The Extensive and Intensive Impacts of Criminal Law on the Incidence of Crime: Evidence from Statutory-Rape-Law Expansions and Teenage Pregnancies

By Michael D. Frakes and Matthew C. Harding

A. Evolution of State Statutory Rape Laws: Background

Over the course of the sample period, nearly every state modified some aspect of its statutory rape laws, often increasing the punishment associated with at least one degree of statutory rape. The full extent of these variations can be uncovered by the provided Stata .do files. For the sake of brevity, we do not set forth all such details in this Appendix. Nonetheless, to illuminate the primary results from Table 2 in the text, we summarize in Table A1 those variations in state statutory rape laws along the initial-criminalization margin, focusing only on expansions in the law (i.e., those laws underlying Panel A of Table 2). That is, the reforms listed in Table A1 represent an expansion in the degree to which the indicated state criminalizes sexual encounters involving the indicated age groups. As discussed later, our primary approach views this initial criminalization threshold as being crossed once an activity triggers a felony statute, thus effectively disregarding (for now) misdemeanors.

TABLE A1. SUMMARY OF EXPANSIONS IN STATUTORY RAPE LAW REFORMS ALONG INITIAL-CRIMINALIZATION MARGIN

State	Year	Ages Affected	Nature of Expansion
Arkansas	1985	11, 12,13	Lifting of previous requirement that defendant (D) be at least 18 years old
Connecticut	1985	15	Age of consent increased from 15 to 16
	1990	<= 12, 16	Lifting of previous requirement that D be at least 18 years old
	1994	13, 14,15	Lifting of previous requirement that D be at least 18 years old, but 2 year age-gap imposed in its place
Delaware	1999	16,17	New degree added covering indicated ages (previously uncovered), but only if D at least 30 years old
Georgia	1995	14,15	Age of consent increased from 14 to 16
Hawaii	2002	14,15	Age of consent increased from 14 to 16, but 5 year age-gap added for new group
Louisiana	2004	12	Lifting of previous requirement that D be at least 18 years old
Mississippi	1985	12,13	Age of consent increased from 12 to 14 years old
	1998	14,15	Age of consent increased from 14 to 16 years old (subject to 3 year age-gap for new group)
North Carolina	1996	13,14,15	Age of consent increased from 13 to 16 years old
North Dakota	2001	15,16,17	Sex with 15, 16 and 17 year olds now felony (previously misdemeanor) if D at least 22 years old
New Mexico	1987	13,14,15	Age of consent increased from 13 to 17 years old (subject to 4 year age-gap for new group)
Nevada	1995	14,15	Age of consent increased from 14 to 16 years old
New York	2001	14	Previously required D to be at least 21 years of age, lowered to 18 years of age
Pennsylvania	1995	12	Lifted previous requirement that D be at least 18 years of age
	1995	13	Previously required D to be at least 18 years of age, amended to require age-gap of at least 4 years
	1995	14,15	Age of consent increased from 14 to 16.[*]
Rhode Island	1988	14	Lifted previous requirement that D be at least 18 years old
South Carolina	1984	12,13	Lifting of prior 3-year age gap requirement
South Dakota	1985	15	Age of consent raised from 15 to 16 years old
Washington	1988	12,13	Previous requirement that D be greater than 16 replaced with requirement that D be at least 3 years older, effectively criminalizing new ranges of encounters (e.g., 12 year old victims with 15 and 16 year old partners)
	1988	14	Previous requirement that D be greater than 18 replaced with requirement that D be at least 4 years older, effectively criminalizing new ranges of encounters (e.g., 14 year old victims with 18 year old partners)

* The documented variations concern Pennsylvania's relevant statutory rape statute. During the early 1970's, Pennsylvania's statutory rape statute covered this age group. However, Pennsylvania removed this age group from

protection under the statute in 1976. It is possible that, during the interim 1976-1995 period, prosecutors could have pursued adults having intercourse with 14 and 15 year olds under an alternative sexual-deviance statute, given the technical language of such statute. However, it is unclear how often prosecutors pursued this alternative route. The question of whether it was even legally possible to take this alternative approach over this time period was also likely uncertain to the players at hand. Only one Pennsylvania appellate decision confronting this question could be found and it was resolved in the early 1990s, close to the point where the statute was modified anyway to allow statutory rape prosecutions based on this age group. In our primary approach, in light of the Commonwealth's explicit decision to remove this age group from their primary statutory rape provisions, we elect to treat this 1995 amendment as an expansion in the law to include this group. However, we note that in an alternative approach that registers no such expansion in the law for 14 and 15 year olds, we estimate virtually identical results.

B. Non-parametric Treatment of Felony Incidence Variable

The felony incidence variable is treated linearly within our primary specifications. In Table A2 of this Online Appendix, we present results from a more non-parametric approach, where we divide the felony incidence variable into four quartiles and estimate the association between live birth rates and the incidence of moving into a higher felony incidence quartile (where a higher quartile represents an increase in the degree to which the laws of the relevant state-year-age criminalize sexual encounters among that age group).

TABLE A2. RELATIONSHIP BETWEEN LIVE BIRTH RATES AND SIMULATED FELONY INCIDENCE QUARTILES

	(1)	(2)
(omitted: 1st Quartile)		
2nd Quartile Simulated Felony Incidence Dummy	2.5	1.1
	(3.7)	(2.6)
3rd Quartile Simulated Felony Incidence Dummy	-1.5	-1.9
	(4.2)	(3.0)
4th Quartile Simulated Felony Incidence Dummy	-9.8*	-13.6**
	(5.4)	(5.4)
N	6525	6525
State-Year Fixed Effects?	NO	YES
Age-Year Effects?	NO	YES
State-Age Effects?	NO	YES

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. All regressions include state, age and year fixed effects. Regressions are weighted by the female population of the associated state-year-age cell. Live birth rate data is from the Natality Detail Files. .
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

The results presented in Table A2 suggest a possible non-linear impact of expanding the degree to which sexual activity is initially criminalized among a particular age group, with the bulk of the impact felt when moving into the higher ranges of the felony-incidence distribution.

C. Further Punishment Severity Specifications

TABLE A3. ADDITIONAL SUMMARY STATISTICS

	OVER-ALL	12 YEAR OLDS	13 YEAR OLDS	14 YEAR OLDS	15 YEAR OLDS	16 YEAR OLDS	17 YEAR OLDS
Statutory Rape Law Variables							
Simulated Basic Felony Incidence (1-10 years minimum)	0.44 (0.41)	0.70 (0.38)	0.66 (0.33)	(0.52) 0.36	0.45 (0.38)	0.18 (0.32)	0.12 (0.31)
Simulated 1st-Tier Heightened Felony Incidence (10-20 years minimum)	0.02 (0.13)	0.07 (0.25)	0.03 (0.16)	0.02 (0.12)	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)
Simulated 2nd-Tier Heightened Felony Incidence (25+ years minimum)	0.01 (0.09)	0.04 (.18)	0.01 (0.08)	0.01 (0.06)	0.00 (0.03)	0.00 (0.00)	0.00 (0.00)
Simulated Misdemeanor Incidence	0.09 (0.23)	0.05 (0.13)	0.07 (0.18)	0.11 (0.24)	0.12 (0.27)	0.11 (0.28)	0.08 (0.24)

Notes: data are from a sample of 6,758 state-year-age cells. The underlying data applied to the statutory rape laws of each state-year-age cell used to form the simulated statutory rape law variables are from the 1996 and 2002 arms of the National Survey of Family Growth. All measures are weighted by the associated female population of the state-year-age cell.

In Table A4 of this Online Appendix, we expand upon Table 3 from the text and estimate specifications that include more than just two punishment severity bins. We actually begin this extension by considering a less severe category. That is, in Columns 1 and 2 of Table A4, we modify the specifications estimated in Table 3 to add measures capturing the simulated percentage of sexual encounters triggering only a misdemeanor statute in the relevant state-year-age cell—i.e., a statute in which the maximum imprisonment associated with the relevant infraction is less than 1 year (generally around six months). The

estimated coefficients of the basic-felony incidence variable and the heightened-felony incidence variable are nearly identical to that estimated in Table 3. The estimated coefficients of the simulated misdemeanor incidence variables are negative in sign; though the estimates are noisy and fail to establish convincing evidence of a deterrent impact from moving into misdemeanor status.

The noise associated with the misdemeanor coefficients is perhaps not surprising. When states expand their laws to criminalize a broader range of sexual activity, they almost predominantly do so by making the newly covered behavior a felony. There are only very rare instances over the sample period when states expand their statutory rape laws to criminalize new behavior in only a misdemeanor context, leaving little information by which to estimate this separate margin. Moreover, even in such instances, one may be concerned that misdemeanor violations are heavily unenforced (i.e., merely constituting "slap-on-the-wrist" offenses) relative to felony statutes, attenuating the results. For these reasons, we emphasize the felony specifications and focus the extensive-versus-intensive inquiry on the basic felony-versus-elevated felony front, keeping the analysis entirely in the "serious" crime realm. Nonetheless, when we estimate specifications that effectively simulate the percentage of sexual encounters that trigger *any* crime—felony or misdemeanor—we estimate virtually identical results to those presented in Table 2.[1]

Columns 3 and 4 of Table A4 add one additional punishment severity bin covering punishments of the highest degree—generally, those carrying a minimum incarceration range of 20-plus years. The estimated coefficient of the simulated incidence of these extra-heightened felonies is noisy and statistically indistinguishable from zero. However, the point estimates suggest a negative

[1] For instance, the estimated coefficient of the simulated any-crime-incidence variable in the full triple-differences specification (analogous to Column 3 of Table 2) is roughly -10 (likewise significant at 1%), suggesting only a small amount of attenuation as a result of including the misdemeanor-only adoptions. The full set of results from this alternative specification is available upon request.

relationship consistent with the initial-felony findings, though of a more modest magnitude (a roughly 7-8 percent reduction in live birth rates). As such, adding this final category does not substantially change the conclusion that the reduction in teenage sexual behavior associated with statutory rape laws appears to arise mostly from the fundamental criminalization of certain activities itself.

TABLE A4. RELATIONSHIP BETWEEN LIVE BIRTH RATES AND SIMULATED PERCENTAGE OF SEXUAL ACTIVITY THAT TRIGGERS A CRIME WITHIN MISDEMEANOR AND FELONY PUNISHMENT TIERS

	(1)	(2)	(3)	(4)
Misdemeanor Incidence				
Simulated Percentage: 4-Year Lead	-	-13.9** (6.5)	-	-13.8** (6.5)
Simulated Percentage: 2-Year Lead	-	3.3 (3.4)	-	3.3 (3.5)
Simulated Percentage	-6.0 (6.5)	-1.7 (5.3)	-5.8 (6.2)	-1.95 (5.4)
Basic Felony Incidence				
Simulated Percentage: 4-Year Lead	-	0.5 (5.4)	-	0.6 (5.5)
Simulated Percentage: 2-Year Lead	-	0.5 (4.6)	-	1.3 (4.8)
Simulated Percentage	-14.1** (5.7)	-14.1** (6.3)	-14.4*** (5.3)	-14.8** (6.1)
1st-Tier Heightened Felony Incidence				
Simulated Percentage: 4-Year Lead	-	-5.3 (10.0)	-	-10.1 (11.8)
Simulated Percentage: 2-Year Lead	-	7.6 (14.6)	-	19.3 (9.8)
Simulated Percentage	-1.7 (8.2)	-5.4 (11.1)	0.6 (8.9)	-8.3 (9.2)
2nd-Tier Heightened Felony Incidence				
Simulated Percentage: 4-Year Lead	-	-	-	-3.3 (12.8)
Simulated Percentage: 2-Year Lead	-	-	-	0.5 (23.4)
Simulated Percentage	-	-	-8.3 (9.4)	-6.9 (18.8)
N	6521	6521	6521	6521

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. All regressions include state, age and year fixed effects, along with state-year effects, age-year effects and state-age effects. Regressions are weighted by the female population of the associated state-year-age cell. Live birth rate data is from the Natality Detail Files. .
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

D. Count Specifications

   As indicated in the text, the Ordinary Least Squares (OLS) approach taken is
perhaps appropriate considering an average of roughly 890 live births within each
state-year-age cell, along with an average denominator for the live birth rate—i.e.,
the female population—of roughly 37,000. With cell sizes this large, the
estimated birth rates are not necessarily so discrete in nature as to warrant a count
model. This is arguably the case even with respect to the younger ages, where
live birth counts per cell are smaller but where female population counts—i.e., the
denominator—are nonetheless sufficiently large to generate continuity in the
calculated birthrates. Moreover, there are only 23 instances of zero-valued cells
out of nearly 7000 state-year-age cells, in which event there is little concern in log
transforming the birthrate dependent variable in order to better achieve normality.
For these reasons, we estimate OLS specifications in our primary approach.

   Nonetheless, as a robustness exercise, in Table A5 of this Online Appendix, we
estimate Poisson regression specifications. We have likewise estimated Negative
Binomial specifications, though we omit the results (available upon request) as
they are nearly identical to the Poisson results (tests reject the presence of over-
dispersion). The results from Poisson regressions are generally consistent with
those from the primary OLS specifications. In Column 1, estimating a basic
difference-in-difference specification with only state, age and year fixed effects,
we find an incidence-rate ratio for the simulated felony incidence variable
coefficient of 93% suggesting a 7% reduction in the rate of live births following a
move from 0 to 100 percent felonization of sexual activity among the given age
group.

   This estimate is robust to the inclusion of state-year covariates (Column 2),
state-year fixed effects (Column 3), and state-age-specific linear time trends
(Column 4). As such, the Poisson results appear robust to the possibility of

unobservable state-specific initiatives adopted over the sample period that likewise bear on teenage pregnancies. Unlike the OLS specifications, however, the estimated felony incidence coefficient falls by half and loses statistical significance with the addition of the state-age fixed effects (357 fixed effects) and age-year fixed effects (161 fixed effects) necessary to implement the full triple-differences specification.

TABLE A5. RELATIONSHIP BETWEEN LIVE BIRTH RATES AND SIMULATED PERCENTAGE OF SEXUAL ACTIVITY THAT TRIGGERS A FELONY: POISSON REGRESSION RESULTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A. Poisson Regression Coefficients							
Simulated Felony	-7.5***	-7.5***	-8.4***	-8.4*	-4.4	-4.1	-2.0
Percentage	(2.6)	(2.6)	(3.0)	(4.6)	(5.5)	(5.2)	(5.2)
Percentage Black	-	-	-	-	-	125.6**	-
						(42.8)	
Panel B. Incidence-Rate Ratios for Contemporaneous Simulated Felony Percentage Variable							
IRR	0.93	0.93	0.92	0.92	0.96	0.96	0.98
N	6525	6437	6525	6525	6525	6437	6525
State-Year Covariates	NO	YES	NO	NO	NO	NO	NO
State-Year Fixed Effects?	NO	NO	YES	YES	YES	YES	YES
Age-Year Effects?	NO	NO	NO	NO	YES	YES	YES
State-Age Effects?	NO	NO	NO	NO	YES	YES	YES
State-Age-Specific Linear Time Trends	NO	NO	NO	YES	NO	NO	YES

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. All regressions include state, age and year fixed effects. Poisson regressions include an offset equal to the log of the female population of the associated state-year-age cell. Live birth rate data is from the Natality Detail Files. .
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

E. Randomization Inference

Standard errors may be inaccurately estimated in difference-in-difference or triple-differences specifications when there are a limited number of overall analytical or treatment groups (Bertrand et al. 2004, Conley and Taber 2005). While the above specifications draw on a large number of treatment and control states, we perform hypothesis tests on the estimated felony-incidence coefficient from the main triple-differences specification using a randomization inference approach (Duflo et al. 2007) that allows for an estimation of the distribution of the treatment effect that is valid under any number of groups. Using only the set of states that did not expand their statutory rape laws over the sample period to newly felonize a range of a sexual activity, we randomly generate 1,000 sets of placebo laws and estimate the primary triple-differences specification on each of these simulated sets. We simulate the placebos so that the expected distribution of state-year-age-specific placebo law changes over time matches the distribution of actual law changes (Gruber and Hungerman 2008; Frakes 2013) and matches the expansion magnitudes (in terms of percentage of sexual activity felonized) actually observed. We find that the estimated coefficient of the simulated felony incidence variable (using the actual variation in the laws) falls in the 0.4^{th} percentile of the empirical distribution of the 1000 estimated coefficients from the simulations, consistent with a p-value of < 0.1. We limit the simulation number to 1,000 due to the substantial required computational time.

F. Falsification Exercise: Nearby Adult Live Birth Rates

Expansions in statutory rape laws should only be expected to be associated with a reduction of live birth rates of the targeted population. This expectation forms the basis of the above triple differences analysis, in which we use non-reformed age groups as within-state control groups. One would also not expect expansions

in statutory rape laws within a state to be associated with a corresponding reduction in the live birth rates of the nearby adult population, as that population was likewise not the target of the associated reforms. If anything, to the extent that the deterred sexual encounters with minors induces some offenders to seek matches with partners closer to their own age, such expansions might be associated with a slight increase in pregnancy rates of this older population. In Table A6, we perform this hypothesis test in a simple difference-in-difference framework and estimate the association between the percentage of sexual activity among 12-17 year olds that triggers a felony within the operable state-year cell (i.e., our codification of the scope of the prevailing statutory rape regime) and the live birth rates of 18 year-olds (Column 1), 19 year-olds (Column 2) and 20 year-olds (Column 3), in each case where the live birth rates are formed based on estimated ages and years at the time of conception (as above). As expected, in each case, we estimate a positive statistically-insignificant coefficient of the simulated statutory rape variable.

TABLE A6. FALSIFICATION EXERCISE: RELATIONSHIP BETWEEN 18-20 YEAR-OLD LIVE BIRTH RATES AND SIMULATED PERCENTAGE OF SEXUAL ACTIVITY AMONG 12-17 YEAR OLDS TRIGGERING A FELONY

	(1)	(2)	(3)
	18-Year Olds	19-Year Olds	20-Year Olds
Simulated Felony Percentage	7.8	5.7	6.2
	(5.5)	(5.1)	(5.2)
N	1175	1175	1175

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. All regressions include state, age and year fixed effects. The simulated felony percentage variable captures the percentage of sexual activity among 12-17 year olds that triggers a felony within the operable state-year cell. Live birth rate data is from the Natality Detail Files. .
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

F. Heterogeneity in Treatment Effects Across Races

As suggested in the text, true violations of statutory rape laws appear to be heavily under-enforced, with much discretion left in play on the part of the police and prosecutors (and on the part of parents engaging such parties) to decide on which instances to pursue. Discretionary situations of this nature lead to concerns of selective enforcement. Evidence to date suggests that this selection has tended heavily to target black and Hispanic males as offenders of statutory rape violations.   According to incarceration data from Georgia, those in jail for offenses against children generally are more likely to be white males (e.g., 67% white in the case of child-molestation offenses); however, in the context of statutory rape, those incarcerated for this offense are actually more likely to be black males (i.e., 55% black).

According to Richard Delgado (1996):

> Unable to prosecute the whole country, law enforcement officials apply the law principally against two groups: men, frequently older, who have sex with girls from "good homes;" and minority men, who are punished if they commit the crime of having sex with white women or impregnate a woman of color under circumstances that add to the welfare rolls.

Sutherland (2003) adds to Delgado's claim:

> The California Alliance for Statutory Rape Enforcement's mostwanted list provides some evidence to back up Delgado's claim about the likelihood of minority men being targeted for prosecution. Of the thirty-five people featured on the list in March 2003, thirty-two were men. All thirty-two of these men were identified as Hispanic or black.

If minority males are more likely to be the targets of statutory rape enforcement, one might predict that the impact of statutory rape law expansions would be more impactful in regions with higher rates of black residents. For a simple test of this claim, we modify the triple-differences specification to include an interaction between the felony-incidence variable and the percentage of the state-year-age population that is black. We find a large negative estimate of the interaction term (-22.2) consistent with these expectations; though this estimate is rather noisy and not distinguishable from zero (full results available upon request).

While minority men may be more likely targets of statutory rape violations, that does not immediately entail that sexual encounters involving black females are more likely to be those garnering attention from the authorities. After all, heightened enforcement may be targeted at black males having intercourse with white females (Delgado 1996). However, much of statutory rape enforcement is also targeted against black males who have had intercourse with black females leading to pregnancies, where the parties generally bringing these legal violations to the attention of criminal justice system are those working at welfare offices (Sutherland 2003). As such, it is perhaps reasonable to believe that expansions in the scope of statutory rape laws will have a larger impact on the live birth rates of black females relative to white females. To test this hypothesis, we simply estimate separate specifications where the dependent variable is the live birth rate specific to white, black and other-race females, respectively. As demonstrated by Table A7, the strongest findings are indeed in the context of black and other-race females relative to white females.

TABLE A7. RELATIONSHIP BETWEEN RACE-SPECIFIC LIVE BIRTH RATES AND SIMULATED PERCENTAGE OF SEXUAL ACTIVITY TRIGGERING A FELONY

	(1)	(2)	(3)
	White Females	Black Females	Other-Race Females
Simulated Felony Percentage	-2.9	-12.9*	-13.0
	(7.0)	(7.4)	(21.10)
N	6525	6525	6525

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. All regressions include state, age and year fixed effects, along with state-year, state-age and age-year fixed effects. Regressions are weighted by the female population of the associated state-year-age cell (of the relevant race). Live birth rate data is from the Natality Detail Files. .
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

G. Abortion-Rate Specifications

The primary analysis focuses on live birth rates for several reasons. Largely, we are able to collect comprehensive live birth rates for each state for as far back in time as were able to track the evolution of state statutory rape laws. Such rates provide us with a general proxy for the targeted sexual activity of statutory rape laws, facilitating a general deterrence analysis. At the same time, of course, this specific relationship between live birth rates and statutory rape laws has been of substantial interest to policymakers themselves.

Of course, other proxies for sexual activity are potentially available, including abortion rates. Pregnancies after all, which may result from sexual activity, can end in one of miscarriage, abortion, still birth or live birth. In Table A8, we estimate the relationship between state-year-age-specific abortion rates (logged) and the percentage of sexual activity among the state-year-age cell that triggers a felony. Abortion data, however, is only available for 46 states between the 1991 and 2004 period and was obtained from the Centers for Disease Control (CDC).

Moreover, given the structure of the CDC data, the 13 and 14 year-old groups are consolidated together. The difference-in-difference specifications suggest a marginally significant reduction of nearly 14 percent in the relevant abortion rate upon an increase from 0 to 100 percent in the felonization of sexual activity among the relevant age group (Column 1). This finding remains nearly unchanged with the inclusion of the state-year covariates considered in Table 2 (Column 2), along with the inclusion of state-year fixed effects (Column 3). We note, however, that we have not codified and controlled for all other state-based policies bearing on the ease by which minors may obtain abortions. Future work would benefit from the inclusion of such controls.

As such, these specifications provide some support for a robustness of the live-birth-rate findings to the consideration of this alternative outcome measure. However, upon the addition of the state-age and age-year fixed effects (i.e., the full triple-differences specification), the coefficient of the simulated felony incidence variable changes sign (Column 4) and is statistically indistinguishable from zero.

Of course, there may be additional forces stemming from statutory rape expansions that could have an offsetting effect on abortion rates. As indicated in the text, the fact of a statutory-rape-law violation may be more likely to come to light in the event of a pregnancy. As such, with the expansion of a statutory rape law, potential offenders seeking to avoid the associated penalties may either reduce the sexual activity truly targeted by the law or they may continue to engage in the activity but attempt to circumvent detection—e.g., by using contraception at higher frequencies or by encouraging abortions by their partners. These latter attempts, however, may be of limited effect to the extent that abortion procedures likewise trigger some possibility of detection of statutory rape violations. Some jurisdictions have passed laws requiring certain health care providers to notify the police and related offices of knowledge of statutory rape

violations. In future work, we hope to codify such expansions in the law (a challenging exercise given the pre-existence of general child-abuse notification statutes that may or may not have encapsulated statutory rape violations).

Ultimately, these results do not provide strong evidence that the primary live-birth-rate results can be entirely explained by an increase in abortion activity in order to avoid detection of a statutory rape violation.

TABLE A8. RELATIONSHIP BETWEEN ABORTION RATES AND SIMULATED PERCENTAGE OF SEXUAL ACTIVITY
THAT TRIGGERS A FELONY (AGES 13-17, 1991-2004, 46 REPORTING STATES)

	(1)	(2)	(3)	(5)
Simulated Felony Percentage	-14.8*	-14.4*	-15.5*	15.9
	(8.1)	(8.0)	(8.4)	(19.2)
N	2263	2263	2263	2263
State-Year Covariates	NO	YES	NO	NO
State-Year Fixed Effects?	NO	NO	YES	YES
Age-Year Effects?	NO	NO	NO	YES
State-Age Effects?	NO	NO	NO	YES

Notes: robust standard errors corrected for within-state correlation in the error term are reported in parentheses. Estimated coefficients and standard errors are multiplied by 100. The dependent variable in the above specifications is the natural log of the relevant abortion rate. All regressions include state, age and year fixed effects. Given the nature of the collected abortion data, the 13 and 14 year-old groups are consolidated into one age group, whereas the 15-17 year-old groups are individually represented in the specifications. Data are from 46 reporting states, excluding California, Florida, Illinois, Maryland, New Hampshire, and Rhode Island, which either did not report, did not report age among adolescents by individual year, or did not meet reporting standards for age. Abortion data is from the Centers for Disease Control.
*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.