POLICY ESSAY

IMPACTS OF EXECUTIONS ON HOMICIDES

Can Executions Have a Short-Term Deterrence Effect on Non-Felony Homicides?

Randi Hjalmarsson
Queen Mary, University of London

One of the most recent contributions to the ever-growing literature testing for a deterrent effect of the death penalty is the article by Land, Teske, and Zheng (2012, this issue). Specifically, Land et al. conduct a time-series analysis of the relationship between the number of monthly executions and homicides in Texas from 1994 to 2007, where they decompose homicides into non-felony and felony homicides. This extends the recent work of Land et al. (2009), who used the same data to look at all homicides. Land et al. (2009) found that there were 0.5 to 2.5 (depending on the model) fewer homicides in Texas in the 12 months after an execution. Land et al.'s (2012) findings indicate that this deterrence effect is driven by non-felony homicides and that a small brutalization effect is actually observed for felony homicides.

One feature of the article by Land et al. (2012) that distinguishes it from much of the previous research that has been conducted on the death penalty is the type of data used. In particular, much of the existing literature uses data that are aggregated either geographically and/or temporally. Yet, Land et al. focus on Texas and use data that are temporally disaggregated down to the month. Thus, in the first part of this policy essay, I will discuss whether this is the right framework for the analysis. If a deterrent effect exists, then can one expect to identify it with an approach such as this?

The second part of this policy essay focuses on the interpretation of Land et al.'s (2012) key result: Any short-term deterrence effect is driven by non-felony-type homicides. I assess whether this finding makes sense given that deterrence can occur only if a potential offender

Direct correspondence to Randi Hjalmarsson, School of Economics and Finance, Queen Mary, University of London, Mile End Road, London E1 4NS, United Kingdom (e-mail: r.hjalmarsson@qmul.ac.uk).

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is aware of the occurrence of an execution. Is someone who commits a non-felony–type homicide likely to be aware of the occurrence of an execution, let alone the number of executions or the month-to-month change in the number of executions? To answer this question, I present a brief analysis of data describing the media coverage of more than 170 executions in Texas from 1999 to 2004.

What Is the Right Framework and Unit of Analysis to Test for a Deterrent Effect of the Death Penalty?

I agree with Land et al. (2012) that conducting analyses using nationally and/or annually aggregated data is not the appropriate approach to study the deterrent effect of the death penalty. In other words, if studies of this sort actually found evidence of deterrence, I would be hard pressed to believe, for many reasons, that any estimated deterrence effect is properly identified.

According to Donohue and Wolfers (2006: 794), the death penalty is applied so rarely “that the number of homicides it can plausibly have caused or deterred cannot be reliably disentangled from the large year-to-year changes in the homicide rate caused by other factors.” Not only is the death penalty rarely applied, but also in many year-state observations, it is never applied. Berk (2005) showed that much of the previous research purporting to have found evidence of deterrence is driven by just a few states and years with more than five executions. Thus, I support Land et al.’s (2012) focus on the state of Texas, in which the death penalty has been applied relatively frequently and consistently over time. One could argue that a deterrence effect of the death penalty is more likely to be found in Texas than in any other state, given that the probability of receiving a death sentence and being executed is much larger here than in the rest of the country.¹

In addition, temporally aggregating homicide data to the annual level can also be problematic for identification of a deterrence effect. Homicide variation may only occur on the days immediately surrounding an execution. Given that there are so few executions and given all of the other factors that affect homicide rates, this variation may be impossible to observe upon annually aggregating homicide data. Alternatively, it may be that there is intertemporal substitution of homicides, such that a short-term deterrence effect occurs but is offset by an increase in homicides in the longer term. For these reasons, I agree with the authors that using monthly homicide data for the state of Texas is an improvement over annual data.

¹ Hjalmarsson (2009) stated that there were 15.2 death sentences per 1,000 homicides from 1974 to 1995 in Texas and that 15% of the death sentences were carried out. These data contrast with national data presented by Donohue and Wolfers (2006); only 8.7 death sentences were handed down in 2003 per 1,000 homicides and just 1.9% of the 3,374 individuals on death row at the beginning of the year were executed, including those in Texas.
However, I argue that disaggregating the data down further to the weekly level would be even better. To a lesser extent, monthly data are still subject to the same aggregation concerns as annual data. For instance, is there a deterrence effect in the first week after an execution, which is offset by an increase in homicides in the following week? However, another difference between a monthly and weekly analysis using Texas data should be highlighted. During Land et al.’s (2012) sample period (1994–2007), there were, on average, almost two executions per month and very few months had zero executions. Thus, they must analyze whether the difference in the number of executions from month to month has a deterrent effect on the difference in the number of homicides, controlling for seasonality. However, this presumes that in a state like Texas, which uses the death penalty fairly regularly, that the monthly number of executions affects a potential murderer’s perceptions of the likelihood of receiving a death sentence from month to month. Do we really believe that such an individual is aware of or perceives the difference between months with three, four, or five executions? Using the week as the unit of analysis, however, would allow the researcher to look at the effect of a potential shock to perceptions—whether there are no executions versus at least one execution.

Regardless of the unit of analysis (i.e., weekly vs. monthly), executions can only have a deterrent effect if the potential murderer is aware of the executions. This observation is true both when measuring executions at the extensive margin (that is, whether at least one execution occurred in a specified period) and at the intensive margin (that is, the number of executions in that period). I will return to this point in my analysis/discussion that follows.

Interpreting the Results: Why Are Non-Felony Homicides Deterred?

Land et al.’s (2012) primary contribution is to take the analysis of Land et al. (2009) a step further and assess whether a differential effect of executions on felony and non-felony homicides exists. Land et al. find a deterrence effect of approximately two non-felony–type homicides in the month immediately after an execution, which is offset during the next 12 months, such that there is a net effect of 1.4 non-felony–type homicides deterred over a 12-month period. In contrast, felony-type homicides increase by 0.5 in the month after an execution. In their discussion of these results, Land et al. state that felony-type homicides “are more likely to have been committed by individuals with prior felony convictions and who thus are more criminally prone.”

This statement leads to my primary concern with these results. Specifically, Land et al.’s (2012) interpretation of their results suggests that any deterrence effect of an execution is driven by those individuals who are less criminally prone and who are less likely to have
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a prior felony record. Is this result feasible? To answer this question, I think one needs to assess whether these "less criminally prone" individuals are likely to be aware of the number of executions in a given month.

As stated in the previous section, executions can have a deterrent effect only if one is actually aware that an execution took place. Land et al. (2012) recognize this and indicate in their concluding paragraph that there is little knowledge of how the announcement of an execution is distributed across the population of Texas. They point to this as an area for future research. I agree that this question needs to be studied in more detail. But also, I think that more can be said on the question.

Specifically, an individual can learn of an execution through two basic mechanisms: word-of-mouth and a public media announcement. However, it seems unlikely that the less criminally prone have the informal criminal networks for the word-of-mouth mechanism to play a prominent role in dispersing information. If anyone learned about executions via such a mechanism, then it would be those more criminally prone individuals with a felony record. Thus, a public media announcement is left as the underlying mechanism through which the "deterred" in Land et al.'s (2012) study learn about an execution. If this is the case, then future research should be conducted to assess whether the deterrent effect estimated by the authors is driven by those executions that receive the most media coverage.

Although I agree with the authors that more research on this question is needed, I also think that some existing data and research can begin to shed some light on this question. Thus, I will continue this discussion in the next section with a brief analysis of a data set that I assembled to test for a deterrence effect on homicides in three Texas cities (Dallas, Houston, and San Antonio) using daily data (Hjalmarsson, 2009).

Media Coverage of Texas Executions

In this section, I present a brief analysis of the media coverage of the 172 executions in Texas between January 1, 1999 and December 31, 2004. Specifically, I present some statistics that (a) give some sense of how much media coverage is devoted to executions in Texas, where executions are not a rare phenomenon, and (b) indicate what circumstances will lead to coverage of an execution in a newspaper or on the news.

For each execution, I collected information about the execution, offender, and victim from the Texas Department of Criminal Justice's website. In addition, I collected data regarding whether there was news coverage of each execution in three local daily newspapers: The Dallas Morning News (DMN), Houston Chronicle (HC), and San Antonio Express-News (SAE). I searched for news stories on each of the 172 executions in all three newspapers.

3. This data was collected for Hjalmarsson (2009), where a more detailed description of the data can be found.
4. The San Antonio Express-News is the major newspaper in Central and South Texas with circulation spreading from Austin to the Mexico border. The Houston Chronicle has the largest circulation of any

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and recorded the total number of stories about the execution as well as the dates of the first
and last articles. Of course, a legitimate concern is the possibility that potential offenders do
not read the newspaper. Although television coverage of executions is much more difficult
to come by, I obtained coverage information for the 83 most recent executions in the data
from an NBC affiliate station in Dallas.

Table 1 presents summary statistics that indicate the extent to which executions are
covered in each of these media outlets. Overall, execution coverage varies across city papers.
Whereas DMN reported on 65% of the executions from 1999 to 2004, the HC and SAE
covered just 35% and 30% of executions, respectively. The higher coverage rate in the
DMN is driven by the fact that almost all executions were covered at least once prior to
June 15, 2001; a change in management at this time resulted in a decrease in the coverage
rate to approximately 34%, which is comparable with the other newspapers. Finally, even
though 81% of executions were covered in at least one newspaper, only 38% were covered
in more than one paper and just 10% were covered in all three papers. A similar pattern
is observed when looking at television coverage, as just 36% of executions were covered at
least once on the Dallas NBC News. For those executions covered by NBC, the average
amount of time devoted to the story was approximately 55 seconds.

Thus, the summary statistics described previously indicate that only one third of
executions are covered by each media outlet. Can anything be said about which executions
are likely to receive such coverage? As described in Hjalmarsson (2009), the strongest
predictor of whether an execution is covered by a local media outlet is whether the sentence
occurred locally; for example, the sentencing of an offender in Harris County, which
contains Houston, significantly increases the likelihood that the execution is covered in the
*Houston Chronicle*.

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| TABLE 1 |
| Media Coverage of Texas Executions from 1999 to 2004 |
| Variable | Observations | Mean | Standard Deviation |
| At least one hit in the Dallas Morning News | 172 | 0.65 | 0.48 |
| At least one hit in the Houston Chronicle | 172 | 0.35 | 0.48 |
| At least one hit in the San Antonio Express-News | 172 | 0.30 | 0.46 |
| Covered at least once on the Dallas NBC News | 83 | 0.36 | 0.48 |

*Notes.* The Dallas NBC News data were only obtained for the 83 most recent executions in the sample; November 2001 to 2004. For
those executions that were covered, the average number of days between the first and last news article is 5.0 days in the Dallas
Morning News, 13.8 days in the Houston Chronicle, and 10.4 days in the San Antonio Express-News.
Implications of the Media Coverage Analysis

The preceding analysis highlights two important points about the media coverage of Texas executions. First, each media outlet covers only approximately one third of the executions in Texas. Second, the strongest predictor of whether an execution is covered is whether the offender was sentenced locally.

Given these findings, I find it difficult to believe that individuals with the potential to commit non-felony-type homicides become aware of the number of monthly executions in Texas through public media announcements. If, as I suggested, these offenders do not have the informal criminal networks to learn of these executions via word-of-mouth, then one is left asking how it is possible for such a deterrence effect to be found.

Therefore, I think that additional research is needed before I can be convinced of the findings that (a) a short-term deterrence effect occurs in Texas and (b) it is driven by non-felony-type homicides. Specifically, we need to focus on how aware the populace (and especially the subpopulation of potential offenders) is of an execution. If Land et al.’s (2012) results are to be believed, then analyses should be done that show that the deterrence of non-felony-type homicides is driven by the subset of executions covered by the media (or by those that were sentenced locally).

Finally, Land et al. (2012) claim that their results imply “that there would be little, if any, deterrence of homicides in Texas if executions were not used frequently.” Consequently, Land et al. question whether such a deterrence effect would be found in other states, which do not have the same high and persistent levels of the death penalty and execution rates. Although I agree with the authors that it is unclear whether such an effect would be found in other states with a more limited use of the death penalty, I think that Land et al.’s discussion of the policy implications overlooks two points. First, what about the role played by the media? Perhaps the low coverage rate in Texas newspapers of executions is because executions in Texas are such a “common” phenomenon. What kind of media coverage do executions receive in other states, where executions are a more “rare” phenomenon? Thus, is it not possible for an execution to have a larger effect (even if there are not many executions) if it is covered by the media more intensively? Second, and perhaps more fundamentally, Land et al. study the effect of the difference in month-to-month executions. That is, as I understand it, identification does not rely on the number of executions but, rather, on a variation in the number of monthly executions. Could this not be satisfied in other states with fewer executions?

Although I am certainly not convinced of the existence of a deterrence effect, I hope that future research extends these analyses to other states and pays closer attention to the potential role played by the media in making the populace aware of the occurrence of an execution.
References


Randi Hjalmarsson received her PhD in economics from Yale University in 2005 and a BA in 1998 from Columbia University. She is currently a Reader (Associate Professor) in the School of Economics and Finance at Queen Mary, University of London and a Research Affiliate at the Centre for Economic Policy Research. She was previously an Assistant Professor at the University of Maryland, School of Public Policy. Her research focuses on empirical questions related to the economics of crime, including peer effects in prison, the impact of gun shows on homicide and suicide, and whether there is a deterrent effect of the death penalty. She is currently studying the causal effect of the demographic composition of the jury on trial verdicts, the intergenerational nature of crime, and the link between education and crime.