
Crime and Punishment

The city of Detroit, Michigan, has twice as many police per capita as Omaha, Nebraska, but the violent crime rate in Detroit is four times as high as in Omaha. Does this mean police are the source of violent crime? If that sounds like an odd question, consider this: Since 1970 the number of Americans in prison has nearly quadrupled as a share of the population, even as the violent crime rate has doubled and the property crime rate has risen 30 percent. Does sending people to prison actually encourage them to commit crimes?

Few people would answer either of these questions with a yes, but there is still a widespread concern that crime pays and that there seems to be little that policymakers can do about it. In a nation in which more than 20 percent of all households can expect to be victimized by a serious crime in any given year, it is little wonder that people are asking some tough questions about law enforcement. Do harsher penalties really discourage people from committing crimes? Will longer prison sentences reduce the crime rate? Are more police the answer, or should we try something else? Given that crime costs its victims more than \$200 billion every year in America, even as we are spending roughly \$100 billion per year in public monies to prevent it, answers to questions such as these are clearly important.

There is one thing we can be sure of at the start: Uniformly heavy punishments for all crimes will lead to a larger number of *major* crimes. Let's look at the reasoning. All decisions are made at the margin. If theft and murder will be punished by the same fate, there is no marginal deterrence to murder. If a theft of \$5 is met

with a punishment of 10 years in jail and a theft of \$50,000 incurs the same sentence, why not go all the way and steal \$50,000? There is no marginal deterrence against committing the bigger theft.

To establish deterrents that are correct at the margin, we must observe empirically how criminals respond to changes in punishments. This leads us to the question of how people decide whether to commit a crime. A theory as to what determines the supply of criminal offenses needs to be established.

Adam Smith, the founder of modern economics, observed,

The affluence of the rich excites the indignation of the poor, who are often both driven by want, and prompted by envy, to invade his possessions. It is only under the shelter of the civil magistrate that the owner of that valuable property, which is acquired by the labour of many years, or perhaps by many successive generations, can sleep a single night in security. He is at all times surrounded by unknown enemies, whom, though he never provokes, he can never appease, and from whose injustice he can be protected only by the powerful arm of the civil magistrate continually held up to chastise it. The acquisition of valuable and extensive property, therefore, necessarily requires the establishment of civil government. Where there is no property, or at least none that exceeds the value of two or three days' labour, civil government is not so necessary.¹

Thus, Smith concluded, theft will be committed in any society in which one person has substantially more property than another. If Smith is correct, we can surmise that the individuals who engage in theft are seeking income. We can also suppose that, before acting, a criminal might be expected to look at the anticipated costs and returns of criminal activity. These could then be compared with the net returns from legitimate activities. In other words, those engaging in crimes may be thought of as doing so on the basis of a cost/benefit analysis in which the benefits to them outweigh their costs. The benefits of the crime of theft are clear: loot. The costs to the criminal would include, but not be limited to, apprehension by the police, conviction, and jail. The criminal's calculations are thus analogous to those made by an athlete when weighing the cost of

¹ Adam Smith, Book V, Chapter 1, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776.

possible serious injury against the benefits to be gained from participating in a sport.

If we view the supply of offenses in this manner, we can devise ways in which society can lower the net expected benefit for committing any illegal activity. That is, we can figure out how to reduce crime most effectively. Indeed, economists have applied this sort of reasoning to study empirically the impact of punishment on criminal activity. The two areas on which they have focused are (1) the impact of increasing the probability that criminals will be detected and apprehended by, for example, putting more police on the street; and (2) the role of punishment by, for example, imprisonment.

Surprisingly, at least to an economist, the empirical answers to these questions came back rather mixed in early research studies. The estimated impact of imprisonment on crime rates appeared quite small, indeed often little different from zero. Moreover, a substantial majority of the early studies that attempted to estimate the impact of police on the crime rate found either no relationship or found that having more police on the force appeared to *increase* the crime rate!

The problem researchers have encountered in estimating the impact of police or prison terms on criminal activity is quite simple in principle but a difficult one to correct: Because people who live in areas with higher crime rates will want to take measures to protect themselves, they are likely to have larger police forces and to punish criminals more severely. Thus, even if more police and more severe penalties actually do reduce crime, this true effect may be masked or even seem to be reversed in the data, because high-crime areas will tend to have more police and higher prison populations.

Economic research has begun to unravel these influences, however, offering us the clearest picture yet of the likely effects of police and imprisonment on the crime rate. In a series of articles, Steven Levitt of the University of Chicago has looked for factors that strongly influence the number of police in a community or the size of a state's prison population but do not otherwise affect the crime rate. He has found such factors, and in so doing has revealed a much clearer picture of the true deterrence effect of law enforcement.

Levitt finds the strongest deterrent effect of police on violent crime such as murder, rape, and assault. In fact, he estimates the **elasticity** of violent crime with respect to police to be about -1.0 . Accordingly, a 10 percent increase in a city's police force can be expected to produce about a 10 percent decrease in the violent crime rate in that city. With regard to property crimes, such as burglary, larceny, and auto theft, the impact of having more police is smaller but still significant. In this case, the estimated elasticity is about -0.3 , meaning a 10 percent increase in the police force will yield about a 3 percent reduction in property crimes. The implications for a city like Detroit are quite striking. Increasing the police force by 10 percent would mean adding about 440 officers. Levitt's estimates imply that, as a result, the city could expect to suffer about 2100 fewer violent crimes each year and about 2700 fewer property crimes.

Levitt also has been able to isolate the role of imprisonment on deterring crime. He finds once again that the effects are strongest for violent crime. A 10 percent decrease in a state's prison population can be expected to increase the violent-crime rate in that state by about 4 percent. In the case of property crime, a 10 percent decrease in prison population will yield about a 3 percent rise in burglaries, larcenies, and auto thefts in the state. Perhaps not surprisingly, many states have been constructing new prisons.

In separate research, Levitt has found that juvenile criminals respond to incentives, just as their adult counterparts do. From the mid-1970s to the mid-1990s, juvenile crime soared relative to adult crime, which has led many commentators to worry about a generation of juveniles who are seemingly undaunted by the threat of imprisonment. In fact, it appears soaring juvenile crime was largely the result of changes in the incentives faced by juveniles: Over this same period of time, violent-crime imprisonment rates for juveniles fell 80 percent relative to those for adults. Hence, the chances of violent young criminals being jailed dropped to only about half that of violent adult criminals. Moreover, the change in penalties that occurs as youths become subject to adult laws (usually age 18) has a strong effect on their behavior. In states tough on youth but easy on adults, violent-crime rates rise 23 percent at age 18, but in states that are easy on juveniles and tough on adults, such crime drops 4 percent at age 18. Incentives, it seems, still matter.

Are the growing expenditures on crime prevention worth it? According to Levitt's results, the answer is yes. Adding another person to the prison population costs about \$30,000 per year but can be expected to yield benefits (in terms of crime prevention) of more than \$50,000 per year. Although adding an officer to the police force has an expected cost of about \$80,000 per year, that officer can be expected to produce crime-prevention benefits of almost \$200,000. If these numbers are anywhere close to being correct, we can expect further increases in spending on crime prevention in the years to come and perhaps even some noticeable reductions in the crime rate.

DISCUSSION QUESTIONS

1. The analysis just presented seems to make the assumption that criminals act rationally. Does the fact they do not necessarily do so negate the analysis?
2. In many cases, murder is committed among people who know each other. Does this mean that raising the penalty for murder will not affect the number of murders committed?
3. Consider the following prescription for punishments: "Eye for eye, tooth for tooth, hand for hand, foot for foot. . . ." Suppose our laws followed this rule, and further suppose we spent enough money on law enforcement to apprehend everyone who broke the law. What would the crime rate be? (*Hint: If the penalty for stealing \$10 was \$10, and if you were certain you would be caught, would there be any expected gain from the theft? Would there be an expected gain from the theft if the penalty were only, say, \$1, or if the chance of being caught were only 10 percent?*)
4. In recent years, the penalty for selling illegal drugs has been increased sharply. How does that affect the incentive to sell drugs? For the people who decide to sell drugs anyway, what do the higher penalties for dealing do to their incentive to commit other crimes (such as murder) while they are engaged in selling drugs?