ICPSR UNDERGRADUATE RESEARCH PAPER COMPETITION, 2008

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Manipulating the "Truth": The Unintended Consequences of Truth-in-Sentencing Laws in California, 1992-1996

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Manipulating the "Truth": The Unintended Consequences of Truth-in-Sentencing Laws on Sentencing Behavior in California, 1992-1996

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Graduation Date: May 2009

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Abstract

Determinate sentencing policies have changed the face of the criminal justice system over the past 30 years, but the most recent trend—Truth-in-Sentencing—aims not to readjust sentencing conditions, but rather to ensure that convicts serve most of their assigned prison sentences. However, this study finds that TIS has unexpectedly influenced sentencing behavior. After the adoption of Truth-in-Sentencing laws in California in 1994, violent offenders saw fewer convicted counts, less severe convictions, and decreased assigned prison sentences. Moreover, robbery and aggravated assault offenders are spending less time in prison after the implementation of Truth-in-Sentencing, suggesting that the law has not achieved its aims and may have even worsened the situation in California.

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I. Introduction

Over the past 35 years, the United States criminal justice system has become increasingly more stringent in its charging and sentencing guidelines. Mandatory minimums, clear-cut sentencing statutes, and more severe time-off provisions have intended to decrease the discretion of individual actors in the criminal justice system. One of the more recent additions to this collection of policies—the Truth-in-Sentencing movement—does not affect sentencing guidelines, but rather aims to increase the proportion of time violent offenders spend in prison given their sentence length.

Truth-in-Sentencing (TIS) was motivated by a belief that, even after tougher sentencing laws, the criminal justice system remained too lax once offenders had been convicted, allowing violent criminals to leave prison long before their sentences were up. Indeed, a 1991 Bureau of Justice Statistics survey found that the typical inmate entering state prison in that year could expect to serve under half of the sentence he received (Beck 1995). Consequently, the TIS program encouraged states to require that violent offenders serve at least 85% of their assigned sentence, hoping that this would reduce leniency and volatility in the system and incapacitate serious offenders for longer periods of time (Ditton 1999).

In theory, the implementation of TIS should have increased the amount of time violent offenders were incarcerated as a proportion of their assigned sentence. However, such a policy directive considered time spent in prison as a variable operating in a vacuum, unaffected by the strategic choices of prosecutors and judges. In reality, TIS laws may not have had their intended positive effect on the time spent behind bars and instead might have altered charging and sentencing behavior—an ironic twist of the "truth" in Truth-in-Sentencing.

This paper empirically examines the assumptions underlying the intent of Truth-in-Sentencing by analyzing changes in sentencing behavior, assigned sentence lengths, and time served in prison among 23,986 newly-admitted prisoners in California before and after the adoption of TIS laws there in 1994. Across four TIS-eligible offense categories, the results suggest that TIS has lowered the number of charges prosecutors file as well as the severity of the charges. Further, judges have reduced their maximum imposed sentence lengths under TIS. Most importantly, I find that TIS has actually led to an overall *decrease* in both the amount of time violent offenders are incarcerated and the proportion of their sentences they serve.

In Section II, I discuss the history of TIS and the literature on its effects. In Section III, I present the empirical findings on the effects of TIS on average time served, counts received, offense distributions, and imposed sentence lengths. Finally, in section IV, I discuss the policy implications of my results.

II. The Truth-in-Sentencing Movement: History and Effects

In 1994, the Department of Justice introduced the Violent Offender Incarceration and Truth-in-Sentencing (VOI/TIS) Incentive program, which granted funds for prison construction to states that required persons convicted of a Part 1 violent crime (listed in TABLE A1 of the Appendix) to serve no less than 85% of their assigned prison sentence (Ditton 1999). Rather than stipulating a change to correctional or sentencing policy, TIS

aimed to reduce the discrepancy between "the sentence imposed on those sent to prison and the time actually served prior to prison release" (Wood 2003: 140). It passed no judgment on the proportionality of a sentence and changed no statutes regarding imposed sentences, but rather emphasized that sentences be observed as faithfully and fully as possible.

California was one of the first states to adopt the TIS 85% requirement in early 1994. With its large and diverse prison population and its consistency in reporting to the Department of Justice, California presents a viable case study for the immediate effects of TIS more broadly on sentencing behavior.

Perhaps because the Truth-in-Sentencing program is relatively new, there are few existing studies of its impact on sentencing behavior. Using county-level data, Shepherd (2002) found that maximum prison sentences increased under TIS, as more offenders chose to go to trial rather than plea bargain as the personal cost of incarceration increased. The study also found that TIS laws have a substitution effect on crime, with violent crime rates decreasing significantly but property crime rates increasing at the same time (Shepherd 2002). The presence of TIS also increased the probability of arrest.

Shepherd's study, however, did not examine changes in sentencing behavior. As with other determinate sentencing policies, actors in the system have motives under TIS to alter their sentencing and charging behaviors, if possible, in order to maintain their personal preferences for proportionality, where proportionality is defined as the principle that the penalty of a sentence should be equal to the harm done by the crime (Bagaric 2000).[1] Before TIS, the corrections system was unpredictable and haphazard; a prosecutor would charge offender *A* with robbery and the judge would impose a sentence of 48 months, but the convict might be released after serving anywhere from 35-60% of his sentence. Thus, if those in the criminal justice system felt that the proportionate sentence for offender *A* were 24 months, they would "charge upwards" in order to guarantee that he spent around 2 years in prison. But after TIS, judges and prosecutors could be assured that offenders would serve no less than 85% of their sentence. To illustrate further, an offender facing the 48-month robbery conviction would now be spending around 41 months in prison—over a year longer incarcerated.

TIS laws did nothing, however, to affect the baseline preferences of proportionality of judges and prosecutors. Thus, those actors would adjust their charging and sentencing practices to ensure that offender *A* was once again spending only 24 months in prison. This change could be accomplished in multiple ways: (1) prosecutors might file *fewer* charges in the post-TIS relative to the pre-TIS period, (2) prosecutors may file *lesser* charges in the post- relative to the pre- period, and (3) judges might assign *less severe* sentences within a given offense category.

This third behavioral change has already been observed in at least one case under TIS. In their study of the adoption of TIS in Mississippi (which required 85% stays on *all* offenders), Wood and Dunaway (2003) found that court-imposed sentences across all major offense categories declined by an average of 29% after TIS was enacted, with the average assigned sentence dropping from 7.3 years in 1994 to an astonishing 5.9 years in 1997 (Wood 2003: 143). As the authors wrote,

[1] I assume that, because time served in prison had not yet been affected or determined in any kind of formal, statutory way, this optimized sentencing behavior—and prosecutorial/judicial preferences—were well established. That is, *ex ante* preferences are constant in the post-1994 period.

> In Mississippi, in response to TIS, the court community – represented by judges, prosecutors and public defenders – has adjusted its sentencing behavior to maintain what is seen as proportionality in punishment in the face of a mandatory sentencing policy passed at the legislative level. […] The courts are aware that all prison-bound offenders will now serve 85 percent of their sentences, and have apparently responded by imposing lesser sentences that make allowances for such a requirement. (Wood 2003: 143, 148)

This study is the first to analyze the effects of TIS on the two other realms of prosecutorial and judicial choices—the number and severity of offense charges—and reexamines the effects of TIS on assigned sentence length. These three areas of judicial and prosecutorial discretion may ultimately undermine the intended effects of TIS.

III. Empirical Methods and Results

A. Data

My dataset comprises 23,986 individual prison records submitted by the state of California to the Department of Justice from 1993-2003 and contained in the archives of the Inter-university Consortium for Political and Social Research. My sample period includes those convicts entering prison in 1992, 1993, 1995, and 1996. In their raw form, these records detail the dates a convict was admitted to and released from prison, the offenses filed, the number of counts per offense, and the total maximum and minimum court-imposed sentence. All cases under consideration were new court commitments upon entering prison and were released from prison due to reasons other than death, sentence expiration, commutation, or other non-standard situations. I further dropped 118 cases in which prisoners were released within the same month that they entered prison, as the reporting mechanism for such cases seems to have changed over the sample period.

I define "pre-TIS" cases to be those convicts admitted to prison in 1992 and 1993, the two years immediately prior to the adoption of TIS in early 1994. "Post-TIS" cases include prisoners admitted in 1995 and 1996. 1994 is omitted from the analysis to allow 12 months for the new TIS law to manifest in sentencing practices. A 1999 Bureau of Justice Statistics study found that, 12 months after their adoption of TIS, states saw anywhere from 57-74% of their new admissions to prison sentenced under TIS requirements (Ditton 1999). Though "full implementation" did not actually occur in most early-enacting states until three years

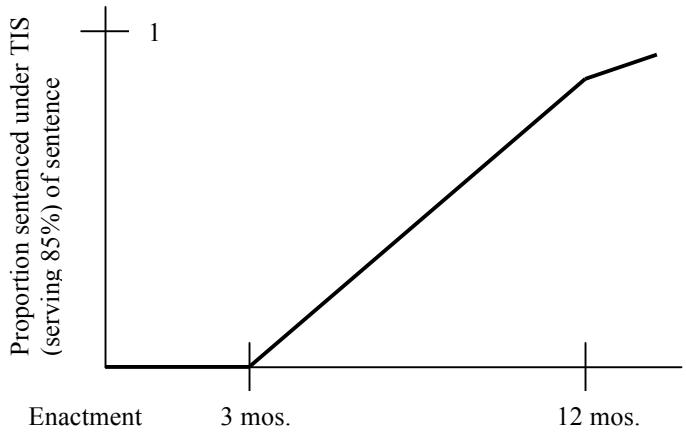


FIGURE 1: Implementation of TIS, theoretical model

later, I limit the gap period to 12 months for simplicity of analysis (see FIGURE 1) (Ditton 1999). My findings will consequently tend to be *understated*, as a proportion of the offenders considered after 1994 may not have been sentenced under TIS.

Finally, I consider a subset of TIS-eligible crimes. I exclude the more serious offenses, including murder and manslaughter, which have assigned prison terms that extend beyond the dataset as well as fewer observations, and examine instead the TIS-eligible offenses of rape, sexual assault, robbery, and aggravated assault.

The distribution of observations across crimes is skewed, with more observations in less severe offenses categories. Histograms of observations pre- and post-TIS are included in the Appendix (FIGURE A1).[2]

B. Results: What is the effect of TIS on time served in prison?

I first consider the question of whether time served has increased under TIS in California, barring any assumptions about a change in the nature of sentencing behavior. To do so, I perform simple two-group mean-comparisons tests across offenses. TABLE 1 includes the mean time served in prison (in months) by offense category. I restrict to cases in which the assigned maximum sentence length was below the 85th percentile in order to exclude outliers of habitual offenders, whose extremely lengthy sentences may bias the means upwards, and those offenders who may have committed life-term offenses such as murder in addition to their lesser TIS offenses.

In three of the four offense categories, the difference between post- and pre-1994 is negative, revealing that convicts are spending less time in prison after the adoption of TIS. On average, violent offenders in all categories but rape spent 4.3 fewer months incarcerated. These differences are statistically significant. The one exception is rape, which sees a statistically significant *increase* of 2.4 months spent in prison.

TABLE 1: Average time served, in months, by offense

	RAPE	SEXUAL ASSAULT	ROBBERY	AGGRAVATED ASSAULT
Pre-TIS	22.2 (12.7) $n = 181$	16.7 (14.3) $n = 167$	30.7 (22.5) $n = 5040$	25.7 (18.4) $n = 3612$
Post-TIS	24.6 (10.9) $n = 180$	15.1 (.8) $n = 493$	24.3 (20.4) $n = 4902$	22.3 (18.5) $n = 5803$
Difference	**2.4** $t(359) = -1.89$ $p < 0.1$	**-3.4** $t(658) = 1.67$ $p < 0.1$	**-6.3** $t(9940) = 14.68$ $p < 0.001$	**-3.4** $t(8107) = 8.03$ $p < 0.001$

Standard deviations in parentheses. t-test reported as $t(\text{dof}) = t\text{-value}$. H_0: (post – pre) = 0. p-values reported for $H_A \neq 0$.

[2] The large upswing in the number of sexual assault charges post-1994 is driven by a change in sentencing statutes that redefined what comprised the sexual assault category. Some rape or aggravated assault offenses, for instance, may have moved into this category. If these charges initially carried harsher sentences, then results for the sexual assault category may be biased, as the average sentence length may have increased post-TIS.

However, these results may be a reflection of shorter imposed sentences rather than less time spent in prison. To account for the possibility of lower overall sentence lengths, I next study changes in the percent of sentence served, defined as the time served in prison (in months) over the total maximum prison sentence (in months), by offense.[3] If TIS has been effective, the percent of time spent in prison—regardless of changes in the length of the imposed prison sentence—should increase. The results presented in TABLE 2, however, find exactly the opposite. There is a positive and highly significant change in the proportion of time served by rape offenders, who spend 9% more of their sentence in prison under TIS. But for robbery and aggravated assault, offenders serve 9% and 6% less of their sentences under TIS, respectively. These results are also highly significant. Also notable is that in none of the cases under TIS are offenders serving anywhere near 85% of their sentence.

TABLE 2: Proportion of time served, by offense

	RAPE	SEXUAL ASSAULT	ROBBERY	AGGRAVATED ASSAULT
Pre-TIS	0.56 (0.19) $n = 637$	0.45 (.19) $n = 195$	0.67 (0.27) $n = 6148$	0.60 (0.27) $n = 3612$
Post-TIS	0.65 (0.20) $n = 455$	0.46 (0.19) $n = 563$	0.58 (0.26) $n = 6573$	0.54 (0.27) $n = 5803$
Difference	**0.09** $t(1090) = -7.6$ $p < 0.001$	**0.01** $t(756) = -0.6$ $p = 0.5$	**-0.09** $t(12719) = 18.2$ $p < 0.001$	**-0.06** $t(9413) = 11.2$ $p < 0.001$

Standard errors in parentheses. t-test reported as $t(\text{dof}) = t\text{-value}$. H_0: (post – pre) = 0. p-values reported for $H_A \neq 0$.

The Appendix includes Kernel density plots that illustrate the difference further (FIGURE A2). As is readily apparent, there is a greater proportion of robbery and aggravated assault offenders serving a lower proportion of their sentences under TIS.

C. Results: Evidence of strategic charging and sentencing

The previous section established that TIS laws have had unintended consequences on time served in prison in California, reducing both the time spent in prison and the proportion of the sentence served for robbery and aggravated assault. This section now considers three ways in which TIS may have altered sentencing behavior: the number of counts, the severity of the charged offense, and the length of the court-assigned sentence.

[3] There were several instances in which convicts served well above their initial sentence in prison, presumably due to bad behavior while in prison. For these cases, I have top coded percent of sentence served at $p = 1$—the statutes of TIS in California cannot require a convict to serve more than 100% of his sentence.

Number of Charges Filed

Strategic charging is the idea that prosecutors select how many and which charges to file against a defendant in order to maximize their personal utility, which is a function of (among other things) the proportionality of a penalty to a crime. Before TIS, prosecutors might have to "pile on" charges in the hope that increasing the maximum total sentence length would guarantee that the offender be incarcerated longer. After TIS, one count of a charge might be enough to guarantee that the offender spend the proportionate amount of time in prison. Therefore, I examine whether the number of charges has changed under TIS by analyzing the number of additional convicted counts as a function of convicted offenses under and not under TIS:[4]

$$Z_i = \alpha + \beta_1 X_i + \beta_2 (X_i * TIS) + \mu \quad (1)$$

where Z_i is the number of additional counts, X_i is a convicted offense for i = rape, sexual assault, robbery, or aggravated assault pre-TIS, and where (X_i*TIS) is an interaction term for offense i. β_2 measures the effect of TIS on the number of additional counts.

The results of the negative binomial linear regression (additional counts are non-negative count variables) are presented in TABLE 3. Across all offenses, the coefficients of the interaction terms indicate that the number of additional charges changes after TIS. This effect is negative and highly significant across all offenses, indicating that TIS has led to an overall decrease in the probability of receiving additional counts for all offenses. The effect is most pronounced on rape: Offenders under TIS face approximately two-thirds a count fewer than pre-TIS offenders. Robbery offenders receive one-quarter less an additional count, and aggravated assault convicts see a one-third reduction. Because the range of the dependent variable in this sample is only 0 to 2, these findings are significant substantively as well as statistically. TIS seems to have markedly influenced charging behavior, causing prosecutors to file fewer charges or judges to convict of fewer counts.

[4] Note: Number of counts includes second and third offenses that may not be TIS-eligible (i.e. nonviolent crimes). Further, this variable only captures the number of counts a defendant is convicted of, not the number he is charged with. Thus, this analysis may be a reflection of either changes in prosecutors' filing of charges or judges' rulings on counts.

TABLE 3: Number of counts received, pre- and post-, by offense

	# Additional Counts *n* = 23986
RAPE	0.56*** (.06)
RAPE*TIS	**-0.67***** (.10)
ROBBERY	0.34** (.11)
ROBBERY*TIS	**-0.27**** (.13)
AGGRAVATED ASSAULT	0.40*** (.03)
AGGRAVATED ASSAULT*TIS	**-0.37***** (.03)
CONSTANT	-1.05 (.02)

Standard errors in parentheses. *$p < 0.1$, **$p < 0.05$, ***$p < 0.001$.

Distribution of Crimes Charged

The decrease in time served may also be a reflection of a change in prosecutors' sentencing choices: prosecutors may have adapted their charging patterns by charging downwards to less serious offenses with shorter sentences. To compare the likelihood of receiving a given charge relative to a baseline charge outcome, I analyze a multinomial logistic regression of TIS on the collection of offenses:

$$\Pr(y_i = j) = \frac{\exp(X_i \beta_j)}{1 + \sum_j^J \exp(X_i \beta_j)} \qquad (2)$$

where the function finds the probability of receiving the observed outcome $y_i = j$ for offense i = rape, sexual assault, and robbery given the explanatory variable X_i = TIS. The baseline offense category, relative to which these probabilities are measured, is aggravated assault. The logistic regression predicts the log odds of being in the category of aggravated assault, with results in TABLE 4 specifying the probability of moving from aggravated assault to a given offense category as a function of TIS.

TABLE 4: Movement between charges – Effect of TIS on likelihood of offense

	Relative to Aggravated Assault $n = 24062$
RAPE	-0.81*** (.06)
SEXUAL ASSAULT	0.59*** (.09)
ROBBERY	-0.41*** (.03)

Standard errors in parentheses. *$p < 0.1$, **$p < 0.05$, ***$p < 0.001$.

Post-TIS defendants are more likely to be convicted of a lesser offense than before 1994.[5] The positive, significant coefficient on SEXUAL ASSAULT indicates that TIS increases the odds of a sexual assault conviction versus an aggravated assault conviction—that is, the new law increases the probability of an offender moving from aggravated assault to sexual assault. RAPE and ROBBERY are now *less* likely convictions than before 1994 relative to aggravated assault—further evidence of changes in charging and conviction behavior. These findings make sense: As seen in FIGURE 2, the average sentence length both before and after TIS is lowest for sexual assault offenses. Prosecutors are possibly moving aggravated assault charges to a category with lesser penalties on average to circumvent the new stipulations of TIS.[6]

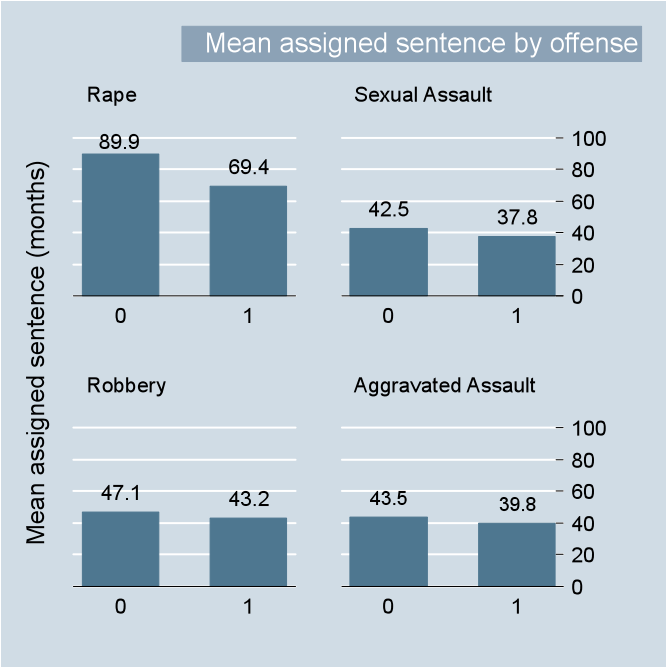


FIGURE 2: Rationale for movement to less severe penalties under TIS

[5] Again, this regression considers only offenses defendants are convicted of, not those they are charged with.

[6] The results with other base outcomes are comparable; rape convictions move to sexual assault and robbery convictions move to aggravated assault.

Length of Assigned Sentence

To measure the effect of TIS on judges' sentencing choices, I analyze the length of assigned sentences for eligible offenses as a function of TIS enactment:

$$Y_i = \alpha + \beta_1 X_i + \beta_2 (X_i * TIS) + \mu \quad (3)$$

where Y_i is assigned sentence length, measured as the total maximum sentence length including all offense charges. As with equation (1) in section B1, this relationship measures the effect of TIS adoption on the average maximum imposed sentence length for each offense X_i = rape, sexual assault, robbery, and aggravated assault pre- and post-TIS.[7] The effect of TIS on sentence lengths is measured by the coefficient β_2 on the interaction term. In TABLE 5, column (1) is the effect of TIS on all observations, while column (2) excludes outliers by restricting to those falling within the 15th and 85th percentiles of assigned sentence length.

TABLE 5: Assigned sentence as a function of offense type, pre- and post-TIS

	(1) *n* = 23986	(2) *n* = 11473
RAPE	48.63*** (1.04)	-1.93** (.63)
RAPE*TIS	**-20.49***** (1.55)	**-3.09***** (.88)
ROBBERY	1.24 (1.83)	.61 (.83)
ROBBERY*TIS	**-4.69**** (2.10)	**-3.44***** (.96)
AGGRAVATED ASSAULT	5.88*** (.41)	3.02*** (.19)
AGGRAVATED ASSAULT*TIS	**-3.93***** (.45)	**-6.14***** (.22)
CONSTANT	41.23 (.26)	42.29 (.12)

Standard errors in parentheses. *$p < 0.1$, **$p < 0.05$, ***$p < 0.001$.

For all offense categories, the significant, negative coefficients on the interaction terms reveal that judges are imposing reduced sentence lengths under TIS. For assault and robbery, the average sentence length decreased 4 months due to TIS; for rape, the new law induced a whopping 20-month decline in the average sentence length. The effects are more muted when excluding outliers, but the story is the same—violent offenders sentenced under TIS face reduced maximum total sentences, as judges sentence towards the lower bounds of their discretion within offense categories.

[7] The omitted category in the regression is sexual assault.

A comparison of means of assigned sentence length (in months) by offense again suggests that judges have altered their sentencing patterns by assigning shorter prison terms within offenses (TABLE 6). Mean maximum sentence lengths have declined by around 4 months, on average, under TIS. The coefficients of TABLE 5 and the statistically significant differences of means in TABLE 6 are evidence that judicial sentencing behavior may be more lenient under TIS, as judges reduce sentence lengths to ensure that convicts spend comparable amounts of time incarcerated.

TABLE 6: Average assigned sentence length, in months, by offense

	RAPE	SEXUAL ASSAULT	ROBBERY	AGGRAVATED ASSAULT
Pre-TIS	39.9 (9.3) $n = 181$	34.8 (12.1) $n = 167$	37.5 (13.7) $n = 5040$	37.2 (11.8) $n = 3150$
Post-TIS	36.7 (4.8) $n = 180$	31.9 (10.8) $n = 493$	31.4 (9.2) $n = 4902$	33.2 (10.4) $n = 4959$
Difference	**-3.1** $t(359) = 3.99$ $p < 0.001$	**-2.9** $t(658) = 2.9$ $p < 0.05$	**-6.1** $t(9940) = 25.9$ $p < 0.001$	**-4.0** $t(8107) = 15.98$ $p < 0.001$

Above values restricted to bottom 85th percentile of assigned sentence lengths. Standard errors in parentheses. t-test reported as $t(\text{dof}) = t\text{-value}$. H_0: (post – pre) = 0. p-values reported for the $H_A \neq 0$.

IV. Conclusion

The findings above demonstrate not only that violent offenders under TIS are spending less time in prison but also that sentencing behaviors have changed with regard to the number and severity of offenses convicted and the length of imposed sentences. This seems to suggest that prosecutors and judges adjusted their charging and sentencing practices in anticipation of an increase in the percent of time served by defendants. However, something else in the system may be working as well. In theory, changes in sentencing behavior due to the adoption of TIS should do *no worse* than resulting in the time served in prison by violent offenders to remain *constant* before and after TIS. As detailed above, however, this is clearly not the case, as the negative differences in means are statistically differentiable. It seems as though prosecutors and judges may have instead *overestimated* the extent to which TIS would increase the proportion of their sentences violent offenders served, consequently overcompensating for the changes in the law by lowering convictions and penalties too far.

This study underscores again the difficulty in changing the criminal justice system simply by implementing more stringent sentencing guidelines. Individual actors may prefer their system to be predictable in their functioning, and the imposition of new laws from above may cause resentment or overcompensation in the possible spectrum of choices these actors still retain. Thus, one new "movement" in criminal justice standards like Truth-in-Sentencing, which may appeal to the public and the press, will be futile if it is not a part of a broader set of reforms.

Appendix

TABLE A1: Definitions of Part I violent offenses eligible for Truth-in-Sentencing 85% requirement

	Includes	Excludes
Murder	Murder Non-negligent manslaughter	Involuntary or negligent manslaughter Conspiracies to commit murder Solicitation of murder Attempted murder
Rape	Forcible rape Attempted rape	Statutory rape Nonforcible sexual acts
Sexual assault	Forcible or violent sexual acts Nonforcible sexual acts with a minor	
Robbery	All forcible acts of robbery Attempted robbery	Nonforcible acts of robbery
Aggravated Assault	Assault with a deadly weapon Attempted murder Aggravated battery Felonious assault	

Source: UCR Handbook (FBI), Bureau of Justice Statistics (DoJ)

FIGURE A1: Distribution of offense categories, 1992-1993 vs. 1994-1995

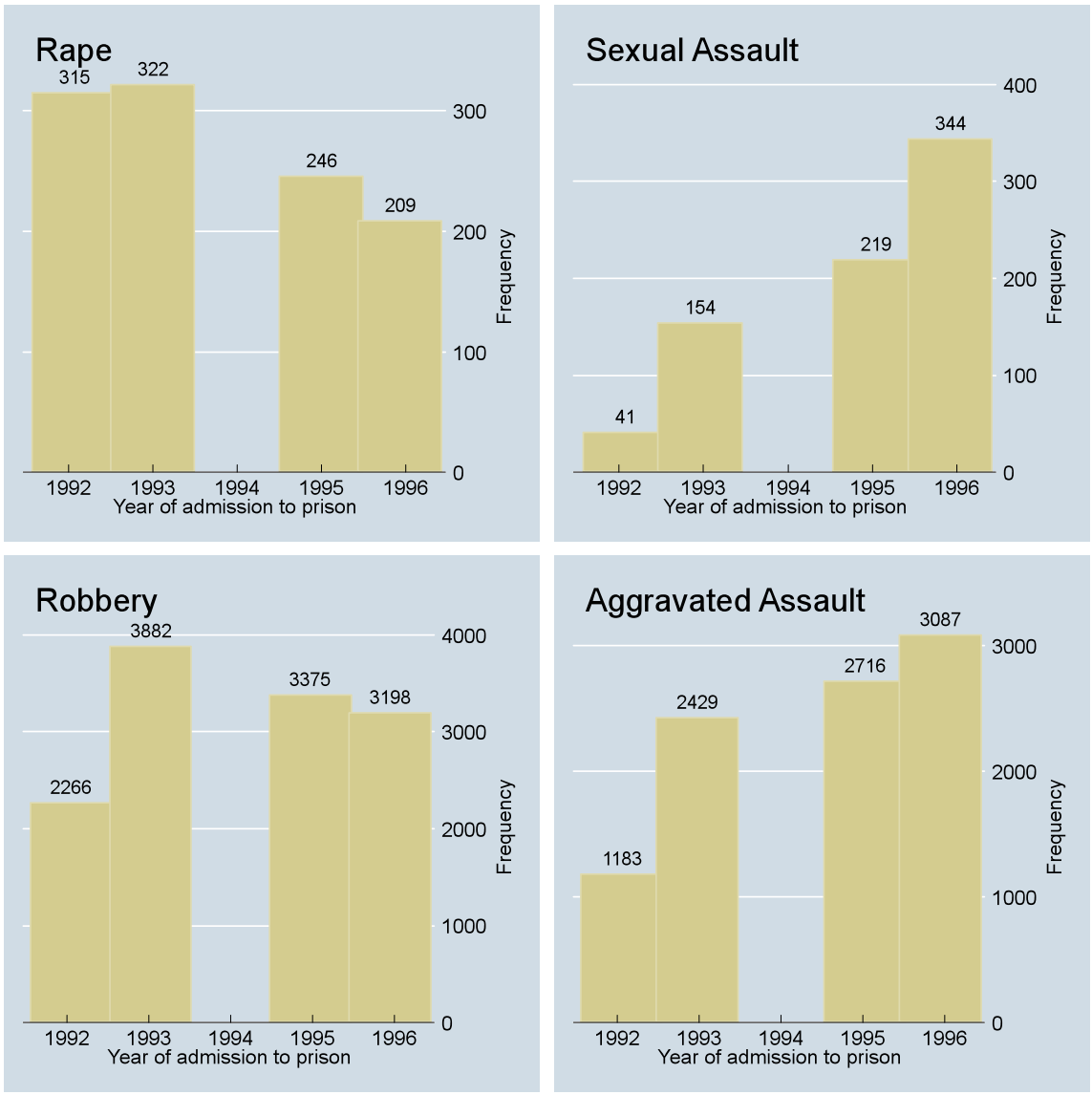
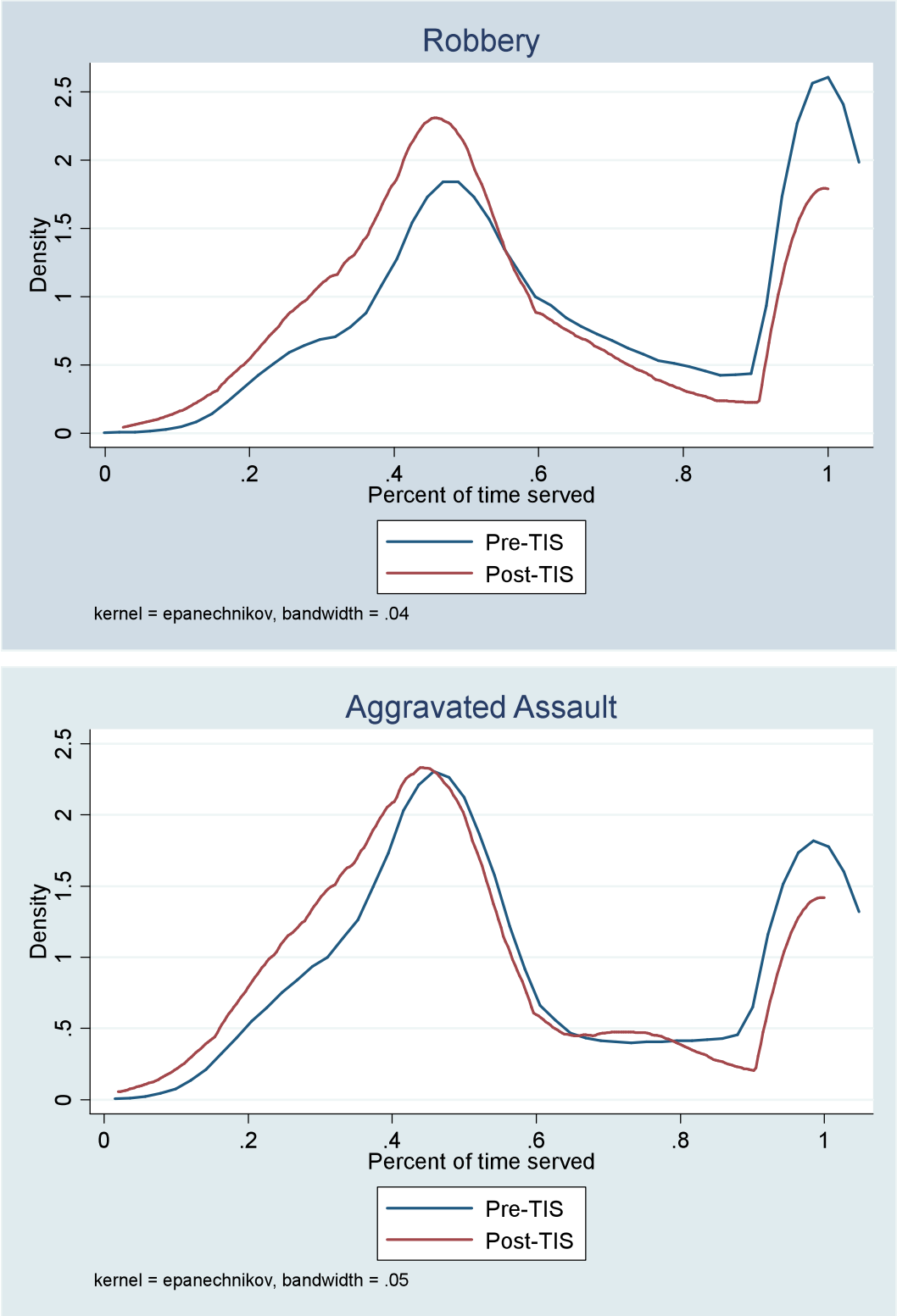


FIGURE A2: Kernel Density estimates, proportion of robbery and aggravated assault convicts by % of time served ($p_{max} = 1$)



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