# The American Felony Murder Rule: Purpose and Effect

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UC Berkeley, Spring 2012

Legal Studies Honors Thesis

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# I. Abstract

Most US states have a felony murder rule, which allows prosecutors to charge felons with murder for any death that occurs during and because of the commission of the felony. This allows the felon to be convicted with murder without requiring the prosecution to prove the mens rea that would otherwise be necessary for a murder conviction. Much of the legal scholarship indicates that the purpose of the felony murder rule is to deter felonies and to make felons limit their use of violence while they're committing the felony by making the felon internalize more fully the negative consequences of their actions.

It's unclear whether legislatures that adopt felony murder rules are more concerned with deterring criminal behavior or making criminals less violent when committing felonies. We analyze judicial decisions to infer what judges believed were the intentions of the legislatures that adopted felony murder statutes. We also use regression analysis to determine whether felony murder statutes are correlated with lower crime rates or lower rates of the average number of deaths that occur during felonies. We do this both by modeling felony rates and rates of felony-related deaths as a function of whether a state has a felony murder rule, and by determining how felony rates and rates of felony-related deaths change when a state adopts or abolishes a felony murder rule.

Our results indicate that the felony murder rule does not have a significant effect on crime rates or crime-related death rates. All statistically significant effects of the rule are to reduce crime-related death rates. Our analysis of judicial opinions indicates that there is no clear consensus about the purpose of felony murder statutes. Courts appear to be divided on whether the purpose of the rule is to reduce crimes or reduce rates of crime-related deaths.

## II. Introduction

The felony murder doctrine is a legal principle which provides that any deaths that occur during the commission of a felony can be legally treated as murder, as long as the deaths were connected in some way to the felony and the deaths were caused by the actions of the felon or felons involved in the crime. In most cases, the rule elevates manslaughter to murder in the context of the law, and so those who cause the death of somebody during the commission of a felony face a greater punishment in states that have felony murder rules due to the presence of the rule.

One important aspect of the felony murder doctrine is that there's no supreme, universally accepted definition of felony murder. Different states have different felony murder rules, largely due to differences in how they define the degree of the murder and which specific crimes can be the underlying felony for a felony murder conviction. In California, for instance, the felony murder rule is established by two sections of the California Penal Code: Section 187 defines murder as the "unlawful killing of a human being…with malice aforethought.[1]" Section 188 clarifies that the mental state that would imply malice aforethought need not be proven "[w]hen it is shown that the killing resulted from the intentional doing of an act with express or implied malice,[2]" which chiefly includes the commission of inherently dangerous felonies. Other statutes, such as New Jersey's original 1829 felony murder statute, punished killing "in committing, or attempting to commit, sodomy, rape, arson, robbery, or burglary, or any unlawful act against the

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[1] *FindLaw: For Legal Professionals*. Thomson Reuters. Web. 15 Apr. 2012. <http://codes.lp.findlaw.com/cacode/PEN/3/1/8/1/s187>.
[2] *FindLaw: For Legal Professionals*. Thomson Reuters. Web. 15 Apr. 2012. <http://codes.lp.findlaw.com/cacode/PEN/3/1/8/1/s188>.

peace of this state, of which the probable consequence may be bloodshed…[3]"

The Model Penal Code does not have a specific provision for a felony-murder rule, and in fact it disfavors the application of the death penalty for deaths that occur during the commission of a felony.[4] However, the Model Penal Code does define as murder any criminal homicide that "is committed recklessly under circumstances manifesting extreme indifference to the value of human life.[5]"

Determining the effects that legal rules have on the decision to commit crimes is of great importance to the field of Law and Economics. The felony murder rule, which allows prosecutors to charge a felon with murder for any deaths that occur during the commission of a felony, is believed to exist largely because of its deterrent effect on criminal behavior. The felony murder rule would supposedly reduce the number of felonies committed by making it more dangerous to commit such felonies and lowering the expected benefit of committing those felonies. The rule would also supposedly reduce the average number of deaths that occur during the commission of felonies by giving felons incentives to prevent bystanders from dying so that they can avoid murder charges.

Alternatively, the felony murder rule may create incentives for felons to intentionally kill witnesses in order to avoid detection and conviction, especially after having already unintentionally killed one bystander.[6] The felony murder rule punishes such a death as murder,

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[3] Birdsong, Leonard. "Felony Murder: A Historical Perspective By Which to Understand Today's Modern Felony Murder Rule Statutes." *Thurgood Marshall Law Review* 32.1 (2006): 1-26. Web. <http://heinonline.org/HOL/Page?handle=hein.journals/thurlr32&div=2&g_sent=1&collection=journals>.
[4] "Murder." *Legal Information Institute*. Cornell University Law School, 19 Aug. 2010. Web. 15 Apr. 2012. <http://www.law.cornell.edu/wex/murder#model_penal_code>.
[5] Denno, Deborah W., Arthur A. McGivney. "Selected Model Penal Code Provisions." Fordham University School of Law, Fall 2009. Print.
[6] Malani, Anup. "Does the Felony Murder Rule Deter? Evidence from FBI Crime Data." *New York Times* 3 Dec. 2007 (Working Paper). PDF File. <www.nytimes.com/packages/pdf/national/malani.pdf>.

and since murder is often punished with life in prison or by the death penalty, Malani argues that the marginal cost of killing additional witnesses is relatively low. Any criminal punishment would be bounded by the criminals' perception that no punishment is worse than death, and an additional prison sentence or death sentence for a criminal who is already serving a life sentence or death sentence would have no deterrent effect on the behavior of the criminal. On the other hand, killing witnesses (or co-conspirators) who may testify against one criminal would lower the probability that that criminal would be captured, and so the marginal benefit of killing such witnesses and co-conspirators may induce the criminals to escalate their level of violence.

Some authors offer support for the felony murder rule, largely on theoretical grounds, by arguing that the felony murder statutes should have a positive effect on criminal behavior. David Crump, for instance, argues from a theoretical perspective that according to well-established notions of the deterrence effects of criminal law, the felony murder rule must deter criminals.[7] We assume that criminals are rational, and if the felony murder rule doesn't deter criminals from killing witnesses, this would call into question the deterrence effects of virtually all criminal punishments. In making this argument, Crump challenges the critics that contend that the felony murder rule is totally ineffective as a deterrent.

Crump relies on three specific points to defend his argument. First, although many critics argue that the felony murder rule cannot deter because few people are aware of it, it's probable that most criminals are aware that causing a death during a crime would make the crime far more serious and it would likely result in a more serious punishment, even if they aren't specifically aware that the state in which the crime occurs has a felony murder law. Indeed, while evidence

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[7] Crump, David. "Reconsidering the Felony Murder Rule in Light of Modern Criticisms: Doesn't the Conclusion Depend upon the Particular Rule at Issue?" *Harvard Journal of Law and Public Policy*, 32:3. Print.

suggests that few people in states with a felony murder rule are aware of it, it's possible that criminals that operate in states that don't have a felony murder rule are aware that no additional punishment will be levied against them for such deaths, and that this causes them to increase their propensity to commit crimes or their likelihood to use violence during the crimes.

Second, Crump challenges the notion that accidental deaths cannot be deterred by the rule: he invokes the existence of strict liability laws and laws that punish negligence to argue that if accidents cannot be deterred, then these laws are equally ineffective at deterring the crimes that they punish. For instance, many drivers are unaware of many of the traffic regulations that exist in the United States, but most of these regulations are probably intended to influence driving behavior and we usually expect most of these regulations to deter negligent or dangerous driving. If the felony murder rule is ineffective simply because many people are unaware of the rule, it seems logical to conclude that all strict liability crimes which have low levels of awareness are ineffective at influencing behavior, which seems likely.

His final argument is that the felony murder rule prevents defendants from avoiding punishment by claiming, for example, that their gun discharged accidentally, and so defendants would be deterred from killing people on the grounds that they wouldn't be able to avoid conviction by misleading the jury about their mens rea at the time of the crime. Of course, for this to deter criminals from killing people, they would still need to be aware of the felony murder rule itself, so this argument may be called into question given the presumably low awareness among criminals of felony murder statutes. Still, this probably has the effect of helping prosecutors secure convictions on violent felons, it probably is helpful to prosecutors in negotiating plea bargains, and it may have the effect of longer incapacitation of violent criminals.

On the other hand, Malani[8] shows that states that have felony murder rules are more likely to have a higher proportion of deaths during robberies, although these states are also more likely to have lower rates of deaths related to burglaries, larcenies, and auto thefts. Malani uses FBI data to model the effect of the felony murder rule on criminal behavior using crime data from states that do and don't have the felony murder rule, and he holds constant other variables that would affect the decision to commit felonies. He also finds that the felony murder rule is correlated with slightly lower rates of felonies

Of course, such a regression may be subject to significant omitted variable bias: specifically, states that suffer from high levels of crime may be more likely to adopt (or refuse to abolish) a felony murder rule. Malani does discuss how changes in the number of felonies and the average number of deaths that occur during felonies may result in adopting or abolishing the felony murder rule. He notes that most states that did modify their felony murder statutes did so during sweeping reforms of their criminal codes, which were the result of the Supreme Court's 1972 ruling on capital punishment in *Furman v. Georgia*.[9]

Also relevant to the study of the effect of the felony murder rule on criminal behavior is the intent of the legislature in adopting the rule. Criminologists typically discuss five main purposes of punishment in the criminal law: deterrence, rehabilitation, retribution, restoration, and incapacitation. Of course, there are many intentions legislators may have in passing a law that wouldn't be covered under these theories of punishment, including for political purposes, and these may not be accurately reflected in a history or analysis of the law. For instance, legislators may have constituents who have an interest in building and expanding prisons, and

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[8] See ID.
[9] See ID.

the felony murder rule would probably create extra demand for prison facilities. In addition, legislators may want to give prosecutors more leverage in plea bargaining, and giving the prosecutor the ability to threaten murder charges if a criminal doesn't plead guilty will not only deter crime, but it will allow the government to appear more competent at enforcing laws and ensuring justice.

However, the theory of deterrence has probably been one of the most influential rationales for the felony murder rule, and it's important to understand whether the purpose of the law is to deter criminals from committing felonies or to influence them to be more careful when carrying out the felony. One would presume that if a legislature wanted to merely decrease the prevalence of felonies, they would pass laws that prescribe more strict punishments for the felony itself, rather than pass a law that elevates the punishment for something that may or may not happen during the felony. As the commentary on Section 707-701 of Part II of the Hawaiian code notes, "[i]f the murder penalty is to be used to reinforce the deterrent effect of penalties imposed for certain felonies (by converting an accidental, negligent, or reckless killing into a murder), it would be more effective, and hardly more fortuitous, to select a certain ratio of convicted felons for the murder penalty by lot.[10]"

Of course, it's also possible that the main purpose of the law is to deter criminals from committing felonies, and one advantage of passing a felony murder statute is that felons would also be led to be more careful while they're carrying out the crimes, and so the legislature decided that it would be slightly more useful to pass a felony murder law rather than an increase in the punishment for the underlying felony.

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[10] Hawaii State Legislature. "Part II. Criminal Homicide." Hawaii State Government. 11 February 2012. <http://www.capitol.hawaii.gov/hrscurrent/vol14_Ch0701-0853/HRS0707/HRS_0707-0701.htm>.

Economic theory presents one hypothesis for the effect of the felony murder rule on the number of felonies in a state, and it presents two competing hypotheses for the effect of the rule on the behavior of felons already engaged in the felony. First of all, the felony murder rule should prevent rational criminals from committing felonies because the rule lowers the expected benefit of committing the felony, regardless of the felons' circumstances prior to committing the felony. It could conceivably increase the number of less dangerous felonies or misdemeanors by raising the relative expected benefit of these crimes. In this paper, we test the following relatively simple hypothesis: Do felony murder rules deter prospective criminals from committing felonies? To test this hypothesis, we'll only use data on rates of felonies (in particular, those that are likely to be predicate felonies for felony murder charges) rather than rates of both felonies and other crimes (such as misdemeanors and felonies that are unlikely to be used as predicate felonies for felony murder charges), since it's possible that the felony murder rule would cause felons to commit misdemeanors and nonviolent felonies as substitutes for violent felonies.

There are two competing hypotheses for the effect of the felony murder rule on felony behavior during the commission of the felony. A rational felon may on the one hand be incentivized to take care to avoid dangerous behavior during the crime, which would prevent death. On the other hand, the rule may reasonably create incentives for the rational criminal to avoid punishment; depending on how risk averse a felon is, the felons may choose to lower the probability of conviction by killing witnesses in exchange for a greater punishment in the event that they are convicted. The second hypothesis we wish to test is the following: does a felony murder statute increase, decrease, or not affect the average number of deaths that occur during the commission of felonies? To answer this question, we use data on the average number of deaths that occur during the commission of specific felonies which are likely to be used as

predicate felonies for charges of felony murder. These are auto thefts, burglaries, larcenies, rapes, and robberies. We regress the number of crimes of each type and the number of deaths associated with each type of crime against a dummy variable that codes for whether or not the state has a felony murder rule (and what type of felony murder rule the state has) to determine the effect of the rule on crime rates and rates of crime-related deaths.[11]

For the felony murder rule to have any significant effect on criminal behavior would imply some level of rationality and rational decision-making among the criminals, and this rationality can be tested using the methods above. For instance, it's conceivable that potential felons would be deterred from committing crimes due to the felony murder rule, but that while committing a felony, they wouldn't behave as rationally as they would when deciding whether or not to commit the crime. In this case, we would expect the felony murder rule to be correlated with a decrease in felonies, but we would expect no change in the average number of deaths that occur during the commission of felonies. One advantage of testing the effect of the felony murder rule on both rates of felonies and rates of felony-related deaths is that it gives us insights into the rationality of criminal decision-making before and during the commission of crimes.

If our analysis suggests that one actual effect of the felony murder rule was not intended by legislatures (for example, if felony murder rules are correlated with a decrease in crime, but it appears the primary purpose of the felony murder law was not specifically to decrease crime), then this would perhaps suggest that the judges who ruled on the law or the legislators who passed the law were unaware of this positive effect of the law, or they expected this effect but simply did not view it as a primary objective of the law.

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[11] All regressions are run with R Version 2.13.1; R Development Core Team (2011). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL http://www.R-project.org/.

## III. Evolution of the Felony Murder Rule in the United States

The felony murder rule originated in the English Common Law, and while there's no clear record of the original purpose of the felony murder rule, the history of the rule's evolution in the United States can give some indications of what the intentions of legislators were when they passed and modified the felony murder statutes.

According to Professor Leonard Birdsong of the Barry University School of Law in Florida, the felony murder rule appears to have undergone five major transformations in five different states during its existence in the United States.[12]

The first major development in the evolution of the rule occurred in Pennsylvania in 1794. The legislature passed a law which regulated the application of the death penalty to apply only to deaths that occurred in the perpetration of arson, rape, robbery, and burglary (as well as to intentional murder). The law further stipulated that "all murder in the state other than ones committed in the perpetration of one of the common law felonies specified in their degree statute was to be second degree murder.[13]" Birdsong argues that such a law influenced the development of the felony murder rule by creating the norm that deaths that occur during the commission of one of the enumerated felonies can be considered murder, even without "willful, deliberate, and premeditate killing." Twelve states subsequently adopted the grading scheme introduced by this law with little to no changes, and an additional nineteen states adopted a modified grading scheme.

In 1827, Illinois passed the first true felony murder law, which states that an

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[12] See ID.
[13] See ID.

"'involuntary killing…in the commission of an unlawful act which in its consequences, naturally tends to destroy the life of a human being, or is committed in the prosecution of a felonious intent…shall be deemed and adjudged to be murder.[14]'" Like the California felony murder rule, Illinois' 1827 rule doesn't apply to all felonies, but rather to those felonies which are inherently dangerous to human life.

In 1829, New Jersey passed a law which specified that sodomy, rape, arson, robbery, burglary, or any unlawful act that has a probable chance of resulting in bloodshed could be the underlying crimes that result in felony murder convictions. New York passed the most strict felony murder rule, which specified that "killing 'without any design to effect death, by a person engaged in the commission of any felony'" could result in a felony murder conviction.[15]

Finally, Professor Birdsong also notes that Maine designed its felony murder statute such that the felony murder rule would only apply to deaths that are caused by the defendant or another participant in the crime, and the death must have been a "'reasonable foreseeable consequence of such commission, attempt or flight.[16]'" This definition of felony murder comports well with modern application of the felony murder rule in England, which is now almost uniformly used only when the underlying crime was inherently dangerous.

Clearly, the felony murder statutes in the United States vary from state to state and over time, but the above five states – Pennsylvania, Illinois, New Jersey, New York, and Maine – have been instrumental in the evolution of the American felony murder doctrine. Because so many states have modeled their felony murder statutes using elements first introduced by these five states, analyzing the purposes of each of these statutes will help us more accurately identify the

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[14] See ID.
[15] See ID.
[16] See ID.

purposes of the American felony murder rule.

In the following section, we will review judicial decisions in Illinois, Maine, New Jersey, New York, and Pennsylvania in which the court communicates what it believes are the purpose or purposes of the felony murder rule. For convenience, we limit our sample to judicial decisions available on the database provided by LexisNexis Academic.[17] We search for judicial decisions that contain keywords "felony murder" and "purpose," and we search through fifty cases per state to determine if the court discusses the purpose of the felony murder rule. Maine only has 25 judicial decisions recorded in LexisNexis that use the words "purpose" and "felony murder," and so we only analyze 25 judicial opinions from Maine. Our total number of cases analyzed is therefore 225, and we identify six cases in which the opinion specifically discusses the purpose of the felony murder rule. These six cases, in turn, cite additional cases that discuss the purpose of the felony murder rule (which in turn cite additional cases that discuss purpose), and by reviewing these cited cases, we find an additional six cases that discuss the purpose of the rule.

The purpose of using this methodology to search for judicial opinions is to help guarantee that the judicial opinions that we find are an unbiased, random sample of all of the judicial opinions that may discuss the purpose of the felony murder rule. One major threat that may introduce bias into our sample is the possibility that the judicial opinions that are recorded in LexisNexis are not themselves a simple random sample of all of the opinions that discuss the purpose of the felony murder rule. In particular, the cases that are recorded in the LexisNexis database are mainly recent cases from within the past two or three decades, and all but three of the six judicial opinions that we find that discuss the purpose of the rule are from the year 1990 or later. For this reason, it's important to interpret the views of these courts as representing more

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[17] *LexisNexis* Academic. Reed Elsevier Inc. Web. 20 Apr. 2012. <http://www.lexisnexis.com/hottopics/lnacademic/>.

modern views on the felony murder rule, and to acknowledge that their analyses of the purpose or purposes of the felony murder rule may not be consistent with historical views.

## IV. Methodology and Results

### A. Differences in Different Types of Felony Murder Rules

Our first step in running regressions is to determine if there's a significant difference between the effect of a felony murder rule that punishes such deaths as first degree murder and one that punishes such deaths as second degree murder. Economic theory would suggest that there would be a difference, although it's unclear how significant it would be. In essence, a "first degree" felony murder rule (a rule that punishes felony murder as if it were a first degree murder) places a higher price on deaths that occur during the commission of a felony than a "second degree" felony murder rule, so a first degree rule would make felons more careful while committing crimes. A symmetric argument can be used to conclude that a first degree felony murder rule would be more effective at deterring such felonies in the first place.

We can consider scenarios in which the difference in crime rates and death rates would be significant. For instance, consider a state that punishes first degree murder with 25 years to life in prison, while second degree murder is punished with 5 to 10 years in prison. The "price" of murder in the first degree is at least 2.5 times the price of murder in the second degree, and we can imagine that adopting a first degree felony murder rule would deter crime and prevent deaths much more than adopting a second degree rule (if criminals are rational and aware of the rule).

If there is a significant difference between the different types of rule, then we'll need to

regress crime rates and death rates against all types of felony murder rules: those that prescribe first degree punishment, those that prescribe second degree punishment, and those that prescribe punishment in a state that doesn't have different degrees of murder. For instance, one regression we may run would regress crime rates against one binary variable that codes for the presence of a first degree rule, one that codes for the presence of a second degree rule, one that codes for the presence of a felony murder rule in a state that doesn't have different degrees of murder, and other variables that we expect to influence crime rates.

This will make interpretation of the results more difficult: for instance, when regressing crime-related death rates against the binary variables that code for the different felony murder rules, there may be a positive coefficient on the variable that codes for the "second degree" rule. This may imply one of the two things: first, the felony murder rule actually increases the number of deaths that occur per crime (possibly by making felons more likely to kill witnesses to avoid punishment), or second, the felony murder rule decreases the number of deaths that occur per crime, but the effect is much greater in the first degree rule, and the positive coefficient on the second degree rule merely indicates that the second degree rule doesn't prevent deaths to the extent that the first degree rule does.

Alternatively, we can run several regressions, each for the different type of felony murder rule. For instance, we can run one regression that regresses crime rates against a binary variable that codes for a first degree felony murder rule and other related variables; we can run another regression that regresses crime rates against a binary variable that codes for a second degree felony murder rule and other related variables; last, we can run a regression that regresses crime rates against a variable that codes for the presence of a felony murder rule and other related variables in states that don't differentiate between different degrees of murder. The coefficient on

each variable would denote the effect of that kind of felony murder rule, compared to having no felony murder rule. This would significantly simplify the interpretation of the effect of each type of felony murder rule, although each regression would have a smaller sample size.

If, on the other hand, it appears that the different types of felony murder rules have the same effect (possibly no effect), then it will probably be safe to assume that we can regress crime rates and crime-related death rates against a single dummy variable that codes for whether or not the state has some kind of a felony murder rule. This will be the most desirable outcome, as any results that we obtain from these regressions would be less ambiguous than the complicated results that we may get when we run regressions which include all dummy variables.

For this purpose, for all of the five types of crimes and for the sum of these crimes, we run four different types of regressions. They are the following:

1. A regression of the number of crimes per population against the presence of a first degree felony murder rule using observations for which the state had a first degree felony murder rule or a second degree felony murder rule;

2. A regression of the number of crime-related deaths per crime against the presence of a first degree felony murder rule using observations for which the state had a first degree felony murder rule or a second degree felony murder rule;

3. A regression of the number of crimes per population against the presence of a first degree felony murder rule using observations for which the state switched between a first degree rule and a second degree rule;

4. A regression of the number of crime-related deaths per crime against the presence of a first degree felony murder rule using observations for which the state switched between a first degree rule and a second degree rule.

In addition, we run each of the above types of regressions twice, once using the value of the data as recorded and once using the natural log-transformed values of the data[18]. Specifically, the eight types of regressions we run have the following structure:

1. $$\frac{\text{Crimes}}{\text{Population}} = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1\frac{\text{GDP}}{\text{Population}}[19] + \beta_2\frac{\text{Government Spending}}{\text{Population}} + \beta_3(\text{Proportion Metropolitan}) + \beta_4(\text{Jobs per Capita}) + \beta 5(\text{Proportion Imprisoned}) + \beta_6\frac{\text{Income}}{\text{Population}} + \beta_7(\text{Year}_{1969}) + \beta_8(\text{Year}_{1970}) + \ldots + \beta_{36}(\text{Year}_{1998}) + \beta_{37}(\text{Region}_{\text{Midwest}}) + \beta_{38}(\text{Region}_{\text{Northeast}}) + \beta_{39}(\text{Region}_{\text{South}}) + \varepsilon$$

2. $$\ln\left(\frac{\text{Crimes}}{\text{Population}}\right) = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1\ln\left(\frac{\text{GDP}}{\text{Population}}\right) + \beta_2\ln\left(\frac{\text{Government Spending}}{\text{Population}}\right) + \beta_3\ln(\text{Proportion Metropolitan}) + \beta_4\ln(\text{Jobs per Capita}) + \beta_5\ln(\text{Proportion Imprisoned}) +$$

[18] Most crime-related data and some economic and demographic data were generously provided by Anup Malani from the University of Chicago. All other data were obtained from the U.S. Bureau of Economic Analysis: Bureau of Economic Analysis. "BEA Regional Economic Accounts." *U.S. Department of Commerce: Bureau of Economic Analysis*. U.S. Department of Commerce. Web. 19 Apr. 2012.

[19] All variables related to money are in inflation-adjusted 1997 dollars. We use 1997 dollars because the SIC industrial classification system ends in 1997 and the NAICS classification system begins in 1997. Because of differences in values for GDP between these two classifications in 1997, we splice the NAICS data by a constant for each state so that the value of the NAICS data is equal to the value of the SIC data in 1997. We do this splicing for all variables for which data is obtained through both classification systems.

$$\beta_6 \ln\left(\frac{\text{Income}}{\text{Population}}\right) + \beta_7 \ln(\text{Population}) + \beta_8(\text{Year}_{1969}) + \beta_9(\text{Year}_{1970}) + \ldots + \beta_{37}(\text{Year}_{1998}) + \beta_{38}(\text{Region}_{\text{Midwest}}) + \beta_{39}(\text{Region}_{\text{Northeast}}) + \beta_{40}(\text{Region}_{\text{South}}) + \varepsilon$$

3. $$\frac{\text{Deaths}}{\text{Crime}} = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \frac{\text{GDP}}{\text{Population}} + \beta_2 \frac{\text{Government Spending}}{\text{Population}} + \beta_3(\text{Proportion Metropolitan}) + \beta_4(\text{Jobs per Capita}) + \beta 5(\text{Proportion Imprisoned}) + \beta_6 \frac{\text{Income}}{\text{Population}} + \beta_7(\text{Year}_{1969}) + \beta_8(\text{Year}_{1970}) + \ldots + \beta_{36}(\text{Year}_{1998}) + \beta_{37}(\text{Region}_{\text{Midwest}}) + \beta_{38}(\text{Region}_{\text{Northeast}}) + \beta_{39}(\text{Region}_{\text{South}}) + \varepsilon$$

4. $$\ln\left(\frac{\text{Deaths}}{\text{Crime}}\right) = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \ln\left(\frac{\text{GDP}}{\text{Population}}\right) + \beta_2 \ln\left(\frac{\text{Government Spending}}{\text{Population}}\right) + \beta_3 \ln(\text{Proportion Metropolitan}) + \beta_4 \ln(\text{Jobs per Capita}) + \beta_5 \ln(\text{Proportion Imprisoned}) + \beta_6 \ln\left(\frac{\text{Income}}{\text{Population}}\right) + \beta_7 \ln(\text{Population}) + \beta_8(\text{Year}_{1969}) + \beta_9(\text{Year}_{1970}) + \ldots + \beta_{37}(\text{Year}_{1998}) + \beta_{38}(\text{Region}_{\text{Midwest}}) + \beta_{39}(\text{Region}_{\text{Northeast}}) + \beta_{40}(\text{Region}_{\text{South}}) + \varepsilon$$

5. $$\frac{\text{Crimes}}{\text{Population}} = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \frac{\text{GDP}}{\text{Population}} + \beta_2 \frac{\text{Government Spending}}{\text{Population}} + \beta_3(\text{Proportion Metropolitan}) + \beta_4(\text{Jobs per Capita}) + \beta 5(\text{Proportion Imprisoned}) + \beta_6 \frac{\text{Income}}{\text{Population}} + \beta_7(\text{Year}_{1969}) + \beta_8(\text{Year}_{1970}) + \ldots + \beta_{36}(\text{Year}_{1998}) + \beta_{37}(\text{State}_{\text{Alabama}}) + \beta_{38}(\text{State}_{\text{Arkansas}}) + \ldots + \beta_{86}(\text{State}_{\text{Wyoming}}) + \varepsilon$$

6. $$\ln\left(\frac{\text{Crimes}}{\text{Population}}\right) = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \ln\left(\frac{\text{GDP}}{\text{Population}}\right) + \beta_2 \ln\left(\frac{\text{Government Spending}}{\text{Population}}\right) + \beta_3 \ln(\text{Proportion Metropolitan}) + \beta_4 \ln(\text{Jobs per Capita}) + \beta_5 \ln(\text{Proportion Imprisoned}) +$$

$$\beta_6 \ln\left(\frac{\text{Income}}{\text{Population}}\right) + \beta_7 \ln(\text{Population}) + \beta_8(\text{Year}_{1969}) + \beta_9(\text{Year}_{1970}) + \ldots + \beta_{37}(\text{Year}_{1998}) + \beta_{38}(\text{State}_{\text{Alabama}}) + \beta_{39}(\text{State}_{\text{Arkansas}}) + \ldots + \beta_{87}(\text{State}_{\text{Wyoming}}) + \varepsilon$$

7. $$\frac{\text{Deaths}}{\text{Crime}} = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \frac{\text{GDP}}{\text{Population}} + \beta_2 \frac{\text{Government Spending}}{\text{Population}} + \beta_3(\text{Proportion Metropolitan}) + \beta_4(\text{Jobs per Capita}) + \beta 5(\text{Proportion Imprisoned}) + \beta_6 \frac{\text{Income}}{\text{Population}} + \beta_7(\text{Year}_{1969}) + \beta_8(\text{Year}_{1970}) + \ldots + \beta_{36}(\text{Year}_{1998}) + \beta_{37}(\text{State}_{\text{Alabama}}) + \beta_{38}(\text{State}_{\text{Arkansas}}) + \ldots + \beta_{86}(\text{State}_{\text{Wyoming}}) + \varepsilon$$

8. $$\ln\left(\frac{\text{Deaths}}{\text{Crime}}\right) = \alpha(\text{Dummy}_{\text{Felony Murder}}) + \beta_1 \ln\left(\frac{\text{GDP}}{\text{Population}}\right) + \beta_2 \ln\left(\frac{\text{Government Spending}}{\text{Population}}\right) + \beta_3 \ln(\text{Proportion Metropolitan}) + \beta_4 \ln(\text{Jobs per Capita}) + \beta_5 \ln(\text{Proportion Imprisoned}) + \beta_6 \ln\left(\frac{\text{Income}}{\text{Population}}\right) + \beta_7 \ln(\text{Population}) + \beta_8(\text{Year}_{1969}) + \beta_9(\text{Year}_{1970}) + \ldots + \beta_{37}(\text{Year}_{1998}) + \beta_{38}(\text{State}_{\text{Alabama}}) + \beta_{39}(\text{State}_{\text{Arkansas}}) + \ldots + \beta_{87}(\text{State}_{\text{Wyoming}}) + \varepsilon$$

In each of these regressions, $\text{Dummy}_{\text{Felony Murder}}$ is a binary variable that codes for whether the state has the felony murder rule in question (in this case, a rule that punishes such deaths as first degree murder); since we limit our analysis only to states that either have a first degree or a second degree felony murder rule (during that year), the coefficient on $\text{Dummy}_{\text{Felony Murder}}$ represents the effect of the first degree rule compared to a second degree rule. $\frac{\text{GDP}}{\text{Population}}$ is the per capita state gross domestic product, and $\frac{\text{Government Spending}}{\text{Population}}$ is the per capita level of government spending in the state. (Jobs per Capita) is the number of jobs per person in the state

(which is not a perfect indicator of the employment rate, since some people have multiple jobs, although we use it as a proxy). Any variable of the form $Year_i$ is a binary variable that codes for whether or not the year is i, any variable of the form $Region_j$ codes for whether or not the state is in region j, and any variable of the form $State_k$ codes for whether or not the state is k.

Finally, the presence of "ln" before a variable denotes that the natural logarithm of the variable has been taken. This is only used for continuous variables, or variables that can be reasonably construed to be continuous (such as population); this is not used for binary variables. An advantage to using the log-transformation of the data is that the coefficient on each variable will denote the percentage change in crime rates or crime-related death rates associated with a change in a binary variable or a percentage change in a continuous variable. For instance, in the second regression, if $\alpha$ is equal to 0.2, then adopting a felony murder rule is correlated with a 20% increase in crimes per person. If $\beta_2$ is equal to -0.2, then a 10% increase in per capita government spending is correlated with a 2% decrease in crimes per person.

One important note is that in the regressions in which the independent variable includes crime-related death rates, when calculating rape-related death rates, we divide the total number of deaths that occur during the commission of rapes by the total number of forcible rapes. This is merely for convenience, as data on the total number of forcible rapes and data on the number of deaths related to rape were easily accessible. It's certainly possible for this to cause problems in our data. In the extreme example, it may be that in one year in one state, only two rapes were documented, only one of which was forcible, and a death resulted in both cases, in which case our data would indicate that there were two deaths per crime for this category.

Of course, such a situation would be extremely unlikely: we would expect that most deaths that occur in rape cases will be from instances of forcible rape. Indeed, the highest

proportion of deaths per crime achieved using this method is less than 0.1, so this doesn't seem to be a concern.

It's also possible that obtaining our data using this method will introduce bias. For instance, it may be the case that using this method to obtain crime-related death rates will produce results that are higher than the actual death rates, and that this method will affect the death rates in states with felony murder rules more than in states with no felony murder rules. For simplicity, call the number of rape-related deaths per rape (what we're trying to estimate) $d_1$ and the number of rape-related deaths per forcible rape (our estimate) $d_2$. It's possible that the relationship between $d_1$ and $d_2$ changes based on whether the state in question has a felony murder rule. We find it unlikely, however, that the ratio between $d_1$ and $d_2$ is correlated with the presence of a felony murder rule in a way that would introduce substantial bias, so we accept our calculation as a reasonable proxy for the number of rape-related deaths per rape.

One problem with using the log-transformation of the crime-related death data is that for many years in many states, there are some crimes for which no related deaths are reported, so the number of deaths per crime is 0, and the natural log of this is undefined. To correct for this, we take the number of crime-related deaths in each state in each year, add 1 to it, and divide this sum by the number of crimes. We then take the natural log of this. This is generally appropriate when the maximum of the data for each column is relatively large, such as in the hundreds. For many crimes, however, there are fewer than 100 reported related deaths in any year in even large states, such as California, New York, or Texas. This is one advantage for using the data that is not log-transformed.

In any event, we choose to run all eight tests for each of the five types of crimes and the sum of these crimes, and we test the hypothesis that the effect of the first degree felony murder

rule is the same as the effect of the second degree felony murder rule. This would imply that $\alpha=0$ in all of the tests. We can assume that the first degree felony murder rule is more effective at deterring crime than the second degree felony murder rule, since a harsher punishment will make felons unambiguously less likely to commit the crime. Therefore, when regressing the number of crimes per population against the independent variables, we use a one-sided hypothesis test at the 95% confidence level, where we only reject the null hypothesis if $\alpha$ more than 1.65 standard errors below 0. However, it's possible that the first-degree felony murder rule would be less effective than the second-degree rule at preventing deaths, so we employ a two-sided test when regressing the number of deaths per crime against the independent variables. We reject the null if $\alpha$ is more than 1.65 standard errors away from 0 (if $\alpha$ is negative or positive).

Of course, with so many regressions, it's possible that we'll reject the null even when the null hypothesis is true, simply due to noise. In addition, it may be the case that the null hypothesis is incorrect (the first degree rule is more or less effective at deterring crime or preventing death than the second degree rule), but the difference is small. However, the purpose of running these tests is to determine if there's a compelling reason to avoid treating all of the felony murder rules the same when comparing states that do and don't have the felony murder rule.

If there does appear to be a difference in effectiveness and it is significant, that would clearly justify adding binary variables for each type of felony murder rule when comparing states that do and don't have felony murder rules, which would make interpretation of the results more difficult. However, if it appears that there is no significant difference in the effectiveness of the two types of felony murder rules, then we can justify adding only one binary variable that codes for whether or not the state has some kind of a felony murder rule. For this reason, we run the 48

regressions described above, and use the results to determine how to run the regressions that compare all states.

Using the hypothesis tests specified above, we can reject the null hypothesis that the first degree felony murder rule is as effective as the second degree felony murder rule at deterring crime in only one of the 24 relevant regressions, and we can reject the null hypothesis that the first degree felony murder rule is as effective as the second degree rule at preventing deaths in eight of the 24 relevant regressions. Results for these tests are reflected in Tables 1-4. Specifically, the first degree rule appears to deter robberies more than the second degree rule when using the data that is not log-transformed when comparing all states that have a first degree or second degree felony murder rule. In this regression, the first degree rule appears to decrease the number of robberies per person by $3.342 \times 10^{-4}$ robberies, whereas the average number of robberies in all of these states in all of the years is $1.353 \times 10^{-3}$ robberies.

However, there are eight regressions in which we can reject the null that the first degree felony murder rule has the same effect on the number of deaths per crime as the second degree felony murder rule. Three of these regressions use the data that is not log-transformed for all states with such rules, four of them use the log-transformed data for all states, and one of them uses the log-transformed data only for states that experienced a rule change.

Of the three regressions using the data that is not log-transformed for all states, one of the regressions suggests that the first degree rule decreases the number of deaths per burglary by $2.738 \times 10^{-5}$ deaths, compared to an average of $5.387 \times 10^{-5}$ deaths per burglary. Another regression suggests that the first degree rule increases the number of deaths per robbery by $8.704 \times 10^{-4}$ deaths (compared to an average of $4.394 \times 10^{-3}$ deaths), and the third regression indicates that the first degree rule decreases the number of deaths per crime by $4.489 \times 10^{-5}$ deaths (compared to an

average of $1.420 \times 10^{-4}$ deaths).

Of the three regressions using the data that is log-transformed for all states, one regression indicates that the first degree rule decreases the number of deaths per burglary by 36.8%, another regression suggests that it increases the number of deaths per larceny/theft by 10.4%, another indicates that it decreases the number of deaths per robbery by 14.0%, and the last regression indicates that it decreases the number of deaths related to all of the crimes per crime by 21.8%.

The final regression, using log-transformed data for states that experienced a rule change, indicates that the presence of a first degree felony murder rule (as opposed to a second degree rule) decreases the number of deaths per burglary by 177%. Clearly, given this result, a linear regression wouldn't be adequate to capture the true effect of the first degree rule in this case, but it seems that the first degree rule has a very large negative effect on the number of deaths that occur per burglary.

Overall, it does not appear that the first degree felony murder rule has a significantly different effect on the number of crimes per person than the second degree felony murder rule; the difference associated with the number of robberies in a state can probably be attributed to sampling error. There may be some difference between the effect of the first degree rule and the second degree rule on the number of deaths per crime, but the effect is relatively ambiguous (for some crimes, the number of deaths appears to increase due to the first degree rule, while it decreases for other crimes). In addition, when we look at data using only states that experienced a change in their rule (either it went from having a first degree rule to having a second degree rule or vice versa), the change in the effectiveness appears to disappear for all but one crime (burglaries). This data set is especially useful to the extent that it allows us to isolate the effect of

the first degree felony murder rule, since we include dummy variables for each state and for each year and so we're able to more fully isolate the effect of the rule.

The strongest evidence that there isn't a significant difference in the effectiveness of the first degree felony murder rule and the second degree rule in deterring crime is that we cannot reject the null hypothesis that they have the same effect in any of the cases in which we compare how crime rates change when the rule is adopted or eliminated. Given that we can only reject the null hypothesis in one of the 24 relevant regressions, and we cannot reject the null hypothesis in any of the regressions in which we add controlling variables for each state, it seems that punishing felony murder as first degree has a significant effect on crime rates.

In addition, we can reject the null hypothesis that the two kinds of felony murder rule have the same effect on crime-related death rates in only one of the twelve regressions in which we add controlling variables for each state. This is the strongest evidence that the two types of felony murder rule have roughly the same effect on crime-related death rates, and that any difference in crime-related death rates in the regressions in which we don't control for each state is due to differences inherent in each state. For instance, states that have a history of high rates of crime-related deaths may be more likely to pass stricter first degree felony murder rules, which would not be effective in decreasing the crime-related death rates. This would cause the presence of first degree felony murder rules to be correlated with high rates of crime-related deaths, but the direction of causality would be the opposite of what would probably be intuitively assumed.

B. Effect of the Presence of Any Kind of Felony Murder Rule

Given the relatively low amount of cases in which we can reject the null hypothesis (that the effect of the first degree rule differs from that of the second degree rule) and because the effect that may exist is ambiguous, it seems reasonable to combine all types of felony murder rule into one variable that simply codes for whether or not the state has some kind of a felony murder rule. This will allow us to more easily compare the effect of the felony murder rule versus not having any kind of felony murder rule. This will include first degree rules, second degree rules, and felony murder rules in states that do not have separate distinctions for first and second degree murder.

The regressions that we run are identical to those specified previously, except that the binary variables that code for the presence of a first degree felony murder rule is replaced with those that code for the presence of any kind of felony murder rule. In particular, the second and fourth sets of regressions, which use the log-transformed data for every state, are meant to be similar to the regressions run by Malani, and we expect to obtain similar results to those that he obtained. The other six regressions, particularly the sixth and eighth sets of regressions, will either challenge or confirm Malani's findings. The sixth and eighth sets of regressions use the log-transformed data, but only for states that experienced a rule change, and we include dummy variables for each state. This will allow us to exploit the panel nature of the data, which will allow us to more clearly isolate the effect of the felony murder rule on crime rates and crime-related death rates.

Again, to test the effect of the felony murder rule on the average number of crimes per person, we run a one-sided hypothesis test at the 95% confidence level, and we reject the null

hypothesis only if the coefficient on the variable that codes for the presence of a felony murder rule, α, is more than 1.65 standard errors below 0. To test the effect of the rule on the number of deaths per crime, we use a two-sided test and we reject the null hypothesis if α is more than 1.65 standard errors away from 0.

Using these tests, we cannot reject the null hypothesis that the felony murder rule does not deter crime in any of the 24 relevant regressions, but we can reject the null hypothesis that the felony murder rule has no effect on the number of deaths per crime in eight of the 24 relevant regressions. Results for these tests are reflected in Tables 5-8. In particular, the data that is not log-transformed for every state indicates that the felony murder rule increases the number of deaths per robbery by $1.340 \times 10^{-3}$ deaths (compared to an average of $4.394 \times 10^{-3}$ deaths), and it increases the total number of deaths per crime by $5.252 \times 10^{-5}$ deaths (compared to an average of $1.420 \times 10^{-4}$ deaths).

Using the log-transformed data for every state, we have evidence that the felony murder rule increases the number of deaths per auto theft by 9.40%, it increases the number of deaths per larceny/theft by 13.4%, it increases the number of deaths per rape by 11.6%, and it increases the number of deaths per robbery by 21.2%. Overall, our regressions would indicate that the felony murder rule increases the number of deaths per crime by 33.9%, although this would imply that the total number of deaths per crime increased by a higher percentage than the highest percentage increase of any of the individual crimes, which isn't possible.

Finally, using data that only includes states that switched from having a felony murder rule to not having one or vice versa and controlling for each state, our regressions indicate that the felony murder rule has a statistically significant effect for only one crime. Using the log-transformed data, it appears that the felony murder rule decreases the number of deaths per auto

theft by 30.0%, but does not appear to influence any other crimes.

Given these results, it seems that states that are more likely to have felony murder rules are more likely to have higher rates of crime-related deaths per crime, but that adopting the felony murder rule or eliminating the rule itself doesn't have a large effect on the proportion of crime-related deaths. Indeed, the only apparent effect of adopting the rule is that it actually decreases the average number of crime-related deaths in a state.

This suggests that direct relationships between the presence of a felony murder rule and the average number of crime-related deaths are either the result of reverse causation or confounding variables. For instance, states that have had a poor history of preventing crime-related deaths may be more likely to adopt a felony-murder rule, which would then decrease (or have no effect on) the average number of crime-related deaths, but the state will still have a higher rate of crime-related deaths than other states.

C. Effect of Each Type of Felony Murder Rule

Although it appears that there's no statistically significant and systematic difference between the effect of the first degree and the second degree felony murder rules, it's still useful to try to isolate the effect of each type of felony murder rule. As noted, it would be difficult to isolate the effect of each type of felony murder rule by simply running a regression with a dummy variable for each type of felony murder rule.

One solution is to run three sets of regressions, one for each type of felony murder rule: first degree felony murder rules, second degree felony murder rules, and felony murder rules that don't specify the associated degree of murder. For each type of rule (say rule X), we'll only use

data in which either no felony murder rule is in place, or rule X is in place. We'll include a dummy variable that codes for whether or not the state has rule X in any given year, and the coefficient assigned to that dummy variable will be the effect of rule X (as opposed to if the state had no felony murder rule).

i. Effect of First Degree Felony Murder Rule

First, we determine the effect of the first degree felony murder rule on crimes rates and rates of crime-related deaths, compared to not having a felony murder rule. The regressions are identical to those specified above, but we limit our data only to states and years in which either the state has a first degree felony murder rule or no felony murder rule.

Using these tests, we can reject the null hypothesis that the felony murder rule does not deter crime in three of the 24 relevant regressions, and we can reject the null hypothesis that the felony murder rule has no effect on the number of deaths per crime in nine of the 24 relevant regressions. Results for these tests are reflected in Tables 9-12. Unfortunately, there are only three states that switched between having a first degree felony murder rule and having no felony murder rule between 1968 and 1998. These are Minnesota, Ohio, and Utah. Any results obtained from the last four of the eight types of regressions specified above may therefore be merely the result of circumstances that occurred in some or all of these states.

The data that is log-transformed for every state indicates that the felony murder rule decreases the number of vehicle thefts per person by 0.04900 thefts (compared to an average of $3.899 \times 10^{-3}$ thefts in this data set). Using data that is not log-transformed for states that switched from having a first degree felony murder rule to not having one or vice versa and controlling for

each state, it appears that having a first degree felony murder rule decreases the number of deaths per auto theft by $-7.244 \times 10^{-4}$ deaths (compared to an average of $1.858 \times 10^{-5}$ deaths in this data set). Finally, using data that is log-transformed for states that experienced a rule change, having a first degree felony murder rule is correlated with a decrease in the number of deaths per auto theft by 23.7%.

Using the data that is not log-transformed for every state, we have evidence that the first degree felony murder rule increases the number of deaths per robbery by $1.384 \times 10^{-3}$ (compared to an average of $4.496 \times 10^{-3}$ deaths), and it increases the total number of deaths per crime by $4.704 \times 10^{-5}$ (compared to an average of $1.355 \times 10^{-4}$ deaths).

Using data that is log-transformed for every state, our results indicate that the first degree felony murder rule increases the number of deaths per auto theft by 10.5%, it increases the number of deaths per larcenies by 14.3%, it increases the number of deaths per rape by 12.2%, and it increases the number of deaths per robbery by 18.7%. Overall, it appears that the first degree felony murder rule increases the total number of deaths per crime by 29.8%.

Finally, using log-transformed data that only includes states that switched from having a first degree felony murder rule to not having one or vice versa and controlling for each state, our tests indicate that the first degree rule decreases the number of deaths per burglary by 86.6%, and it decreases the total number of deaths per crime by 88.1%.

These results seem to mimic the results obtained in Part B: states that are more likely to have first degree felony murder rules are more likely to have higher rates of crime-related deaths per crime, but adopting or eliminating the first degree felony murder rule doesn't appear to have a large effect on the proportion of crime-related deaths. If anything, adopting a first degree rule seems to decrease the average number of crime-related deaths in a state, and eliminating the rule

appears to increase the average number of crime-related deaths in a state.

ii. Effect of Second Degree Felony Murder Rule

We now determine the effect of the second degree felony murder rule on crimes rates and rates of crime-related deaths, compared to not having a felony murder rule. We now limit our data to states and years in which either the state has a second degree felony murder rule or no felony murder rule. One important note is that only one state switched from having a second degree felony murder rule to having no felony murder rule or vice versa: this was Alaska, which adopted a second degree felony murder rule in 1978. Our analysis of how a rule change affects crime rates and rates of crime-related deaths therefore only includes Alaska, and we don't include year variables.

In the twelve regressions we run that regress crime rates against the presence of a second degree felony murder rule using all states, we see that the effect of the felony murder rule is statistically significant in only one regression. The felony murder rule is correlated with an 8.386% decrease in forcible rapes.

In the twelve regressions we run that regress crime-related deaths rates against the presence of a second-degree felony murder rule using all states, we see that the effect of the felony murder rule is statistically significant in six regressions. Three of these use data that is not log-transformed, and three of them use the log-transformed data.

Using the data that isn't log-transformed, the second degree rule is correlated with an increase in the number of deaths per burglary of $4.586 \times 10^{-5}$ deaths (compared to an average of $6.131 \times 10^{-5}$ deaths), an increase in the number of deaths per robbery of $9.084 \times 10^{-4}$ deaths

(compared to an average of $3.713 \times 10^{-3}$ deaths), and an increase in the total number of deaths per crime of $9.834 \times 10^{-5}$ deaths (compared to an average of $1.428 \times 10^{-4}$ deaths).

Using the log-transformed data, the second degree felony murder rule appears to decrease the average number of deaths per auto theft by 36.1%, increase the average number of deaths per burglary by 24.5%, and increase the average overall number of deaths per crime by 72.6%.

Looking only at how crime rates and crime-related death rates changed in Alaska as Alaska adopted the second degree felony murder rule, there are no instances in which the effect of the felony murder rule is statistically significant. This provides further evidence that the felony murder rule itself does not cause a significant change in states' crime rates and crime-related death rates, but that factors correlated with having a felony murder rule are also correlated with higher or lower crime rates and crime-related death rates.

The results of all 48 regressions related to this section are documented in Tables 13-16.

iii. Effect of Felony Murder Rule with no Specified Degree of Murder

This section focuses on the effect of the felony murder rule on criminal behavior when no degree of murder is specified. The results are listed in Tables 17 and 18. Note that there are no results in which we control for each state, because there is no state which at one time had a "no degree" felony murder rule and at another time had no felony murder rule.

Using data that is not log-transformed, the no degree felony murder rule is correlated with an increase in deaths related to robberies of $7.086 \times 10^{-4}$ deaths (compared to an average of $3.923 \times 10^{-3}$ deaths), and it's correlated with an increase in the total number of deaths per crime of $4.868 \times 10^{-5}$ deaths (compared to an average of $1.222 \times 10^{-4}$ deaths).

Using data this is log-transformed, the no degree felony murder rule appears to decrease the number of motor vehicle thefts by 8.52%, and decrease the number of larcenies/thefts by 3.05%. Additionally, it appears to increase the average number of deaths per motor vehicle thefts by 20.9%, increase the average number of deaths per larceny/theft by 9.79%, increase the average number of deaths per robbery by 14.7%, and increase the average overall number of deaths per crime by 41.2%.

Since we don't have data on how the crime rates or crime-related death rates change as the rule changes, it's difficult to interpret these results with a high degree of confidence. However, if the results are caused by the presence of the felony murder rule, then it would seem that in states that have a felony murder rule which doesn't specify the degree of murder, the felony murder rule is successful at deterring certain felonies (motor vehicle thefts and larcenies/thefts), but it actually increases the number of deaths per crime for several crimes.

## V. Inferring the Purpose of the Felony Murder Rule

We now seek to understand the purpose of the felony murder doctrine, in particular, its intended effect on criminal behavior. One strand of thought suggests that the felony murder rule's purpose is to deter the commission of crimes by increasing the expected cost of the crime. If only one death may occur during the commission of a felony and the probability of a death occurring during the crime is p and the marginal punishment of the felony murder rule is c, then the felony murder rule will increase the expected cost of the crime by pc. More generally, if the probability of i deaths occurring is $p_i$ and the marginal punishment of the felony murder rule when i deaths occur is $c_i$, then the presence of the felony murder rule increases the expected cost of the crime

by $\Sigma p_i c_i$. In any event, the marginal cost of the felony increases, and some rational criminals are theoretically deterred from committing the felony.

A second strand of thought suggests that the purpose of the felony murder rule is to make felons more careful when committing crimes to avoid any deaths. Felons who are already committing a felony will simply have more reason to protect the lives of their potential victims while the crime is underway. Other hypotheses indicate that the felony murder rule serves a dual purpose in decreasing crime and making felons more careful during the commission of the crime, or that the felony murder rule serves a retributive purpose.

To infer the purpose of the felony murder rule, we look to the judicial record to identify what judges believe are the purposes of the felony murder rule. We look to the judicial record to determine the perceived purpose of the felony murder rule for a number of reasons. First, we believe that judges will be relatively impartial when assessing the purpose of the rule. An alternative would be to look to legislative debates, hearings, or preambles to bills that establish felony murder rules to infer the purpose of the felony murder rule. However, legislators may have political motives to state that the felony murder rule has a certain purpose, but it seems reasonable that the judges will be relatively impartial when expressing what they believe to be the purposes of the felony murder rule.

In addition, preambles to statutes, legislative debates, and legislative hearings may express the beliefs of the writers of the bills or the speakers during the debates or hearings, but it would probably be unreasonable to assume that these legislators speak for the entire legislature that adopts the felony murder rule. However, it seems reasonable that judicial decisions would be more likely to express most or all possible relevant purposes of the felony murder rule.

To determine the purpose of the felony murder rule, we look though hundreds of judicial

decisions that are likely to mention the purpose of the felony murder rule, and we identify those that specifically discuss the purpose or intent of the statute. We limit our analysis to five states that have been highly influential in the development of the felony murder rule: Illinois, Maine, New Jersey, New York, and Pennsylvania. We find candidate cases by searching through the catalog of cases compiled by the LexisNexis database which use the term "felony murder" and the word "purpose" at least once in the case.

We search through the first results that are returned in each state. Rather than searching for cases that use the word "purpose," we could have searched for cases that use words such as "deter" or "prevent." However, it's reasonable to hypothesize that conducting such a search would introduce bias into our sample.

For instance, it may be the case that 50% of all cases indicate that the purpose of the felony murder rule is to prevent crimes, and 50% of the cases indicate that the purpose of the rule is to make felons more careful during the commission of the crime. However, it's plausible that using the word "deter" may be more popular when discussing the deterrence of crime than when discussing the deterrence of dangerous activity during the crime, so 60% of those cases that use the word "deter" would indicate that the purpose of the rule is to prevent crimes, and 40% of the cases that use the word "deter" would indicate that the purpose of the rule is to make felons more careful when committing the crime. It seems reasonable, however, to assume that the word "purpose" would not be more highly correlated with one theory of deterrence than another.

Limiting our search only to Illinois, Maine, New Jersey, New York, and Pennsylvania may not produce results that are accurate and complete for all fifty states, and this is not the purpose of this analysis. We seek only to determine the judicially recognized purposes of the felony murder rule in these five states, since they appear to have been the most influential in the

development of the felony murder rule in the remaining states. It's certainly possible, and indeed plausible, that other states with felony murder statutes have them for purposes that would not and could not be represented by these five states. It is, therefore, very important to stress caution when attempting to generalize the results of this survey to all other states.

In addition, we limit our review of each case to sentences that contain the word "purpose" or the phrase "felony murder," as well as surrounding sentences if the context is otherwise unclear. While certainly possible, it's very implausible that a judicial opinion would discuss the purpose of the felony murder rule without using the word "purpose" or the phrase "felony murder" in the portion of the opinion in which the purpose of the rule is discussed. In these cases, it's possible, though unlikely, that we would overlook some cases which do in fact discuss the purpose of the felony murder rule. However, even in these cases, it's unlikely that this will introduce bias into the results. For this to happen, the probability that an opinion discusses the purpose of the felony murder rule's purpose without using the phrase "felony murder" or the word "purpose" would need to be correlated with the actual purpose that the court infers in the opinion. We find this highly unlikely, and so we remain confident that our survey remains highly accurate and unbiased.

We search through 50 cases in each state, with the exception of Maine, which only has 25 such cases. Of these 225 judicial decisions, we identify six as explicitly discussing the purpose or legislative intent of the felony murder rule. They are the following:

- *The People of the State of Illinois v. Jeffrey A. Davison*, 923 N.E.2d 781 (2010)
- *State of Maine v. Timothy L. Anderson and Edward G. Sabatino*, 409 A.2d 1290 (1979)
- *The People of the State of Illinois v. Robert Klebanowski*, 852 N.E.2d 813 (2006)
- *The People of the State of Illinois v. Taiwan M. Davis*, 821 N.E.2d 1154 (2004)

- *The People of the State of Illinois v. John Belk*, 784 N.E.2d 825 (2003)
- *State of New Jersey v. Damon L. Hill*, 868 A.2d 290 (2005)

No relevant cases originated from New York or from Pennsylvania (judicial decisions from New York were usually significantly shorter in length than decisions from the other four states). Of the six opinions above, two indicate that the purpose of the felony murder rule is to reduce crimes, while three state that the purpose of the rule is to make felons more careful while committing felonies. In one case, *State of Maine v. Timothy L. Anderson and Edward G. Sabatino*, the court indicates that the purpose of the law is to create incentives for defendants to plead guilty in return for a reduced punishment. No opinions clearly and specifically indicate that there is a dual purpose for the statute (both to reduce crimes and to reduce crime-related deaths), although no opinion specifically indicates that there is no such dual purpose.

Finally, after identifying the above six cases (the six primary cases), we identify all of the (secondary) judicial opinions that the primary cases cite as justification for their interpretation of the purpose of the felony murder rule. We then identify any (tertiary) opinions that the secondary opinions cite as justification for their interpretation of the purpose of the rule, until no additional cases are cited. From this process, we identify a total of twelve cases that in some way discuss the purpose of the felony murder rule.

In Section A (Reducing Crimes), we discuss all of the primary cases that indicate that the purpose of the rule is to reduce crimes, as well as any secondary and tertiary cases that they quote or cite. In Section B (Reducing Crime-Related Deaths), we discuss all of the primary cases that indicate that the purpose of the rule is to reduce the number of deaths related to the underlying felonies, as well as any relevant secondary and tertiary cases. Section C discusses the primary case in which the court asserts that the purpose of the rule is to accomplish an alternative

goal, and the secondary case that it cites.

A. Reducing Crimes

In two primary cases, the court indicates that the purpose of the felony murder rule is to make crimes more costly for criminals, and to reduce the number of crimes that are committed. These cases are *The People of the State of Illinois v. Robert Klebanowski* and *State of New Jersey v. Damon L. Hill*. In *State v. Klebanowski*, the majority opinion attempts to contrast the theoretical foundations of felony murder and accountability by quoting the decision in the secondary case of *State v. Dennis*, 692 N.E.2d 325 (1998): "Felony murder seeks to deter persons from committing forcible felonies by holding them responsible for murder if a death results." To justify its conclusion, the court in *People v. Dennis* quotes the opinion in the tertiary case of *People v. Viser*, 343 N.E.2d 903 (1975), which states the following:

> Our Criminal Code does not establish degrees of murder. And we are not concerned with whether the General Assembly, in establishing the offense of felony murder, intended to deter the criminal from the commission of rape, or robbery, or burglary, but not to deter him from the violent assault that accompanies each of those offenses. That kind of fragmentation of legislative purpose cannot survive the forthright characterization of…aggravated battery as one of the forcible felonies that will trigger a charge of felony murder. What was intended was to deter the commission of any of the enumerated forcible felonies, including aggravated battery, by holding the perpetrator responsible for murder if death results.

The opinion does note the possibility that the felony murder rule is meant to deter violence associated with the crime, but it takes no stand on whether this is the actual purpose of the rule. The court does, however, clearly state that the purpose of the rule is to "deter the commission of any of the enumerated forcible felonies." We therefore categorize this opinion as stating that the purpose of the rule is to deter the commission of felonies.

The court in *State v. Klebanowski* then quotes the court in *People v. Lowery*, 687 N.E.2d 973 (1997), which quotes committee comments to suggest that the purpose of the rule is to deter violence:

> As noted in the committee comments of the felony-murder statute, 'it is well established in Illinois to the extent of recognizing the forcible felony as so inherently dangerous that a homicide occurring in the course thereof, even though accidentally, should be held without further proof to be within the "strong probability"…classification of murder.'…This differentiation reflects the legislature's concern for protecting the general populace and deterring criminals from acts of violence.

These "acts of violence" may refer to the violence that would directly lead to the death of a victim, or to the underlying felonies themselves. In the former case, this would indicate that the purpose of the rule is to specifically reduce crime-related deaths, and in the latter case, this would indicate that the purpose of the rule is to deter crimes themselves. Because it's unclear what kind of violence the court in *People v. Lowery* is discussing, we note that the interpreted purpose of the felony murder rule in this case is ambiguous. In any event, the court in *State v.*

*Klebanowski* specifically notes that the purpose of the rule is to reduce the total number of crimes.

In *State v. Hill*, the majority opinion quotes the opinion in *State v. Martin*, 573 A.2d 1359 (1990), which clearly notes that the purpose of the felony murder rule is to deter crimes: "'[T]he continuing justification for the felony murder rule is that in some circumstances one who commits a felony should be liable for a resulting, albeit unintended, death…The historical justification for the rule is that it serves as a general deterrent against the commission of violent crimes.'" The court specifically states that felons will be less likely to commit crimes if they'll be held liable for any deaths that result from it: "The rationale is that if potential felons realize that they will be culpable as murderers for a death that occurs during the commission of a felony, they will…be less likely to commit the felony. From this perspective, the imposition of strict liability without regard to the intent to kill serves to deter the commission of serious crimes." This is justified by commentary of the New Jersey Code and its felony murder rule.

B. Reducing Crime-Related Deaths

In three primary cases, the opinion indicates that the primary purpose of the rule is to reduce the number of deaths that occur during the commission of the felony. These are the cases of the *People of the State of Illinois v. Jeffrey A. Davison*, *[t]he People of the State of Illinois v. Taiwan M. Davis*, and *[the] People of the State of Illinois v. John Belk*. In *People v. Davison*, the majority opinion notes that "[t]he felony-murder statute is intended to limit violence caused by the commission of a forcible felony, subjecting an offender to a first degree murder charge if another person is killed during that felony." The court does not directly express the opinion that

the felony murder rule may serve another purpose, such as reducing the commission of the underlying felony.

The opinion in *People v. Davison* quotes the decision in *People v. Belk* to justify its claim that the purpose of the rule is to limit violence during the commission of the felony. In *People v. Belk*, the majority opinion states that "the purpose behind a felony-murder statute is to limit the violence that accompanies the commission of forcible felonies, so that anyone engaged in such violence will be automatically subject to a murder prosecution should someone be killed during the commission of a forcible felony." Again, in no part of the opinion does the court acknowledge a possible alternative purpose for the rule, such as reducing crime rates. The court in *People v. Belk* quotes the court in *People v. Shaw*, 713 N.E.2d 1161 (1998), which in turn cites the opinion of the court in *People v. Dennis*.

Interestingly, the court in *People v. Shaw* clearly states that the purpose of the rule is to decrease the level of violence used in a crime: "[t]he object of the felony…murder statute is to limit the violence that attends the commission of felonies, so that anyone engaging in that violence will be automatically subject to a murder prosecution, should a murder occur during the commission of a felony." However, as noted in Section A, the court in *People v. Dennis* actually explicitly states that the purpose of the felony murder rule is to deter the commission of the underlying crimes themselves, not to decrease the level of violence used by the criminals. Nowhere in the opinion in *People v. Dennis* does the court clearly indicate that the purpose of the felony murder rule is to reduce violence once a felony is underway.

Finally, in the case of *People v. Davis*, the court states the following:

"[T]he merger doctrine is similarly precluded by the purpose of the felony-murder

> doctrine, which is to hold a felon is responsible for the direct and foreseeable consequences of his actions.…The logic behind the felony-murder statute is that one who chooses to commit a forcible felony will endeavor to limit his use of violence to avoid being automatically subject to a murder prosecution if someone dies as a result of the commission of the felony."

This court then quotes the opinions in the cases of *People v. Lowery* and *People v. Shaw*, which are both discussed above.

C. Alternative Purposes

Finally, we identify two cases in which the judicial opinion states that the purpose of the rule is to achieve a goal other than reducing crime or reducing the number of crime-related deaths. The first of these cases is *State v. Anderson* in Maine, which states that the purpose of the rule is to give prosecutors flexibility in presenting and obtaining plea deals. The opinion states:

> "[I]t was the intent of the Legislature to maintain both provisions [the felony murder statute and the accomplice statute] as a beneficial comprehensive scheme in the enforcement of the law against murder by providing a device whereby judicial and prosecutorial resources may be conserved in the operation of the criminal justice system. The Legislature was aware that the crime of murder is, more often than not, committed in the course of robberies, burglaries, kidnappings, arsons, rapes and gross sexual misconduct cases, in which proof of the underlying felony could be easily made and

> admissions of guilt to the incidental murder would be more readily acceptable, if the ensuing penalty did not involve the capital punishment of "life" in prison…With the inherent flexibility of two possible sanctions for criminal homicides of the felony-murder variety, both the State and the defendant often find it advantageous to preclude the possibility of the maximum penalty of life imprisonment for…murder, and may settle for an admission of guilt under the felony-murder provision which carries a lesser penalty."

In justification of this conclusion, the court cites the case of *State v. Corbitt*, 378 A.2d 235 (1977), which states that a major effect of the felony murder rule is to separate persons into two groups: "those who go to trial and those who plead…*non vult*." The majority opinion argues that an incentive scheme that encourages guilty pleas serves the purposes of, among other things, "the facilitation of…plea negotiations in homicide cases, necessary to achieve flexibility and efficiency as well as justice in criminal justice administration; the conservation of scarce judicial and prosecutorial resources for those cases which properly…require trial; and the prompter imposition of punishment on acknowledged offenders." The opinion also asserts that there are several additional purposes for facilitating guilty pleas, such as the "human and rehabilitative one of ameliorating the rigor of life imprisonment for those offenders who are willing to acknowledge their crime." Neither of these cases indicates that the purpose of the rule is to act as a deterrent against crime or against violence.

D. Summary

In summary, five cases clearly state that the purpose of the felony murder rule is to deter the commission of violent crimes, essentially by making the crimes more costly for felons. Four cases clearly state that the purpose of the rule is to reduce the level of violence used once the felony is underway, and one case (*People v. Lowery*) does not explicitly state one hypothesis or the other (it merely says that the felony murder rule is designed to reduce violence, which may refer to the underlying felony or the violence involved in that felony which may lead to death). The remaining two cases indicate that the purpose of the felony murder rule is to facilitate plea bargaining.

Given the results, there's clearly no consensus about the purpose or intent of the felony murder rule. It's certainly possible that the rule has the dual purpose of reducing crimes and reducing crime-related deaths, although no opinion clearly articulates this hypothesis. Indeed, the use of the definite article "the" when discussing the purpose of the rule ("[t]he logic behind the felony murder rule;" "[t]he historical justification for the rule;" "the continuing justification for the rule") in many of the opinions suggests that the felony murder rule has only one purpose, which is either to reduce crimes or to reduce deaths, but not both. A summary of all twelve judicial opinions is contained in Table 19.

Finally, one point of importance is that the court in *People v. Lowery* states that a purpose of the rule is to protect the general populace from acts of violence: this may refer either to the deterrent effect of the rule (which could be either to decrease crime or to decrease crime-related violence and deaths, or both), or to the effect of the rule on incapacitation of criminals who commit crimes that result in death. It's possible that the court in *People v. Lowery* interpreted the

purpose of the felony murder rule to be to raise the punishment for felony-related homicides so that those who commit these homicides are separated from society for a longer period of time than those who commit felonies that don't result in death.

On the other hand, felony murder rules are designed to punish accidental deaths that occur during felonies (rather than intentional deaths), and it seems counter-intuitive that legislators would find it necessary to incapacitate people for accidental acts. However, it's possible that legislators believed that those who commit manslaughter during the commission of a violent felony are more likely than other felons to endanger the lives of others. For instance, legislators may believe that felons that are so careless while they're committing a felony that somebody dies as a result of it are likely to be more careless and more violent during the commission of future crimes. In any event, the court also recognizes the deterrent effect of the rule, since the court specifically notes that the legislature wanted the felony murder rule to deter criminals from acts of violence.

Of the twelve opinions, eight originated in Illinois, while three originated in New Jersey and one originated in Maine. Only one opinion cited another opinion that originated in another state (this was the opinion in *State v. Anderson* in Maine, quoting the opinion in *State v. Corbitt* in New Jersey). For a number of reasons, including the fact that cases from one state are more likely to quote cases in that state than to quote cases from other states, the secondary and tertiary opinions cannot be considered a simple random sample of judicial opinions, and they should not be taken as a rigorously representative sample of the cases that discuss the purpose of the felony murder rule. Still, their opinions provide useful insights into the purpose of the felony murder rule, and we include them.

# VI. Conclusions and Analysis

## A. Effect of the Felony Murder Rule on Criminal Behavior

The regressions that we run that do not incorporate state-controlling variables tend to support Malani's conclusion that the felony murder rule does not significantly deter crime and may actually increase deaths that occur during the commission of felonies. After controlling for the major factors which are likely to influence crime rates and crime-related death rates, there is little evidence that the felony murder rule is correlated with a decrease in crime, and there's substantial evidence that the rule is correlated with an increase in crime-related deaths. This is true for all types of felony murder rule.

However, the states that have adopted a felony murder rule, eliminated an existing rule, or changed their felony murder rule provide us with useful opportunities to analyze how crime rates and crime-related deaths rates change, holding nearly all other variables constant. When controlling for these state-specific factors, we see that the effect of the felony murder rule on crime rates and crime-related death rates nearly vanishes in the wide majority of the regressions. There are two particularly appealing possible reasons for this:

- Omitted variable bias: the factors that we control for in the earlier regressions do not include every factor that is instrumental in influencing crime rates and death rates in a state, and some of these factors are correlated with the presence of a felony murder rule;
- Mistaken direction of causation: having a felony murder rule is correlated with an increase in crime-related death rates, but rather than the felony murder rule causing the

higher crime-related death rates, the higher crime-related death rates cause legislators to adopt harsher punishments, including felony murder punishments.

Virtually any regression that models one economic factor against others in a complex environment will suffer from omitted variable bias. In particular, it seems likely that having a felony murder rule will influence many other factors in a state, and these factors will influence crime rates and crime-related death rates; the felony murder rule does not directly influence these rates. For instance, states that adopt felony murder rules may do so as an alternative to having a high police presence in communities, which will reduce the ability of police departments to respond to violent criminal activity, and this will cause an increase in crime-related death rates.

In addition, while Malani has shown that having a felony murder rule is correlated with an increase in robbery-related death rates, it seems reasonable that legislatures will adopt felony murder rules (in particular, first degree felony murder rules) as a response to existing high rates of crime-related deaths. This reflects the possibility that the presumed direction of causation is mistaken. The fact that states that adopt a felony murder rule, eliminate their felony murder rule, or modify their existing felony murder rule don't experience a statistically significant change in crime rates or death rates suggests that crime rates and death rates are not an increasing or decreasing function of the presence of a felony murder rule.

Perhaps the most popular explanation for this finding is that felony murder rules are not sufficiently well-known, and criminals are not deterred from committing crimes or using excessive violence during the commission of the crime because they don't know that they'll be subjected to greater punishments as a result of the violence. This is consistent with the neo-classical view of punishment, which suggests that obscure or little-known crimes don't promote

justice, in part because criminals cannot be deterred by such crimes. The neoclassical view states that crime can be reduced using "formal punishment that is swift, certain, and severe" (75).[20] This suggests that a rule such as the felony murder rule, which is often poorly understood and obscure, does not provide the certainty of punishment that would be useful in a punishment that seeks to deter violent criminal activity.

It's also certainly possible that the felony murder rule is sufficiently well-known and clear, and so it has the capacity to deter, but our assumption of rationality is not satisfied. Those who commit violent felonies that would be affected by felony murder rules may not be incorporating the additional threat of punishment into their decisions. While felony murder rules may deter some individuals, others may discount the fact that committing violent felonies is more dangerous and that increased violence during the commission of the felony will result in a more severe punishment.

We may expect rationality to be satisfied for some sets of criminals, such as those criminals who are likely to commit white collar crimes or other large economic crimes. A legal rule that increases the expected punishment for these crimes or attempts to regulate criminal behavior for these types of crimes may be more effective at influencing criminal behavior during the commission of these offenses. In addition, we may expect the assumption of rationality to be satisfied for organized crime, since actors in criminal syndicates may be trained more carefully in how to avoid punishment and it seems reasonable that criminal syndicates would be more knowledgeable about the law than individual actors.

However, the felony murder rule does not appear to have a statistically significant and

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[20] Holmes, Ronald M., Jeffrey A. Maahs, and Gennaro F. Vito. *Criminology: Theory, Research, and Policy, Second Edition*. Sudbury, Mississauga, and London: Jones and Bartlett Publishers, 2007. Print.

consistent effect on either crime rates or crime-related death rates, which suggests that the felony murder rule has not been successful at regulating criminal behavior before or during the commission of crimes over the second half of the twentieth century.

B. Purpose of the Felony Murder Rule

Analysis of judicial decisions that cite the purpose of the felony murder does not provide a clear interpretation of the purpose of the felony murder. Much of the academic literature on the felony murder rule suggests that the purpose of the rule is to reduce the level of violence used in felonies that are underway. However, there are at least as many judicial decisions that suggest that the purpose of the rule is to reduce the total number of felonies that are committed as there are decisions that indicate that the purpose of the rule is to reduce the level of violence used per crime.

One interesting note is that of the twelve judicial decisions we analyze, three are from the 1970's, four are from the 1990's, and five are from 2003 or later. Two of the three cases opinions from the 1970's indicate that the purpose felony murder rule is to give prosecutors and defendants flexibility in negotiating plea bargaining. Of the opinions that clearly indicate that the purpose of the rule is to reduce the commission of felonies, one is from the 1970's, two are from the 1990's, and two are from 2005 and 2006. The four opinions which state that the purpose of the rule is to decrease the level of violence used by criminals during the commission of crimes are from 1998, 2003, 2004, and 2010 (the opinion which does not clearly state the purpose of the rule is from 1997).

This suggests that views on the purpose of the felony murder have changed since the

1970's: during that time, it appears that courts were more likely to view the purpose of the rule as a tool to negotiate plea bargaining, and that view has since fallen out of favor. Since then, it appears that the alternative view that the purpose of the rule is to serve as a deterrent against violence has become more favorable, although there's no consensus on whether the rule is meant to deter criminal activity itself or whether it's meant to deter excessive violence during the commission of the crimes.

From the 1980's to the 1990's, the United States has moved from a norm of indeterminate sentencing to determinate sentencing, as demonstrated by the adoption of Truth in Sentencing laws during this period. These laws have given judges far less discretion in determining the lengths of criminal punishments, and this may have contributed to the decrease in the facilitation of plea bargaining as a justification for felony murder rules.

The Truth in Sentencing movement began in 1984 in response to prison overcrowding in the United States during the 1980's and 1990's.[21] This movement included a move towards sentencing guidelines, which were rules designed to ensure consistency of sentencing. While judges can differ from the guidelines, they typically need to provide justifications for gross deviations from the guidelines.

For instance, in 1998, Wisconsin adopted a Truth in Sentencing law, which replaced the state's indeterminate sentencing system with a Truth in Sentencing model, and it established a Criminal Penalties Study Committee. This committee developed advisory sentencing guidelines that applied to eleven of the most common offenses that result in imprisonment, and the

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[21] Carr, Timothy S. "'Truth in Sentencing' in Georgia." 14 May 2008. Web. 20 Apr. 2012. PDF File. <www.dcor.state.ga.us/Research/Standing/Truth_in_sentencing.pdf >.

Wisconsin Legislature enacted these guidelines into law in 2001.[22]

As Truth in Sentencing laws have become more widespread, it's likely that judges have had to focus on alternative justifications for the felony murder rule when discussing the purpose of the rule. For instance, a judge that wants to justify a punishment that is lower than normal for a criminal convicted of felony murder may need to focus on the deterrent effect of the felony murder rule, which will provide stronger justification for a deviation from the normal punishment length.

Even judicial decisions from states that do not themselves have Truth in Sentencing laws may be affected by this change in legal norms: if the national legal discourse about the purpose of felony murder rules shifts from revolving around plea negotiations to revolving around deterrence, this will almost certainly affect the legal discourse in all states. This may explain the lack of recent judicial decisions that indicate that the purpose of the rule is to facilitate plea bargaining, and the abundance of recent decisions that argue that the purpose of the rule is to deter crime or to reduce the number of crime-related deaths.

We would expect that Truth in Sentencing Laws would have a similar effect on the tendency of judges to verbalize their beliefs that the purpose of felony murder rules is to incapacitate dangerous felons. Since incapacitation is generally believed to be as legitimate as deterrence as a purpose of the criminal law,[23] it seems that judges would be able to justify a deviation from a prescribed punishment by appealing to the purpose of incapacitation in a way that's similar to appealing to the deterrent purpose of the rule. Still, we find no clear evidence

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[22] Wisconsin Court System. "Wisconsin Court System – Court Services for Judges – Truth in Sentencing." *Wisconsin Court System*. State of Wisconsin, 07 Mar. 2012. Web. 20 Apr. 2012. <http://www.wicourts.gov/services/judge/truth.htm>.

[23] Lippman, Matthew. *Contemporary Criminal Law: Concepts, Cases, and Controversies, Second Edition*. Los Angeles, London, New Delhi, Singapore, Washington DC: SAGE Publications, Inc., 2010. Print.

from the judicial record that the purpose of the rule is to incapacitate violent felons, and only one of the twelve cases identified above suggests in any way that the purpose of the rule is to incapacitate violent criminals.

In any event, it doesn't appear that the felony murder rule of any variety has a consistent and significant effect on crime rates or crime-related death rates, so if the purpose of the rule was either to deter or crime or deter crime-related violence, it does not appear to have been successful in any significant way. We agree with Malani that the felony murder rule has little effect on criminal behavior before or during the commission of felonies, although we find that the significant effects that do exist are decreases in felony-related death rates. It's certainly possible that the main purpose or one of the main purposes of the rule was to facilitate plea bargaining or criminal incapacitation, and future research can focus on the empirical effect of the felony murder rule on plea bargaining.

## VII. Limitations and Future Research

As noted, many assumptions are required to guarantee that the felony murder rule has a deterrent effect. The literature on the felony murder rule casts serious doubt on two of these assumptions in particular: awareness of the rule and individual rationality. Those who are unaware of the felony murder cannot be influenced by it, and those who are aware of the rule may choose to discount it and behave as though the felony murder rule doesn't exist.

We don't attempt to incorporate the level of awareness of the felony murder rule into our analysis, principally because very little reliable empirical evidence exists on how well-informed felons are about the rule. It's certainly possible to run regressions similar to the ones we run

above, but to include a variable for how well-known the felony murder rule is in each state. One can attempt to collect this data by asking a sample of people in each state whether they're aware of the rule.

Previous studies have attempted to infer the level of awareness of the felony murder rule by asking those who have been convicted of felony murder if they knew about the rule. Of course, those who were imprisoned for felony murder wouldn't be a representative sample of all of the people in a state. Indeed, we would expect that those who were convicted of felony murder to be the least likely to be deterred by the rule, and this lack of deterrence may result primarily from the fact that they weren't aware of the rule.

For instance, it's possible that in any state with a felony-murder rule, 50% of the people are aware of the rule and 50% aren't. Of the 50% who aren't aware of the rule 10% of them commit a crime that results in a felony murder conviction, while every person who is aware of the rule is sufficiently deterred by the rule that they don't commit such crimes. We would then see that of the 5% of the population that was convicted of the felony murder rule, 0% of them were aware of the rule, but this is not sufficient evidence to show that the felony murder rule is too obscure to deter.

In this case, a finding that 0% of the prison population is aware of the felony murder can actually be taken as evidence that the felony murder rule does deter. Indeed, if there's evidence that the proportion of the general population that's aware of the rule is higher than the proportion of the prison population that's aware of the rule. A promising direction of future research may be to simply determine what proportion of those who were convicted of the felony murder rule were aware of the rule before they committed the felony murder offense (call that proportion $p_p$), and what proportion of the general population is aware of the rule (call that proportion $p_g$).

If $p_g$ is higher than $p_p$, then that would suggest that knowing about the rule does deter acts of violence. That is, those who are aware of the rule commit violent crimes less often or limit their use of violence while committing the crime so as to avoid punishment. If $p_g$ is lower than $p_p$, then this would suggest that knowing about the rule increases the likelihood of committing crimes that lead to felony murder convictions, which would provide evidence that the felony murder rule causes felons to escalate their level of violence during the commission of the crime. Of course, it's likely that the likelihood of being in prison would be correlated with factors that affect the likelihood of being aware of the felony murder rule (such as educational background), so those factors should also be controlled.

Another assumption we make is the assumption of rationality: we assume that those criminals who are aware of the felony murder rule incorporate their knowledge of the rule into their behavior. This assumption may not hold for some criminals, who may simply discount or ignore the felony murder rule while committing felonies. While it would be difficult to account for individual rationality directly in any meaningful way, it may be useful to consider how felony murder rules affect crime rates and crime-related death rates in organized crime in particular, and to compare the effect of the felony murder rule on organized crime to its effect on individual criminals. If we assume that organized criminal syndicates are more rational than individual criminals, this can give some insights into whether the assumption of rationality is valid.

Also, to simplify our analysis, we implicitly assume that the actual incarceration of those convicted of felony murder doesn't affect crime rates or rates of crime-related death. However, it's certainly possible that these rates would fall after the adoption of a felony murder rule, simply because those who are likely to commit inherently dangerous felonies that may result in death are incarcerated.

One way to estimate the effect of incarceration on rates of felonies and rates of felony-related deaths may be to determine the expected sentence for felony murder in every state (call this expected sentence length T years), and then run a regression that includes an additional dummy variable that codes for whether or not the state had a felony murder rule T years ago. The coefficient associated with this dummy variable would then represent the effect of incarceration on crime rates and crime-related death rates, and future researchers may pursue the effect of incarceration on such rates in more depth.

In particular, after the adoption of a felony murder rule, we would expect to see an improvement in crime rates and crime-related death rates over the period between the time until release of criminals convicted of manslaughter and the time until release of criminals convicted of felony murder. If the punishment for manslaughter in any given state is a sentence of $T_m$ years and the punishment for felony murder in that state is a sentence of $T_f$ year, then we would expect that crime rates would decrease over the period between $T_m$ years since the adoption of the felony murder rule and $T_f$ years since the adoption of the rule. The literature on felony murder may benefit from research that analyzes the effect of incapacitation on crime rates and crime-related death rates.

Finally, future research on the purpose of the felony murder rule may seek to focus on the importance of plea negotiations and cooperation with prosecutors and police in the development of the felony murder rule in the United States. While the role of the felony murder rule in inducing cooperation after cases may not be well-represented in judicial decisions, future researchers may benefit by looking to other sources for the purpose of the felony murder rule as it relates to plea bargaining and related issues, as well as incapacitation.

# VIII. References

Birdsong, Leonard. "Felony Murder: A Historical Perspective By Which to Understand Today's Modern Felony Murder Rule Statutes." *Thurgood Marshall Law Review* 32.1 (2006): 1 26. Web. <http://heinonline.org/HOL/Page?handle=hein.journals/thurlr32&div=2&g_sent=1&collection=journals>.

Carr, Timothy S. "'Truth in Sentencing' in Georgia." 14 May 2008. Web. 20 Apr. 2012. PDF File. <www.dcor.state.ga.us/Research/Standing/Truth_in_sentencing.pdf >.

Crump, David. "Reconsidering the Felony Murder Rule in Light of Modern Criticisms: Doesn't the Conclusion Depend upon the Particular Rule at Issue?" *Harvard Journal of Law and Public Policy*, 32:3. Print.

Denno, Deborah W., Arthur A. McGivney. "Selected Model Penal Code Provisions." Fordham University School of Law, Fall 2009. Print.

Holmes, Ronald M., Jeffrey A. Maahs, and Gennaro F. Vito. *Criminology: Theory, Research, and Policy, Second Edition*. Sudbury, Mississauga, and London: Jones and Bartlett Publishers, 2007. Print.

Lippman, Matthew. *Contemporary Criminal Law: Concepts, Cases, and Controversies, Second Edition*. Los Angeles, London, New Delhi, Singapore, Washington DC: SAGE

Publications, Inc., 2010. Print.

Malani, Anup. "Does the Felony Murder Rule Deter? Evidence from FBI Crime Data." *New York Times* 3 Dec. 2007 (Working Paper). PDF File. <www.nytimes.com/packages/pdf/national/malani.pdf>.

Bureau of Economic Analysis. "BEA Regional Economic Accounts." *U.S. Department of Commerce: Bureau of Economic Analysis*. U.S. Department of Commerce. Web. 19 Apr. 2012.

*FindLaw: For Legal Professionals*. Thomson Reuters. Web. 15 Apr. 2012.

Hawaii State Legislature. "Part II. Criminal Homicide." Hawaii State Government. 11 February 2012. <http://www.capitol.hawaii.gov/hrscurrent/vol14_Ch0701-0853/HRS0707/HRS_0707-0701.htm>.

*LexisNexis* Academic. Reed Elsevier Inc. Web. 20 Apr. 2012. <http://www.lexisnexis.com/hottopics/lnacademic/>.

"Murder." *Legal Information Institute*. Cornell University Law School, 19 Aug. 2010. Web. 15 Apr. 2012. <http://www.law.cornell.edu/wex/murder#model_penal_code>.

Wisconsin Court System. "Wisconsin Court System – Court Services for Judges – Truth in

Sentencing." *Wisconsin Court System*. State of Wisconsin, 07 Mar. 2012. Web. 20 Apr. 2012. <http://www.wicourts.gov/services/judge/truth.htm>.

Table 1: Difference between first-degree and second-degree felony murder rule, not log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $8.078 \times 10^{-4}$ | 5.904 | No. |
| Number of Burglaries Per Population | $1.313 \times 10^{-3}$ | 4.788 | No. |
| Number of Larceny/Thefts Per Population | $1.190 \times 10^{-3}$ | 2.496 | No. |
| Number of Forcible Rapes Per Population | $-9.585 \times 10^{-6}$ | -1.125 | No. |
| **Number of Robberies Per Population** | $\mathbf{-3.342 \times 10^{-4}}$ | **-4.720** | **Yes.** |
| Total Number of Crimes Above Per Population | $2.968 \times 10^{-3}$ | 3.884 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $-1.426 \times 10^{-6}$ | -0.133 | No. |
| **Number of Deaths Related to Burglaries Per Burglary** | $\mathbf{-2.738 \times 10^{-5}}$ | **-3.496** | **Yes.** |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $3.173 \times 10^{-7}$ | 0.312 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $1.653 \times 10^{-4}$ | 0.405 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | $\mathbf{8.704 \times 10^{-4}}$ | **1.816** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | $\mathbf{-4.489 \times 10^{-5}}$ | **-5.570** | **Yes.** |

Table 2: Difference between first-degree and second-degree felony murder rule, log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | 0.11329 | 3.481 | No. |
| Number of Burglaries Per Population | 0.15685 | 6.432 | No. |
| Number of Larceny/Thefts Per Population | 0.038922 | 2.004 | No. |
| Number of Forcible Rapes Per Population | -0.02345 | -0.821 | No. |
| Number of Robberies Per Population | -0.01767 | -0.429 | No. |
| Total Number of Crimes Above Per Population | 0.078046 | 4.157 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | -0.038746 | -0.672 | No. |
| **Number of Deaths Related to Burglaries Per Burglary** | **-0.368438** | **-5.545** | **Yes.** |
| **Number of Deaths Related to Larcenies Per Larceny/Theft** | **0.1037475** | **2.101** | **Yes.** |
| Number of Deaths Related to Rapes Per Forcible Rape | 0.056166 | 0.804 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **-0.139645** | **-2.204** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **-0.218258** | **-3.562** | **Yes.** |

Table 3: Difference between first-degree and second-degree felony murder rule, not log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $-3.890 \times 10^{-4}$ | -1.101 | No. |
| Number of Burglaries Per Population | $5.516 \times 10^{-4}$ | 1.178 | No. |
| Number of Larceny/Thefts Per Population | $4.875 \times 10^{-4}$ | 0.525 | No. |
| Number of Forcible Rapes Per Population | $4.771 \times 10^{-5}$ | 2.410 | No. |
| Number of Robberies Per Population | $2.456 \times 10^{-4}$ | 1.193 | No. |
| Total Number of Crimes Above Per Population | $9.435 \times 10^{-4}$ | 0.602 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $-3.111 \times 10^{-5}$ | -0.236 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $-9.523 \times 10^{-5}$ | -1.309 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $-1.124 \times 10^{-6}$ | -0.161 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $6.753 \times 10^{-4}$ | 0.436 | No. |
| Number of Deaths Related to Robberies Per Robbery | $1.839 \times 10^{-3}$ | 1.017 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | $-3.330 \times 10^{-5}$ | -0.769 | No. |

Table 4: Difference between first-degree and second-degree felony murder rule, log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | -0.08997 | -1.433 | No. |
| Number of Burglaries Per Population | 0.008824 | 0.234 | No. |
| Number of Larceny/Thefts Per Population | -0.013329 | -0.351 | No. |
| Number of Forcible Rapes Per Population | 0.14996 | 2.461 | No. |
| Number of Robberies Per Population | 0.03640 | 0.614 | No. |
| Total Number of Crimes Above Per Population | -0.007116 | -0.204 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | 0.004895 | 0.009 | No. |
| **Number of Deaths Related to Burglaries Per Burglary** | **-1.76541** | **-2.989** | **Yes.** |
| Number of Deaths Related to Larcenies Per Larceny/Theft | -0.21010 | -0.485 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | -0.703847 | -1.003 | No. |
| Number of Deaths Related to Robberies Per Robbery | 0.35759 | 1.091 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | 0.28625 | 0.862 | No. |

Table 5: Difference between felony murder rule and no felony murder rule, not log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $1.797x10^{-4}$ | 1.533 | No. |
| Number of Burglaries Per Population | $1.097x10^{-3}$ | 4.796 | No. |
| Number of Larceny/Thefts Per Population | $8.786x10^{-4}$ | 2.231 | No. |
| Number of Forcible Rapes Per Population | $3.719x10^{-5}$ | 4.616 | No. |
| Number of Robberies Per Population | $3.981x10^{-4}$ | 7.017 | No. |
| Total Number of Crimes Above Per Population | $2.590x10^{-3}$ | 4.123 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $2.543x10^{-6}$ | 0.260 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $8.147x10^{-6}$ | 1.199 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $1.048x10^{-6}$ | 1.224 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $2.543x10^{-4}$ | 0.740 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **$1.340x10^{-3}$** | **3.314** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **$5.252x10^{-5}$** | **7.075** | **Yes.** |

Table 6: Difference between felony murder rule and no felony murder rule, log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | -0.02812 | -1.030 | No. |
| Number of Burglaries Per Population | 0.035944 | 1.774 | No. |
| Number of Larceny/Thefts Per Population | -0.01341 | -0.855 | No. |
| Number of Forcible Rapes Per Population | 0.077835 | 3.150 | No. |
| Number of Robberies Per Population | 0.16518 | 4.891 | No. |
| Total Number of Crimes Above Per Population | 0.005823 | 0.381 | No. |
| **Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft** | **0.09402** | **1.853** | **Yes.** |
| Number of Deaths Related to Burglaries Per Burglary | 0.097423 | 1.632 | No. |
| **Number of Deaths Related to Larcenies Per Larceny/Theft** | **0.134414** | **3.173** | **Yes.** |
| **Number of Deaths Related to Rapes Per Forcible Rape** | **0.116304** | **1.884** | **Yes.** |
| **Number of Deaths Related to Robberies Per Robbery** | **0.21247** | **3.695** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **0.33936** | **6.131** | **Yes.** |

Table 7: Difference between felony murder rule and no felony murder rule, not log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $-2.423 \times 10^{-4}$ | -1.467 | No. |
| Number of Burglaries Per Population | $6.411 \times 10^{-4}$ | 2.797 | No. |
| Number of Larceny/Thefts Per Population | $1.597 \times 10^{-4}$ | 0.169 | No. |
| Number of Forcible Rapes Per Population | $2.538 \times 10^{-5}$ | 0.985 | No. |
| Number of Robberies Per Population | $9.115 \times 10^{-5}$ | 1.219 | No. |
| Total Number of Crimes Above Per Population | $6.751 \times 10^{-4}$ | 0.590 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $-3.306 \times 10^{-6}$ | -0.109 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $7.874 \times 10^{-6}$ | 0.301 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $-1.294 \times 10^{-6}$ | -0.604 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $-1.422 \times 10^{-4}$ | -0.192 | No. |
| Number of Deaths Related to Robberies Per Robbery | $-4.184 \times 10^{-4}$ | -0.492 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | $3.081 \times 10^{-6}$ | 0.144 | No. |

Table 8: Difference between felony murder rule and no felony murder rule, log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | -0.03915 | -0.962 | No. |
| Number of Burglaries Per Population | 0.04898 | 2.238 | No. |
| Number of Larceny/Thefts Per Population | 0.020156 | 0.751 | No. |
| Number of Forcible Rapes Per Population | 0.083013 | 1.617 | No. |
| Number of Robberies Per Population | 0.051738 | 1.076 | No. |
| Total Number of Crimes Above Per Population | 0.01332 | 0.570 | No. |
| **Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft** | **-0.30000** | **-1.920** | **Yes.** |
| Number of Deaths Related to Burglaries Per Burglary | 0.19271 | 0.835 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | -0.07525 | -0.700 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | 0.05499 | 0.242 | No. |
| Number of Deaths Related to Robberies Per Robbery | -0.05798 | -0.316 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | -0.08318 | -0.384 | No. |

Table 9: Difference between first degree felony murder rule and no felony murder rule, not log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $1.087x10^{-4}$ | 0.913 | No. |
| Number of Burglaries Per Population | $1.070x10^{-3}$ | 4.504 | No. |
| Number of Larceny/Thefts Per Population | $9.160x10^{-4}$ | 2.355 | No. |
| Number of Forcible Rapes Per Population | $3.169x10^{-5}$ | 4.418 | No. |
| Number of Robberies Per Population | $3.838x10^{-4}$ | 7.857 | No. |
| Total Number of Crimes Above Per Population | $2.510x10^{-3}$ | 4.010 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $7.851x10^{-7}$ | 0.082 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $5.227x10^{-6}$ | 0.738 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $1.193x10^{-6}$ | 1.287 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $2.724x10^{-4}$ | 0.708 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **$1.384x10^{-3}$** | **3.128** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **$4.707x10^{-5}$** | **6.719** | **Yes.** |

Table 10: Difference between first degree felony murder rule and no felony murder rule, log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| **Number of Motor Vehicle Thefts Per Population** | **-0.04900** | **-1.784** | **Yes.** |
| Number of Burglaries Per Population | 0.03052 | 1.522 | No. |
| Number of Larceny/Thefts Per Population | -0.012906 | -0.830 | No. |
| Number of Forcible Rapes Per Population | 0.06696 | 2.681 | No. |
| Number of Robberies Per Population | 0.14506 | 4.214 | No. |
| Total Number of Crimes Above Per Population | 0.003274 | 0.220 | No. |
| **Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft** | **0.104949** | **2.025** | **Yes.** |
| Number of Deaths Related to Burglaries Per Burglary | 0.07902 | 1.266 | No. |
| **Number of Deaths Related to Larcenies Per Larceny/Theft** | **0.14315** | **3.175** | **Yes.** |
| **Number of Deaths Related to Rapes Per Forcible Rape** | **0.1222725** | **1.881** | **Yes.** |
| **Number of Deaths Related to Robberies Per Robbery** | **0.18713** | **3.191** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **0.29815** | **5.320** | **Yes.** |

Table 11: Difference between first degree felony murder rule and no felony murder rule, not log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| **Number of Motor Vehicle Thefts Per Population** | **$-7.244 \times 10^{-4}$** | **-3.426** | **Yes.** |
| Number of Burglaries Per Population | $4.953 \times 10^{-5}$ | 0.201 | No. |
| Number of Larceny/Thefts Per Population | $1.863 \times 10^{-3}$ | 1.991 | No. |
| Number of Forcible Rapes Per Population | $-3.266 \times 10^{-5}$ | -1.297 | No. |
| Number of Robberies Per Population | $-8.679 \times 10^{-5}$ | -1.002 | No. |
| Total Number of Crimes Above Per Population | $1.069 \times 10^{-3}$ | 0.934 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $-1.154 \times 10^{-5}$ | -0.407 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $-3.655 \times 10^{-5}$ | -0.946 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $1.092 \times 10^{-7}$ | 0.095 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $-6.657 \times 10^{-4}$ | -0.806 | No. |
| Number of Deaths Related to Robberies Per Robbery | $2.694 \times 10^{-4}$ | 0.443 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | $-6.896 \times 10^{-6}$ | -0.384 | No. |

Table 12: Difference between first degree felony murder rule and no felony murder rule, log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| **Number of Motor Vehicle Thefts Per Population** | **-0.23675** | **-3.267** | **Yes.** |
| Number of Burglaries Per Population | -0.01646 | -0.592 | No. |
| Number of Larceny/Thefts Per Population | 0.106327 | 3.056 | No. |
| Number of Forcible Rapes Per Population | 0.04879 | 0.649 | No. |
| Number of Robberies Per Population | -0.06103 | -1.127 | No. |
| Total Number of Crimes Above Per Population | 0.04464 | 1.611 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | -0.200661 | -0.623 | No. |
| **Number of Deaths Related to Burglaries Per Burglary** | **-0.86581** | **-1.741** | **Yes.** |
| Number of Deaths Related to Larcenies Per Larceny/Theft | -0.08910 | -0.376 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | -0.6478 | -1.440 | No. |
| Number of Deaths Related to Robberies Per Robbery | -0.4782 | -1.596 | No. |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **-0.88128** | **-2.635** | **Yes.** |

Table 13: Difference between second degree felony murder rule and no felony murder rule, not log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $6.815 \times 10^{-5}$ | 0.405 | No. |
| Number of Burglaries Per Population | $2.896 \times 10^{-5}$ | 0.093 | No. |
| Number of Larceny/Thefts Per Population | $5.240 \times 10^{-4}$ | 0.808 | No. |
| Number of Forcible Rapes Per Population | $6.133 \times 10^{-7}$ | 0.047 | No. |
| Number of Robberies Per Population | $4.446 \times 10^{-4}$ | 3.016 | No. |
| Total Number of Crimes Above Per Population | $1.066 \times 10^{-3}$ | 1.081 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $9.240 \times 10^{-7}$ | 0.049 | No. |
| **Number of Deaths Related to Burglaries Per Burglary** | **$4.586 \times 10^{-5}$** | **4.038** | **Yes.** |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $3.669 \times 10^{-7}$ | 0.337 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $9.193 \times 10^{-5}$ | 0.247 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **$9.084 \times 10^{-4}$** | **2.087** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **$9.834 \times 10^{-5}$** | **8.624** | **Yes.** |

Table 14: Difference between second degree felony murder rule and no felony murder rule, log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | 0.31038 | 6.760 | No. |
| Number of Burglaries Per Population | 0.147181 | 3.999 | No. |
| Number of Larceny/Thefts Per Population | 0.034779 | 1.084 | No. |
| **Number of Forcible Rapes Per Population** | **-0.08386** | **-1.691** | **Yes.** |
| Number of Robberies Per Population | 0.83912 | 14.233 | No. |
| Total Number of Crimes Above Per Population | 0.10198 | 3.183 | No. |
| **Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft** | **-0.36060** | **-3.075** | **Yes.** |
| **Number of Deaths Related to Burglaries Per Burglary** | **0.24445** | **1.913** | **Yes.** |
| Number of Deaths Related to Larcenies Per Larceny/Theft | -0.044441 | -0.532 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | 0.218581 | 1.538 | No. |
| Number of Deaths Related to Robberies Per Robbery | 0.154864 | 1.506 | No. |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **0.72564** | **7.252** | **Yes.** |

Table 15: Difference between second degree felony murder rule and no felony murder rule, not log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $-4.239 \times 10^{-4}$ | -0.758 | No. |
| Number of Burglaries Per Population | $4.239 \times 10^{-3}$ | 2.611 | No. |
| Number of Larceny/Thefts Per Population | $4.239 \times 10^{-3}$ | 3.037 | No. |
| Number of Forcible Rapes Per Population | $4.239 \times 10^{-4}$ | 1.723 | No. |
| Number of Robberies Per Population | $4.239 \times 10^{-4}$ | 1.309 | No. |
| Total Number of Crimes Above Per Population | $4.239 \times 10^{-2}$ | 2.839 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $-9.655 \times 10^{-5}$ | -0.593 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $2.036 \times 10^{-5}$ | 0.200 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $-1.423 \times 10^{-6}$ | -0.096 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $-4.177 \times 10^{-3}$ | -1.136 | No. |
| Number of Deaths Related to Robberies Per Robbery | $1.244 \times 10^{-3}$ | 0.246 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | $-2.552 \times 10^{-5}$ | -0.241 | No. |

Table 16: Difference between second degree felony murder rule and no felony murder rule, log-transformed, with state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | -0.01870 | -0.144 | No. |
| Number of Burglaries Per Population | 0.25164 | 2.071 | No. |
| Number of Larceny/Thefts Per Population | 0.2523 | 2.499 | No. |
| Number of Forcible Rapes Per Population | 0.3268 | 1.305 | No. |
| Number of Robberies Per Population | 0.3059 | 1.077 | No. |
| Total Number of Crimes Above Per Population | 0.22405 | 2.289 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | -0.10714 | -0.297 | No. |
| Number of Deaths Related to Burglaries Per Burglary | -0.15385 | -0.363 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | -0.2781 | -1.327 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | -0.7097 | -1.192 | No. |
| Number of Deaths Related to Robberies Per Robbery | 0.3199 | 0.386 | No. |
| Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns) | 0.4746 | 0.547 | No. |

Table 17: Difference between no degree felony murder rule and no felony murder rule, not log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| Number of Motor Vehicle Thefts Per Population | $-1.803 \times 10^{-4}$ | -1.259 | No. |
| Number of Burglaries Per Population | $-1.730 \times 10^{-4}$ | -0.611 | No. |
| Number of Larceny/Thefts Per Population | $1.317 \times 10^{-4}$ | 0.220 | No. |
| Number of Forcible Rapes Per Population | $6.690 \times 10^{-5}$ | 5.535 | No. |
| Number of Robberies Per Population | $3.330 \times 10^{-4}$ | 6.638 | No. |
| Total Number of Crimes Above Per Population | $1.784 \times 10^{-4}$ | 0.207 | No. |
| Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft | $2.658 \times 10^{-5}$ | 1.466 | No. |
| Number of Deaths Related to Burglaries Per Burglary | $-2.496 \times 10^{-6}$ | -0.270 | No. |
| Number of Deaths Related to Larcenies Per Larceny/Theft | $-4.377 \times 10^{-7}$ | -0.477 | No. |
| Number of Deaths Related to Rapes Per Forcible Rape | $-1.837 \times 10^{-4}$ | -0.486 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **$7.086 \times 10^{-4}$** | **1.832** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **$4.868 \times 10^{-5}$** | **4.631** | **Yes.** |

Table 18: Difference between no degree felony murder rule and no felony murder rule, log-transformed, no state dummy variables

| Independent Variable | Value of α | t-value | Reject Null? |
|---|---|---|---|
| **Number of Motor Vehicle Thefts Per Population** | **-0.085154** | **-2.349** | **Yes.** |
| Number of Burglaries Per Population | -0.01305 | -0.524 | No. |
| **Number of Larceny/Thefts Per Population** | **-0.030452** | **-1.787** | **Yes.** |
| Number of Forcible Rapes Per Population | 0.068514 | 1.687 | No. |
| Number of Robberies Per Population | 0.281234 | 6.205 | No. |
| Total Number of Crimes Above Per Population | -0.02958 | -1.586 | No. |
| **Number of Deaths Related to Motor Vehicle Thefts Per Motor Vehicle Theft** | **0.20924** | **2.939** | **Yes.** |
| Number of Deaths Related to Burglaries Per Burglary | 0.01042 | 0.117 | No. |
| **Number of Deaths Related to Larcenies Per Larceny/Theft** | **0.097852** | **1.883** | **Yes.** |
| Number of Deaths Related to Rapes Per Forcible Rape | -0.007983 | -.082 | No. |
| **Number of Deaths Related to Robberies Per Robbery** | **0.14649** | **1.685** | **Yes.** |
| **Number of Deaths Related to All Crimes Above Per Crime (Listed in First Five Columns)** | **0.41232** | **4.917** | **Yes.** |

Table 19: Summary of Judicial Opinions

| Case | State | Year | Reduce Crimes? | Reduce Deaths? | Primary, Secondary, Tertiary? |
|---|---|---|---|---|---|
| *State v. Klebanowski* | Illinois | 2006 | Yes. | No. | Primary. |
| *State v. Hill* | New Jersey | 2005 | Yes. | No. | Primary. |
| *People v. Dennis* | Illinois | 1998 | Yes. | No. | Secondary. |
| *People v. Viser* | Illinois | 1975 | Yes. | No. | Tertiary. |
| *People v. Lowery* | Illinois | 1997 | Ambiguous. | Ambiguous. | Secondary. |
| *State v. Martin* | New Jersey | 1990 | Yes. | No. | Secondary. |
| *State v. Davison* | Illinois | 2010 | No. | Yes. | Primary. |
| *State v. Davis* | Illinois | 2004 | No. | Yes. | Primary. |
| *State v. Belk* | Illinois | 2003 | No. | Yes. | Primary. |
| *People v. Shaw* | Illinois | 1998 | No. | Yes. | Secondary. |
| *State v. Anderson* | Maine | 1979 | No. | No. | Primary. |
| *State v. Corbitt* | New Jersey | 1977 | No. | No. | Secondary. |