Prosecutorial Discretion, Hidden Costs, and the Death Penalty: The Case of Los Angeles County

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This Article analyzes the processing of homicide cases in Los Angeles County from 1996 to 2008 to measure the time-costs of pursuing cases capitaly and to examine how prosecutorial discretion in homicide charging is exercised in this jurisdiction. To answer these questions, we explore two related outcomes: (1) the odds of a “death-notice” filing and (2) time-to-resolution. According to Model 1, death-eligible cases with multiple special circumstances are significantly more likely to be prosecuted capitaly than those with only one special circumstance. In light of the limited financial information regarding capital punishment at the county level, Models 2–4 utilize Cox Proportional Hazard regression to investigate the time-costs associated with death eligibility. Estimates indicate that capital cases take significantly longer to reach resolution than noncapital cases. Furthermore, the filing of special circumstances increases survival time in noncapital cases. In addition to highlighting the time-costs of trying
cases capitally, these findings reveal the time-costs associated with the prosecution of special circumstance cases, even when the death penalty is not ultimately sought. By examining capital costs at the county level, this analysis contributes to the ongoing policy reform debate in California that aims to address the state’s “dysfunctional” death penalty system.2

I. INTRODUCTION

On August 27, 2004, the California Commission on the Fair Administration of Justice (CCFAJ) was established by California State Senate Resolution Number 44 to conduct a comprehensive review of California’s criminal justice system. The commission was charged with three overarching tasks: (1) examine past failures of the state’s criminal justice system, particularly wrongful convictions and executions; (2) review potential strategies for improving the criminal justice system, including adding safeguards against miscarriages of justice; and (3) propose legislative reforms that will improve fairness and justice in the state.3

After four years of work, the CCFAJ published its final report in 2008. The bulk of the final report focused on issues facing the state’s capital punishment system, which the commission characterized as “broken” in terms of its economic costs, the quality of justice it affords, and the toll it takes on other aspects of criminal justice administration in the state.4 Specifically, the report identified a range of flaws in the system, explored alternatives to capital punishment, and proposed legislative reforms.5 A key finding was that excessive delays and overbroad prosecutorial discretion plagued California’s death penalty system.6 Ultimately, though, the report indicated that due to serious gaps in data-collection efforts within the state, further research on the costs of capital punishment is necessary, particularly on pretrial and presentencing costs, in order to develop appropriate remedial policies.7

This study attempts to answer the CCFAJ’s call for further research on the problems associated with California’s death penalty system at the trial level by examining the processing of homicide cases in one jurisdiction—Los Angeles County—from 1996 to 2008. We investigate the practices and

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2 CCFAJ, supra note 1, at 3, 6.
3 Id. at 1.
4 Id. at 4–7.
5 Id. at 5–15. See generally id. at 60–104 (discussing the financial and procedural implications of reforming California’s death penalty system by narrowing the list of special circumstances or replacing capital punishment with life in prison without the possibility of parole).
6 Id. at 21–27, 102–04.
7 Id. at 34–43, 77–84, 96–102.
patterns of prosecutorial discretion in homicide case processing in order to better understand the associated costs and consequences of the capital punishment system prior to final adjudication.

In the next section, we provide a brief overview of the failures of California’s “modern” death penalty system,8 in part by describing in more detail the findings of the CCFAJ panel. To contextualize these failures, we begin with a brief sketch of the mechanics of California’s homicide and capital sentencing laws and how they are typically applied in Los Angeles County, the site of our study. We follow with a review of the death penalty cost literature, highlighting the ways in which methodological limitations may restrict the utility of existing estimates in notable ways. Within this section, we specifically examine the role of prosecutorial discretion in seeking the death penalty and the potential economic and justice costs associated with the breadth of discretion afforded to prosecutors.

Next, we provide an overview of our methodological framework used to estimate the time-costs of California’s capital punishment system at the county level. Data on Los Angeles County homicide cases filed from 1996 to 2008 were used to formulate multiple regression models predicting: (1) the odds of a “death-notice” filing and (2) time-to-resolution. We conclude by addressing the public policy relevancy of our findings, as well as their implications for how criminal justice resources are allocated and for broader goals of justice. Here, we place the California case within the context of the penological justifications for capital punishment, which have, in recent years, been challenged by the accumulation of countervailing empirical evidence indicating that the death penalty is ineffective as either a deterrent or a method of incapacitation.9

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8 The “modern” era of capital punishment refers to the post-Furman (1972) period when states redrafted their death penalty laws in an effort to reinstate capital punishment with constitutionally sound statutes that addressed the infirmities identified in Furman v. Georgia, 408 U.S. 238 (1972). Not all states that tried came up with constitutionally viable schemes initially; California’s first post-Furman statute was found unconstitutional. Steven F. Shatz & Nina Rivkind, The California Death Penalty Scheme: Requiem for Furman?, 72 N.Y.U. L. REV. 1283, 1307–10 (1997). The core of the current statute was put into effect in 1978 as a result of a voter initiative. See id. at 1310–17. See generally CCFAJ at 17–18 (discussing the history of California’s “modern” death penalty statute, particularly the broadening of death eligibility over time).

A. THE FAILURES OF CALIFORNIA’S DEATH PENALTY SYSTEM

In California, criminal homicides are divided into two categories—manslaughter and murder. Manslaughter, which can take several different forms, is defined as the “unlawful killing of a human being without malice.” Manslaughter, which can take several different forms, is defined as the “unlawful killing of a human being without malice.” 10 Murder is defined as “the unlawful killing of a human being, or a fetus, with malice aforethought.” 11 Varying degrees of murder are distinguished based on the presence or absence of premeditation. First-degree murder consists of premeditated killings or killings in the course of a specified felony, and only first-degree murders that involve at least one of the twenty-two special circumstance allegations (which themselves have numerous subcategories of eligibility) enumerated in California Penal Code (PC) §190.2 qualify for the death penalty. 12 Thus, a special circumstance allegation requires an accompanying charge of first-degree murder.

The criminal justice processing of homicides begins when a killing is reported to the police. 13 Once a homicide is “cleared by arrest,” it is eligible for prosecution. A homicide is considered to be “cleared by arrest or solved, for crime reporting purposes, when at least one person is arrested, charged with the commission of an offense, and turned over to a court for prosecution.” 14 The district attorney’s (DA) office then decides whether or not charges will be filed. The decision to file criminal charges shapes the course of the case in fundamental ways, setting in motion a series of criminal proceedings.

In Los Angeles County, a deputy DA makes the initial charging decisions. 15 If the deputy DA charges the defendant(s) with first-degree murder and at least one special circumstance allegation, the case becomes potentially death eligible. 16

11 Cal. Penal § 187(a).
13 See infra Figure 1.
16 As used here, “death eligible” refers to a case involving at least one special circumstance allegation, but not necessarily involving the filing of a death notice. Throughout this paper, the term death eligible refers to all cases involving a special circumstance (both capital and noncapital) unless otherwise specified. A “capital case” or “death penalty case” refers to one in which both a special circumstance allegation and a death notice have been filed. The term “special circumstance case” applies to cases involving one or more special circumstances, but no death notice. “Non-special
Figure 1

Processing of Homicide Cases in Los Angeles County

<table>
<thead>
<tr>
<th>Homicide Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide is “cleared by arrest”</td>
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<tr>
<td>Homicide is not solved or “cleared exceptionally”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charges Filed by Deputy DA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide Charges Filed</td>
</tr>
<tr>
<td>First-degree murder charged†</td>
</tr>
<tr>
<td>Second-degree murder or lesser offense charged*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special Circumstance Allegations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special circumstance(s) are filed‡</td>
</tr>
<tr>
<td>No special circumstance(s) are filed*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preliminary Hearing</th>
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</thead>
<tbody>
<tr>
<td>Death notice is filed‡</td>
</tr>
<tr>
<td>No death notice is filed*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial‡</td>
</tr>
<tr>
<td>Plea Bargain*</td>
</tr>
<tr>
<td>Dismissal*</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Verdict at Guilt Trial</th>
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</thead>
<tbody>
<tr>
<td>Guilty of first-degree murder and at least one special circumstance‡</td>
</tr>
<tr>
<td>Not guilty of first-degree murder or at least one special circumstance*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sentence at Penalty Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life without the possibility of parole (LWOP)</td>
</tr>
<tr>
<td>Death sentence</td>
</tr>
</tbody>
</table>

Legend:  *non-death-eligible case; †potentially death-eligible case; ‡death-eligible case.

Upon completion of a preliminary hearing, the “special circumstance committee” recommends whether or not a death notice should be filed. The special circumstance committee chair reviews this recommendation and

circumstance case” refers to a case without any special circumstance allegation.

17 The information contained in Figure 1 can be found at: David Baldus et al., Perspectives, Approaches, and Future Directions in Death Penalty Proportionality Studies, in The Future of America’s Death Penalty, supra note 9, at 135, 136 fig.1; H. Mitchell Caldwell et al., Death Penalty Survey Report 5–7 (2007), available at http://www.ccfaj.org/documents/reports/dp/expert/Pepperdine-CaldwellResearch.pdf; Linda E. Carter et al., Understanding Capital Punishment Law 95–103 (2008); Philip J. Cook, Potential Savings from Abolition of the Death Penalty in North Carolina, 11 AM. L. & ECON. REV. 498, 513 fig.3 (2009); Letter from Natasha Minsker, supra note 15, at 5 (Chart 1), 8 (Chart 2).
makes a final determination as to whether or not the death penalty will be sought.

At any point during this process, the prosecution may offer the defense a plea agreement. If the defense agrees to a negotiated plea, the case results in a guilty plea to life without the possibility of parole (LWOP) or a lesser sentence.

If no plea bargain is offered or an agreement is not reached, the case proceeds to trial. Capital trials are bifurcated, consisting of a guilt phase and a penalty phase. In order to advance to a penalty trial and qualify for the death penalty, the jury must find the defendant(s) guilty of both first-degree murder and at least one special circumstance allegation during the guilt phase. At the penalty trial, jurors hear case-specific aggravating and mitigating evidence before receiving instructions on the process that should be used to weigh that evidence when rendering a sentence of death or LWOP.18

The current scheme for selecting death-eligible murders from the larger category of first-degree murders was originally authorized in 1978, when California voters passed the so-called Briggs Death Penalty Initiative Act. State senator John Briggs, who was one of the initiative’s authors, touted the law as the “toughest” death penalty law in the nation.19 It derived most of its “toughness” from its very broad definitions of the types of murder that would be eligible for capital prosecution.20

While both state and federal appeals courts have held that California’s death penalty statute is constitutional, its application since first being put into practice has been anything but ideal. Indeed, it has been called, by no less than a federal circuit court judge, a multibillion dollar “debacle” and “fraud” perpetrated on California taxpayers.21 Since 1978, prosecutors in the state have sought thousands of death sentences, hundreds of capitaly charged defendants have been sent to death row, and thirteen executions have been carried out. As of mid-year 2012, 725 condemned persons populated the state’s overcrowded and decrepit death row,22 yet executions remain on hold in the state as the latest lethal injection protocol has been

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19 Id. at 728.
20 Id. at 729.
deemed unconstitutional by a state court judge.\textsuperscript{23} The average time from judgment to execution in California is seventeen years and growing longer annually; this wait is well above the national average.\textsuperscript{24}

At the core of many of California’s problems with the death penalty is the breadth of the original sentencing statute, which has only grown broader since 1978.\textsuperscript{25} In 1997, Shatz and Rivkind raised the question of whether California’s statute adequately narrowed the pool of death-eligible cases, as was mandated in \textit{Furman v. Georgia}.\textsuperscript{26} Their analysis of case facts in a sample of California homicide convictions appealed from 1988 to 1992 indicated that seven out of every eight noncapital first-degree murder cases would factually qualify for the death penalty under California’s statute, thereby rendering the state’s death-eligibility criterion even more arbitrary and capricious than the one deemed unconstitutional prior to \textit{Furman}.\textsuperscript{27} They did a closer examination of all first- and second-degree murder convictions in three California counties, and found a similar proportion of cases that would be death eligible under the statute.\textsuperscript{28}

Beyond this justice concern with California’s statute, another consequence of having an overbroad “narrowing” scheme is that prosecutors’ charging power is thereby increased. Special circumstances can be filed in most first-degree murder cases in order to leverage guilty pleas;\textsuperscript{29} overzealous prosecutors can actively seek the death penalty in cases that would not warrant such action in other counties, thus creating interjurisdictional disparities;\textsuperscript{30} extralegal factors, such as defendant and victim demographic characteristics, as well as political pressures, can more

\begin{footnotes}
\footnotetext[24]{CCFAJ, \textit{supra} note 1, at 22. \textit{See generally id.} at 21–27 (reviewing empirical findings regarding delays in California’s death penalty system).}
\footnotetext[25]{Shatz, \textit{supra} note 18, at 728; Shatz & Rivkind, \textit{supra} note 8, at 1326, 1339–41.}
\footnotetext[26]{\textit{Furman v. Georgia}, 408 U.S. 238, 239 (1972).}
\footnotetext[28]{Shatz & Rivkind, \textit{supra} note 8, at 1334–35.}
\end{footnotes}
easily creep into the decisionmaking process, and local jurisdictions can suffer the resource drains caused by increased threats of a death-notice filing, which leads to dramatically higher case expenses.

One way that these resource costs materialize is in case delays and lengthy time-to-resolution. Indeed, the CCFAJ report noted that capital cases likely take longer to reach resolution than noncapital cases since they require more preparation, but the Commission could only speculate about the specific preconviction time-costs:

The decision to seek the death penalty in a pending murder prosecution triggers a number of consequences that affect the duration, complexity and cost of the trial proceedings. Death penalty trials clearly take longer and cost more than murder trials in which the death penalty is not sought. Unfortunately, we have only a rough estimate of how many death penalty trials are taking place each year in California.

Attorney salaries represent a large portion of the costs associated with capital punishment at the county level, yet prosecutors and defense attorneys are not required to keep track of their expenses. Moreover, county-level attorneys report that “there is no such thing as a typical homicide case,” thereby making cost estimates based on officials’ “best guess” of “average” homicide cases subject to measurement error. State-level costs are equally difficult to estimate since the California Supreme Court does not maintain records on the time dedicated to the handling of

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32 Katherine Baicker, The Budgetary Repercussions of Capital Convictions, 4 ADVANCES ECON. ANALYSIS & POL’Y 1, 3, 10, 13 (2004); Ashley Rupp, Death Penalty Prosecutorial Charging Decisions and County Budgetary Restrictions: Is the Death Penalty Arbitrarily Applied Based on County Funding?, 71 FORDHAM L. REV. 2735, 2752, 2758–61 (2002).

33 CCFAJ, supra note 1, at 34. In 2006, the CCFAJ hired the RAND Corporation to evaluate whether or not it was possible to estimate accurately the costs associated with California’s capital punishment system. EVERINGHAM, supra note 1, at 1, 6–8. Criminal justice officials at the state and county levels were interviewed in an effort to gauge the availability of financial data on California capital cases. Id. Based on these interviews, RAND concluded that it was unfeasible to calculate costs due to the lack of readily available financial information. Id.


35 EVERINGHAM, supra note 1, at 5.
capital versus noncapital cases.

In the end, the CCFAJ was only able to offer rough estimates of capital punishment costs in California. The Commission estimated that California currently spends $137.7 million on death-penalty-related costs each year.\footnote{CCFAJ, supra note 1, at 10, 83–84.} This estimate was divided into pretrial and trial costs at $20 million annually, $54.4 million each year for the cost of state-level appeal and habeas proceedings, and confinement costs at $63.3 million annually. The Commission was unable to calculate the costs of federal habeas corpus proceedings.\footnote{Alarcón & Mitchell, supra note 21, at S109–S110; see also CCFAJ, supra note 1, at 84 (providing state, but not federal, habeas costs).}

The CCFAJ panel also raised the issue of overbroad charging practices as a contributory factor in the system’s failures. However, the panel was unable to systematically examine patterns in special circumstance filings throughout California, as there is no statewide database of prosecutorial charging decisions, or any mandate or mechanism for data collection whatsoever.\footnote{CCFAJ, supra note 1, at 96–101.} As such, the panel was forced to rely on studies that examined the special circumstance allegations filed only against current death-row inmates, or ones that looked at special circumstance filings in just a limited number of jurisdictions.\footnote{Id. at 64. See generally id. at 60–77 (reviewing studies examining special circumstances filed against defendants sentenced to death in California).}

After reviewing these and other findings, the CCFAJ panel pinpointed the “felony-murder” special circumstance as particularly problematic and recommended that the legislature remove felony-murder from the list of special circumstance allegations.\footnote{Id. at 62.} Indeed, the report suggested limiting death eligibility to five crime types: (1) murder of a law-enforcement officer; (2) murders occurring at correctional facilities; (3) multiple murders; (4) murders involving excessive torture; and (5) murder of witnesses, jurors, judges, prosecutors, and investigators.\footnote{Id. at 61–62.} Its concerns with the felony-murder special circumstance were empirically justified: Shatz found that while a large proportion of death sentences were sought in felony-murder cases, the rate of obtaining death sentences was exceptionally low (higher only than for “lying in wait”).\footnote{Shatz, supra note 18, at 745.} For the most common felony-murder cases—burglary-murder and robbery-murder—the death sentence rate was a mere 5%.\footnote{Id.}
The Commission also analyzed three potential remedies to fix the current capital punishment system, and considered the relative costs and/or savings of each. First, it suggested that legislative reforms to the current system aimed at improving justice would cost an additional $95 million, bringing the total annual rate to $232.7 million.\(^{44}\) The option of narrowing death eligibility to the five types of special circumstance allegations listed above was estimated to potentially lower the annual cost of the death penalty to $130 million.\(^{45}\) Finally, the option of replacing the death penalty with a system of LWOP would bring down annual costs to an estimated $11.5 million.\(^{46}\) The Commission again qualified all of these estimates, stating that “it is impossible to ascertain the precise costs of the administration of California’s death penalty law at this time. But the choices that California faces require some comparison of projected costs; for this purpose, rough estimates will have to do.”\(^{47}\)

In order to assess the costs associated with capital cases and other related policy concerns, the panel called for the establishment of a statewide data-collection system.\(^{48}\) It was recommended that the state legislature impose requirements on courts, prosecutors, and defense attorneys to collect information on special circumstance filings, death-notice filings, and case dispositions (e.g., dismissal, plea, verdict, etc.).\(^{49}\) It was further proposed that the state formulate a “Death Penalty Review Panel” composed of various criminal justice officials to review California’s death penalty system on an annual basis.\(^{50}\)

Despite the clear message conveyed in the CCFAJ report, the California legislature has remained recalcitrant on the issue of the death penalty, making it “clear that the future of California’s death penalty is now up to the voters.”\(^{51}\) California Chief Justice Tani Cantil-Sakauye conveyed a similar sentiment when asked about the future of the state’s death penalty system: “That really is up to the voters or to the Legislature . . . .”\(^{52}\) As a result of the legislature’s unwillingness and/or inability to implement reforms—even just those that would allow accurate data collection—a measure (Proposition 34) was placed on the November 2012 ballot allowing

\(^{44}\) CCFAJ, \textit{supra} note 1, at 10, 83–84.
\(^{45}\) \textit{Id.}
\(^{46}\) \textit{Id.}
\(^{47}\) \textit{Id.} at 77.
\(^{48}\) \textit{Id.} at 13, 94.
\(^{49}\) \textit{Id.} at 14, 102.
\(^{50}\) \textit{Id.} at 13, 102.
\(^{51}\) Alarcón & Mitchell, \textit{supra} note 21, at S47–S48.
California voters to determine the future of the state’s death penalty system. Senator Hancock, Proposition 34’s founder, largely marketed the measure as a cost-saving initiative, claiming that it would save the state millions of dollars annually, much of which would be redirected to other public-safety efforts.\(^{53}\)

**B. WHAT DOES THE DEATH PENALTY COST?**

In *Gregg v. Georgia*, the Supreme Court underscored the uniqueness of capital cases by explicating the “death is different” doctrine.\(^{54}\) This doctrine requires the implementation of numerous procedural safeguards in capital cases to ensure that constitutional standards are achieved. Nearly three decades of scholarship indicate that the procedural safeguards implemented in capital cases make them cost significantly more than noncapital murder cases.\(^{55}\) Yet even with the current level of safeguards in place, miscarriages of justice persist.\(^{56}\) Indeed, the decision to seek the death penalty fundamentally alters the course of an “average” homicide case, setting in motion an entire chain of events that requires the allocation of extra resources at the county and state levels, even if the case ultimately results in a sentence less than death.\(^{57}\)

At the pretrial and trial stages, capital cases involve a number of unique procedures, including, ideally, the appointment of specialized and experienced attorneys—generally two per case; the investigation of a defendant’s life history, which often requires the use of expert consultants; individualized juror “death-qualification” voir dire in addition to standard voir dire; and a two-part trial consisting of a guilt phase and a punishment phase.\(^{58}\) In addition, the state incurs a number of postconviction costs in death sentence cases due the complex appeal process, which typically involves three avenues for redress, and can raise issues from both the guilt and penalty phases of the trial. There is an automatic direct appeal (which

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\(^{57}\) Letter from Natasha Minsker, *supra* note 15, at 8.

\(^{58}\) Gradess & Davies, *supra* note 55, at 398.
in California is directly to the California Supreme Court), as well as opportunities to file habeas corpus petitions at the state and federal levels, which again require considerable expertise and resources.\textsuperscript{59} The costs of housing the condemned on death row are also substantially higher than they are for general-population prisoners, due to security needs and related expenses.\textsuperscript{60} In addition, the infrastructure costs associated with the functioning of the courts, including the salaries of court officials (e.g., attorneys, judges, etc.) is significantly increased by the existence of the death penalty caseload.\textsuperscript{61}

In the mid-1980s, the cost of trying a California capital case was an estimated $201,510 more than a noncapital trial, excluding pretrial or appeal costs.\textsuperscript{62} An article in the \textit{Sacramento Bee} from that time period estimated that California would save an estimated $90 million annually if capital punishment were abolished.\textsuperscript{63} More recent estimates published by Alarcón and Mitchell indicate that a total of about $4 billion has been spent by the state and federal governments on California death penalty cases from 1978 to 2010.\textsuperscript{64} This $4 billion figure includes pretrial, trial, appellate, and incarceration costs; nearly half was attributable to presentencing costs incurred at the county level.\textsuperscript{65}

Although these kinds of cost-comparison studies are enlightening, they often suffer from several methodological limitations, including: small sample sizes, omitted variable bias, selection bias, and narrow periods of analysis.\textsuperscript{66} These analyses usually derive financial estimates by extrapolating costs associated with a small sample of “typical” or “average” death penalty cases to the entire universe of death penalty or death-eligible cases. They then compare the total costs of death penalty cases versus non-death penalty cases rather than statistically controlling for additional factors that may affect the cost differential between these types of cases (e.g.,

\begin{itemize}
  \item \textsuperscript{59} CCFAJ, \textit{supra} note 1, at 21.
  \item \textsuperscript{60} Id. at 69–70.
  \item \textsuperscript{61} Gradess & Davies, \textit{supra} note 55, at 406–08 (discussing infrastructure costs). See generally id. at 399–406 (discussing the death penalty infrastructure costs that are incurred at the local level, even when cases are not prosecuted capitally).
  \item \textsuperscript{64} Alarcón & Mitchell, \textit{supra} note 21, at S41.
  \item \textsuperscript{65} Id. at 62.
  \item \textsuperscript{66} John K. Roman et al., \textit{Reassessing the Cost of the Death Penalty Using Quasi-Experimental Methods: Evidence from Maryland}, 11 AM. L. & ECON. REV. 530, 531 (2009) [hereinafter \textit{Reassessing the Cost of the Death Penalty}].
\end{itemize}
number of defendants, seriousness of the crime, etc.).  Failing to control for additional cost-related factors may artificially inflate cost estimates due to omitted variable bias. In other words, cost differences that may actually stem from other case factors (e.g., number of defendants, offense severity, etc.) are attributed to the filing of a death notice because these important covariates are not estimated. These models also suffer from selection bias since they focus on a small sample of death penalty cases rather than the full universe of homicide cases.

In recent years, more sophisticated studies looking at various death penalty jurisdictions have attempted to overcome these methodological shortcomings by utilizing multiple regression and quasi-experimental techniques. Cook et al.’s study of North Carolina capital cases represents one of the first attempts to calculate the costs associated with each component of the death penalty system through the use of multiple regression techniques. Results indicate that a capital trial at that time cost an estimated $147,700 more than a noncapital trial in that jurisdiction. Cook conducted a follow-up study, also in North Carolina, which employed counterfactual logic to estimate the potential economic effect of abolition in that state. His findings suggested that the state would have saved an estimated $11 million annually if capital punishment had been abolished in July 2004.

Using a slightly different approach, Roman et al. attempted to control for selection effects resulting from prosecutorial charging decisions by analyzing the full universe of death-eligible murder cases in Maryland from 1978 to 1999 within a quasi-experimental framework. Propensity scores were used to match capital and noncapital murders along a number of case-level characteristics in order to model the costs associated with the decision.

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69 Gradess & Davies, supra note 55, at 397; ROMAN ET AL., RESEARCH REPORT, supra note 67, at 531.


71 Id. at 2–3.


73 Id. at 499.

74 See ROMAN ET AL., RESEARCH REPORT, supra note 67, at 533; Roman et al., Reassessing the Cost of the Death Penalty, supra note 66, at 530.
to seek the death penalty. Upon successful completion of propensity-score matching, the researchers estimated a series of regression equations corresponding to various stages of the capital punishment process. Results from two-sampled t-tests indicated that capital cases involve significantly longer hearings and trials at the guilt phase and in postconviction appeal proceedings. Moreover, capital cases have significantly more postconviction appeals. An Ordinary Least Squares regression model was then used to evaluate the cost differential between capital and noncapital cases. Coefficients indicate that the trial and appellate review process is significantly more costly for capital cases compared to noncapital cases.

While the extant death penalty cost literature has effectively helped to dispel the popular myth that capital punishment is cheaper than LWOP, it remains limited in several respects. Only five out of the fourteen cost studies reviewed by Roman et al. compared death-eligible (i.e., capital and special circumstance cases) to non-death-eligible cases at the county level, and none of those utilized multiple regression techniques. To date, Roman et al.’s analysis of Maryland’s death penalty system is the only multiple regression study at the county level.

Nonetheless, what is clear from the existing cost literature is that additional expenses begin to accrue as soon as the decision to seek death is made by the prosecutor. As noted above, under California’s scheme, the filing of one or more special circumstance allegations fundamentally alters the course of a homicide case by making it death eligible. As a result, a large portion of the county-level costs associated with the death penalty are put in motion by those charging decisions.

75 Roman et al., Reassessing the Cost of the Death Penalty, supra note 66, at 533.
76 Id. at 554.
77 Id. at 562.
78 Id.
79 Id. at 551.
80 Id. at 569–70.
81 See Gradess & Davies, supra note 55, at 397, 411.
83 See Roman et al., Research Report, supra note 67; Roman et al., Reassessing the Cost of the Death Penalty, supra note 66.
84 See supra Table 1.
Once the DA’s office decides to file a death notice, the costs of proceeding continue to mount. Because in such cases the defense must prepare not only for the guilt phase, but also for a penalty phase, the American Bar Association recommends that a four-member defense team consisting of two attorneys and two investigators be assigned to each capital case.85 As the case proceeds to trial, the requirement that a death-qualified jury be seated in a capital case means that extensive voir dire must be performed to ensure that any potential juror is excluded from the capital case if his death penalty attitude could “prevent or substantially impair the performance of his duties as a juror in accordance with his instructions and his oath.”86

The Supreme Court has also ruled that defense attorneys are entitled to present information regarding the defendant’s life history to capital jurors before they determine whether or not death is an appropriate punishment.87 As a result, defense attorneys devote a considerable amount of resources to the preparation of a defendant’s life history, which often includes hiring a range of expert witnesses who can testify about elements of the life history.88 While these procedures are necessary for ensuring that constitutional requirements are achieved, they make capital cases significantly more costly than noncapital cases.

In the case of California, data limitations, in part due to the absence of a comprehensive system for tracking county-level data, have stifled efforts to calculate with precision these pre-adjudication costs of capital punishment.89 Accordingly, researchers have had to calculate costs using several sources, some of which vary in accuracy and comprehensiveness. Erickson’s comparative analysis of “middle range” death-eligible cases from Los Angeles County provides one of the most comprehensive tabulations of capital punishment trial costs in California.90 Erickson

85 MINSKER, THE HIDDEN DEATH TAX, supra note 34, at 7; see also CCFAJ, supra note 1, at 42–43.
89 EVERINGHAM, supra note 1, at 1, 6–8.
calculated the costs of capital punishment by compiling financial information from a variety of criminal justice agencies using a sample of nineteen “typical” death-eligible cases involving one or more special circumstance allegations. In the early 1990s, capital cases were estimated to cost $1.2 million more than comparable noncapital death-eligible cases. A detailed breakdown of these specific costs throughout the various stages of the capital punishment process vividly reveals the financial burden that capital cases place on county-level criminal justice systems. At the pretrial stage, the cost differential stems from death qualification of a jury and defense attorney appointments. The prolonged process of death qualification costs the county an additional $56,706 per case compared to the noncapital jury-selection procedure. The complexity of capital cases requires the appointment of specialized defense attorneys at a rate of about $324,665 per case compared to a rate of $78,273 per noncapital case. Comparable estimates for the salary costs of prosecutors, investigators, and expert witnesses could not be calculated. The number of days spent in court is another source of disparity. On average, death penalty cases involve 120 more court days than noncapital cases, at a rate of $3,589 per court day.

C. THE COST–DISCRETION NEXUS

Because prosecutorial discretion in filing special circumstances is so vast in California (in that approximately 87% of first-degree murder cases meet the criteria for one or more special circumstances), the pretrial and trial costs may well exceed most other death penalty jurisdictions. A related consequence of the broad statute is that the threat of capital punishment is much more widespread in California, thus providing a powerful, albeit expensive, tool in the prosecutor’s arsenal.

It appears that a few special circumstance allegations, in particular, account for the majority of death-eligible homicides in the state. The

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91 Id. at 38–39.
92 Id. at 3.
93 Id. at 21–22.
94 Id. at 21. The enhanced cost of death qualification is $56,706 per case (the difference between $68,909 for jury selection in death penalty cases versus $12,203 for non-death penalty cases).
95 Id. at 22.
96 Id. at 21.
97 See CCFAJ, supra note 1, at 18; Shatz & Rivkind, supra note 8, at 1331.
felony-murder special circumstance\(^{98}\) was found in the vast majority of death penalty cases prosecuted in Alameda County\(^9\) and in those appealed statewide.\(^{100}\) In addition, felony-murder was the most common special circumstance filed against death row inmates from 1997 to 2007.\(^{101}\) Felony-murder and other overbroad special circumstances increase the chances of racial bias and error by bolstering prosecutorial discretion.\(^{102}\) For instance, Radelet and Pierce’s analysis of charges filed in Florida homicide cases between 1973 and 1977 indicates that black defendants accused of killing whites are significantly more likely to have their crime “upgraded” from non-felony-murder to felony-murder than other defendant–victim racial combinations.\(^{103}\)

Adding to the problem is that despite California’s overbroad death-eligibility scheme, there is no statutory requirement that prosecutors indicate whether or not they intend to file a death notice.\(^{104}\) Nonetheless, under California Rule of the Court 8.613(b), prosecutors are presumed to be seeking the death penalty in special circumstance cases unless the DA’s office formally indicates otherwise,\(^{105}\) so defense attorneys are required to prepare these cases for capital litigation.

Prior research has largely overlooked the influence of overbroad charging practices on cost outcomes. The few studies that have examined costs at the county level mainly focused on the differential between capital and special circumstance cases, ignoring differences between special circumstance and non-special circumstance cases. The paucity of research on this topic has significant policy implications given Roman et al.’s finding that attorneys spend a substantial amount of time and energy preparing death-eligible cases for capital litigation in which the death penalty is not ultimately sought.\(^{106}\)

Because prosecutors often seek to maximize conviction rates when making charging decisions,\(^{107}\) they may use special circumstance filings as

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98 CAL. PENAL CODE § 190.2(17) (West 2008).
99 Shatz & Rivkind, supra note 8, at 1334–35; Shatz, supra note 18, at 737–45.
100 Shatz, supra note 18, at 738–45.
101 KREITZBERG, supra note 30, at 10.
102 Id. at 48.
104 Abernathy v. Superior Court, 68 Cal. Rptr. 3d 726, 730 n.5 (Ct. App. 2007) (“Subdivision (a)(2) of section 190.9 specifies certain procedures when the prosecutor gives notice of intention to seek the death penalty; however, it does not require such notice.”).
105 CAL. R. CT. 8.613(b).
107 Celesta A. Albonetti, Criminality, Prosecutorial Screening, and Uncertainty: Toward
a tactical tool, broadly filing death-eligible charges at the beginning stages of the process and subsequently deciding which cases will be prosecuted capitaly based on the odds of securing a guilty verdict (and more specifically, a death sentence). This sort of strategic maneuver is advantageous to prosecutors for several reasons. Foremost, by filing at least one special circumstance allegation in a wide range of cases, prosecutors are afforded a considerable amount of flexibility when responding to community sentiment. For instance, prosecutors can file special circumstance allegations during the initial charging stage, and then gauge whether or not public outrage surrounding a particular case warrants the filing of a death notice.

The filing of special circumstance allegations in a wide range of cases may also augment prosecutors’ bargaining power in plea negotiations. The informal structure of plea bargaining allows prosecutors and defense attorneys to formulate several iterations of plea agreements before a consensus is reached between both parties. The recursive nature of this process allows defense attorneys to negotiate the best possible pleas for their clients. In death-eligible cases, however, the negotiation process is severely undercut by the unequal power differential between the defense and prosecution. Defense attorneys’ decisions are often dictated by prosecutors’ ability to leverage aggravating circumstances and a death notice. When a special circumstance allegation is filed, defense attorneys are left with two options—advise their clients to plead guilty or run the risk of advancing to a capital trial by rejecting the plea bargain. The lack of plea options available in death-eligible cases may force a defendant to accept a guilty plea that will result in an LWOP sentence in order to avoid the risk of receiving a death sentence at trial.

Two recent empirical studies demonstrate the potentially coercive nature of plea negotiations in death-eligible cases. Kuziemko used the

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reinstatement of New York State’s capital punishment system in 1995 as a naturalistic experiment of capital plea-bargaining practices. Data on first-degree and second-degree murder cases filed in New York State from 1995 to 2000 was used to examine the effect of capital punishment on a defendant’s propensity to plead guilty. Results indicate that defendants prosecuted in counties that actively sought the death penalty were more likely to plead guilty to their original arraignment charges than defendants prosecuted in non-death penalty counties; that is, defendants charged in active death penalty counties in New York are more likely to accept harsher plea agreements. However, the threat of capital punishment does not appear to increase a defendant’s overall propensity to plead guilty.

Ehrhard’s qualitative analysis of plea-bargaining practices in an unidentified state sheds light on the interactional dynamics involved in capital plea agreements. Results from a series of open-ended interviews with prosecutors and defense attorneys indicate that the death penalty is frequently used to induce guilty pleas. As one defense attorney candidly notes:

> [P]rosecutors “say they don’t” but “do, absolutely” use the threat of death as leverage to induce a plea, this is “one of the most duplicitous parts of the process in my book, when you go in for a plea on a case that is capital eligible or on which a notice has been filed and they require the client to say that I’m pleading knowingly, freely, and voluntarily and ‘no, I haven’t been coerced.’ Bull-shit you haven’t been coerced.”

Another defense attorney claimed that plea bargaining in death-eligible cases rarely involves a sentence of life with the possibility of parole: “I don’t know anybody who pleads to life with parole. It’s always LWOP versus the death penalty.” The majority of defense attorneys noted that the choice between an LWOP sentence and the possibility of advancing to a capital trial led them to advise their clients to plead guilty in order to avoid the death penalty. Many defense attorneys were fully aware of the power differential created by the threat of capital charges, characterizing plea agreements in death-eligible cases as “take it or leave it” endeavors rather than actual “negotiations.” Prosecutors also acknowledged that the threat

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111 Id. at 125–30.
112 Id.
113 See generally Ehrhard, supra note 29, at 313–25 (providing an empirical analysis of this issue).
114 Id.
115 Id. at 316.
116 Id.
117 Id. at 318.
of capital punishment is frequently used to induce a guilty plea, even though nearly all denied ever engaging in such activities.\textsuperscript{118} Ultimately, the unequal power structure created by the capital plea-bargaining process may undermine defendants’ rights regardless of whether or not prosecutors intentionally coerce defendants with the threat of capital charges.

While prosecutors engage in a cost–benefit analysis when deciding how to charge and pursue cases,\textsuperscript{119} the risk of losing in a capital case is mitigated by the fact that death-qualified juries are more conviction-prone than regular criminal juries. Thus, the chances of getting a conviction, particularly in cases in which multiple special circumstances can be filed, are enhanced.\textsuperscript{120} In addition, prosecutors often focus on maximizing their chances of conviction while minimizing the risks of a trial, and thus they do not necessarily consider the financial impact their charging decisions will have on the courts over the long run, even if the case ultimately ends in a plea agreement.\textsuperscript{121}

\textsuperscript{118} Id. at 319–23.
\textsuperscript{119} See generally Albonetti, Criminality, Prosecutorial Screening, and Uncertainty, supra note 107; Albonetti, Prosecutorial Discretion, supra note 107; Landes, supra note 107; Rasmussen et al., supra note 107 (examining the cost–benefit analysis conducted by prosecutors).
\textsuperscript{120} This effect has been empirically demonstrated by at least three factors. First, death qualification excludes minorities and women at disproportionate rates and these demographic factors are correlated with conviction-proneness, in that white men are more conviction-prone than others. Second, the death-qualification process itself biases those subject to it in favor of conviction. Third, support for the death penalty is highly correlated with other attitudes about justice, due process, and crime control, such that death-qualified jurors have lower evidentiary thresholds for proof of guilt, and higher tolerance for false convictions than non-qualified jurors. For a review, see Mona Lynch, The Social Psychology of Capital Cases, in 1 JURY PSYCHOLOGY: SOCIAL ASPECTS OF TRIAL PROCESSES, at 157, 163–65 (Joel D. Lieberman & Daniel A. Krauss eds., 2009). \textit{See generally Joseph W. Filkins et al., An Evaluation of the Biasing Effects of Death Qualification: A Meta-Analytic/Computer Simulation Approach, in THEORY AND RESEARCH ON SMALL GROUPS 153, 161–65 (R. Scott Tindale et al. eds., 1998) (reporting on a small effect size for conviction-proneness overall, and a larger effect size for the exclusion of minorities as a result of death qualification); Craig Haney et al., “Modern” Death Qualification: New Data on Its Biasing Effects, 18 LAW & HUM. BEHAV. 619, 624–30 (1994) (reporting findings on the demographic impacts of death qualification, based on a California sample); William C. Thompson et al., Death Penalty Attitudes and Conviction Proneness: The Translation of Attitudes into Verdicts, 8 LAW & HUM. BEHAV. 95, 106–09 (1984) (reporting on the constellation of attitudes that make death-qualified juries more conviction prone). Relatedly, see Marla Sandys, Stacking the Deck for Guilt and Death: The Failure of Death Qualification to Ensure Impartiality, in AMERICA’S EXPERIMENT WITH CAPITAL PUNISHMENT, supra note 108, at 385, 402–06 (discussing the overinclusion of excludable “automatic death penalty” jurors, who are especially likely to be conviction-prone).
\textsuperscript{121} In some instances, prosecutors consider capital punishment costs when making charging decisions (e.g., Baicker, supra note 32, at 3, 13, and Rupp, supra note 32, at 2758–61), yet in others, they ignore such financial concerns (e.g., Russell Gold, Counties Struggle
II. METHODOLOGICAL FRAMEWORK

This study attempts to assess the potential time-costs and consequences associated with Los Angeles County’s death penalty system by drawing insights from a data set of 7,258 defendants charged with murder (PC § 187) or voluntary manslaughter (PC § 192(a)) between 1996 and 2008. This data set was obtained directly from the Los Angeles County DA’s Office via a public records request. There are two advantages to focusing on Los Angeles County homicide cases. First, the Los Angeles County DA’s Office is the largest prosecutorial agency in the United States, making it an ideal locale for studying the time-costs of capital punishment. Second, Los Angeles County sentences more defendants to death than any other county in California. Approximately 30% of all capital cases in California originate in Los Angeles County.

Because prior research indicates that homicide cases that result in second-degree murder or voluntary manslaughter charges at adjudication are often factually death eligible, we included all homicide cases involving charges of first-degree murder, second-degree murder, and voluntary manslaughter. Homicide cases that were filed by the DA’s office but were later dismissed are excluded from the data set as they do not belong to the sample of interest (i.e., cases actually processed through the court system). In contrast, defendants who were initially charged with murder or voluntary manslaughter but subsequently had these charges downgraded to a lower offense such as involuntary manslaughter are included in the sample. Defendants represent the basic unit of analysis. Defendants tried within a multiple-defendant case are treated as statistically dependent observations. Clustered standard errors were calculated using Stata’s “vce (cluster id)” command to account for “clustering among prosecutors, defense attorneys and judges, all of which might reasonably be related to the cost of a case.”


123 See CONDEMNED INMATE LIST, supra note 22 (this figure was calculated by dividing the number of death-row inmates sentenced in Los Angeles County by the total number of California death-row inmates).

124 See id.

125 Baldus et al., supra note 17, at 160.

126 Id. at 157.

127 Roman et al., Reassessing the Cost of the Death Penalty, supra note 66, at 568; see also LAWRENCE C. HAMILTON, STATISTICS WITH STATA: UPDATED FOR VERSION 10, at 254 (2009); STATACorp, STATA User’s Guide Release 11, at 300–02 (11th ed. 2009) [hereinafter STATACorp].
A. LOGISTIC REGRESSION PREDICTING THE FILING OF A DEATH NOTICE AMONG DEATH-ELIGIBLE CASES

In this section we develop a logistic regression model to examine death-notice filings among death-eligible cases. California’s extensive list of statutorily defined aggravating circumstances provides prosecutors with considerable leeway in determining which cases will become death eligible.\(^{128}\) A similar degree of prosecutorial discretion surrounds the selection of capital cases from the wide range of death-eligible cases. In the absence of statewide standards for the filing of death notices, each DA has developed her own protocol for selecting capital cases.\(^{129}\) This has led to considerable variation in the process of filing special circumstance allegations and death notices.\(^{130}\)

In this context, an important policy question arises: What legally relevant factors do prosecutors use to select capital cases and how does this selection method influence the processing of homicide cases within Los Angeles County’s court system? The filing of a death notice has profound financial implications for prosecution of other criminal cases within the same county;\(^{131}\) therefore, the selection process is particularly relevant to the handling of all homicide cases. Because prosecutors generally seek to maximize their conviction rates and in capital cases they strive to obtain death sentences, it is hypothesized that the special circumstance committee will be more likely to file a death notice in cases containing multiple special circumstance allegations. On the other hand, the odds of a death-notice filing may be higher for multiple special circumstance cases because the special circumstance committee perceives them to be more serious. Measures of case seriousness and criminal history were added to the model in order to test this alternative hypothesis.

B. COX PROPORTIONAL HAZARD REGRESSION PREDICTING TIME-TO-RESOLUTION

The dependent variable analyzed in Models 2–4 is time-to-resolution (measured as the number of calendar days from a case’s filing date to its resolution date).\(^{132}\) For pending cases, time-to-resolution is measured as the
The number of calendar days from the filing date to the last date in the data set (November 7, 2008).\textsuperscript{133} The use of time-to-resolution as a proxy measure for cost is justified on several grounds. Foremost, county-level financial data on capital cases is often unreliable.\textsuperscript{134} In addition, a large proportion of the cost differential between capital and noncapital homicide cases stems from the fact that capital cases simply take longer to reach resolution.\textsuperscript{135} According to Roman et al.: “The majority (70\%) of the cost differential between a death-notice and a non-death-notice case occurs during the trial phase. This difference is due to a greater number of pre-trial motions, longer and more intensive \textit{voir dire}, longer trials and a greater amount of general preparation time.”\textsuperscript{136} Using time-to-resolution as a proxy measure for cost also provides methodological advantages. Estimates based on a small sample of “average” capital cases likely suffer from measurement error due to the fact that criminal justice officials find it difficult to accurately assess which cases are “typical.”\textsuperscript{137} Therefore, models using a time-to-resolution dependent variable likely produce more reliable estimates of the potential cost differential between death-eligible and non-death-eligible cases than those based on a small sample of “average” cases.

Two hypotheses regarding the time-to-resolution measure were derived from the extant literature. As previously noted, the implementation

\begin{itemize}
  \item \textsuperscript{133} Cases filed on the last date of data collection (November 7, 2008) were coded as right-censored and given a time-to-resolution value of 1, since each defendant “survived” at least one day.
  \item \textsuperscript{134} CCFAJ, supra note 1, at 39, 96–98; EVERINGHAM, supra note 1, at 3–4; Letter from Natasha Minsker, supra note 15, at 4–6.
  \item \textsuperscript{136} ROMAN ET AL., \textsc{Research Report}, supra note 67, at 30. The time-to-resolution measure represents a critical component of most cost studies. See \textit{id.} at 18. For example, Roman and colleagues calculated costs using the following formula: “Cost = Price of unit of input X Quantity of inputs.” \textit{Id.} According to this formula, price and quantity are calculated separately such that cost is defined as the “price of an hour of an attorney’s time . . . multiplied . . . by the number of hours spent by that attorney in each stage of case processing.” \textit{Id.} Likewise, Miethe calculates the capital costs as the product of attorney wages and attorney hours spent preparing a particular case. MIETHE, supra note 135, at 8–9. Our data does not contain a breakdown of the time spent during each phase of the case processing, and it is thus not possible to calculate the costs associated with various stages of the pretrial and trial processes.
  \item \textsuperscript{137} EVERINGHAM, supra note 1, at 5.
\end{itemize}
of procedural safeguards in capital cases (e.g., appointment of special
counsel, death qualification, additional motions, etc.) dramatically increases
the amount of time devoted to pretrial investigations and litigation
efforts. As such, it is hypothesized that capital cases will take
significantly longer to reach resolution than noncapital cases. Roman et
al.’s survey results suggest that special circumstance cases take longer to
reach resolution than non-special circumstance cases. In addition,
California Rule of the Court 8.613(b) requires that defense attorneys
prepare special circumstance cases for the possibility of capital
prosecution. Accordingly, we predict that special circumstance cases
will take significantly longer to reach resolution than non-special
circumstance cases.

Cox Proportional Hazard (PH) regression was used to estimate the
effect of covariates on time-to-resolution. The main advantage of Cox PH
regression over parametric survival analysis techniques (exponential,
Weibull, gamma, etc.) is that it does not require specification of the baseline
hazard rate, thereby minimizing the possibility of misspecification with
regard to the baseline rate. In comparison to Ordinary Least Squares
regression, Cox PH regression more effectively addresses non-normality in
the outcome variable as well as censoring. Cox PH regression produces
coefficient estimates in the form of a hazard ratio; values larger than 1
imply an increase in the hazard (and thus a decrease in survival time), while
hazard ratios less than 1 indicate a decrease in the hazard rate (and thus an
increase in survival time). Hazard ratios can also be interpreted as a
percentage change in the hazard rate using the following formula: \[ \exp \beta(x_i = X1) - \exp \beta(x_i = X2) / \exp \beta(x_i = X2) \] * 100.

C. INDEPENDENT VARIABLES

In order to facilitate policy-relevant comparisons between various types
of homicide cases, we use several measures of death penalty status and
death eligibility. The main predictors of interest for Models 2–4 were
dichotomously coded as follows: (a) capital case (1 = death notice filed and
0 = no death notice filed); (b) special circumstance case (1 = at least one

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138 CCFAJ, supra note 1, at 22–23; ROMAN ET AL., RESEARCH REPORT, supra note 67, at 9–15; Alarcón & Mitchell, supra note 21, at S75–S78; Erickson, supra note 90, at 11.
139 Roman et al., Reassessing the Cost of the Death Penalty, supra note 66, at 569–71.
140 See supra text accompanying note 105.
141 JANET M. BOX-STEFFENSMEIER & BRADFORD S. JONES, EVENT HISTORY MODELING: A
142 Id. at 16–18.
143 Id. at 50, 59–61.
144 See id. at 60.
special circumstance but no death notice filed and 0 = no special circumstance filed); (c) single special circumstance case (1 = one special circumstance but no death notice filed and 0 = no special circumstance filed); and (d) multiple special circumstance case (1 = two or more special circumstances but no death notice filed and 0 = no special circumstance filed). For Model 1, the multiple special circumstance variable was coded in a slightly different manner (1 = two or more special circumstances filed and 0 = single special circumstance filed).

Models 1–4 utilize many of the same independent variables because measures of case complexity and offense severity are likely related to both the filing of a death notice and time-to-resolution. In general, cases involving serious offenses (e.g., multiple counts, sentencing enhancements, etc.) are more complex to the extent that they require additional procedural safeguards and greater logistical coordination between criminal justice agencies (e.g., courts, prosecutors, etc.). Greater case complexity, in turn, requires that attorneys dedicate additional time to pretrial investigative work and the filing of motions at trial. Measures of complexity and offense severity are included to help rule out alternative explanations for observed differences in the probability of a death-notice filing and time-to-resolution hazard rate. The number of criminal counts was logarithmically transformed to model its diminishing effect. Cases involving multiple criminal counts likely contain more witnesses and evidentiary exhibits at trial, thereby requiring additional pretrial preparation and motions at trial. Likewise, it would seem that cases involving numerous counts are more likely to elicit public outrage, and thus have a higher probability of receiving a death notice.

The following sentencing enhancements were added to Models 1–4 to control for case seriousness/complexity: prior prison term sentencing enhancement (PC § 667.5(a)); habitual offender sentencing enhancement (PC § 667(a)(1)); and gang sentencing enhancement (PC § 186.22(b)). Cases with multiple defendants may take longer to reach resolution because they require greater logistical coordination between various criminal justice actors and agencies. In contrast, multiple defendant variables were excluded from Model 1 because there is no apparent reason why the presence of multiple defendants would be related to the probability of receiving a death notice. Lastly, defendant gender (1 = male and 0 = female) was included in Model 1.145 Defendant gender was excluded from Models 2–4 because it would logically seem to have little impact on the

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145 The data set included no other demographic data, so we were unable to control for factors that may well be important to prosecutorial decisionmaking, including defendant and victim race. See generally Pierce & Radelet, The Impact of Legally Inappropriate Factors, supra note 31, at 19–25 (analyzing race as a factor in prosecutorial decisionmaking).
Organizational, political, and caseload factors are relevant to both the filing of a death notice and time-to-resolution. To control for unobserved annual differences in organizational factors, a series of dummy variables were included for each file-year from 1997 to 2008 (the reference file-year category is 1996). Cases filed in years with a heavy caseload may take longer to reach resolution due to backlogs in the courts. Similarly, cases prosecuted in file-years with a high homicide rate might be either less likely to involve a death notice due to resource drain or more likely to involve a death notice due to political pressure stemming from a high homicide rate.

D. MISSING DATA

A total of 531 cases (7% of the sample) are missing allegation information and eleven defendants had no recorded gender. Among these defendants with missing allegation information, twenty-four were prosecuted capitally. In addition, twelve capital defendants had allegation information but were not charged with at least one special circumstance allegation. The DA’s office was contacted several times regarding this matter, but officials did not comment on the error. The original data set was left intact because the DA’s office was unwilling to provide additional assistance in locating the source of this error. In other words, despite the absence of allegation information, these thirty-six defendants were coded as capital defendants charged with one special circumstance. This is a reasonable approach given that capital cases are defined by the presence of at least one special circumstance allegation and the filing of a death notice.\footnote{CAL. PENAL CODE §§ 190.2, 190.4 (West 2008).} In contrast, the number of special circumstance allegations for each of these thirty-six defendants was coded as missing because there is no reliable method for determining whether or not multiple special circumstance allegations were filed.

Multiple imputations were used to fill in missing allegation and gender information. The following binary variables were imputed ten times using Stata’s “mi impute mvn” command: single special circumstance case, multiple special circumstance case, prior prison term sentencing enhancement, habitual offender sentencing enhancement, gang sentencing enhancement, and defendant gender. Predictor variables in the imputation equation included the following: time-to-resolution, death penalty case, two defendants, three or more defendants, file-years 1997 through 2008, and pending case. A second equation using the same predictors was used to multiply impute the special circumstance variable ten times because it was collinear with measures regarding the number of special circumstances.
(single vs. multiple). Following the advice of StataCorp, we rounded down imputed values smaller than 0.50 to 0, while imputed values larger than 0.50 were rounded up to 1. Accordingly, the final imputed variables analyzed in Models 1–4 were dichotomously coded. The substantive results of Models 1–4 are virtually the same when defendants with missing information are excluded, suggesting that these observations do not bias coefficient estimates (results not shown). Results from the multiply imputed versions of Models 1–4 are presented below because they yield more robust estimates due to the increase in statistical power stemming from a larger sample size.

E. RESULTS

Summary statistics displayed in Table 1 indicate that death-eligible cases tend to exhibit greater complexity along a number of dimensions. The mean/median time-to-resolution is considerably longer for death-eligible defendants compared to non-death-eligible defendants. Death-eligible cases also have a larger number of defendants and criminal charges. Sentencing enhancements for a prior prison term and habitual criminal history are more likely to be filed in death-eligible cases. Non-special circumstance cases have the largest percentage of sentencing enhancements for gang activity. A large proportion of death-eligible cases contain a felony-murder special circumstance (PC § 190.2(a)(17)) as either one of many aggravating circumstances or as the sole aggravating circumstance. However, capital cases are less likely to contain a felony-murder special circumstance as the only aggravating circumstance. Given prior research on prosecutorial discretion regarding the “upgrading” and “downgrading” of felony-murder charges, these patterns suggest that deputy DAs use felony-murder allegations to increase the pool of death-eligible cases so that at a later point, they can more selectively decide which cases will be prosecuted capitaly. Lastly, capital cases are more likely than special circumstance cases to involve multiple special circumstance allegations.

Table 1
Summary Statistics by Case Type (N = 7258)

<table>
<thead>
<tr>
<th>Case Type</th>
<th>Non-Special Circumstance</th>
<th>Special Circumstance</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Name</td>
<td>Mean (Median)</td>
<td>Std. Dev.</td>
<td>Mean (Median)</td>
</tr>
<tr>
<td>Time-to-Resolution (in Days)</td>
<td>497.26 (398)</td>
<td>426.15</td>
<td>642.93 (550)</td>
</tr>
<tr>
<td>Multiple Special Circumstance a</td>
<td>—</td>
<td>—</td>
<td>0.26</td>
</tr>
<tr>
<td>Log (Number of Counts)</td>
<td>1.22</td>
<td>0.49</td>
<td>1.46</td>
</tr>
<tr>
<td>Two Defendants</td>
<td>0.23</td>
<td>0.42</td>
<td>0.3</td>
</tr>
<tr>
<td>Three or More Defendants</td>
<td>0.13</td>
<td>0.34</td>
<td>0.26</td>
</tr>
<tr>
<td>Gang Enhancement a</td>
<td>0.37</td>
<td>0.48</td>
<td>0.32</td>
</tr>
<tr>
<td>Habitual Offender Enhancement a</td>
<td>0.12</td>
<td>0.32</td>
<td>0.12</td>
</tr>
<tr>
<td>Prior Prison Enhancement a</td>
<td>0.14</td>
<td>0.35</td>
<td>0.12</td>
</tr>
<tr>
<td>Male Defendant a</td>
<td>0.93</td>
<td>0.25</td>
<td>0.93</td>
</tr>
<tr>
<td>Felony-Murder Charge a</td>
<td>—</td>
<td>—</td>
<td>0.55</td>
</tr>
<tr>
<td>Felony-Murder Charge as Only Special Circumstance a</td>
<td>—</td>
<td>—</td>
<td>0.41</td>
</tr>
<tr>
<td>Pending Case</td>
<td>0.13</td>
<td>0.33</td>
<td>0.14</td>
</tr>
</tbody>
</table>

a. Some observations are missing. For details on the missing data strategy, see Part II.D.

Note: Std. Dev. = standard deviation. Numbers are rounded to the second decimal place.
These figures have implications for detention costs associated with homicide cases. Information obtained on a sample of three capital defendants housed in the Los Angeles County jail during 2010 was used to calculate detention costs. Financial records obtained from the California Department of Finance through a public records request indicate that it cost $77.17 per day to detain a capital inmate in the Los Angeles County jail during 2010. Based on the median time-to-resolution displayed in Table 1, the typical detention costs for each case type are as follows: (1) non-special circumstance cases = $30,646 ($77 x 398 days); special circumstance = $42,350 ($77 x 550 days); capital case = $68,376 ($77 x 888 days). These estimates represent just one crude indicator of the cost differential between capital and noncapital cases. In fact, these estimates are likely conservative because they do not include additional travel costs borne each day the defendant is transported between the county jail and courthouse as part of the trial process. In addition to detention costs, there are a myriad of factors that make capital cases more expensive than noncapital cases, including the appointment of additional attorneys and investigators, the death-qualification process, and extra court appearances. Capital cases each require the appointment of two defense attorneys and investigators hired to gather information on a defendant’s life history as mitigating evidence. The jury-selection process involved in capital cases is more complicated than that in noncapital cases, requiring that each juror be death qualified. Attempts to calculate these additional costs were stymied by the DA’s refusal to provide us with financial records for capital cases.

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149 The median, rather than the mean, is used to calculate detention costs because it is more resistant to extreme observations and pending cases. See Mieth, supra note 135, at 1.

150 Alarcón & Mitchell, supra note 21, at S75–S79; see also, e.g., Carter et al., supra note 17, at 16; Roman et al., research report, supra note 67, at 30; Haney, The Social Context of Capital Murder, supra note 87, at 548 (observing that the capital punishment process is “costly”); Letter from Natasha Minsker, supra note 15, at 6, 8–9 (considering distinguishing factors of capital cases that may increase costs, including delay in deciding whether to pursue the death penalty and relative uninvolvment of defense counsel); cf. Lockett v. Ohio, 438 U.S. 586, 608 (1978) (holding that capital defendants have the constitutional right to present evidence of relevant mitigating factors).
Table 2

<table>
<thead>
<tr>
<th>File-Year</th>
<th>Defs.</th>
<th>DE Defs.</th>
<th>(Def.s) (DE Defs.)</th>
<th>Capital Defs.</th>
<th>(Capital Defs.) (DE Defs.)</th>
<th>Condemned Defs.</th>
<th>(Condemned Defs.) (Capital Defs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>722</td>
<td>219</td>
<td>30%</td>
<td>45</td>
<td>21%</td>
<td>24</td>
<td>53%</td>
</tr>
<tr>
<td>1997</td>
<td>609</td>
<td>187</td>
<td>31%</td>
<td>47</td>
<td>25%</td>
<td>15</td>
<td>32%</td>
</tr>
<tr>
<td>1998</td>
<td>592</td>
<td>210</td>
<td>35%</td>
<td>33</td>
<td>16%</td>
<td>12</td>
<td>36%</td>
</tr>
<tr>
<td>1999</td>
<td>499</td>
<td>157</td>
<td>31%</td>
<td>28</td>
<td>18%</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>2000</td>
<td>474</td>
<td>155</td>
<td>33%</td>
<td>17</td>
<td>11%</td>
<td>8</td>
<td>47%</td>
</tr>
<tr>
<td>2001</td>
<td>539</td>
<td>127</td>
<td>24%</td>
<td>15</td>
<td>12%</td>
<td>6</td>
<td>40%</td>
</tr>
<tr>
<td>2002</td>
<td>587</td>
<td>166</td>
<td>28%</td>
<td>11</td>
<td>07%</td>
<td>7</td>
<td>64%</td>
</tr>
<tr>
<td>2003</td>
<td>518</td>
<td>158</td>
<td>31%</td>
<td>8</td>
<td>05%</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>2004</td>
<td>584</td>
<td>189</td>
<td>32%</td>
<td>43</td>
<td>23%</td>
<td>16</td>
<td>37%</td>
</tr>
<tr>
<td>2005</td>
<td>581</td>
<td>157</td>
<td>27%</td>
<td>21</td>
<td>13%</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>2006</td>
<td>571</td>
<td>123</td>
<td>22%</td>
<td>14</td>
<td>11%</td>
<td>5</td>
<td>36%</td>
</tr>
<tr>
<td>Avg.</td>
<td>570.55</td>
<td>168</td>
<td>29%</td>
<td>25.64</td>
<td>15%</td>
<td>10.09</td>
<td>42%</td>
</tr>
<tr>
<td>2007</td>
<td>597</td>
<td>133</td>
<td>22%</td>
<td>6</td>
<td>0.5%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2008</td>
<td>385</td>
<td>76</td>
<td>20%</td>
<td>3</td>
<td>0.4%</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

a. Some observations are missing. For details on the missing data strategy, see Part II.D.
b. File years 2007–2008 are excluded from mean calculations due to the large number of pending cases.

Notes: Percentages are rounded to the second decimal place. Defs. = Defendants; DE Defs. = Death-eligible defendants (capital and special circumstance cases); Capital Defs. = Capital defendants; Condemned Defs. = Defendants sentenced to death.

Table 2 indicates that the DA’s office files special circumstance allegations in a wide range of homicide cases. On average, special circumstance allegations were filed in approximately 29% of all homicide cases between 1996 and 2006. This suggests that the DA’s office broadly files special circumstance allegations during the beginning stages of the charging process, deciding later which cases will be prosecuted capitally. Among defendants charged with one or more special circumstance allegations, about 15% were prosecuted capitally. Roughly 42% of capital cases resulted in a death sentence during the period of analysis, and thus valuable resources were spent preparing the other 58% of death penalty
cases for capital litigation that did not result in a death sentence. Applying Erickson’s\textsuperscript{151} cost estimates to the figures in Table 2, without adjusting for inflation, suggests that between 1996 and 2006, Los Angeles County spent upwards of $338 million prosecuting capital cases ($1.2 million per death penalty case multiplied by 282 death penalty cases). Of this $338 million, roughly $205.2 million was spent prosecuting capital cases that did not result in death sentences ($1.2 million per capital case multiplied by 171 capital cases that did not result in a death sentence). These estimates should be interpreted cautiously given Erickson’s “average” case method;\textsuperscript{152} in other words, figures are indicative of the general resource drain imposed by capital cases rather than a precise estimate of such costs. Although these crude cost estimates are subject to a high degree of measurement error, they vividly demonstrate the financial burden that capital cases place on Los Angeles County’s budget.

Taken together, these summary statistics illustrate two ways in which Los Angeles County’s charging scheme drains resources from the criminal justice system: (1) preparing special circumstance cases for capital litigation even though a death notice is not ultimately sought in the vast majority of cases (85%); and (2) prosecuting capital cases in which a majority (58%) do not result in a death sentence.

Model 1 supports the hypothesis that the special circumstance committee seeks to maximize its conviction rate by seeking the death penalty in multiple special circumstance cases. Compared to cases involving a single special circumstance allegation, the odds of a death-notice filing are 4.73 times higher for multiple special circumstance cases. A defendant’s criminal history and the seriousness of the crime being prosecuted also play a role in the decision to file a death notice. The odds of a death-notice filing are 2.25 times higher for defendants charged with a habitual-offender sentencing enhancement\textsuperscript{153} compared to defendants who were not charged with a habitual-offender enhancement.
Table 3
Logistic Regression Predicting a Death-Notice Filing Among Death-Eligible Cases (N = 2057)

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Odds Ratio</th>
<th>Robust SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Special Circumstance Case</td>
<td>4.733**</td>
<td>0.192</td>
</tr>
<tr>
<td>Male Defendant</td>
<td>1.398</td>
<td>0.35</td>
</tr>
<tr>
<td>Log (Number of Counts)</td>
<td>2.166**</td>
<td>0.172</td>
</tr>
<tr>
<td>Prior Prison Enhancement</td>
<td>1.358</td>
<td>0.234</td>
</tr>
<tr>
<td>Habitual Offender Enhancement</td>
<td>2.251**</td>
<td>0.228</td>
</tr>
<tr>
<td>Gang Enhancement</td>
<td>1.072</td>
<td>0.239</td>
</tr>
<tr>
<td>File-Year 1997(^b)</td>
<td>1.104</td>
<td>0.316</td>
</tr>
<tr>
<td>File-Year 1998</td>
<td>0.574</td>
<td>0.346</td>
</tr>
<tr>
<td>File-Year 1999</td>
<td>0.785</td>
<td>0.415</td>
</tr>
<tr>
<td>File-Year 2000</td>
<td>0.291*</td>
<td>0.548</td>
</tr>
<tr>
<td>File-Year 2001</td>
<td>0.317*</td>
<td>0.551</td>
</tr>
<tr>
<td>File-Year 2002</td>
<td>0.172**</td>
<td>0.542</td>
</tr>
<tr>
<td>File-Year 2003</td>
<td>0.12**</td>
<td>0.578</td>
</tr>
<tr>
<td>File-Year 2004</td>
<td>0.749</td>
<td>0.34</td>
</tr>
<tr>
<td>File-Year 2005</td>
<td>0.455</td>
<td>0.48</td>
</tr>
<tr>
<td>File-Year 2006</td>
<td>0.3*</td>
<td>0.515</td>
</tr>
<tr>
<td>File-Year 2007</td>
<td>0.095**</td>
<td>0.583</td>
</tr>
<tr>
<td>File-Year 2008</td>
<td>0.113**</td>
<td>0.824</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.03**</td>
<td>0.469</td>
</tr>
</tbody>
</table>

Adjusted Pseudo $R^2$ = 0.153
*p < .05, **p < .01

b. Reference = 1996 for all file-year variables.
Notes: SE = standard error. Sample includes death-eligible cases only (i.e., those containing at least one special circumstance allegation). Estimates are rounded to the third decimal place. Adjusted Pseudo $R^2$ was derived using the “mibeta” command in Stata. For all dichotomous variables, 1 represents the presence of the relevant category (e.g., 1 = gang enhancement and 0 = no gang enhancement).
A one-unit increase in the log number of criminal counts charged against a defendant corresponds to a 2.16 increase in the odds ratio of a death-notice filing. Several file-year variables are significant at $\alpha = 0.05$: 2000–2003 and 2006–2008. This may indicate that the special circumstance committee takes agency-level caseload factors into account when deciding whether or not to seek the death penalty. Conversely, this pattern could be attributable to political (e.g., DA election cycles) or personnel (e.g., changes in the number of deputy DAs, changes in personnel demographics, etc.) factors. Special circumstance cases filed after 1999 are less likely to result in a death notice than special circumstance cases filed in 1996. This pattern may be due to the large number of homicides prosecuted in the late 1990s.¹⁵⁴

Table 4

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hazard Ratio</td>
<td>Robust SE</td>
<td>Hazard Ratio</td>
</tr>
<tr>
<td>Capital Case</td>
<td>0.459**</td>
<td>0.059</td>
<td>0.439**</td>
</tr>
<tr>
<td>Special Circumstance Case</td>
<td>——</td>
<td>——</td>
<td>0.747**</td>
</tr>
<tr>
<td>Single Special Circumstance Case</td>
<td>——</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>Multiple Special Circumstance Case</td>
<td>——</td>
<td>——</td>
<td>——</td>
</tr>
<tr>
<td>Prior Prison Enhancement</td>
<td>1.027</td>
<td>0.044</td>
<td>1.114</td>
</tr>
<tr>
<td>Habitual Offender Enhancement</td>
<td>0.92</td>
<td>0.044</td>
<td>1.009</td>
</tr>
<tr>
<td>Gang Enhancement</td>
<td>1.001</td>
<td>0.036</td>
<td>1.039</td>
</tr>
<tr>
<td>Log (Number of Counts)</td>
<td>0.921**</td>
<td>0.026</td>
<td>1.026</td>
</tr>
</tbody>
</table>

¹⁵⁴ See supra Table 2.
<table>
<thead>
<tr>
<th>Two Defendants&lt;sup&gt;c&lt;/sup&gt;</th>
<th>0.909**</th>
<th>0.036</th>
<th>1.031</th>
<th>0.036</th>
<th>0.963</th>
<th>0.037</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three or More Defendants&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.742**</td>
<td>0.047</td>
<td>0.872**</td>
<td>0.047</td>
<td>0.802**</td>
<td>0.047</td>
</tr>
<tr>
<td>File-Year 1997&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.199*</td>
<td>0.075</td>
<td>1.388*</td>
<td>0.076</td>
<td>1.186</td>
<td>0.077</td>
</tr>
<tr>
<td>File-Year 1998</td>
<td>0.991</td>
<td>0.072</td>
<td>1.168</td>
<td>0.073</td>
<td>1.013</td>
<td>0.072</td>
</tr>
<tr>
<td>File-Year 1999</td>
<td>0.904</td>
<td>0.071</td>
<td>1.063</td>
<td>0.072</td>
<td>0.92</td>
<td>0.072</td>
</tr>
<tr>
<td>File-Year 2000</td>
<td>0.823*</td>
<td>0.075</td>
<td>0.964</td>
<td>0.077</td>
<td>0.832*</td>
<td>0.077</td>
</tr>
<tr>
<td>File-Year 2001</td>
<td>0.788**</td>
<td>0.072</td>
<td>0.894*</td>
<td>0.073</td>
<td>0.778**</td>
<td>0.073</td>
</tr>
<tr>
<td>File-Year 2002</td>
<td>0.791**</td>
<td>0.069</td>
<td>0.911**</td>
<td>0.069</td>
<td>0.796**</td>
<td>0.069</td>
</tr>
<tr>
<td>File-Year 2003</td>
<td>0.773**</td>
<td>0.074</td>
<td>0.908**</td>
<td>0.074</td>
<td>0.79**</td>
<td>0.074</td>
</tr>
<tr>
<td>File-Year 2004</td>
<td>0.653**</td>
<td>0.067</td>
<td>0.743**</td>
<td>0.068</td>
<td>0.654**</td>
<td>0.068</td>
</tr>
<tr>
<td>File-Year 2005</td>
<td>0.625**</td>
<td>0.07</td>
<td>0.716**</td>
<td>0.07</td>
<td>0.623**</td>
<td>0.07</td>
</tr>
<tr>
<td>File-Year 2006</td>
<td>0.709**</td>
<td>0.072</td>
<td>0.8**</td>
<td>0.072</td>
<td>0.705**</td>
<td>0.072</td>
</tr>
<tr>
<td>File-Year 2007</td>
<td>0.633**</td>
<td>0.094</td>
<td>0.753**</td>
<td>0.093</td>
<td>0.637**</td>
<td>0.093</td>
</tr>
<tr>
<td>File-Year 2008</td>
<td>0.804</td>
<td>0.182</td>
<td>1.135</td>
<td>0.182</td>
<td>0.805</td>
<td>0.182</td>
</tr>
</tbody>
</table>

*<sup>p</sup> < .05, **<sup>p</sup> < .01

a. Reference for Model 2 = Noncapital cases (special circumstance and non-special circumstance cases). Reference for Models 3–4 = Non-special circumstance case.

b. Reference = Non-special circumstance case.


d. Reference = 1996 for all file-year variables.

Notes: SE = standard error. The Breslow method was used for ties. Estimates are rounded to the third decimal place. For all dichotomous variables, 1 represents the presence of the relevant category (e.g., 1 = gang enhancement and 0 = no gang enhancement).
Before estimating Cox PH regression models, we nonparametrically analyzed differences in the survival functions for key variables using stratified Wilcoxon log-rank tests. The following covariates were used for stratification purposes: habitual offender enhancement, prior prison enhancement, number of counts, two defendants, three or more defendants, and file-years (1996–2008). After controlling for these strata variables, results from the stratified Wilcoxon log-rank tests indicate that there are significant time-to-resolution differences between death-eligible and non-death-eligible defendants: capital case vs. noncapital case ($\chi^2 = 44.17, p < 0.01$); capital case vs. non-special circumstance case ($\chi^2 = 83.69, p < 0.01$); special circumstance case vs. non-special circumstance case ($\chi^2 = 40.36, p < 0.01$); single special circumstance and multiple special circumstance cases vs. non-special circumstance cases ($\chi^2 = 44.56, p < 0.01$). Although log-rank tests are nonparametric, they provide useful summary information about the adjusted relationship between death eligibility and time-to-resolution that does not rely on the proportional hazards assumption.

Models 2–4 indicate that death-eligible cases take significantly longer to reach resolution than non-death-eligible cases. After controlling for

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155 Stratified Wilcoxon log-rank tests were conducted using non-imputed data because Stata does not allow the “sts test” command to be used with imputed data. Stata omitted some observations from the log-rank tests because the strata for the file-year and number of counts variables had too few failures. The substantive conclusions of the Wilcoxon log-rank tests are nearly the same when these variables are not used for stratification purposes.

156 Box-Steffensmeier & Jones, supra note 141, at 131–37 (2004); David Machin et al., Survival Analysis: A Practical Approach 149 (2d ed. 2006).

157 Schoenfeld residual analyses of Models 2–4 using non-imputed data indicate that the proportional hazards assumption is violated for several variables, including the following covariates of interest: capital case, special circumstance case, single special circumstance case, and multiple special circumstance case. These diagnostic results are not surprising given that nonproportionality is commonplace in many social science fields. See Box-Steffensmeier & Jones, supra note 141, at 132, 136; see also Janet M. Box-Steffensmeier & Christopher J. Zorn, Duration Models and Proportional Hazards in Political Science, 45 Am. J. Pol. Sci. 972, 972 (2001); Judith D. Singer & John B. Willett, It’s About Time: Using Discrete-Time Survival Analysis to Study Duration and the Timing of Events, 18 J. Educ. Stat. 155, 186 (1993); John B. Willett et al., The Design and Analysis of Longitudinal Studies of Development and Psychopathology in Context: Statistical Models and Methodological Recommendations, 10 Dev. & Psychopathology 395, 421 (1998). Despite these indicators of nonproportionality, we present estimates from the Cox PH regression below because they are most pertinent to our main research question: Do death-eligible defendants take significantly longer to advance through the court system than non-death-eligible defendants? Cox PH regression estimates the average effect of covariates over time, thereby providing a parsimonious picture of the relationship between death eligibility and time-to-resolution. Box-Steffensmeier & Jones, supra note 141, at 131–37; Machin et al., supra note 156, at 149; Box-Steffensmeier & Zorn, supra, at 974–75. In this regard, as Machin and colleagues note, a standard Cox PH model may be preferable to a Cox PH
case complexity and file-year effects, capital cases take 54% longer to reach resolution than comparable noncapital cases (special circumstance and non-special circumstance) (see Model 2). Cases involving one or more special circumstance allegations take 25% longer to reach resolution than those without a special circumstance (see Model 3). In other words, even when a death-eligible case is not prosecuted capitally, the filing of one or more special circumstances significantly increases the time-to-resolution by 25%. The filing of multiple special circumstances also increases survival time. According to Model 4, cases with a single special circumstance take 25% longer to reach resolution than non-special circumstance cases, whereas cases involving two or more special circumstances take 42% longer to reach resolution than those without a special circumstance.

In addition to death eligibility, several measures of case complexity and organizational capacity significantly predict time-to-resolution. Cases involving three or more defendants (Models 2–4) and those with two defendants (Model 2) have a lower hazard ratio than single-defendant cases. Contrary to our hypotheses regarding case characteristics, only one measure of offense severity was statistically significant—log (number of counts) in Model 2. Many of the hazard ratios for file-years 2000 to 2007 are significant and less than one. This pattern could possibly be attributed to the large number of cases filed from 1996 to 1998 (see Table 2 above). The large influx of cases filed from 1996 to 1998 may have created a backlog in the court system that dramatically slowed down the time-to-resolution of subsequent cases. In light of the large standard error associated with file-year 2008, the hazard ratio for this variable is likely nonsignificant due to the large number of pending cases filed in 2008.

III. DISCUSSION

These findings shed light on charging practices and their efficiency costs in Los Angeles County. Summary statistics demonstrate that prosecutors broadly file special circumstance allegations, deciding later which cases will be prosecuted capitally. Results from Model 1 support our hypothesis that the special circumstance committee seeks to maximize the

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model with time interactions that addresses issues of nonproportionality if temporal changes in the effect of covariates are not central to the analysis:

If the PH [proportional hazard] assumption is not valid in the data, one may use ‘time-varying covariates’ in the Cox model to capture the non-PH . . . . However, the violation of this [proportional hazard] assumption is not necessarily unacceptable. To assume PH is essentially to estimate the effect of an independent variable averaged over time and ignore the possibility that the effect may vary over time. A simple model based on the assumption of PH is sometimes preferable to a more ‘correct’ but complex model if the added complexity does not identify features of scientific or clinical significance.

MACHIN ET AL., supra note 156, at 149.
odds of receiving a conviction by selectively filing death notices in cases involving multiple special circumstance allegations. This pattern remains robust even after controlling for other measures of criminal history and seriousness of the offense.

Findings from Models 2–4 highlight the time-costs associated with the prosecution of capital cases. As hypothesized, capital cases take significantly longer to reach resolution after controlling for measures of case complexity and crime seriousness, and as a result resources are drained from criminal justice agencies at the county level. Results confirm prior bivariate research indicating that capital cases are more costly and time-consuming at the pretrial and trial stages than similar noncapital cases. Our findings also indicate that the time-cost differential between death-eligible and non-death-eligible cases is a function of the intensity of resources required to process capital and special circumstance cases rather than an artifact of omitted variable bias resulting from the use of bivariate techniques. In other words, these estimates illustrate that the effect of death eligibility on time-to-resolution is robust across a range of contexts and methodological approaches, thereby corroborating prior bivariate estimates.

Models 2–4 also underscore the importance of assessing infrastructure costs associated with Los Angeles County’s death penalty system. Special circumstance cases take significantly longer to reach resolution even when prosecutors decline to seek the death penalty. Although it is not possible to translate the coefficients from Models 2–4 into precise dollar amounts, these results clearly highlight the time-costs associated with maintaining the death penalty at the county level even when no death sentences are actively being sought. Taken together, results from Models 1–4 suggest that a large proportion of these costs are derived from single special circumstance cases that had a low probability of ever being selected by the special circumstance committee for capital prosecution. The costs of preparing special circumstance cases for capital litigation are compounded by the fact that two attorneys and two investigators must be assigned to death-eligible cases. The indirect costs associated with special circumstance allegations are often overlooked by death penalty cost studies, but can dramatically affect the operating budgets of criminal justice agencies at the county level. It is clear that unrestrained charging decisions place a financial burden on the legal system given the large number of special circumstance

158 See CCFAJ, supra note 1, at 34–43; Alarcón & Mitchell, supra note 21, at S41, S75; Garey, supra note 62, at 1269; Erickson, supra note 90, at 3.
159 CCFAJ, supra note 1, at 42; MINSKER, THE HIDDEN DEATH TAX, supra note 34, at 7, 32.
160 See Gradess & Davies, supra note 55, at 409–11; Baicker, supra note 32, at 3; Rupp, supra note 32, at 2754.
cases filed each year.

These results challenge the California District Attorneys Association’s (CDAA) claim that the use of capital plea bargaining lowers the costs of prosecuting homicide cases by reducing the amount of time spent handling cases at the trial and postconviction stages. During the August 17, 2011, meeting of the California Assembly Appropriations Committee, representatives from the CDAA went on the record in opposition to state Senator Hancock’s death penalty abolition bill, arguing that if there were no death penalty, prosecutors would lose the “plea bargain effect” because no one would plead guilty to murder. According to the CDAA, the abolition of the death penalty would likely increase the costs of prosecuting homicide cases by encouraging defendants to go to trial when they otherwise would have pleaded guilty to LWOP or a lesser charge in an effort to avoid the possibility of obtaining a death sentence. The CDAA argues that this increase in the rate of homicide trials would, in turn, lead to the allocation of additional resources to homicide appeals. While this cost–benefit analysis assumes that the costs of prosecuting death penalty cases will be offset by increases in the number of potentially death-eligible cases that result in plea agreements, it does not account for the considerable amount of resources wasted preparing special circumstance cases for capital litigation that will not result in a death-notice filing. Models 3 and 4 suggest that the overbroad charging practices may increase the costs of prosecution, with noncapital special circumstance cases taking significantly longer to reach resolution than non-special circumstance cases. In fact, the number of special circumstance cases filed each year is considerably larger than the number of death penalty cases, and thus overbroad special circumstance filings may have a larger impact on county-level budgets than the CDAA acknowledges.

We recognize that studies such as ours have a number of inherent limitations, largely due to the limited access to county-level prosecutors’ data granted to researchers, including ourselves. Given the administrative nature of the data set, it contains few or no details pertaining to case-processing characteristics (e.g., number of motions filed, hourly estimates, etc.) and defendant demographics (e.g., race, socioeconomic status, etc.). In particular, the data set does not include a detailed breakdown of the total number of hours spent by various criminal justice officials on each case during the pretrial and trial processes or the costs associated with these activities. As such, time-to-resolution was used as a proxy for cost, but we

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161 California Legislative Hearings, supra note 53.
162 Id.
163 Id.
are unable to translate that into an exact dollar amount. Despite this drawback, the use of a time-to-resolution measure is the most reliable proxy measure of cost given the lack of publicly available financial data at the county level. Furthermore, the time-to-resolution model conservatively estimates death penalty time-costs since it does not account for increased salary expenses associated with death-eligible cases and the additional staffing required in such cases.

The restricted geographical scope of this study may lower the external validity of model estimates. However, concerns over external validity are counteracted by public policy implications. Nearly 30% of defendants on California’s death row were sentenced in Los Angeles County, and therefore estimates derived from Los Angeles County account for a large portion of the variance in the time-costs associated with California’s death penalty system. Los Angeles County’s death penalty policies also have national significance. In 2009, Los Angeles County distinguished itself by sentencing the most defendants in the nation to death, sending 13 people to death row. Consequently, Los Angeles County beat out other county-level jurisdictions nationally. Indeed, only two states—Florida (15) and Arizona (14)—surpassed the county’s number of death sentences in 2009. Ultimately, Los Angeles County accounted for 12% of the nation’s death sentences that year.

IV. PUBLIC POLICY IMPLICATIONS

Our results echo findings from a number of different kinds of analyses of capital punishment costs. That is, these are resource-intensive endeavors

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164 CCFAJ, supra note 1, at 34–43, 77–84, 96–104; MINSKER, THE HIDDEN DEATH TAX, supra note 34, at 32.
165 See CONDEMNED INMATE LIST, supra note 22 (this figure was calculated by dividing the number of death-row inmates sentenced in Los Angeles County by the total number of California death-row inmates).
169 Id. In 2009, there were a total of 106 death sentences in the nation, 13 of which were imposed in Los Angeles County. Accordingly, this figure was derived from the following calculation: 13/106 = 0.1226 (rounded to 12%).
that require major trade-offs at the local and state levels in order to fund them.\(^{170}\) On that front, excessive expenditures in this arena appear particularly problematic.\(^{171}\) However, costs are just one side of the question about whether capital punishment is justified as a criminal justice policy. Indeed, over the last few decades, many of the rationales espoused in defense of the death penalty have been seriously called into question. Two of the most frequently cited penological justifications for the death penalty—deterrence and incapacitation—have largely been discredited by recent criminological research.\(^{172}\)

Many of the econometric studies from “new deterrence” literature, which claim to find a substantial capital punishment deterrent effect, suffer from a host of methodological and theoretical flaws.\(^{173}\) Once these methodological and theoretical deficits are corrected, the general deterrent effect of capital punishment disappears.\(^{174}\) These limitations have led criminologists to question conclusions drawn from the new deterrence literature. For example, Radelet and Lacock’s\(^{175}\) survey of seventy-six eminent criminologists indicates that 88.2% of these individuals hold the expert opinion that the extant scientific literature does not provide support for a general deterrent effect of capital punishment. Risk-assessment studies have also severely undercut the incapacitation justification for capital punishment by demonstrating that the odds of repeat homicide offenders are rare.\(^{176}\) Lastly, the myth that death sentences are cheaper than LWOP sentences has been debunked by the cost literature cited above.\(^{177}\)

One of the last remaining justifications for the death penalty in the modern era is a variant of retribution theory based on claims about “victims’ rights.” According to this perspective, application of the death penalty demonstrates the state’s valuation of homicide victims and provides friends and family members with a sense of closure from their suffering.\(^{178}\)

\(^{170}\) See Baicker, \textit{supra} note 32, at 3; Rupp, \textit{supra} note 32, at 2754.

\(^{171}\) See Gradess & Davies, \textit{supra} note 55, at 397.

\(^{172}\) Radelet, \textit{supra} note 9, at 22–25.


\(^{174}\) See Fagan & West, \textit{supra} note 9, at 315, 318–20; Donohue & Wolters, \textit{supra} note 173.

\(^{175}\) Radelet & Lacock, \textit{supra} note 173, at 501.

\(^{176}\) Radelet, \textit{supra} note 9, at 23–24.

\(^{177}\) Gradess & Davies, \textit{supra} note 55, at 411.

\(^{178}\) Radelet, \textit{supra} note 9, at 32–33.
Although the psychological effects of executions on victims’ family members have not been thoroughly evaluated, some researchers argue that executions may further traumatize family members of homicide victims.\textsuperscript{179} The emotionally protracted nature of capital cases often serves to “revictimize” family members of homicide victims.\textsuperscript{180}

Moreover, the noneconomic costs of the death penalty, especially to core values of justice, due process, and equal protection, have grown increasingly apparent as the “modern” death penalty has lumbered on. Systemic failures in ensuring the protection of capital defendants’ rights at the trial level are made evident by the exceptionally high rates of procedural error found in capital cases from across the country.\textsuperscript{181} Most dramatically, it has been discovered that a notable number of death penalty sentences have been imposed upon factually innocent citizens.\textsuperscript{182} Capital case outcomes in a number of death penalty states, including California, continue to reflect racially discriminatory patterns.\textsuperscript{183} And, as detailed above, death eligibility in many jurisdictions does not appear to be much narrower than it was prior to \textit{Furman}, especially in states like California with broad capital statutes.\textsuperscript{184}

In light of the “executioner’s waning defenses,”\textsuperscript{185} coupled with these kinds of documented justice failures, many states have decided to abolish or fundamentally alter their capital punishment systems in order to redirect taxpayer dollars to alternative public-safety efforts.\textsuperscript{186} In 2007, then-New Jersey Governor Jon Corzine signed a measure invalidating the state’s death penalty system.\textsuperscript{187} In a similar vein, New Mexico Governor Bill

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\textsuperscript{180} Reed & Blackwell, supra note 179, at 253–55, 259–61.

\textsuperscript{181} See Liebman et al., supra note 56, at ii.


\textsuperscript{184} See Shatz, supra note 18, at 752.

\textsuperscript{185} Radelet, supra note 9, at 19.

\textsuperscript{186} See Alarcón & Mitchell, supra note 21, at S207.

\textsuperscript{187} Id. at S208.
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Richardson signed legislation to repeal the death penalty in 2009, citing financial concerns as a major rationale. In 2011, Illinois abolished the death penalty, primarily because of the series of miscarriages of justice that had been uncovered in the state, and due to its discriminatory application. The state has earmarked the cost savings for victim services and for law-enforcement training. Most recently, on April 25, 2012, Connecticut abolished its death penalty system largely in response to concerns over costs and wrongful convictions.

California is at a similar crossroads with regards to capital punishment. As the CCFAJ report highlighted, from a policy perspective, refusing to modify the current system is not a viable option. Our findings suggest that the very existence of the death penalty as a charging option—as it is codified in the state—ensures significant financial, efficiency, and justice costs. The discretion to file special circumstances in the vast majority of homicides makes for a very expensive tool in the prosecutorial arsenal that undoubtedly impacts resource allocations to public safety, crime prevention, and victim services. Indeed, Los Angeles County’s prosecutorial charging patterns suggest that only a small percentage of special circumstance cases are ultimately prosecuted capitally, but the time-costs begin to accrue as soon as those special circumstances are filed. In light of the tenuous empirical support for capital punishment as a public-safety tool and the high costs it exacts on the state, it is difficult to imagine a justification for maintaining this “broken system” on any public policy grounds.

190 See Gradess & Davies, supra note 55, at 397; Baicker, supra note 32, at 3, 13; Rupp, supra note 32, at 2768–69.
191 See supra Table 2.
192 See CCFAJ, supra note 1, at 6, 16, 60.