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# **An Economic Analysis of the Death Penalty**

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## I. Introduction

Since the United States' inception, capital punishment has been used as a form of retribution, incapacitation, and restitution against society's most vicious criminals. While the federal government has imposed the death penalty for such crimes as espionage and conspiracy, the majority of capital sanctions today are imposed by state governments for murder. At present, thirty-eight states have death penalty statutes, but only seventeen states have executed more than two convicts in the last two decades (Economist 1995). The efficiency of the death penalty has been questioned by experts in the United States due to the small number of executions that these thirty-eight states carry out.

From an economic perspective, society should only use capital punishment if the marginal benefits outweigh the marginal costs. In the course of analyzing the economic efficiency of capital punishment, and before providing any recommendations, both the benefits and costs of the death penalty must be evaluated. Since the death penalty has been implemented for centuries, many people believe its benefits outweigh its costs. The evaluation of benefits in Part II will be compared to the costs assessed in Part III to determine if this long held assertion is correct.

Before the analysis begins, it is important to note that from an economic perspective, the marginal benefits and marginal costs are the most meaningful when studying allocative efficiency. The additional benefits of the death penalty are benefits beyond those associated with life imprisonment. That is, the marginal benefits are the difference between the total benefits of the death penalty and the total benefits of life imprisonment.

The marginal economic cost of the death penalty to society is the difference between the costs of a murder trial where the maximum sentence is life imprisonment and the costs associated with the capital trial process. Many analyses produce monetary estimates of how much it costs to put somebody to death. However, these studies produce total cost estimates, not marginal cost estimates. Since the costs of a life imprisonment trial are not often provided, a reader does not have a standard against which to compare the monetary costs of capital cases. When conducting an economic analysis of the costs of the death penalty, it is the additional costs incurred during a capital case over those associated with a life imprisonment murder case that are significant, not the total costs incurred by the state's implementation of the death penalty.

Beginning with the Supreme Court's reinstatement of the death penalty in *Gregg v. Georgia*, 408 U.S. 238 (1976), research on the effects of capital punishment has been increasing as executions are slowly becoming more frequent. Although criminal justice experts, state supreme courts, and state correctional authorities have investigated the morality, fairness, benefits, and costs of the death penalty, no study has combined all of these aspects into a single paper. This paper addresses all of these issues from a positive economic perspective, and also considers the normative aspects of capital punishment. Part II evaluates the marginal benefits of the death penalty. Part III assesses the marginal costs of the death penalty. Part IV addresses the normative issues of morality and equity. Finally, an overall assessment and recommendation are provided in Part V.

## II. Benefits of the Death Penalty

Few studies have addressed the benefits of the death penalty even though thirty-eight states have a death penalty statute (Economist 1995). Since limited quantitative data is available on the marginal benefits of capital punishment, this section provides a qualitative assessment of the benefits of deterrence, reduced crowding, and nonuse values of the death penalty.

### Deterrence

Proponents of capital punishment believe the death penalty's most significant benefit is deterring potential criminals from committing murder. When New York recently adopted the death penalty, Governor George E. Pataki said that he thought capital punishment would reduce New York's spending on prisons by deterring all levels of crime (Dao 1995). Similar views are held by many politicians and citizens throughout the nation. The primary assumption underlying the deterrence hypothesis is that potential criminals weigh the benefits and costs of committing a crime. If the expected costs (lengthy incarceration or even death) are large enough, potential criminals will not commit the crime. The economic benefit of the deterrence hypothesis, if it holds true, is the value of an avoided murder. Society benefits from fewer murders because overall protection costs may decline as the murder rate decreases. In addition, the potential victim can contribute to society's production for the rest of his working life. Any deterred murders would improve the overall productivity of the nation. Such a hypothesis assumes criminals are utility-maximizing, rational decision makers. This hypothesis and its assumptions have been heavily criticized by opponents of the death penalty.

At its most basic level, the deterrence hypothesis has logical appeal to most people when considering crime. If the punishment is great enough, it is argued, people will choose not to partake in illegal activity. For example, if speeding on an interstate was punishable by a mandatory prison sentence, few violations would result. (This example ignores any Eighth Amendment cruel and unusual punishment protections.) In this example, rational decision makers realize that the expected marginal costs of speeding (which are a function of the probability of being caught and the subsequent imprisonment) exceed the marginal benefits (arriving at their destination earlier). Thus, the action is not undertaken.

However, this assumed relationship between the severity of punishment and the deterrence effect is greatly disputed as the punishment is increased and hardened criminals become the decision makers. The deterrence effect of the death penalty is especially difficult to assess because researchers cannot easily identify the number of murders that are not committed by potential murderers. Sociologists and criminal justice researchers use group experiments as well as empirical evidence from states with the death penalty (capital states) and states without the death penalty (non-capital) states to assess the deterrence factor. Since most deterrence-effect studies by researchers focusing on group experiments yield conflicting results at best (Young and French 1992), this analysis will focus on empirical data from other crimes as well as data from states with and without the death penalty.

In 1973, economist Isaac Ehrlich studied data from robberies that occurred in the 1940s, 1950s, and 1960s. He found that the higher the probability of conviction for robbery, the lower the robbery rate, *ceteris paribus* (Cooter and Ulen 1988). However, he found that the severity of the punishment did not affect deterrence in 1940 and 1960. Interestingly, he found a deterrent effect based on the severity of punishment when studying robbery reports from 1950.

More recently the Capital Punishment Research Project and the New York Times compared capital and non-capital states to assess deterrence effects (Economist 1994a). The investigation examined the number of murders that occurred in New Jersey before and after the imposition of a death penalty statute in 1982. No statistically significant decrease was found in the number of murders that occurred. The study also compared the number of murders per 100,000 residents in both Massachusetts (a non-capital state) and New Jersey (presently a capital state). No significant difference was found in the number of murders. In the same study, the murder rate in New York (a non-capital state when the study was conducted) was compared to the rate in Texas (a capital state); and there was no statistical difference between the two states with respect to the number of murders per 100,000 residents. Interestingly, while most southern states have the death penalty, they also have higher murder rates. In fact, Louisiana, a capital state, has the highest murder rate in the nation. Among southern states, only Florida has a murder rate below the national average.

Several kinds of criminal behavior may explain this discrepancy between the deterrence hypothesis and the available empirical evidence. First, criminals may be utility-maximizing, rational decision makers who enjoy killing people so much that they feel the marginal cost of getting caught does not outweigh the utility they gain from killing.

Another possible scenario is that murderers are not rational decision makers. While they may know the expected benefits and costs of their actions, they may not respond in a utility-maximizing fashion. A third scenario may be that murderers react spontaneously in any given situation and do not appropriately consider the benefits and costs of their actions. This type of behavior is known as a crime of passion. For crimes of passion and crimes that involve irrational decision making, any type of punishment, including death, will probably have no deterrence effect on these criminals because they do not consider the costs of their actions. These scenarios may partially explain why deterrence does not have a visible effect on murderers.

### **Reduced Crowding**

Many proponents of capital punishment argue that by executing criminals, correctional facilities will be less crowded. Although this statement is correct in an absolute sense, given the present rate of executions per year, the reduction is minimal. Nationally, only 1.2 percent of all convicted murderers are executed each year (Famighetti 1994). Given the current requirements of the trial and appellate processes, the number of actual executions will continue to be quite small as compared to the number of murder convictions. However, the benefits of reduced incarceration costs can be partially quantified. In 1992, 1.2 percent of the 2,575 inmates on death row were executed

(Famighetti 1994). Assuming annual incarceration costs are \$17,957 (Keve 1992) and the average life expectancy for a Death Row inmate is 40 years in prison, the marginal benefit of executing one inmate is \$415,071 when discounted at 3 percent over 40 years. When multiplying the benefit by 30, the approximate number of inmates executed every year, the death penalty saves \$12,452,130 in reduced incarceration costs.

### **Other Benefits Associated With The Death Penalty**

Since marginal willingness to pay for a good can be interpreted as the marginal benefit of that good, additional sources of willingness to pay must be considered in the evaluation of the benefits associated with the death penalty. Some third parties who are not directly involved with each individual death penalty case would benefit from a capital punishment statute. Families of victims who were murdered often fall into this category. These families receive some level of restitution and increased utility when the executions occur if they believe that justice has prevailed. This emotional relief by the victims' families can be categorized as a benefit because these families are willing to pay to have the murderer executed. In addition to the families' willingness to pay for the executions, proponents of the death penalty nationwide are willing to pay for these executions. This additional willingness to pay is known as a nonuse value. A nonuse value is the willingness to pay by a third party who does not directly benefit from a specific action, but is willing to pay some amount of money to know that the action is undertaken.

Nonuse values may play an important role in determining the benefits of the death penalty. For every execution that occurs, proponents gain some level of utility even though they are not directly or indirectly connected to the case. One such example of this willingness to pay appeared in the form of a paid advertisement in *The New York Times*. Real estate developer Donald Trump took out a full-page advertisement in the paper protesting New York's failure to adopt capital punishment at the time (Editor & Publisher 1989). The headlines of the ad read, "Bring Back the Death Penalty" which was followed by an editorial. This advertisement is an exception and, thus, is likely to overstate the average willingness to pay. Nonetheless, the advertisement suggests some positive level of willingness to pay on the part of supporters of the death penalty.

Although precisely measuring this willingness to pay may be difficult to accomplish, it can be estimated through such means as contingent valuation. In this approach respondents are asked how much they would be willing to pay for an action to be undertaken (in this instance, imposition of the death penalty). From the responses, researchers are able to estimate benefits associated with nonuse values. However, contingent valuation has recently come under increased scrutiny. To be specific, studies have concluded that use of the contingent valuation method may overestimate willingness to pay under hypothetical circumstances (Neill et al. 1994, Cummings et al. 1995). Although the debate with respect to the accuracy and reliability of contingent valuation continues, contingent valuation is one of the leading methods of estimating the benefits, or willingness to pay for non-market goods.

The potential benefits associated with nonuse values of the death penalty are quite large.

To estimate these benefits, assume that every American who is a death penalty supporter is willing to pay \$1 per year. Assuming the United States population is currently 250,000,000 people and approximately 80 percent of the population favors the death penalty (Gallup 1995), total willingness to pay is \$200,000,000. Though not all proponents are willing to pay \$1, some are willing to pay considerably more. In any event, the benefits of the death penalty from this willingness to pay are potentially quite large and must not be ignored.

Few studies have been conducted on the economic benefits of capital punishment. The empirical evidence that has emerged does not specify dollar amounts for these benefits. A substantial part of the lack of information on the monetary benefits of the death penalty can be attributed to the difficulty of determining potential murderers that were deterred and assessing nonuse values. Although no overall estimates of the benefits has been provided, a conservative approximation is in the hundreds of millions of dollars due solely to the willingness to pay by proponents of the death penalty who derive nonuse values from its imposition. When the approximate \$200,000,000 of nonuse values are added to the \$12,452,130 from reduced incarceration costs, annual benefits from the death penalty are approximately \$212,452,130. Although further research is needed to more accurately assess the benefits of the death penalty, this estimate demonstrates that the annual benefits of capital punishment may be quite large.

### **III. Costs of the Death Penalty**

When executing a convicted murderer, the state incurs a variety of costs. Costs associated with capital punishment begin with the costs of the police investigation of the crime and end with the costs of burial. All of the financial burdens that accrue along the way must be evaluated before a meaningful assessment of the economic efficiency of the death penalty can be made. This section identifies the various costs associated with the death penalty and, where possible, provides estimates of those costs.

#### **Investigation Costs**

The first cost incurred by the state in capital cases is the police investigation costs. Once the defendant has been accused of a particular crime, the prosecution determines whether the death penalty will be sought. Police investigations of murders must be conducted in a more precise manner than in other criminal investigations because the stakes are much higher (Blakley 1990). A human life is at stake during the trial and, consequently, this interest makes the focus on details even greater than for a life imprisonment murder trial. When prosecuting attorneys present their case in a murder trial, they do not want any evidence of police incompetency. Such evidence can be enough to preclude a death sentence or even be grounds for acquittal as a result of reasonable doubt. Increased care is taken in capital cases because the prosecution wants to produce enough evidence not only to convict the accused but also to show how gruesome the murder was. Frequently, additional police officers and investigators spend more time on these details than in a non-capital case. Police investigators cost at least \$50 per hour for up to 200 hundred hours of work for a single capital trial (Namiotka 1995). This investigative work costs

\$10,000. Information concerning the average cost of investigation in a non-capital murder trial is limited, inhibiting a more meaningful assessment of the marginal cost of the increased police work. The marginal cost of this increased focus by investigators for capital cases is the difference between resources used for a life imprisonment murder case and the resources used for a capital case. Though it is difficult to assess the actual dollar amounts associated with increased use of officers and technology for a capital case without a lengthy study of such circumstances, some additional cost is clearly incurred by the state for these increased investigative procedures.

### **Trial and Sentencing Costs**

Another component of the costs of the judicial process is trial court fees. These fees include costs associated with all pre-trial research by lawyers and staff for the prosecution and defense, depositions, motions, jury selection, court reporters, and other required court procedures.

As both attorneys select a jury, each extensively evaluates every potential juror. Each lawyer wants jurors who may favor his side. The careful evaluation during jury selection in a capital case takes much longer than in a non-capital case. A California study determined that jury selection in death penalty cases takes 5.3 times longer as compared to non-capital murder cases (Tashima 1991). This additional selection time translates into increased costs for capital cases that may exceed courtroom costs of non-capital cases by \$120,433 (Garey 1985).

After the trial begins, litigation is intense. Every possible defense is exhausted, and this often leads to the increased use of expert witnesses relative to non-capital cases. One California study found capital trials to be 3.5 times longer than non-capital murder trials (Tashima 1991). The average difference between a capital and a non-capital trial has been estimated to be thirty days (Garey 1985). Assuming the courtroom costs to be \$3011 per day, the additional cost of operating just the courtroom for capital cases is \$90,325 (Garey 1985). To the extent that this general relationship holds nationwide, the time and resources spent on capital trials significantly exceeds any costs incurred for non-capital trials.

After the defendant is convicted in a non-capital murder trial, a simple sentencing hearing is held to determine the appropriate length of punishment. However for capital cases, a separate sentencing trial is required (*Gregg v. Georgia*, supra). The Supreme Court requires this heightened due process because of the finality and irreversibility of the potential punishment. Moreover, it is not uncommon for the sentencing trial to exceed the length of the verdict trial (Dieter 1992). The defense presents mitigating factors while the prosecution presents aggravating factors in this additional trial. Each lawyer tries to influence the judge's decision of whether to impose the death penalty. During this part of trial, a psychiatrist must be employed to determine the sanity of the defendant at the time of the offense. A psychiatrist typically costs about \$964 (Garey 1985). This second trial entails additional costs that are not incurred in a non-capital trial. Assuming courtroom costs to be \$3011 per day, the extended length of capital trials could impose large costs on the state (Garey 1985).

The total costs of conducting a regular trial and then a sentencing trial can be astounding. One Nevada study broke down the costs of a capital trial (Namiotka 1995). Each court appointed defense attorney costs \$75 per hour and will work up to 72 hours per week. A total of 800-1000 attorney hours may be spent on the trials alone (Tabak and Lane 1991). At \$75 per hour, attorney's fees range between \$60,000 and \$75,000. Other studies cite attorney's fees for each attorney ranging between \$18,860 and \$400,000 (Mazurek 1995, Kozinski and Gallagher 1995). Forensic experts charge between \$5,000 and \$8,000 for DNA analysis. A four-week trial will produce court reporter and transcript costs of \$22,000 and \$4,200 for fourteen jurors (twelve plus two alternates). Regular witnesses are paid \$25 per day while expert witnesses receive an average of \$750 per day excluding mileage (Namiotka 1995). Sequestration of the jury can also increase costs significantly.

Capital trials can cost the state an enormous amount of money. The highly publicized Susan Smith trial was expected to cost Union County, South Carolina, \$250,000 (Myrtle Beach Sun News 1995). One California study found that capital cases are six times more costly than non-capital murder trials (Dieter 1992). A Maryland study conservatively estimated the additional costs of a capital trial and sentencing at \$45,099. Furthermore, a study of Kansas capital cases found that on average, a capital trial and sentencing trial costs \$146,196 more than a non-capital murder trial and sentencing (Von Drehle 1988a). This empirical evidence shows just how costly the first stages of the judicial process are.

### **Appellate Costs**

After the original trial and sentencing trial have been completed, a capital case must then proceed through a series of appeals. The Supreme Court requires all cases where the defendant is sentenced to die to be directly appealed to the state court of last resort "which serves as a check against the random or arbitrary imposition of the death penalty" (Gregg v. Georgia, *supra*). Attorneys spend, on average, between 800 and 1,000 hours on this single appeals process (Garey 1985). A report from the New York Public Defense Backup Center to the New York Senate Finance Committee, the Assembly Ways and Means Committee, and the Division of the Budget estimated that direct appeals to the New York State Court of Appeals (New York's court of last resort) would cost an average of \$245,720 in attorney's fees for both prosecution and defense per appeal (Gradess 1989). The defense costs alone for this appeal are estimated to be \$90,712 in New York (Blakley 1990). California estimates defense costs for state supreme court review at \$66,112-\$82,639 (Garey 1985). Total costs of the state supreme court appeal excluding court costs are estimated between \$165,279 and \$220,371 per capital case (Blakley 1990). Other research estimates the total cost to range between \$87,041 and \$200,440 (Von Drehle 1988a).

If the appeal is lost at the state supreme court level, at least six other levels of appeal are available to the defendant (Von Drehle 1988b). One of these six appeals permits the defendant to file a writ of certiorari with the U.S. Supreme Court. Such a procedure is estimated to cost an average of \$192,762 for both sides, excluding court costs (Blakley 1990). A Florida investigation revealed appeals costs to reach from \$344,280 to over

\$1,252,747 over appeals costs of a non-capital trial (Von Drehle 1988a).

### **Execution Costs**

After all the appeals have concluded, the convicted murderer faces execution by the state. The state incurs several execution-related costs. First, the state must create a death chamber where the execution occurs. This is a fixed cost. After constructing one (which most states already have), the chamber must be maintained in operating condition. Though these costs are difficult to quantify, they are an additional cost to capital punishment.

A second execution-related cost involves the round-the-clock watch of an inmate once his death warrant has been signed. The inmate is moved to a cell closer to the death chamber about thirty days before execution in some states (Von Drehle 1988a). The cost in overtime for guards for each watch is approximately \$17,288 (Von Drehle 1988a). Ironically, this 24-hour watch is intended to ensure that the inmate does not kill himself before the scheduled state execution.

A third execution-related cost is the last meal given to the inmate. Florida gives its inmates a twenty-five dollar allowance for the inmates' final meal (Von Drehle 1988a). The marginal cost incurred is the difference between the twenty-five-dollar meal and the cost of a regular meal. Although this is a minor cost, it is a cost to the state that should be included in the analysis.

A fourth execution-related cost is the fee paid to the executioner who either administers the lethal dosage, flips the switch on the electric chair, or drops the capsule in the gas chamber. In Florida, executioners who operate the electric chair are paid \$188 (Von Drehle 1988a). These executioners are paid not only for their time, but also for any resulting mental distress.

After the execution has occurred, a medical professional is required to pronounce the person legally dead. The medical examiner or coroner is paid by the state to perform this duty. Empirical evidence is limited, but this cost can be estimated at \$150.

Finally, the state must pay for the funeral and burial of the body since the state is the one who killed the person. Florida allows \$188 for a death suit to be worn by the convict (Von Drehle 1988a). In addition, Florida pays the undertaker \$658 for the burial of the executed person (Von Drehle 1988a).

In total, the execution of a convicted criminal can cost the state a few thousand dollars. Although these execution costs are minimal when compared to the trial and appellate costs, the execution costs are an additional burden imposed upon the state that is not present in the absence of a death penalty statute.

### **Forgone Output**

Economic efficiency is achieved when resources are allocated to their most highly valued uses. Society may incur additional costs as a result of enforcement of the death penalty

insofar as resources are not employed in their most highly valued use. Consider first the inmates who are executed. Inmates often work while they are in prison. Inmates not only help with some tasks at correctional facilities, they also work for the state in various capacities. Although it is difficult to determine whether these convicted murderers would be allowed to perform many of these tasks due to the security risk they impose on society, some amount of output may be forgone when these criminals are executed instead of imprisoned for life.

Another opportunity cost associated with capital trials is the time spent by jurors. During a capital trial, jurors are required to attend the trial everyday and listen to testimony. While listening to testimony, the jurors are not performing their usual jobs. If jurors are paid \$15 per day during a four week trial, the total cost to the court is \$4,200 (Namiotka 1995). However, this estimate may well understate the actual opportunity cost incurred as the jurors cannot perform at their regular jobs. If capital trials take 3.5 times longer, the additional forgone output of these jurors is greater than that in a non-capital murder trial.

### **False Positives**

One of the greatest fears of the criminal justice system with respect to capital punishment is the problem of false positives--executing the innocent. The series of appeals that has been incorporated into the capital trial process is designed to ensure "super due process" for the alleged criminal. This heightened level of judicial scrutiny is intended to minimize the probability of the execution of an innocent person. However, the efficiency of the appellate process is uncertain. Although the overwhelming percentage of those who have been executed in recent years were clearly guilty, the probability of executing an innocent person is not zero. One study found that between 1900 and 1987, 350 people were erroneously sentenced to death by judges (Keve 1992). Fourteen cases have been documented since 1973 in which a judge wrongly sentenced an innocent man to death (Von Drehle 1988c). Furthermore, between January of 1987 and July of 1989, at least twelve people were discovered to be innocent after first being sentenced to death (Keve 1992). In a separate investigation, 139 innocent people were sentenced to death in the United States between 1900 and 1985. Unfortunately, twenty-three of these innocent people were actually executed (Haines 1992). This is strong evidence that our system of criminal justice is imperfect. If our judicial process has wrongly executed twenty-three innocent people, it is likely that other undocumented cases of false positives have occurred.

Besides the forgone output of these wrongly executed people, the costs incurred by society are tremendous both in a moral and security sense. The idea of executing an innocent person strikes the average citizen as a gross societal wrong. Taking the life of an innocent person can also undermine the confidence the public has in the judicial process. People often think that if it could happen to one of their fellow citizens, it could happen to them. This could have a significant chilling effect on capital punishment cases. Future jurors and judges may be reluctant to sentence convicted felons to death if they believe that false positives are likely in the future. These key figures in the judicial process may not want to be responsible for executing an innocent person. Therefore, they may decide

not to impose the appropriate sentence of death when it truly is warranted. The costs of this chilling effect are difficult to quantify because the effect is a non-market good. Contingent valuation could be used to try to estimate the willingness to pay by the public.

### **Forgone Research Information**

At present, convicted murderers provide psychology and criminal justice researchers with information on how the criminal mind works. This captive sample provides researchers with valuable information as to why crimes are committed, why they are committed in a certain manner, and how these crimes could have been prevented. These research subjects help experts in the field understand the inner workings of the criminal mind. After this information is extracted, the studies can be used to predict conditions under which crimes could occur in the future and then prevent those conditions. By executing the subjects, the main source of information to explain this behavior is eliminated.

### **Other Costs Associated with the Death Penalty**

Willingness to pay by third parties who oppose the death penalty is another cost of the death penalty. Organizations such as the Illinois Coalition Against the Death Penalty are willing to pay to stop the death penalty. This willingness to pay must be considered as part of the cost because these people would benefit from the abolishment of capital punishment. Approximating the United States population at 250,000,000 and 20 percent of the people oppose the death penalty, there are approximately 50,000,000 opponents. Assuming each opponent is willing to pay \$1 per year to see the death penalty abolished, total willingness to pay by opponents of the death penalty is \$50,000,000. Unfortunately, the true willingness to pay is very difficult to calculate accurately for the same reasons that were cited with respect to nonuse values in the case of proponents of the death penalty.

### **Total Costs of a Capital Case**

The total costs of a capital case, beginning with the investigation costs and ending with the execution costs, are estimated to range in the millions of dollars. Studies conducted in Florida, North Carolina, and Texas estimate capital cases cost an average of \$3.36 million, \$2.16 million, and \$2.3 million, respectively (Keve 1992, Johnson 1995). The highest estimates are in California where a single capital case is estimated to cost between \$4.35 and \$5.44 million (Tashima 1991).

Estimated costs to the states on a yearly basis are astounding. A California study estimated that the state spends an additional \$90 million per year because of its imposition of the death penalty (National Law Journal 1995). New Jersey's death penalty annually costs that state an additional \$22.8 million dollars over the estimated costs of a life imprisonment system (Keve 1992). A 1987 study found that the death penalty process would cost Kansas an extra \$14,306,374 annually (Keve 1992). In 1989, the New York Department of Correctional Services estimated that New York's adoption of the death penalty would cost the state approximately \$141 million dollars per year (Dieter 1992).

Assuming 130 Death Row inmates are processed every year and marginal costs for trial and sentencing for each range between \$45,099-\$146,196 (Von Drehle 1988a), the

additional trial costs of capital punishment range between \$5,862,870-\$19,005,480. After discounting incremental appellate costs that range between \$344,280 and \$1,252,747 (Von Drehle 1988a) at 3 percent over 7 years (the average length for the appellate process) and assuming 130 inmates are processed each year, additional annual appellate costs of capital punishment are \$39,835,120-\$144,949,480. Further assuming execution costs are \$18,472 per execution and 30 executions occur every year, the annual execution costs of capital punishment are \$544,160. Finally, nonuse values by opponents of the death penalty are \$50,000,000 per year. The total annual incremental cost of the death penalty ranges from \$96,252,150 to \$214,509,120.

When all costs are considered, the death penalty costs a state several million dollars per case. However, even when all of these costs are incurred in a trial and appeals process, an execution cannot be assured. During the process, the defendant may be (1) found innocent, (2) found guilty but not assessed the death penalty, (3) found guilty, assessed the death penalty, only to have the sentence overturned by an appellate court, or (4) found guilty, assessed the death penalty but given clemency by the governor (though this is very rare). The actual percentage of death penalty sentences carried out is smaller than some proponents may think. Approximately 30 percent of all death sentences are overturned in the appeals process (Ross 1995). The Massachusetts Coalition Against the Death Penalty estimates this number to be closer to 50 percent, as compared to 10 percent for non-capital sentences (Rosenthal 1990).

When forgone output, forgone information, and false positives are added to the nonuse values of opponents and the costs of the judicial and correctional processes, capital punishment becomes a very costly punishment from an economic perspective. The marginal cost estimates of capital punishment are not sufficiently detailed to compare to the estimated marginal benefits of the death penalty. Using the limited available data to conduct an economic analysis would reveal neither a meaningful nor accurate assessment of the economic efficiency of the death penalty.

#### **IV. Normative Issues of the Death Penalty**

When assessing economic efficiency, marginal benefits are weighed against marginal costs. However, when determining the overall effects of a public policy, normative issues must also be considered. The two primary issues in this case are the morality and equity of the death penalty.

##### **Morality**

The morality of the death penalty has been debated for centuries. The debate continues today. Some proponents of capital punishment believe that criminals who take the life of another person should also be killed. This "eye for an eye" approach to capital punishment is a prominent belief of many southerners in the "Bible Belt." Some proponents even request that the murderer die in the same manner as the victim. Yet, others believe capital punishment develops a sense of respect for a human life because it takes a person's life if he decides to murder someone.

Many opponents of the death penalty view this form of punishment as an uncivilized practice. They believe the death penalty is as inhumane as torturing prisoners (Economist 1989). Other opponents believe that humans should not decide the fate of one another. That is, life and death decisions should not be left in the hands of mere mortals.

In addition to the arguments based on religious and humane grounds, some opponents use logic to explain their views. The former director of corrections departments in both Delaware and Minnesota, Paul W. Keve, believes "the act of murder reveals a lack of respect for human life. In consequence then, we need to encourage a higher respect for life. But finally, it defies all logic to suppose that we can encourage a greater respect for human life by the device of taking a human life" (Keve 1993, p.14).

The arguments associated with the morality of the death penalty are difficult to quantify. Determining the legitimacy or validity of these arguments is beyond the scope of this analysis. However, the strong sentiments expressed by both proponents and opponents of the death penalty will fuel the debate over its morality into the foreseeable future.

### **Equity**

If the death penalty remains a part of our criminal justice system, a more important normative issue is the fairness of the death penalty. The United States Constitution has been interpreted as permitting the imposition of the death penalty. The Fourteenth Amendment states, "No State shall...deprive any person of life, liberty, or property, without due process of law." This clause furthers the proponents' arguments for capital punishment since it explicitly provides for the taking of life if due process is fulfilled.

However, the Constitution has several problems with respect to the death penalty. First, the Constitution does not identify all of the specific components of due process. Due process consists of a trial by an impartial jury of the defendant's peers, no compelled self-incrimination, no double jeopardy, and other constitutional measures. However, leaving additional factors to the discretion of judges and other courtroom figures complicates the question of whether due process is ensured.

A second constitutional problem with the death penalty is determining what is "cruel and unusual punishment" which is prohibited by the Eighth Amendment. Many believe that capital punishment per se is cruel and unusual. Interestingly, 80 percent of the population does not. The Supreme Court, as a non-partisan, non-elected body, has a duty to disregard public opinion and rule on the merits of the statute. Unfortunately, interpretations of cruel and unusual punishment also vary among justices. Therefore, determining whether a statute violates the Eighth Amendment is subject to varying interpretations.

Another component of the equity issue is the constitutional right to effective counsel. As established in the Supreme Court case *Powell v. Alabama*, 287 U.S. 45 (1932), all defendants accused of a capital offense have the right to counsel. Subsequently, the Court held that "the right to counsel is the right to effective counsel" (*McMann v. Richardson*, 397 U.S. 759). However, the effectiveness of counsel in death penalty cases has been

questioned due to the different judicial procedures in a capital case (Determan 1989). Preparing for the penalty trial is significantly different than preparing for the guilt/innocence trial because counsel must coordinate and integrate information used in both trials to minimize any discrepancies in arguments used in each trial.

Since counsel is usually court-appointed, the quality of the defense varies greatly. It is difficult to assess the quality of defense counsel because so many factors must be included in the analysis. Some standards have been adopted to minimize the variance in quality. However, the effectiveness of these standards has been heavily criticized (Garey 1985).

Another constitutional problem is ensuring a fair and impartial jury. Though efforts, such as sequestration, are made to minimize partiality, the inherent biases of jurors may play a significant role in a capital case. Substantial evidence exists that a disproportionate number of low income and minority defendants are sentenced to death. Indigent defendants receive court-appointed counsel that often do not possess the same skills as retained counsel. Rich defendants can retain counsel and pay for resources for which an indigent defendant cannot. By employing these resources, wealthier defendants may benefit from higher quality defense. Although the O.J. Simpson case was neither a capital trial nor a typical case, it did illustrate how wealthier defendants can obtain a higher quality defense.

In the 1987 Supreme Court case *McCleskey v. Kemp*, 481 U.S. 279 (1987), a statistical study performed by three law professors examined the imposition of the death sentence in over 2,000 cases (Ducat and Chase 1992). The Baldus study, as it was known, accounted for 230 variables in studying death penalty cases in Georgia in the 1970s. The study concluded that the death penalty was imposed in 22 percent of the cases involving African-American defendants and white victims, in 8 percent of the cases involving white defendants and white victims, in 1 percent of the cases involving African-American defendants and African-American victims, and in 3 percent of the cases involving white defendants and African-American victims. Similar results were found when examining the percentage of cases where the prosecuting attorney sought the death penalty: the death penalty was sought in 32 percent of the cases involving African-American defendants and white victims, while it was only sought in only 19 percent of the cases involving white defendants and African-American victims. Finally, the study concluded that defendants charged with murdering whites were 4.3 times as likely to receive the death penalty as defendants charged with killing African-Americans.

The empirical evidence provided by the Baldus study shows clearly that imposition of the death penalty varies with the race of the victim and of the defendant. Both the jury's imposition and the prosecution's seeking of the death penalty are also racially correlated. Although the Supreme Court has refused to consider empirical studies that show a correlation between race and the imposition of the death penalty, these correlations raise substantial concerns as to the protections of due process for minorities.

## V. Conclusion

This analysis has described the marginal benefits and marginal costs of the death penalty and estimated, where possible, dollar amounts on these values. Unfortunately, many of the benefits and costs associated with the death penalty cannot easily be quantified. One of the main benefits of the death penalty, the deterrence hypothesis, has yielded mixed results at best. While reduced incarceration is another highly visible benefit, its marginal benefit when compared to the entire process is quite small. However, nonuse values associated with the proponent's willingness to pay may be quite large.

The costs of the death penalty are quantified in more detail. The investigation, attorney preparation, trial, appellate proceedings, and execution procedures of a capital case exceed the costs associated with a life imprisonment murder case. A Florida study revealed that the state spends six times as much money on a single capital case as it would to imprison a defendant until he dies (Von Drehle 1988a). False positives and nonuse values also increase the cost of capital punishment by some indefinite amount.

Some supporters of the death penalty believe that the entire capital process should be reformed. In fact, United States Supreme Court Chief Justice William Rehnquist expressed his concerns at an American Bar Association meeting: "The capital defendant does not need to prevail on the merits in order to accomplish his purpose; he wins temporary victories by postponing final adjudication" (Determan 1989, p.36). The Chief Justice hinted at combining several levels of lower appeal after the original appeal to the state supreme court into one larger federal level. Illinois Supreme Court Justice Benjamin Miller expressed similar views on the appeals process. He said that in over 400 capital cases he has reviewed as a supreme court justice, only once has he voted to reverse the death sentence.

By combining the levels of appeals and decreasing the total number of appeals, the process could be significantly sped up. However, this streamlining may increase the number of false positives and raise larger problems of racial discrimination.

Overall, economic efficiency cannot be accurately assessed given the present shortage of quantitative data on the marginal benefits and marginal costs of the death penalty. Further research is needed on the benefits of the death penalty, especially in the areas of deterred homicides and nonuse values. However, this investigation has identified considerable marginal costs associated with capital punishment relative to a sentence of life imprisonment. As politicians react to the increasing popularity of the death penalty, our nation's legislators must carefully examine both the positive and normative effects of capital punishment.

Please see Appendices A, B, and C

**APPENDIX**  
**Appendix A**  
Costs of a Capital Trial

Sources of Cost	Total Cost	Incremental Cost
Investigation Costs	\$10,000 for up to 200 hours	N/A
Trial Costs		
--jury	\$4,200	N/A
	\$3,011 per day	N/A
--courtroom	\$25 per day	N/A
	\$750 per day	N/A
--witness	\$5,000-\$8,000	N/A
	\$22,000	N/A
--expert witnesses	\$964	\$964
	\$18,860-\$400,000	N/A
--DNA expert	\$60,000-\$75,000	
	\$250,000	
--transcript		\$45,099-
--psychiatrist		\$145,196
--attorney's fees		
--TOTAL		
Appellate Process		
--state supreme	\$245,720	
	\$165,279-\$220,371	
court review	\$87,041-\$200,440	N/A
	\$192,762	
	N/A	
--U.S. Supreme		
Court review		N/A
--TOTAL		\$344,280-

		\$1,252,747
Execution Costs		
--round-the-clock watch	\$17,288	\$17,288
--last meal	\$24	N/A
--executioner's fee	\$188	\$188
--coroner's fee	\$150	\$150
--death suit	\$188	\$188
--undertaker's fee	\$658	\$658
--TOTAL	\$18,496	\$18,472

**Appendix B**

TOTAL ANNUAL INCREMENTAL COST OF THE DEATH PENALTY

TRIAL COSTS

130 death row inmates per year X (\$45,099-\$146,196)

=\$5,862,870-\$19,027.6: 27

APPELLATE COSTS

130 death row inmates per year X \$344,280 over 7 years

discounted @  
3% = \$306,424

discounted @  
5% = \$284,591

130 X \$206,424  
= **\$39,835,120**

130 X \$284,591  
= **\$36,996,830**

130 death row inmates per year X \$1,252,747 over 7 years

discounted  
@ 3%=\$1,114,996

discounted  
@ 5%=\$1,035,552

130 X  
\$1,114,996= **\$144,949,480**

130 X  
\$1,035,552= **\$134,621,760**

EXECUTION COSTS

30 executed inmates per year X \$18,472 =\$544,160  
NONUSE VALUES =\$50,000,000

TOTAL:

**\$96,252,150** discounted @  
3%

**\$93,413,860** discounted @  
5%--

**\$214,509,120** discounted @ 3%

**\$204,181,400** discounted @ 5%

THIS MARGINAL COST ESTIMATE  
PROBABLY UNDERSTATES THE  
ACTUAL MARGINAL COST DUE TO  
IGNORING ADDITIONAL FACTORS  
SUCH AS SEQUESTRATION COSTS,  
FALSE POSITIVES, THE COSTS OF  
TRYING CAPITAL DEFENDANTS  
WHO ARE ACQUITTED, AND RACIAL  
DISCRIMINATION.

**APPENDIX C**  
**ANNUAL BENEFITS OF A CAPITAL TRIAL**

Sources of Benefit	Incremental Benefit	Total Benefit
Deterrence	N/A	N/A
Reduced Crowding	\$415,071* \$308,126**	\$12,452,130* \$9,243,780**
Nonuse values	\$200,000,000	\$200,000,000

**TOTAL INCREMENTAL BENEFIT:**

**\$212,452,130**  
discounted @  
3%

**\$209,243,780**  
discounted @  
5%

\* assuming 1) an annual incarceration cost of \$17,957 per inmate

2) an inmate will serve 40 years for life imprisonment

3) discounted @ 3% to obtain net present value

\*\* assuming both (1) and (2) above, discounted @ 5% to obtain net present value

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