know from this study if the null findings are attributable to effective community interventions, local law enforcement, wiser use of jails, diminished returns on incarceration, or some other factors. Still, the emerging research on the effects of Realignment, along with a growing body of research pointing to the limits of incarceration (Travis et al., 2014), should provide a degree of confidence to decision and policymakers that large-scale reform of imprisonment policy is possible without endangering the public particularly in states with high rates of incarceration. Crime rates, specifically violent crimes that inspire the most fear and result in the greatest harm, remain near 40-year lows. Moreover, recent opinion polls demonstrate a willingness to downsize prisons (Sundt, Cullen, Thielo, and Jonson, 2015), overwhelming public support for the use of alternatives to prison for nonviolent offenders, and a growing sense that too many people are incarcerated at too high a cost (Pew Charitable Trusts, 2012). For the first time in decades it appears that a “window of opportunity” for justice reform (Tonry, 2010) is opening to allow for a reevaluation of the effectiveness and wisdom of policies that have created the largest prison population in the world.

This is not to say that significant challenges do not remain. Indeed, sentencing reform and decarceration are “wicked problems” (Rittel and Webber, 1973) embedded in exceedingly complex, dynamic social systems. For now at least, we can say that Realignment has not endangered the overall public safety Californians and attention should be turned toward local implementation efforts, targeted crime prevention, and long-term sustainability. Below we offer policy recommendations in each of these areas that have the potential to both maintain the reductions in the prison population seen in the initial phase of Realignment and potentially result

in crime reduction through the investment of Realignment funds in proven public safety strategies.

Local Implementation

At its core, California's Realignment Act is an effort to decentralize corrections by shifting fiscal responsibility for those convicted of non-serious offenses to local governments. This is both a potential strength and a weakness of Realignment. Among the advantages of decentralization are the potential to encourage local experimentation, greater responsiveness to local needs, and stronger support of local stakeholders. The disadvantages include a lack of coordination, weak accountability, mission drift, and goal displacement. The massive problems associated with decentralizing the treatment of the severely mentally ill is a sobering example of the very real dangers of policy failure when state governments transfer responsibility for complex, systemic problems to local governments (Torrey, 2013).

The promises and perils of decentralization point to the critical importance of establishing implementation protocols and accountability systems. Even more so, the magnitude of public investment in Realignment—approximately \$1 billion per year—and the potential public safety risk posed by realigned offenders demands meaningful oversight. Yet, AB 109 was passed with virtually no accountability mechanisms and no provision for systematic evaluation. Under AB 109, local community corrections advisory boards, known as Community Corrections Partnerships (CCP), submit plans for the implementation of Realignment provisions to the county Board of Supervisors for approval. A four-fifths vote is required by the county Board of Supervisors to reject a CCP plan, virtually ensuring that all plans are approved. The law encourages, but does not require, investment in evidence-based approaches to public safety and

does not require any evidence of effectiveness. Moreover, there is no state-level oversight and counties are not even required to submit updated plans annually. As Flynn (2014) observes, “without specifying funding and program-development requirements, Realignment sets up a system to fail” (p. 17).

AB 109 or related laws should be amended to establish standardized performance measures, data collection systems, and meaningful annual reporting requirements to ensure public accountability, reduced costs, and improved public safety. The legislative language developed by the Pew Center’s Public Safety Performance Project (2008) provides an excellent model that maintains the advantages of local flexibility while establishing enforceable standards:

The [agency] shall adopt policies, rules and regulations that within [four] years of the effective date of this Act result in at least [75 percent] of supervised individuals being supervised in accordance with evidence-based practices.

Within [four] years of the effective date of this Act, [75 percent] of state monies expended on programs shall be for programs that are in accordance with evidence-based practices (p. 3).

Without statutory requirements that make funding contingent upon the successful adoption and implementation of evidence-based practices, there will be significant pressure to maintain the status quo particularly in counties that lack the political will to change a criminal justice culture of control, surveillance, and punishment (see Flynn, 2014; Lin and Petersilia, 2014).

Implicit in any serious effort to adopt evidence-based practices is commitment to use scientific evidence to continuously inform decision-making and monitor performance. In addition to funding the creation and maintenance of data systems and requiring counties to report

standardized performance measures, money should be appropriated to support rigorous, independent evaluation of the initiatives and programs funded under AB 109. In particular, it will be important to support studies that compare the relative effectiveness of county Realignment strategies to not only establish whether individual programs are cost-effective, but also to ascertain the menu of interventions that have the greatest systemic benefits. Studies that examine system-wide changes in the administration of justice will also be important to understand the effect of Realignment on important issues such as sentencing, plea-bargaining, and equal protection (also see Petersilia, 2014).

The California Budget Act of 2013 appropriated \$7.9 million to counties simply for replying to a 17-item questionnaire distributed by the Board of State and Community Corrections that asked counties to report their funding priorities, existing programs, and “achievements and success stories.” Counties were also asked to report on a Likert scale, ranging from strongly agree to strongly disagree, whether they had “made progress” achieving outcome measures (as defined by the county) during any of the previous three fiscal years (Board of State and Community Corrections, 2014). Generously speaking, the use of these funds can be viewed as additional one-time, discretionary funds to support Realignment. It is difficult, however, to justify the lack of meaningful evaluation considering the stakes and the amount of public monies spent on one of the largest and most dramatic public safety reforms in U.S. history.

Targeted Crime Prevention

Although much of the policy debate around how best to spend Realignment funds has been framed as a choice between investing in offender treatment versus jail expansion, an important opportunity exists to pursue targeted crime prevention. These proactive strategies

have distinct advantages including the potential to avoid costs associated with both crime and punishment. Two targets with particular relevance to California are diversion programs for the mentally ill and the prevention of auto theft.

In large part, California's Realignment Act was precipitated by unconstitutional mental health care within the prison system caused by extreme overcrowding (*Brown v. Plata*). While AB 109 attempts to slow prison admissions generally, efforts should be made to specifically reduce the number of mentally ill offenders incarcerated by improving mental health treatment broadly. Untreated mental illness is a major driver of incarceration. Baillargeon, Binswanger, Penn, and Williams (2009) found, for example, that individuals with major mental illnesses were significantly more likely to be incarcerated for a violent crime and more likely to be incarcerated multiple times than inmates with no major psychiatric disorders. Individuals with bipolar disorder were more than three times as likely as inmates with no psychiatric disorder to have been incarcerated four or more times.

Although several California counties have invested Realignment funds into mental health services, counties should specifically examine evidence-based interventions that attempt to divert the mentally ill from the criminal justice system. Three promising diversion programs are Crisis Intervention Teams (CIT) (Compton, Bahora, Watson, and Oliva, 2008), Mental Health Courts (Hiday and Ray, 2010; McNiel and Binder, 2007; Steadman, et al., 2011) and Forensic Assertive Community Treatment (Lamberti, Weisman, and Faden, 2004; Lamberti, Deem, Weisman, and LaDuke, 2011). Each of these strategies has the potential to simultaneously improve access to treatment for the mentally ill, reduce imprisonment, and improve public safety.

California had the highest national rates of auto theft in 2010, 2011, 2012, and 2013. Although auto theft rates in California returned to pre-Realignment levels by 2014, California

was still ranked 2nd nationally behind Washington state. California's auto theft problem is tied to several environmental and economic factors such as a mild climate, proximity to the Mexico border, access to major international seaports, and a high concentration of automotive businesses (Clarke and Harris, 1992; Roberts, 2012; Walsh and Taylor, 2007). Nevertheless, auto theft is highly amenable to prevention and recovery efforts and Realignment funds returned to communities with particularly high rates of auto theft could realize significant benefits from crime-specific interventions. Promising strategies include "hot-spot" and "hot-route" patrolling (Barclay et al., 1996; Rengert, 1997; Taylor, Koper, and Woods, 2012), the use of vehicle tracking systems (Clarke and Harris, 1992; Roberts, 2012), license plate recognition technology (Taylor et al., 2012), engine immobilizers and ignition isolation systems (Potter and Thomas, 2001), and specialized auto theft policing units (Taylor et al., 2012). Arizona, which shares many of California's risk factors for auto theft, has aggressively pursued these and other preventive efforts and auto theft rates declined from a high of 1,060 in 2002 to a rate of 292 in 2012, a 72% drop over a ten year period.

Sustainability

The long-term success of California's efforts to reduce prison overcrowding, improve healthcare for inmates, and realize cost efficiency will be difficult, if not impossible, to achieve without addressing sentencing (Vitiello, 2013). The "iron law of prison populations" teaches us that the size of a prison population is determined by two factors: the number of people who are sent to prison and how long they are incarcerated (Clear and Austin, 2009). Realignment only addresses the former, slowing prison admissions by shifting responsibility for the punishment and supervision of non-non-nons to counties and changing rules regarding parole supervision and

revocation. Sentence length and other drivers of admissions will continue to place upward pressure on the number of offenders incarcerated in California. For example, a 2013 study by the California State Sheriffs Association reported that since Realignment was implemented 1,153 inmates were sentenced to jail for 5 years or longer. In Los Angeles county, a “non-non-non” offender was sentenced to a 43-years term, to be served in the local jail, for distribution of a controlled substance (Petersilia and Snyder, 2013).

Without sentencing reform, the prison population and the cost of maintaining that population will remain stubbornly high and there is a greater risk that jails will also become overcrowded and unconstitutional. For example, the Riverside County jail is facing a class action lawsuit alleging unconstitutional conditions due to the failure to provide adequate physical and mental health care (*Gary v. County of Riverside*) and several county jails were under court order to reduce overcrowding or improve conditions of confinement prior to the passage of AB 109 (Schlanger, 2013). In late 2014, California voters passed Proposition 47, which made 7 non-serious property and drug offenses misdemeanors. The effect of Proposition 47 on jail populations has been substantial. In the first 10 months after the law passed, the California prison population declined by close to 7,800 inmates and the jail population declined by close to 10,000 inmates (Lofstrom and Martin, 2015). This change may have removed some of the pressure to reform sentences for higher-level felonies by freeing up jail space for “realigned” offenders, at least in the short-term. It is too soon to know the longer-term effects of Proposition 47, but it seems likely that inmates with longer sentences will continue to accumulate in local jails without comprehensive sentencing reform.

Several observers agree that sentence disparity is another likely byproduct of Realignment, which gives broad discretion to counties and encourages local differences in

implementation (Petersilia and Snyder, 2013; Vitiello, 2013). Petersilia and Snyder (2013) report, for example, wide variability between California counties in the use of split sentences, with just 5% of realigned offenders in Los Angeles county serving such sentences compared to 84% in Contra Costa county. The combination of high discretion and no accountability led Krisberg (2011) to argue “This *laissez faire* approach means that 58 counties will produce many differing versions of the reform — we will see the emergence of justice by geography.” Urging sentencing reform for this and other reasons, Carole D’Elia, the acting executive director of the Little Hoover Commission an independent state oversight agency, observed “we actually have a de facto sentencing commission in our sheriffs,” who exercise discretion over early release to ease jail crowding (St. John, 2014). Sentence disparity and early release have the potential to undermine the legitimacy of reforms and are another reason to encourage comprehensive sentencing reform in addition to greater oversight of the implementation of Realignment.

Conclusion

The results found here provide evidence that large reductions in the size of the prison population can be made without endangering the overall safety of the public. An astounding 17% reduction in the size of the California prison population, which occurred over just 15 months, had no effect on aggregate rates of violent or property crime. Moreover, three years after the passage of Realignment, California crime rates remain at levels comparable to what we would predict if the prison population had remained at 2010 levels. As discussed above, sustaining these achievements will require greater attention to local implementation and accountability, targeted crime prevention, and sentencing reform.

It is tempting to point to the striking drop in crime rates during the late 1990s that roughly correspond to the equally striking rise in imprisonment rates and conclude that prison makes us safer. We make a mistake, however, when we assume that prisons are the only meaningful or viable response to crime. Instead, we should ask whether the relative benefits of imprisonment are greater than the broad array of policies available. The answer to that question is becoming increasingly clear: Imprisonment may affect crime, but it does so at a high social, human, and economic cost and is far less cost-effective than alternatives (Aos, Miller, and Drake, 2006; Currie, 2013; Donohue, 2009). Moreover, there is now evidence that prison populations can be safely reduced without harming the public.

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Appendix A

Table A. Pretest Posttest Measurement Reliability

Series	Chronbach's alpha			Test-Retest Reliability		
	2010 pretest 2012 posttest	2010 pretest 2013 posttest	2010 pretest 2014 posttest	2010 pretest 2012 posttest	2010 pretest 2013 posttest	2010 pretest 2014 posttest
Violent Crime	.99	.98	.98	.99	.97	.96
Murder	.97	.97	.96	.93	.94	.92
Robbery	.99	.98	.97	.99	.97	.95
Rape	.95	.94	.96	.92	.90	.93
Aggravated Assault	.99	.98	.98	.99	.97	.96
Property Crime	.99	.98	.96	.97	.95	.93
Burglary	.99	.97	.96	.98	.96	.94
Motor Vehicle Theft	.97	.95	.94	.93	.90	.89
Larceny Theft	.98	.98	.96	.97	.95	.92

Note: California excluded

Appendix B

The ANCOVA model may be presented as a regression equation that takes the form:

$$Y = \beta_0 + \beta_1 X_i + \beta_2 Z_i + e_i$$

where Y is the dependent variable, β_0 is the intercept, β_1 is the pretest coefficient, X is the covariate, β_2 is the treatment effect, Z is the dummy variable for the treatment, and e is a residual. The null hypothesis is $\beta_2 = 0$. The analyses were conducted with SPSS using Sum of Squares I to adjust for unequal group size. Full ANCOVA results and scatter-plots are available from the first author.

Table 1: Regression Point Displacement Design

	Pretest	Treatment	Posttest 1	Posttest 2	Posttest 3
NR	O (2010)	X (Realignment)	O (2012)		
NR	O (2010)		O (2012)		
NR	O (2010)	X (Realignment)		O (2013)	
NR	O (2010)			O (2013)	
NR	O (2010)	X (Realignment)			O (2014)
NR	O (2010)				O (2014)

Table 2: The Treatment Effect of Realignment on 2012, 2013, and 2014 Violent Crime Rates:
ANCOVA

Year	Dependent Variable	Treatment Effect	95% Confidence Interval		η_p^2
			Lower Bound	Upper Bound	
2012	Violent Crime Index	4.32	-46.28	54.92	.001
	Murder/Manslaughter	0.13	-1.35	1.60	.001
	Rape	-.83	-10.46	8.80	.001
	Robbery	4.95	-8.72	18.61	.011
	Aggravated Assault	2.01	-40.85	44.87	.001
2013	Violent Crime Index	-9.47	-69.39	50.45	.002
	Murder/Manslaughter	-.04	-1.38	1.30	.000
	Rape	-.29	-11.08	10.51	.000
	Robbery	2.17	-18.90	23.24	.001
	Aggravated Assault	-3.02	-46.86	40.81	.000
2014	Violent Crime Index	-14.59	-87.19	58.02	.003
	Murder/Manslaughter	-.26	-1.85	1.32	.002
	Rape	1.46	-7.24	10.15	.002
	Robbery	-7.60	-34.02	18.82	.01
	Aggravated Assault	-.06	-51.22	51.10	.00

Note: N=50

Table 3: The Treatment Effect of Realignment on 2012, 2013, and 2014 Property Crime Rates: ANCOVA

Year	Dependent Variable	Treatment Effect	95% Confidence Interval		η_p^2
			Lower Bound	Upper Bound	
2012	Property Crime Index	154.86	-102.40	412.12	.03
	Burglary	48.42	-45.83	142.67	.02
	Larceny-Theft	46.67	-129.86	223.20	.01
	Auto Theft	74.30 ^a	18.20	130.40	.13
2013	Property Crime Index	172.16	-181.53	525.84	.02
	Burglary	55.57	-58.62	169.76	.02
	Larceny-Theft	72.80	-157.06	302.65	.01
	Auto Theft	66.22 ^b	-5.36	137.80	.07
2014	Property Crime Index	102.46	-333.24	538.16	.01
	Burglary	35.19	-88.75	159.14	.01
	Larceny-Theft	-115.06	-408.21	178.09	.01
	Auto Theft	25.91	-57.54	109.35	.01

Note: a= $p \leq .05$; b = $p \leq .10$; N=50

Figure 1. Regression Point Displacement: The Effect of California Realignment on 2012 Violent Crime Rates

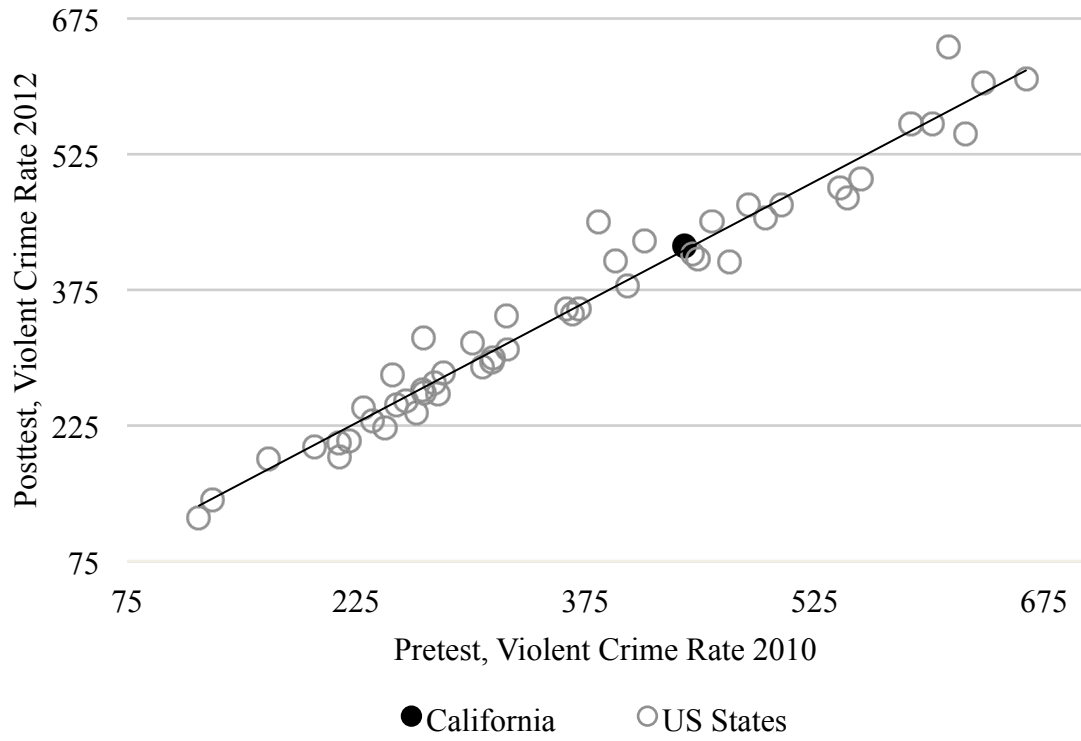


Figure 2. Regression Point Displacement: The Effect of California Realignment on 2012 Property Crime Rates

