

# The **NBER** Digest

NATIONAL BUREAU OF ECONOMIC RESEARCH

February 1996

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## Incarceration Reduces Crime

In a number of states, prisoners' rights groups have succeeded in winning civil suits alleging that overcrowding in prisons—often two prisoners in a cell intended for one—was cruel and unusual punishment, and thus unconstitutional. Since the first filing of such litigation in 1965, similar lawsuits have been brought in 47 states and the District of Columbia. Of the 70 cases brought, the plaintiffs have won a full or partial victory in all but six instances. As a result, the entire prison system has been under court order concerning overcrowding in 12 states: Alabama, Alaska, Arkansas, Delaware, Florida, Mississippi, New Mexico, Oklahoma, Rhode Island, South Carolina, Tennessee, and Texas.

In **The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation** (*NBER Working Paper No. 5119*), **Steven Levitt** looks at what happens to crime rates in those states where litigation has forced action on overcrowding. In conforming with the court order, it

is left up to the state whether to build new prisons, shuffle prisoners among prisons or place them in another state, slow the number of individuals put into the prison, or release prisoners. Levitt finds that three years after a final court decision, prison populations are 14 percent lower than otherwise

year. These results stand up well, across all the crime categories that Levitt examines, ranging from murder and rape to burglary and automobile theft.

Using earlier research on the cost of crime to individuals and the nation, Levitt estimates that the social benefit from eliminating the 15

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“[F]or each one-prisoner reduction induced by prison overcrowding litigation, the total number of crimes committed increases by approximately 15 per year.”

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would have been expected, whereas violent crime rates are 11 percent higher, and property crime rates are 6 percent higher in those states.

Levitt concludes that for each one-prisoner reduction induced by prison overcrowding litigation, the total number of crimes committed increases by approximately 15 per

crimes would be approximately \$45,000. That compares with an annual per-prisoner cost of incarceration of roughly \$30,000. However, Levitt cautions that such cost-benefit calculations are inherently uncertain given the difficulty in quantifying these types of issues.

DRF

## The Credit Channel Is Key to Understanding Monetary Policy

Most economists agree that monetary policy can influence the course of the real economy significantly—at least in the short run. But there is less agreement about exactly *how* this happens. According to the conventional textbook

credit markets—such as the fact that lenders typically have only limited information about borrowers—might help to explain the surprising potency of monetary policy. Collectively, effects of monetary policy that arise because of credit-

nanke and Gertler argue that when monetary policy tightens, the external finance premium widens, for two reasons: First, monetary tightening reduces the funds available for bank lending, forcing traditional bank customers, such as small firms or consumers, to tap more expensive sources of credit or to forego borrowing entirely (the “bank lending channel”). Second, tighter monetary policy leads to lower asset values, lower revenues, and heavier debt burdens among borrowers in general, which reduces their creditworthiness and makes it more difficult and costly for them to obtain new credit (the “balance sheet channel”).

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“[D]espite the presumption that monetary policy should have its greatest impact on short-term interest rates, in practice Fed actions seem to have their largest effects on purchases of long-lived assets . . . ”

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view, monetary policy works by affecting short-term interest rates, which influence the cost of capital and, consequently, spending on durable goods including plant and equipment, inventories, automobiles, and housing. However, empirical studies generally do not find that changes in the cost of capital have strong effects on spending; instead, the strongest determinants of spending appear to be such variables as income, sales, or cash flow. Further, despite the presumption that monetary policy should have its greatest impact on short-term interest rates, in practice Fed actions seem to have their largest effects on purchases of long-lived assets such as housing—which in principle should be sensitive primarily to changes in long-term, not short-term, interest rates. These puzzles have led many policymakers and researchers to regard the monetary transmission mechanism as a “black box.”

A number of economists have explored whether “frictions” in

market frictions are referred to as the “credit channel” of monetary policy transmission. In **Inside the Black Box: The Credit Channel of Monetary Policy Transmission** (NBER Working Paper No. 5146), **Ben Bernanke** and **Mark Gertler** make the case for their view that the credit channel plays an important role within the black box of monetary policy transmission.

According to the credit channel approach, the conventional effects of monetary policy are amplified by the effects of policy on the *external finance premium*, defined as the difference between the cost of funds raised externally (as when a household borrows, or a firm sells debt or equity) and the opportunity cost of funds generated internally (as when a household saves or a firm retains earnings). The size of this premium reflects imperfect information and other problems in credit markets that drive a wedge between the expected return received by lenders and the cost of funds to potential borrowers. Ber-

Because a monetary tightening induces an increase in the external finance premium, its effects on credit extension, and hence spending, are greater than can be explained by the rise in open-market interest rates alone. Further, because consumers as a group are likely to be relatively more vulnerable to credit-market problems, the credit channel also can explain monetary policy’s unusually potent effect on homebuying. Thus, allowing for a credit channel can help clarify what’s happening inside the black box.

The idea of a credit channel seems to be gaining in credibility among researchers. For example, economists studying recent recessions in Scandinavia and Japan have put heavy weight on credit-related effects, as have some studies of the 1990–1 recession in the United States. Bernanke and Gertler conclude that future analyses of monetary policy transmission cannot afford to ignore these mechanisms.

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## Replacement Workers Make Strikes Less Frequent

In the 1980s, collective bargaining disputes between employers and unions changed. Strike activity, as measured by the Bureau of Labor Statistics, declined by over 50 percent from its level in the 1970s. At the same time, the total number of labor disputes increased because there was a large increase in "holdouts," that is, disputes settled without a strike under an extension of the expired contract. In **The Use of Replacement Workers in Union Contract Negotiations: The U.S. Experience, 1980-9** (*NBER Working Paper No. 5106*), Peter Cramton and Joseph Tracy find that the increased hiring of replacement workers was an important cause of reduced strikes and increased "holdouts."

The higher the likelihood that a firm will replace workers during a strike, Cramton and Tracy write, the less likely the union is to go on strike in the first place. One union alternative to striking, which carries no risk of replacement, is a holdout. During a holdout, the union can work-to-rule, slow down, or carry out other "in-plant" strategies.

Cramton and Tracy find that the more experienced a firm's workers are, the less likely the firm is to replace them. A 2.2-year increase in average worker experience reduces the risk of replacement by 8 percentage points. Also, the tighter the

local labor market is, the less likely the firm is to hire replacements. Further, Cramton and Tracy find

increased risk of replacement between 1982 and 1989 accounted for about half of the unexplained

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"[A] complete ban on hiring replacements during strikes would have raised the number of strikes in the 1980s by almost 13 percent."

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that President Reagan's 1981 decision to replace the air traffic controllers who went on strike after their union, PATCO, called an illegal strike had a significant effect on collective bargaining. Finally, the authors find that bargaining units dealing with firms that have replaced workers in past labor disputes face an 8-percentage-point increase in their risk of being replaced.

Cramton and Tracy use these findings to estimate the likelihood that firms, in a sample of over 3000 contract negotiations between 1980 and 1989, would hire replacement workers during a strike. They reason that union leaders can observe the same data, and will take this into account in deciding whether to strike. The researchers then compute the effect of the likelihood of replacements on the probability that a union will go on strike.

Cramton and Tracy find that the

shift in labor disputes during the 1980s. The increase in the risk of replacement in or after 1982 raised the number of labor disputes in their sample of negotiations by about 10 percent, they estimate. On the other hand, the increased risk of replacement reduced the number of strikes in those negotiations by 7 percent.

Cramton and Tracy use their data to estimate the effect of a complete ban on hiring replacements during strikes. They conclude that such a ban "would have dramatically altered the course of negotiations in the 1980s." While the number of disputes in the observed negotiations would have fallen by 31 percent, a complete ban on hiring replacements during strikes would have raised the number of strikes in the 1980s by almost 13 percent. DRH

## The Demand for Drugs Can Be Changed

The use of illegal drugs is more responsive to their price than previously has been thought, according to a recent NBER study by Henry Saffer and Frank Chaloupka. This fact is crucial in debates about ending the prohibition on drugs, which would lead to large decreases in drug prices. For exam-

ple, if legalization were to cause a 60 percent reduction in retail prices of illegal drugs, as some economists predict, there would be a 54 percent increase in the number of occasional heroin users and a 33 percent increase in the number of occasional cocaine users, Saffer and Chaloupka estimate. The same

60 percent drop in price could lead to a 100 percent increase in the amount of heroin used, and a 50 percent increase in the amount of cocaine used.

In **The Demand for Illegal Drugs** (*NBER Working Paper No. 5238*), Saffer and Chaloupka also estimate the effect of decriminaliz-

ing marijuana—that is, making possession or sale of the substance a misdemeanor rather than a felony—on its consumption. Their results show that decriminalization increas-

na at least monthly by 4–5 percent.

The data on drug prices come from the Drug Enforcement Agency. The data on usage are estimated from the 1988, 1990, and 1991

“[I]f legalization were to cause a 60 percent reduction in retail prices of illegal drugs, as some economists predict, there would be a 54 percent increase in the number of occasional heroin users and a 33 percent increase in the number of occasional cocaine users.”

es the number who use marijuana at least annually by 6–7 percent, and the number who use marijua-

National Household Surveys on Drug Abuse (NHSDA). This dataset consists of 49,802 observations,

which is important because the larger sample increases the number of drug users surveyed and the precision of the estimates. The NHSDA are surveys of the U.S. household population aged 12 or older, and contain information on socioeconomic characteristics as well as data on drug and alcohol use. Those surveys exclude residents of noninstitutional group quarters (such as college dormitories) and exclude residents of institutional group quarters (such as prisons). Also excluded are those people with no permanent residence (such as homeless and residents in transient hotels). Less than 2 percent of the population is excluded.

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