For the first time in a generation, the question of whether the death penalty deters murders has captured the attention of scholars in law and economics, setting off an intense new debate about one of the central justifications for capital punishment.

According to roughly a dozen recent studies, executions save lives. For each inmate put to death, the studies say, 3 to 18 murders are prevented.

The effect is most pronounced, according to some studies, in Texas and other states that execute condemned inmates relatively often and relatively quickly.

The studies, performed by economists in the past decade, compare the number of executions in different jurisdictions with homicide rates over time — while trying to eliminate the effects of crime rates, conviction rates and other factors — and say that murder rates tend to fall as executions rise. One influential study looked at 3,054 counties over two decades.

“I personally am opposed to the death penalty,” said ■. Naci Mocan, an economist at Louisiana State University and an author of a study finding that each execution saves five lives. “But my research shows that there is a deterrent effect.”

The studies have been the subject of sharp criticism, much of it from legal scholars who say that the theories of economists do not apply to the violent world of crime and punishment. Critics of the studies say they are based on faulty premises, insufficient data and flawed methodologies.

The death penalty “is applied so rarely that the number of homicides it can plausibly have caused or deterred cannot reliably be disentangled from the large year-to-year changes in the homicide rate caused by other factors,” John J. Donohue III, a law professor at Yale with a doctorate in economics, and Justin Wolfers, an economist at the University of Pennsylvania, wrote in the Stanford Law Review in 2005. “The existing evidence for deterrence,” they concluded, “is surprisingly fragile.”

Gary Becker, who won the Nobel Prize in economics in 1992 and has followed the debate, said the current empirical evidence was “certainly not decisive” because “we just don’t get enough variation to be confident we have isolated a deterrent effect.”

But, Mr. Becker added, “the evidence of a variety of types — not simply the quantitative evidence — has been enough to convince me that capital punishment does deter and is worth using for the worst sorts of offenses.”

The debate, which first gained significant academic attention two years ago, reprises one from the 1970’s, when early and since largely discredited studies on the deterrent effect of capital punishment were discussed in the Supreme Court’s decision to reinstate capital punishment in 1976 after a four-year moratorium.

The early studies were inconclusive, Justice Potter Stewart wrote for three justices in the majority in that decision. But he nonetheless concluded that “the death penalty undoubtedly is a significant deterrent.”

The Supreme Court now appears to have once again imposed a moratorium on executions as it considers how to assess the constitutionality of lethal injections. The decision in that case, which is expected next year, will be much narrower than the one in 1976, and the new studies will probably not play any direct role in it.

But the studies have started to reshape the debate over capital punishment and to influence prominent legal scholars.

“The evidence on whether it has a significant deterrent effect seems sufficiently plausible that the moral issue becomes a difficult one,” said Cass R. Sunstein, a law professor at the University of Chicago who has frequently taken liberal positions. “I did shift from being against the death penalty to thinking that if it has a significant deterrent effect it’s probably justified.”

Professor Sunstein and Adrian Vermeule, a law professor at Harvard, wrote in their own Stanford Law Review article that “the recent evidence of a deterrent effect from capital punishment seems impressive, especially in light of
its ‘apparent power and unanimity,’ ” quoting a conclusion of a separate overview of the evidence in 2005 by Robert Weisberg, a law professor at Stanford, in the Annual Review of Law and Social Science.

“Capital punishment may well save lives,” the two professors continued. “Those who object to capital punishment, and who do so in the name of protecting life, must come to terms with the possibility that the failure to inflict capital punishment will fail to protect life.”

To a large extent, the participants in the debate talk past one another because they work in different disciplines.

“You have two parallel universes — economists and others,” said Franklin E. Zimring, a law professor at the University of California, Berkeley, and the author of “The Contradictions of American Capital Punishment.” Responding to the new studies, he said, “is like learning to waltz with a cloud.”

To economists, it is obvious that if the cost of an activity rises, the amount of the activity will drop.

“To say anything else is to brand yourself an imbecile,” said Professor Wolters, an author of the Stanford Law Review article criticizing the death penalty studies.

To many economists, then, it follows inexorably that there will be fewer murders as the likelihood of execution rises.

As justices ponder one method of execution, new studies revive the deterrence debate.

“I am definitely against the death penalty on lots of different grounds,” said Joanna M. Shepherd, a law professor at Emory with a doctorate in economics who wrote or contributed to several studies. “But I do believe that people respond to incentives.”

But not everyone agrees that potential murderers know enough or can think clearly enough to make rational calculations. And the chances of being caught, convicted, sentenced to death and executed are in any event quite remote. Only about one in 300 homicides results in an execution.

“I honestly think it’s a distraction,” Professor Wolters said. “The debate here is over whether we kill 60 guys or not. The food stamps program is much more important.”

The studies try to explain changes in the murder rate over time, asking whether the use of the death penalty made a difference. They look at the experiences of states or counties, gauging whether executions at a given time seemed to affect the murder rate that year, the year after or at some other later time. And they try to remove the influence of broader social trends like the crime rate generally, the effectiveness of the criminal justice system, economic conditions and demographic changes.

Critics say the larger factors are impossible to disentangle from whatever effects executions may have. They add that the new studies’ conclusions are skewed by data from a few anomalous jurisdictions, notably Texas, and by a failure to distinguish among various kinds of homicide.

There is also a classic economics question lurking in the background, Professor Wolters said. “Capital punishment is very expensive,” he said, “so if you choose to spend money on capital punishment you are choosing not to spend it somewhere else, like policing.”

A single capital litigation can cost more than $1 million. It is at least possible that devoting that money to crime prevention would prevent more murders than whatever number, if any, an execution would deter.

The recent studies are, some independent observers say, of good quality, given the limitations of the available data.

“These are sophisticated econometricians who know how to do multiple regression analysis at a pretty high level,” Professor Weisberg of Stanford said.

The economics studies are, moreover, typically published in peer-reviewed journals, while critiques tend to appear in law reviews edited by students.

The available data is nevertheless thin, mostly because there are so few executions.

In 2003, for instance, there were more than 16,000 homicides but only 153 death sentences and 65 executions.