DOES FORFEITURE WORK?
Evidence from the States

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EXECUTIVE SUMMARY

This study provides the first multistate analysis of whether forfeiture works to fight crime or is, instead, used primarily to generate revenue. These competing claims lie at the heart of the policy debate over forfeiture, a legal tool that allows law enforcement agencies to seize and permanently keep people’s cars, cash and even homes if they suspect the property is connected to criminal activity. Typically, any proceeds from the property go to law enforcement coffers. Critics charge that this creates an improper incentive for police and prosecutors to pursue forfeiture revenue instead of justice, especially under civil forfeiture laws that do not require a conviction or even criminal charges to forfeit property. Law enforcement and other proponents counter that forfeiture is an essential crime-fighting tool and that forfeiture proceeds can help law enforcement fight more crime.

To test these claims, this study uses a newly assembled set of forfeiture data from five states that use forfeiture extensively—Arizona, Hawaii, Iowa, Michigan and Minnesota—as well as detailed state and local crime, drug use and economic data. The study examines forfeitures under state law alone as well as those conducted in concert with the federal government.

Results show:

• More forfeiture proceeds do not help police solve more crimes—and they may, perversely, make police less effective at solving violent crimes.

• More forfeiture proceeds do not lead to less drug use, even though forfeiture proponents have long cited fighting the illicit drug trade—and the reduction of drug use—as a primary purpose of forfeiture.

• When local budgets are squeezed, police respond by increasing their reliance on forfeiture. A one percentage point increase in unemployment—a common measure of economic health—was associated with an 11% to 12% increase in forfeiture activity.

In other words, this study finds no material support for the claims that forfeiture fights crime, either by enabling police to solve more crimes or by reducing drug use. It does, however, find economic conditions have a large and statistically significant effect on forfeiture activity, suggesting that at least some forfeiture activity is motivated by a desire for revenue.

These results, like those from earlier studies, are particularly salient now, when local government budgets are suffering due to the COVID-19 pandemic. The data suggest that during economic times like these police may pursue more forfeiture.

This report adds to mounting evidence that forfeiture fails to serve the public good, all while violating basic rights to property and due process, thus demonstrating the pressing need for forfeiture reform.
INTRODUCTION

In January 2019, nursing student Stephanie Wilson received a phone call from her ex-boyfriend and the father of her child. Homeless and addicted to drugs, her ex said he was cold and hungry. Taking pity on him, Stephanie agreed to drive him to his mother’s house on her way to school. Moments after she picked him up from the gas station where he was waiting, Detroit police swarmed the car and ordered Stephanie and her ex out.1

The police provided no explanation for the stop, and they found no drugs or other contraband. Nor did they arrest either Stephanie or her ex. But they did seize Stephanie’s car—supposedly for its having somehow facilitated a violation of Michigan’s drug laws. Although no criminal charges were ever filed in connection to the stop, Stephanie lost her car forever when, despite her best efforts, she missed the 20-day deadline to contest the seizure.2

A few months later, after Stephanie got her tax refund, she bought another car. But in June 2019, police seized that one, too. As before, police found no drugs and made no arrests. To get her car back, Stephanie was told she would have to pay $1,800—almost double what she paid for the car—plus towing and storage fees. Stephanie demanded a judicial hearing. Two years later, her forfeiture case is still unresolved. Her car remains in impound.3

How could police take not one but two cars from a woman never charged with, let alone convicted of, any crime? The answer is civil forfeiture, a legal tool available under the laws of most states and the federal government. Civil forfeiture allows law enforcement agencies to seize and forfeit—that is, permanently keep—people’s cars, cash and even homes based on the property’s suspected connection to possible criminal activity. No convictions, charges or even arrests
are required. Instead, law enforcement just has to allege criminal activity and establish a link between property and that alleged activity, typically by a low standard of proof. And property owners, who do not have a right to legal counsel, must often prove their own innocence to recover property.

What is more, the laws of most states and the federal government direct most—or frequently all—of the proceeds of forfeited property to law enforcement, often the very police departments that seized the property and the very prosecutors’ offices that forfeited it. For example, under Michigan law, 100% of forfeiture proceeds go to law enforcement. This means the Detroit Police Department and other Michigan law enforcement agencies stood to turn a profit from taking Stephanie’s cars. Such forfeitures can be highly lucrative for law enforcement. For example, in just two years, Wayne County law enforcement generated $1.2 million in revenue and seized more than 2,600 vehicles from owners like Stephanie. And a recent nationwide study of forfeiture found state and federal governments forfeited $3 billion in 2018 alone.

Opponents of forfeiture argue the promise of such revenue is a major motivator of forfeiture activity. Among other criticisms, they argue allowing police agencies to financially benefit from seizing people’s property distorts law enforcement priorities, encouraging agencies to put profits over public safety or justice. Stories like Stephanie’s of innocent people losing property, as well as a growing body of research, provide evidence for this claim.

Proponents, however, argue revenue generation through forfeiture is largely incidental to policing—a natural consequence of fighting crime, especially drug crime. At the same time, they argue forfeiture is an essential crime-fighting tool. Forfeiture, they say, deprives criminals of assets that they could otherwise use to commit more crimes and ensures that crime does not pay. And, they argue, forfeiture proceeds can help law enforcement fight even more crime, whether directly through greater enforcement or indirectly through drug education and other anti-drug efforts.

This study finds no evidence that forfeiture proceeds help police fight crime, whether in terms of solving more crimes or reducing drug use. It finds, however, significant evidence that police make greater use of forfeiture in response to fiscal stress.

This study finds no evidence that forfeiture proceeds help police fight crime, whether in terms of solving more crimes or reducing drug use. It finds, however, significant evidence that police make greater use of forfeiture in response to fiscal stress. A one percentage point increase in unemployment—a common measure of economic health—was associated with an 11% to 12% increase in forfeiture activity. This finding lends credence to critics’ claims that at least some police forfeiture activity is motivated by a desire for revenue.
In the simplest terms, forfeiture is the government taking and keeping of property alleged to be connected to criminal activity. There are two broad types of forfeiture: civil and criminal. With civil forfeiture, the property itself—and not a person—is on trial, where it stands accused of facilitating, or being derived from, a crime. This is in contrast to criminal forfeiture, where property can be permanently taken from a person only after she is convicted of a crime and her property is shown, during the same criminal proceeding, to be connected to that crime.

Because it is a criminal proceeding, people facing criminal forfeiture of their property enjoy the right to counsel and other protections of the criminal justice system. With civil forfeiture, on the other hand, property owners have no right to an attorney. Property is often seized before any arrest—and an arrest, charge or conviction may never follow. Indeed, to forfeit property, the government typically need only show that it is connected to a crime by an evidentiary standard far below the "proof beyond a reasonable doubt" required in criminal prosecutions.

The most common standard of proof for civil forfeiture nationally is a preponderance of the evidence. A low standard, a preponderance of the evidence merely means that property is more likely than not connected to a crime. However, in many cases, the standard of proof for civil forfeiture is, in effect, even lower; probable cause, or the seizing officer’s justification for confiscating the property in the first place. This is because no one challenges the seizure, resulting in the property’s forfeiture by default. Often, the property itself is used as probable cause. For example, police may consider the mere presence of cash to be suspicious and take it as probable cause that the cash is drug money—even in the absence of drugs or other evidence of criminal activity.

Another feature of civil forfeiture is that the government can use it to forfeit property belonging to someone who has done nothing wrong simply by alleging someone else used it in a crime. And under the civil forfeiture laws of most states and the federal government, such third-party “innocent owners” bear the burden of proving their own innocence to win their property back.

This strange procedure, where property is tried and, if found guilty, “punished” by being forfeited to the government, has its roots in admiralty and customs law, where it has served two main purposes. The first is to gain jurisdiction over property when its owners have committed a crime but are beyond the reach of U.S. law. A pirate ship is a classic example. The second is to protect the government’s revenue. When a cargo arrives in port, but nobody appears to pay the tariff, the government can seize the cargo, and perhaps the vessel, because of the monies owed. If payment is not forthcoming, the government can then take title to—forfeit—the cargo. Generally uncontroversial, these were the primary uses of civil forfeiture for most of the nation’s history.

That began to change in the 1970s and 1980s. Seeing forfeiture as a potential weapon in the war on drugs, Congress enacted a series of laws expanding forfeiture’s reach. The earliest of these laws was the Racketeer Influenced and Corrupt Organizations Act, or RICO Act, of 1970, which created criminal forfeiture. Another important legislative development was the Comprehensive Crime Control Act of 1984, which greatly expanded civil forfeiture’s reach. The objective of much of this legislation was to disrupt the drug trade by removing the means of committing crimes, such as vehicles or houses, as well as the proceeds, or fruits, of crime.

In addition to expanding forfeiture’s reach, Congress in the 1984 Act also, for the first time, gave law enforcement a financial stake in forfeiture efforts by directing proceeds to the newly created Assets Forfeiture Fund rather than the government’s general fund. The Fund administers forfeited assets and distributes proceeds to federal law enforcement agencies. The idea was to encourage more vigorous enforcement of the nation’s drug laws.

At the federal government’s urging, many states followed suit, expanding the reach of their forfeiture laws and giving state and local law enforcement agencies a financial stake in forfeiture. Today, 44 states and the federal government award law enforcement a share of forfeiture proceeds—up to 100% in many cases.
Also as part of its push to promote drug enforcement, Congress created the federal equitable sharing program.20 Equitable sharing allows state and local law enforcement agencies to seize property locally for forfeiture under federal law and receive a cut of the proceeds. The equitable sharing program offers two modes of cooperation: joint task forces and adoptions. With joint task forces, federal and state or local agencies work together to seize property during a shared investigation. The federal government then seeks to forfeit that property under federal law, and the state or local agencies that helped with the seizure file claims for a portion of the proceeds. With adoptions, a state or local agency makes a seizure under state law and without federal assistance. The agency then asks a federal agency to “adopt” the property for forfeiture under federal law. Following a successful forfeiture action, the federal agency returns up to 80% of the proceeds to the state or local agency.21 Equitable sharing proceeds must be used for law enforcement purposes, as a budget supplement; they are not supposed to replace appropriated agency resources.22 The program thus provides discretionary funds to state and local agencies that might have little flexibility in their normal budgets.

Forfeiture’s expanded new role as a weapon in the war on drugs quickly proved highly controversial and has remained so.23 The fact that, under civil forfeiture laws, property owners generally need not be convicted of a crime to forever lose their property runs counter to many Americans’ understanding of property rights and due process. So, too, does the fact that third-party innocent owners must often prove their own innocence to win their property back.

The fact that, under civil forfeiture laws, property owners generally need not be convicted of a crime to forever lose their property runs counter to many Americans’ understanding of property rights and due process. So, too, does the fact that third-party innocent owners must often prove their own innocence to win their property back. The financial incentive has also come under fire, with critics alleging that giving law enforcement a stake in forfeiture creates a conflict of interest and distorts law enforcement priorities. Critics also argue the financial incentive undermines the separation of powers because it allows agencies to self-fund outside the normal legislative appropriations process and with little oversight. And the equitable sharing program has come in for special criticism for allowing state and local law enforcement to forfeit property under federal law and thereby circumvent state laws that may provide property owners with stronger protections—or law enforcement with less, or no, financial incentive.

Combined with copious anecdotal evidence of abuse,24 the sheer scale of forfeiture has raised awareness of these and other issues in recent years, prompting concerns that forfeiture has become an end in itself. Today, there are two broad perspectives on forfeiture, with proponents calling it an invaluable law enforcement tool and opponents warning it does more harm than good.
TWO VIEWS OF FORFEITURE

Proponents argue forfeiture is an effective crime-fighting tool that deprives criminals of assets they could otherwise use to commit more crimes and ensures crime does not pay. They also say law enforcement can use the proceeds to fight even more crime and to fund drug education and other anti-drug efforts. Opponents, in contrast, argue forfeiture plays little role in reducing crime. They also contend that poor protections for property owners combined with law enforcement’s ability to financially benefit may mean police and prosecutors pursue forfeiture to raise revenue rather than to fight crime. Below, I outline these competing perspectives.

PROPONENTS’ VIEW: FORFEITURE IS AN EFFECTIVE CRIME-FIGHTING TOOL

Proponents argue that forfeiture fights crime and protects the public, principally by depriving criminals of the instrumentalities and proceeds of crime. As one of many examples, the chief federal reference concerning forfeiture states:

The Department of Justice Asset Forfeiture Program (Program) encompasses the seizure and forfeiture of assets that represent the proceeds of, or were used to facilitate, federal crimes. The primary purpose of the Program is to employ the federal asset forfeiture authorities in a manner that enhances public safety and security. This is accomplished by removing the proceeds of crime and other assets relied upon by criminals and their associates to perpetuate criminal activity against our society.

Similarly, the Hawaii Attorney General’s website says the state’s Asset Forfeiture Program:

Provides a mechanism to enable law enforcement to take away the means by which criminals engage in their unlawful activity and the benefits derived from that unlawful activity.

As described above, Congress and state legislatures adopted forfeiture in its current form for use in the war on drugs, with the ultimate goal of reducing illicit drug use. And, indeed, by 2000, then-Sen. Jeff Sessions estimated “98 percent of forfeitures . . . in Federal court are as a result of drug cases.” Today, drug crimes remain a central focus, though numerous non-drug-related crimes now give rise to forfeiture, and forfeitures for firearms and white-collar crimes in particular have become increasingly common at the federal level in recent years.

Proponents argue that if forfeiture laws encourage a focus on drug or other crimes at the expense of others, then it is working precisely as Congress and state legislatures intended. After all, lawmakers created the financial incentive to encourage drug enforcement. And when reforms are proposed to remove or reduce the financial incentive, law enforcement representatives often warn this will mean less time and energy spent on enforcement. In just one example, in testimony against a 2019 forfeiture reform bill in Hawaii that would have eliminated the financial incentive in the state’s forfeiture laws, a prosecuting attorney’s office warned that absent the incentive, “it’s not hard to anticipate these agencies de-prioritizing forfeiture cases, choosing to spend precious human resources on other matters.”

Faced with evidence of malfeasance relating to forfeiture—such as innocent people losing property or police misappropriating forfeiture funds—proponents call such incidents lamentable exceptions to the rule. Forfeiture, including its financial incentive, they insist, is essential for fighting some of the worst criminals. Especially in the early years of forfeiture’s use in the war on drugs, courts tended to find this reasoning persuasive, frequently citing the government’s interests in funding and promoting law enforcement as outweighing constitutional protections.

Proponents further argue that forfeiture proceeds flow back into fighting more crime. This quote, from the Hawaii Attorney General’s website, is typical:

A secondary benefit of forfeiture laws is that forfeited property, or the proceeds of its sale, has been turned over to law enforcement and is used to fight against crime. While the purpose of forfeiture and the evaluation of a forfeiture law or program should never be based solely on the generation of revenue, it is only fitting that forfeited property be used to combat those who seek to profit from crime.

Finally, proponents say forfeiture proceeds can also be used to fight crime indirectly, through drug awareness and prevention programs. This is a permissible use of federal forfeiture funds, including
equitable sharing proceeds,34 and of state forfeiture funds in many states.

But while the goals of forfeiture are clear, proponents have provided little evidence that forfeiture truly is effective in fighting crime—in terms of improving police effectiveness either in general or in reducing drug use.

**OPPONENTS’ VIEW: FORFEITURE PLAYS LITTLE ROLE IN REDUCING CRIME AND OFTEN REPRESENTS SIMPLE REVENUE RAISING BY LAW ENFORCEMENT**

Opponents of forfeiture argue that, far from being an important crime-fighting tool, forfeiture is more about generating revenue for law enforcement than protecting the public. They point out that few if any forfeiture programs reliably track whether forfeiture cases are linked to criminal cases or otherwise advancing criminal investigations.35 This makes it impossible for officials to evaluate program effectiveness and calls into question whether forfeiture efforts are furthering legitimate goals.36

Forfeiture opponents also point to a growing body of research finding little indication that forfeiture reduces crime—and no indication that eliminating civil forfeiture increases crime. For example, in a previous study similar to this one, I found no evidence that more equitable sharing proceeds improve police effectiveness or reduce drug usage.37 And a recent study of crime and policing in New Mexico, which abolished civil forfeiture and eliminated the financial incentive in its criminal forfeiture law in 2015, found these reforms did not harm public safety. Following reform, the state experienced no meaningful increase in crime or decrease in arrest rates compared to neighboring Colorado and Texas, which served as control states.38

Opponents also point out that most forfeitures are of relatively low value. Recent research has found that, across 21 states with data, the median currency forfeiture averaged just $1,276. In many of those states—including four of the five states under study here—the median currency forfeiture is much smaller.39 This suggests that rather than targeting kingpins, forfeiture is often targeting ordinary people.

As for whether forfeiture can be used to fight crime indirectly, through spending on drug education or anti-drug efforts, opponents point to data suggesting such spending is rare. A recent analysis of data from 13 states that track this category of spending revealed the states spend an average of just 9% of forfeiture proceeds on community programs.40

Instead, critics argue forfeiture enables law enforcement to “police for profit”—in other words, it creates the risk that agencies will pursue forfeiture for its own sake rather than as a means to reduce crime. They point out most civil forfeiture laws make forfeiture both easy and lucrative for law enforcement.41 Civil forfeiture tends to favor the government and property owners typically have only a short period of time in which to challenge the seizure of their property. Failure to do so results in automatic forfeiture.

Critics further point out that when owners do challenge a seizure, they must hire their own attorney or go up against experienced government attorneys on their own. Because civil forfeiture cases usually take the form of civil suits against property, not people, owners do not have the right to an attorney. Given the high cost of hiring an attorney and the low value of most forfeitures, it should come as no surprise, critics say, that seizures are frequently uncontested.42

Critics also charge that agencies have little incentive to exercise restraint and minimize improper seizures because the system is so biased against property owners and has few accountability mechanisms. They note that when owners successfully regain their property, the seizing agency generally faces no penalties.43 While owners may be able to recoup attorney fees in some states or under certain circumstances at the federal level,44 so-called fee-shifting provisions are far from the rule45 and may have loopholes. For example, when it becomes clear it is not going to win its case, the federal government has been known to dismiss the case without prejudice. With the case dismissed, the government argues the owner did not “substantially prevail” and is therefore not eligible for attorney fees.46 Moreover, these fees may be paid from the general treasury, not the seizing agency’s budget.47

Opponents criticize civil forfeiture on all these grounds, but the financial incentive inherent in most forfeiture laws has aroused the greatest indignation. Opponents argue awarding law enforcement some or all the proceeds of forfeiture undermines legislatures’ power of the purse, creates a conflict of interest and distorts law enforcement priorities, encouraging the pursuit of profit over the pursuit of public safety or justice.48

Many carefully documented cases illustrate, albeit by example, that police do in fact direct some of their efforts to securing funds rather than addressing crime.49 Prior research has also found some evidence that the financial incentive works as critics contend. For example, a 2018 study found that, on average, agencies in states with the lowest financial incentives and the greatest protections for property
owners took in more than twice as much equitable sharing money per agency as agencies in states with the highest incentives and poorest protections. In addition to lending credence to concerns that agencies may use equitable sharing to bypass their states’ laws, those results also suggest agencies’ forfeiture activity may be motivated by a desire for revenue.\textsuperscript{50} And in a 2019 study, I explored the relationship between local economic conditions and state and local law enforcement’s participation in federal equitable sharing, finding agencies increase their equitable sharing activity during times of fiscal stress when local budgets are likely to be squeezed.\textsuperscript{51}

Given the civil liberties concerns at issue and mounting evidence that revenue generation is a major motivator of forfeiture activity, critics argue that, at a minimum, the onus is on proponents to demonstrate forfeiture is in fact successful in fighting crime.

This study subjects these contrasting viewpoints to empirical analysis. The opposing sides in the forfeiture debate have historically talked past each other. But the issues—forfeiture’s impact on policing and drug outcomes and its role in shaping police activity—are empirical questions. As described above, these questions have, to some extent, been addressed in the existing literature, with most evidence appearing to support critics’ claims. Here I have access to newly developed and relatively comprehensive state-level data for five states—Arizona, Hawaii, Iowa, Michigan and Minnesota—covering the years 2005 through 2013, providing the first careful statistical analysis of agency-specific behavior. With these data, I can test whether forfeiture increases police effectiveness, whether it has an impact on the use of illicit drugs and whether the “policing for profit” motivation becomes evident in the presence of fiscal stress.
The five states under study were selected because they had both expansive forfeiture laws and necessary data—specifically, data tying forfeitures under state law to specific agencies over the study period of 2005 to 2013. Helpfully, the states’ forfeiture laws are, and were during the study period, similar, albeit with some variation.

Arizona law makes civil forfeiture both procedurally easy and financially rewarding for law enforcement. Though somewhat improved in recent years, the standard of proof for forfeiting property during the study period was a preponderance of the evidence, meaning the government just had to prove property was more likely than not connected to criminal activity. This standard is far from the proof beyond a reasonable doubt required in criminal court. When an owner, as a third party to a seizure, wishes to make an innocent owner claim to retrieve her property, she bears the burden of proving her innocence of the alleged criminal activity giving rise to the forfeiture action. Arizona law also gives law enforcement a strong incentive to seize property, awarding agencies 100% of the funds generated through forfeiture.

Like Arizona’s civil forfeiture laws, Hawaii’s are among the nation’s most permissive for law enforcement. To forfeit property, the government must tie property to a crime by the low standard of a preponderance of the evidence. Innocent owners also bear the burden of proving they had nothing to do with the alleged crime for which the government is pursuing forfeiture. And under Hawaii law, law enforcement receives 100% of forfeiture proceeds; 25% of funds generated through forfeiture go to police, 25% to prosecuting attorneys and 50% to the attorney general.

Iowa’s civil forfeiture laws are similar to Arizona’s and Hawaii’s. Though it has, like Arizona’s, improved somewhat in recent years, Iowa’s standard of proof required to forfeit property was a preponderance of the evidence during the study period. A person bringing an innocent owner claim bears the burden of proving she had no knowledge of, or involvement in, the alleged illegal use of her property. Iowa law awards 100% of forfeiture proceeds to law enforcement.

Michigan’s civil forfeiture laws are also highly permissive for law enforcement despite modest reforms to the standard of proof and the innocent owner burden in recent years. During the study period, the standard of proof to forfeit property was a preponderance of the evidence, and for seizures where drug activity was alleged—as is the case with most seizures—innocent third-party owners wishing to recover their property bore the burden of proving their innocence or ignorance of the activity. The government bore the burden in all other cases. Michigan law also gives law enforcement a large financial incentive to seize property, allowing agencies to keep and spend 100% of proceeds from drug-related forfeitures and 75% of proceeds from other forfeitures.

Of the five states studied, Minnesota provides the best protections for property owners, though its laws still make forfeiture relatively easy and very rewarding. To forfeit property during the study period, the government had to show property was subject to forfeiture by clear and convincing evidence, a moderately high standard, though still lower than beyond a reasonable doubt. (The state’s standard has since improved somewhat.) In innocent owner cases, third-party owners must prove they had nothing to do with the alleged criminal activity involving their property. The innocent owner defense was not allowed at all in DWI cases until a 2017 reform. Minnesota law enforcement also enjoys a large stake in forfeiture, receiving 90% of proceeds in most cases.

As shown in Table 1, state and local agencies in the five states took in nearly $442 million through forfeitures conducted under state law between 2005 and 2013. For two of the states, Iowa and Minnesota, I am not able to report the full amount forfeited because agencies did not always comply with state requests for data. Consequently, the absolute levels for those two states are understated; however, if underreporting is scattered randomly across the study period, the numbers do provide some sense of trends.

Agencies in the five states took in an additional $218 million through their participation in the U.S. Department of Justice’s equitable sharing program during the study period. Table 1 also reports these amounts. I obtained these data from DOJ rather than the states, and they are reasonably complete.
## Table 1: State and Local Forfeiture Proceeds and Equitable Sharing Proceeds by State and Year, 2005–2013

<table>
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<tr>
<th>Year</th>
<th>Arizona</th>
<th>Hawaii</th>
<th>Iowa</th>
<th>Five-State Total</th>
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<td>State Forfeiture</td>
<td>Equitable Sharing</td>
<td>State Forfeiture</td>
<td>Equitable Sharing</td>
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<tr>
<td>2005</td>
<td>$14,046,980</td>
<td>$5,448,493</td>
<td>$896,121</td>
<td>$2,020,762</td>
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<td>2006</td>
<td>$13,695,877</td>
<td>$7,430,036</td>
<td>$1,419,610</td>
<td>$2,927,245</td>
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<tr>
<td>2007</td>
<td>$20,521,147</td>
<td>$5,918,261</td>
<td>$1,316,772</td>
<td>$2,276,178</td>
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<tr>
<td>2008</td>
<td>$15,192,662</td>
<td>$6,413,722</td>
<td>$1,484,994</td>
<td>$2,053,249</td>
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<tr>
<td>2009</td>
<td>$23,574,929</td>
<td>$4,008,650</td>
<td>$1,316,772</td>
<td>$677,243</td>
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<tr>
<td>2010</td>
<td>$33,235,833</td>
<td>$11,702,027</td>
<td>$1,763,123</td>
<td>$648,346</td>
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<tr>
<td>2011</td>
<td>$29,687,058</td>
<td>$7,822,161</td>
<td>$661,619</td>
<td>$643,256</td>
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<tr>
<td>2012</td>
<td>$33,658,124</td>
<td>$3,574,173</td>
<td>$515,811</td>
<td>$656,094</td>
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<td>2013</td>
<td>$32,908,019</td>
<td>$6,616,161</td>
<td>$868,376</td>
<td>$1,337,168</td>
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<tr>
<td>Total</td>
<td>$216,520,629</td>
<td>$58,927,684</td>
<td>$10,243,198</td>
<td>$13,239,542</td>
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<td>Mean</td>
<td>$1,704,887</td>
<td>$199,755</td>
<td>$276,843</td>
<td>$171,942</td>
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<td>Median</td>
<td>$251,949</td>
<td>$50,451</td>
<td>$189,076</td>
<td>$74,979</td>
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### Note

Means and medians are of total forfeiture proceeds (or, in the case of federal equitable sharing, distributions) by agency, by year. These figures reflect non-zero proceed/distribution amounts only. Arizona’s and Hawaii’s means are much larger than those of the other states in part because Arizona and Hawaii have smaller numbers of agencies and because Arizona agencies in particular seem to engage in a lot of forfeiture activity.
It is important to note that the data include proceeds from both civil and criminal forfeitures. In general, state and federal data do not distinguish between the two, though civil greatly outpaces criminal in jurisdictions that keep track. For example, a recent study found 93% of Arizona’s forfeitures were processed civilly in 2018 and 2019; just 3% were processed criminally. (The proceeding type for the remaining 4% is unknown.) However, law enforcement’s financial incentive is generally the same for both civil and criminal forfeiture. Moreover, the decision of whether to pursue forfeiture through civil or criminal procedures is often made by prosecutors well after police have seized an asset. And the effects of forfeiture funds, if any, are likely to be similar whether funds derive from civil or criminal forfeitures.

Forfeiture amounts varied across agencies and states as well as over time. Indeed, state and local forfeiture amounts fluctuated considerably in all five states over the study period. Two states, Arizona and Minnesota, saw large increases in state forfeiture during the analysis period. Iowa and Michigan present a mixed picture, and Hawaii experienced a decline. Equitable sharing amounts also varied considerably, which is not uncommon since a few large joint task force operations can greatly affect the results in any given year.

My purpose here is to compare trends in forfeiture over time with those in crime clearances, illicit drug use and economic conditions. While it is tempting to do this using data aggregated at the state level, this is inadvisable. Most forfeitures are initiated not by state agencies but by county or municipal agencies. This means local agencies, and not state, are the relevant actors and decision-makers. Using data aggregated up to the state level could obscure relationships between forfeiture proceeds, police activity and other variables that are apparent only with disaggregated data. I have therefore developed time series data at the agency level across all five states. Called a “panel dataset,” this construction allows me to follow variables for each individual agency over multiple years. Besides associating my tests with the actual agencies engaging in forfeitures, this also gives my tests greater statistical power since hundreds of agencies are involved. In the next section, I describe my panel dataset in greater detail.
This study provides the first multistate analysis of effects and causes of state and local forfeiture. It focuses on the individual police agency, which may be a municipal police force, a county sheriff’s office or a state agency. For each police agency, I combined data for forfeiture, crime, number of officers and other variables of interest over a nine-year period, from 2005 through 2013. The result is a panel dataset that follows changes in outcomes, over the same period, for several hundred agencies across the five states. The panel approach offers important advantages over the “cross-sectional” approach taken in many previous studies, which compare agencies to one other at some single point in time. Many factors may affect forfeiture and crime across jurisdictions, and some of them may be difficult or impossible to quantify or even identify. In following individual police agencies over time, my approach effectively controls for many of those unobservable variables. Similarly, any number of factors may contribute to variations in drug use across the United States. Controlling for state and region reduces that statistical noise, allowing me to focus on the variables of interest and greatly increasing confidence in the results. Appendix B describes my regression methodology.

The data for forfeiture amounts by police agency were gathered from public authorities in the five states: Arizona, Hawaii, Iowa, Michigan and Minnesota. As noted above, these five states were selected for the study because they had both expansive forfeiture laws and necessary data—specifically, data tying forfeitures under state law to specific agencies over the study period of 2005 to 2013. A larger study encompassing more states would obviously be preferable, but many states still fail to publicly report consistent and reasonably complete forfeiture data, leaving researchers—and state policymakers—without the tools to determine whether forfeiture is achieving its stated goals.

For the five states studied here, the Institute for Justice obtained annual data specific to agencies or, in Arizona’s case, counties. These reflect proceeds from forfeitures conducted under state law and do not include federal equitable sharing amounts. A number of agencies had no proceeds data for some years. In many cases, it was possible to interpret the missing proceeds as zeros. However, for many Iowa and Minnesota agencies, as well as for a much smaller number of Michigan agencies, with missing proceeds data for some years, it was not possible to determine whether, in those years, they received no forfeiture proceeds or simply failed to report on their forfeiture proceeds. This made it impossible to determine the year-over-year changes that are a crucial part of the panel structure for those agencies. Accordingly, I omitted those agencies from my balanced panel. Fortunately, the forfeiture data for Arizona and Hawaii were complete, those for Michigan were largely complete, and those for Iowa and Minnesota were complete for many agencies.

To create the necessary datasets for my regression analyses, I combined the forfeiture data with several highly detailed government datasets on policing, crime, economic factors.
and drug use. Specifically, I developed datasets at the police agency level that track, over several years, the number of sworn police officers, population served, and the number of serious crimes reported and cleared (i.e., considered solved) by arrest. I combined these datasets with geographically more aggregated data on demographic characteristics, economic conditions and illicit drug use. The resulting datasets contain annual data for all of these variables across hundreds of individual local and county police agencies.

I obtained the number of officers, by year and agency, from the Federal Bureau of Investigation’s Uniform Crime Reporting Program, both directly and through the Inter-university Consortium for Political and Social Research. I obtained crime data through the UCR’s Offenses Known and Clearances by Arrest database. I obtained illicit drug use data from successive tranches of the National Survey on Drug Use and Health. Conducted by the Substance Abuse and Mental Health Services Administration within the U.S. Department of Health and Human Services, NSDUH is widely considered the leading source for drug usage data. It provides information at the national, state and sub-state levels; I used data at the sub-state level for this study. I obtained annual economic data, usually on a county level, from several sources and price inflation data from the Bureau of Economic Analysis. Appendix A provides a list of my data sources.

The time frame for my analyses—the years 2005 through 2013—spanned the Great Recession, with its impact on economic factors and budgets. This time frame provided the variation necessary to test the impact of changes in local economic conditions. The data compilations within the datasets I used were also very consistent during the time frame, which is important in implementing a panel regression.
ANALYSIS AND RESULTS

My analysis finds no material evidence that forfeiture increases police effectiveness or reduces illicit drug use. The relationships between forfeiture and these outcomes are weak and statistically insignificant, with one exception that links increased forfeiture to decreased clearance rates for violent crimes. In contrast, my analysis does find evidence that fiscal stress leads to increased reliance on forfeiture, providing support to critics’ claim that forfeiture promotes “policing for profit.” (Full regression results for all analyses can be found in Appendix B.)

MORE FORFEITURE REVENUE DOES NOT MAKE POLICE MORE EFFECTIVE

Forfeiture proponents argue that increased forfeiture revenues allow police to pursue crime more vigorously. If true, this implies jurisdictions with increasing forfeiture revenues would experience increased police effectiveness, with more reported crimes cleared, or resolved, by arrest. Likewise, one would expect jurisdictions with falling forfeiture revenues to experience the opposite. Using crime and forfeiture data, I empirically tested whether these presumed connections actually exist and find that they do not. In fact, I find no meaningful relationship between forfeiture revenue and police effectiveness.

To measure police effectiveness, I used crime clearance rates for four sets of crime data: all reported crimes, “Index 1” (or simply “index”) crimes, violent crimes and property crimes. Clearance rate refers to the proportion of reported crimes police consider solved, usually by arrest. All reported crimes is a large category consisting of the serious violent crimes of murder, negligent (or involuntary) manslaughter, rape, robbery, aggravated assault and simple assault and the serious property crimes of burglary, larceny, motor vehicle theft and arson. Index 1 crimes refer to the eight serious violent and property crimes the FBI includes in its annual Crime in the United States reports. These overlap with all reported crimes but exclude involuntary manslaughter and simple assault.

These crimes, unlike certain other crimes like drug crimes, rarely lead to forfeiture. This means the promise of forfeiture revenue is unlikely to motivate police to clear them. Forfeiture proponents argue increased income from forfeiture, which arises largely from alleged illicit drug activity, allows police to be more effective generally, including when it comes to serious crimes. Not only are serious crime clearances an important measure of police effectiveness, but focusing on them, rather than on drug crime clearances, allows me to analyze whether forfeiture funds received—rather than the promise of further funds—affects police effectiveness.

A focus on drug crime clearances, on the other hand, would make the direction of causality difficult to determine. The particular availability of the forfeiture tool with respect to those crimes is intended precisely to encourage enforcement. Higher clearance rates for those crimes could therefore stem

| Table 2: Effects of Forfeiture on Crime Clearances |
|---------------------------------|-----------------|-----------------|
| **All Reported Crimes** | **Index 1 Crimes** | **Violent Crimes** | **Property Crimes** |
| State and Local Forfeiture Proceeds Only | Not statistically significant | Not statistically significant | Strong statistically significant decrease**: A $1,000 increase in forfeiture proceeds per officer is associated with 7 fewer crimes solved. | Weak statistically significant increase*: A $1,000 increase in forfeiture proceeds per officer is associated with 2 more crimes solved. |
| State and Local Forfeiture and Equitable Sharing Proceeds | Not statistically significant | Not statistically significant | Statistically significant decrease**: A $1,000 increase in forfeiture proceeds per officer is associated with about 4 fewer crimes solved. | Not statistically significant |

**5% level, *10% level.
For detailed results, see Tables B2 and B3 in Appendix B.
from police being more highly motivated to pursue those crimes by the promise of forfeiture revenue instead of, or in addition to, their being more effective due to having greater resources at their disposal. More practically, this hypothesis is not possible to test with data currently available: Drug crimes, even if reported to the police, are not part of the UCR's Offenses Known reporting; while the number of arrests is reported, the level of arrests relative to illicit drug trafficking cannot be determined.

To measure the impact of forfeiture on an agency’s crime clearances, I built a panel of forfeiture proceeds per officer in a given agency lagged one year before the same agency’s clearance rate for all reported crimes. The lag is to allow for some delay in deploying forfeiture funds, which are usually of uncertain timing and amount, making it difficult to incorporate expected amounts into operations planning. I controlled for the number of sworn police officers per capita for the populations served as well as for the overall population. Finally, I included year indicator variables to reflect trends not otherwise captured.

My results do not support the contention that forfeiture leads to greater police effectiveness (see Table 2). Forfeiture’s effects on clearance rates for all reported crimes were not statistically significant, suggesting additional forfeiture revenue does not translate into more crimes solved. Further, the association between forfeiture proceeds and clearance rates, beyond being statistically insignificant, was tiny: Even if the effects were significant, they would amount to a very small marginal increase in crime clearances. Specifically, an increase in forfeiture revenue of $1,000 per officer lagged one year to the amount of state and local proceeds. Using this to calculate forfeiture proceeds per officer, I proceeded as above.

The results for combined federal, state and local proceeds are similar to those for the state and local proceeds alone. Combined forfeiture proceeds have no detectable effect on clearances for either all reported crimes or index crimes alone. For property crimes, combined proceeds are positively correlated with clearances, but the relationship is small and not statistically significant. And with respect to violent crimes, clearance rates are again negatively associated with forfeiture proceeds: Greater proceeds imply lower violent crime clearance rates. The association is smaller than with state and local proceeds alone. The results for violent crimes are more intriguing. There, I found a stronger statistically significant effect (5% level) from forfeiture revenue on crime clearances. However, the effect was the opposite of that predicted by proponents: A $1,000 increase in forfeiture proceeds is associated with a decrease in violent crime clearance rates of 7 per 1,000 incidents. It is possible increasing forfeiture revenues are tied to increasing application of police resources to drug crimes—with less effort correspondingly being put into resolving violent crimes.

The preceding analyses used proceeds from state and local forfeitures only. As described above, earlier work has considered the impact of federal equitable sharing payments nationwide on policing. But state and local proceeds and equitable sharing funds may have a combined effect not captured in separate analyses. To address this, I added the equitable sharing proceeds received by each of the agencies for each year to the amount of state and local proceeds. Using this to calculate forfeiture proceeds per officer, I proceeded as above.

The results for combined federal, state and local proceeds are similar to those for the state and local proceeds alone. Combined forfeiture proceeds have no detectable effect on clearances for either all reported crimes or index crimes alone. For property crimes, combined proceeds are positively correlated with clearances, but the relationship is small and not statistically significant. And with respect to violent crimes, clearance rates are again negatively associated with forfeiture proceeds: Greater proceeds imply lower violent crime clearance rates. The association is smaller than with state and local proceeds alone—with a $1,000 increase in forfeiture per officer implying a decrease in violent crime clearance rates of about 4 per 1,000 incidents—but the relationship is strongly statistically significant (5% level).

These results suggest forfeiture does not materially improve police effectiveness. Indeed, it may make police less effective when it comes to solving violent crimes.
MORE FORFEITURE REVENUE DOES NOT REDUCE ILLICIT DRUG USE

State and local forfeiture activity is heavily oriented toward illicit drugs. Forfeiture proponents assert that removing the instruments of the drug trade hinders drug operations while removing the profits makes trafficking less attractive. They also claim allowing law enforcement to keep and spend forfeiture proceeds furthers the fight against drugs because police can use the funds to fight drug crime both directly through greater enforcement and indirectly through drug education and other anti-drug efforts. While separating these strands would be difficult, it is possible to cut through the complexities by asking a simple question: Does increased forfeiture revenue lead to decreased illicit drug use? After all, if proponents are right, there should be fewer drugs on the street—and less drug use. Looking at no fewer than four different drug use metrics, I find no association between forfeiture revenues and drug use.

To measure drug use, I turned to the National Survey on Drug Use and Health, the most reliable information available concerning drug addiction and drug abuse. Survey data were gathered consistently during my study period, allowing me to incorporate them into the panel structure. In particular, I tested whether increases in forfeiture revenue experienced by agencies within given NSDUH sub-regions were associated with reductions in drug use in those same sub-regions, controlling for factors that might also affect illicit drug use: the number of sworn police officers and demographic and economic factors sometimes linked to drug use. In all, I measured changes in four NSDUH variables: (1) use of any illicit drug in the previous year, (2) marijuana use in the previous year, (3) nonmedical use of prescription pain relievers in the previous year and (4) cocaine use in the previous year.

None of these four drug use measures showed any systematic association with forfeiture revenues, either for state and local forfeiture proceeds alone or for combined federal, state and local forfeiture proceeds. Correlations were small and never approached statistical significance (see Table 3).

For decades, forfeiture proponents have cited the goal of fighting the illicit drug trade as the primary purpose of forfeiture. And the ultimate goal of fighting the drug trade is to reduce illicit drug use. But the evidence analyzed here finds no link between forfeiture and drug use. No patterns emerge across the four drug use measures to suggest the four sets of results somehow understate forfeiture’s impact. The sample size is large, so even fairly modest effects would be picked up if they were widespread across the data. The data simply do not support proponents’ assertion that forfeiture furthers the policy goal of reducing drug use.

Table 3: Effects of Forfeiture on Drug Use

<table>
<thead>
<tr>
<th></th>
<th>Illicit Drug Use</th>
<th>Marijuana Use</th>
<th>Non-Medical Prescription</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td>State and Local Forfeiture Proceeds Only</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
</tr>
<tr>
<td>State and Local Forfeiture and Equitable Sharing Proceeds</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
<td>Not statistically significant</td>
</tr>
</tbody>
</table>

For detailed results, see Tables B4 and B5 in Appendix B.
FISCAL STRESS DOES INCREASE POLICE RELIANCE ON FORFEITURE

The most controversial aspect of forfeiture is that law enforcement often receives some or all of the proceeds when property is forfeited. State and local agencies can often spend forfeiture proceeds on a wide variety of purposes and with little oversight. In the case of federal equitable sharing proceeds, recipient agencies are required to use the funds for law enforcement purposes. Distributions are not supposed to replace appropriated agency resources; instead, they are to be used as a budget supplement. Forfeiture thus purportedly provides discretionary funds to agencies that might otherwise have little flexibility in their budgets. Among other criticisms of the financial incentive, opponents argue police will pursue forfeiture more assiduously during times of fiscal stress—not due to increases in crime that can lead to forfeiture but because of forfeiture’s increasing value as a budgetary supplement. That is, forfeiture arises not incidentally to normal policing but rather as a deliberate strategy to obtain funds, a strategy especially important when budgetary times are tough.

To test whether local economic conditions impact forfeiture activity, I applied two widely used surrogates for fiscal stress and health: the unemployment rate and personal income. Increased unemployment increases local fiscal stress due to loss of tax income as sales taxes fall as well as to increased demands upon municipal resources, such as responding to homelessness and public health concerns. Meanwhile, increases in personal income lead to improvements in local fiscal health through their impact on people’s purchasing power (sales taxes) and property values (property taxes). If critics are right that police forfeiture activity is responsive to changes in local economic conditions, increased unemployment should correlate with more forfeiture activity and increased personal income with less. For each agency, I included the annual unemployment and personal income levels from county data. As controls, I included the number of sworn police officers, demographic data, the number of reported offenses, the population served and year indicator variables.

My analysis finds that the unemployment rate has a strong impact on state and local forfeiture proceeds: A one percentage point increase in the unemployment rate, such as from 5% to 6%, is associated with a 12% increase in forfeiture proceeds. (See Figure 1.) This result is statistically significant at the 10% level. For personal income, on the other hand, I find no statistically significant effect. This may be because personal income changes far more slowly over time than does unemployment, making causal relationships, if any, harder to discern in the data. These results are consistent with my previous work demonstrating fiscal stress leads to increased equitable sharing activity.

I also tested the effects of fiscal stress on state and local forfeiture proceeds and federal equitable sharing proceeds combined. To do this, I first summed the forfeiture proceeds from any source by agency and year. I then analyzed the impact of unemployment and personal income on these proceeds, again finding unemployment has a positive and statistically significant effect at the 10% level. Here, a one percentage point increase in unemployment is associated with nearly an 11% increase in forfeiture proceeds. Interestingly, and contrary to what one might expect, I also find a very small but statistically significant effect from personal income in one of the tests: As incomes rose, so, too, did forfeiture activity—albeit very slightly, by one-tenth of a percent for a one percentage point increase in personal income (see Table B6 in Appendix B). It could be that higher personal incomes mean more valuable assets are available for forfeiture.

Two limitations of these results are worth noting, both stemming from the proxies I used for fiscal stress. First, in addition to being associated with fiscal stress, unemployment could also lead to higher crime rates, including greater illicit drug use, and thus more incidental forfeiture activity. However, although unemployment may have led to increased crime in some jurisdictions, crime rates did not increase nationwide during the Great Recession. Furthermore, I controlled for reported crime. A second limitation is unemployment and personal income statistics are county level rather than by agency, and fiscal stress may affect different agencies within the same county differently. Ideally, I would have used law enforcement agency budgets as a measure of fiscal stress, but I do not have access to police budgets over time for most of the agencies in my sample.

Nevertheless, my results for unemployment and forfeiture activity are consistent across my analyses as well as with those from my earlier research. This suggests forfeiture is not simply incidental to law enforcement, lending support to critics’ claims that forfeiture activity may be motivated by a desire for revenue.

Figure 1: Local Unemployment and Police Forfeiture Activity

1% Unemployment 12% State and local forfeiture proceeds 11% State and local forfeiture and equitable sharing proceeds

For detailed results, see Table B6 in Appendix B.
CONCLUSION

This study finds no material support for the propositions that forfeiture, either state and local alone or combined with federal equitable sharing, leads to greater policing effectiveness or reduces illicit drug use. It does, however, find that economic conditions affect forfeiture activity, with the relationship both materially important and statistically significant. These results are similar to those from earlier studies, in particular those from my 2019 study of equitable sharing alone,82 and they are especially salient now, when local government budgets are suffering due to the COVID-19 pandemic. The data suggest that it is during times like these that police may make particular recourse to forfeiture.

These findings that forfeiture is not meeting its policy goals would be of considerable concern even if forfeiture were harmless. But forfeiture is not harmless. It is a serious intrusion on civil liberties. Property is often seized and forfeited based only on a police officer’s probable cause determination, as owners fail to contest seizures of their property because they are stymied by a confusing system, cannot afford legal representation or are compelled to sign away their right to their property to avoid possible criminal charges. Even when people do contest forfeiture, the system provides owners with poor protections that disadvantage them every step of the way.

And while forfeiture proponents claim forfeiture targets serious criminals, the size of many local forfeitures suggests ordinary people are often victimized. Where known, currency forfeitures in the states are typically just $1,300 or less. In a number of states, that figure is even lower, at only a few
hundred dollars.83 And in 2017, nearly all of the vehicles swept up by the same Michigan forfeiture program that later claimed Stephanie Wilson’s cars were worth less than $1,000.84 Despite the low values, these properties may be anything but unimportant to their owners.

Forfeiture proponents have never mounted a serious empirical defense of the institution, neither in whole nor in its several parts. This author urges proponents to join the debate in a serious manner, with data rather than assertions. Clearly, at a minimum, better and more public record keeping is needed for policymakers and the public to be able to understand forfeiture’s benefits and its costs. This should be neither controversial nor difficult given that agencies must track the property in their custody in any event. Among other information, agencies should track whether forfeitures are processed according to civil or criminal procedures and whether they are tied to criminal charges or convictions.

Federal courts have upheld forfeiture because of the perception that the government’s interests in fighting crime outweigh the civil liberties infringements. And, indeed, many seized and forfeited properties likely are involved in or derived from crime. But in the absence of evidence that forfeiture works and given mounting evidence that it does not, the courts should reconsider whether the costs do not outweigh the purported benefits. Before taking people’s property, governments should have to prove owners are guilty of a crime. And when property is forfeited, governments should send the proceeds to a general fund. This would neutralize much of the criticism against forfeiture, and, as the results presented here illustrate, no public good is served by awarding forfeiture proceeds to the agencies that seize property.
## APPENDIX A: DATA SOURCES

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Download Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniform Crime Reporting Program Data: Offenses Known. Provided offenses known, offenses cleared by arrest and population served, by agency and year.</td>
<td>FBI’s Uniform Crime Reports, accessed through Inter-university Consortium for Political and Social Research</td>
</tr>
<tr>
<td>Uniform Crime Reporting Program Data: Police Employee Data. Provided the number of sworn officers, by agency and year.</td>
<td>Criminal Justice Information Services Division</td>
</tr>
<tr>
<td>Consolidated Assets Tracking System datasets, including DAG71_T, DISPOSAL_T, NCIC_CD_L, ASSET_T. Provided equitable sharing amounts and agency identification, by individual claim.</td>
<td>Asset Forfeiture Management Staff, Department of Justice</td>
</tr>
<tr>
<td>Covariate data: Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin. Provided minority proportion in the population and age distribution, by county and year.</td>
<td>Census Bureau, Population Division</td>
</tr>
<tr>
<td>Covariate data: Personal income and expenditures, by county and year.</td>
<td>U.S. Department of Commerce, Bureau of Economic Analysis, Regional Product Division</td>
</tr>
<tr>
<td>National Survey on Drug Use and Health, sub-state series.</td>
<td>Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td>Arizona: Racketeer Influenced Corrupt Organizations (RICO) Forfeiture Monies Reports: Forfeiture funds received, identified to agency and time period.</td>
<td>Downloaded from the Arizona Criminal Justice Commission website</td>
</tr>
<tr>
<td>Hawaii: Annual Reports to the Legislature of Proceedings Under the Hawaii Omnibus Criminal Forfeiture Act. Forfeiture funds received, identified to agency and time period.</td>
<td>Downloaded from the Hawaii Department of the Attorney General website</td>
</tr>
<tr>
<td>Iowa: State of Iowa Forfeiture Cases. Iowa: Q &amp; A forfeiture database tables: Forfeiture funds received, identified to agency and time period.</td>
<td>Downloaded from data.iowa.gov. Data provided to the website by the Iowa Department of Justice, Office of the Attorney General, Open Records Law request to the Iowa Department of Justice, Office of the Attorney General</td>
</tr>
<tr>
<td>Michigan: Annual local government forfeiture reports pursuant to MCLS § 333.7524a (repealed): Forfeiture funds received, identified to agency and time period.</td>
<td>FOIA requests to Michigan State Police</td>
</tr>
<tr>
<td>Minnesota: Property Seized Subject to Forfeiture: Forfeiture funds received, identified to agency and time period.</td>
<td>Minnesota Government Data Practices Act requests and downloads from the Office of the Minnesota State Auditor website</td>
</tr>
</tbody>
</table>
All of the regressions used fixed effects panel methods with robust standard errors. All panels were balanced.

**FORFEITURE PROCEEDS AND CRIME CLEARANCES**

These tests explore whether forfeiture, as measured by forfeiture proceeds, has a measurable impact on the rate at which police clear, or solve, crimes by arresting someone. The regression treated the crime clearance rate as the dependent variable. The FBI’s Offenses Known data provide reported crime and crimes cleared by arrest for UCR codes 01 through 09 (see Table B1 for a listing of all UCR crime codes). Summing total crimes and clearances for these codes by agency and year allowed me to calculate the dependent variable CLEAR as 1,000 x (reported incidents cleared by arrest / reported incidents). Multiplication by 1,000, which results in a clearance rate per 1,000 incidents, conforms the measure to the standard reporting units. The mean rate was 233 clearances per 1,000 incidents in the panel data.

I conducted two sets of four regressions. The first set tests the impacts of state and local forfeiture proceeds alone, while the second tests the impacts of state and local forfeiture proceeds plus federal equitable sharing proceeds. The four regressions for each corresponded to all reported crimes in the UCR (codes 01 through 09), Index 1 crimes, Index 1 property crimes and Index 1 violent crimes.

My regressors (independent variables) were forfeiture proceeds per sworn officer (hereafter referred to as forfeiture per sworn officer or just forfeiture), sworn officers per population served, the natural logarithm of the population served, and year dummies for 2006 through 2013, with the year fixed effect measured against year 2005. Forfeiture per sworn officer averaged $1,275 annually. However, I denominated this variable in thousands of dollars to make the regression coefficients easier to interpret. I included quadratic terms for forfeiture to reflect likely diminishing marginal benefits of increased funds. I measured sworn officers per capita as 1,000 x number of sworn officers per population served. The natural log of the population served was just that. The timing was year \( t \) for forfeiture proceeds and year \( t+1 \) for the other variables. The specification took the form:

\[
\text{Clearances/thousand offenses} = \beta_0(1000 \times \text{Forfeiture/officer}) + \beta_1(1000 \times (\text{Forfeiture/officer})^2) + \\
\beta_2(\text{Number of officers/population}) + \beta_3(\text{Log of population served}) + \beta_4(\text{Year 2006 dummy}) + \\
\beta_5(\text{Year 2007 dummy}) + \beta_6(\text{Year 2008 dummy}) + \\
\beta_7(\text{Year 2009 dummy}) + \beta_8(\text{Year 2010 dummy}) + \\
\beta_9(\text{Year 2011 dummy}) + \beta_{10}(\text{Year 2012 dummy}) + \\
\beta_{11}(\text{Year 2013 dummy}) + \epsilon_n,
\]

Where \( i \) indicates the \( i \)th agency and \( t \) indicates the change in the level of the variable from period \( t-1 \) to \( t \).

Table B2 provides the regression of forfeiture and other variables onto CLEAR in the columns headed All Reported Crimes. Forfeiture per officer has a coefficient of 1.113 on its linear term and -0.010 on its quadratic term. Neither coefficient is statistically significant. Their joint marginal effect is 1.113 – (0.010 x Forfeiture). To provide a sense of scale, consider the implied impact of forfeiture proceeds on clearances at the overall mean forfeiture of $1,275 per officer (1.275 in the units used in the regression). The cumulative effect at the mean of $1,275 per officer implied by the regression coefficients is just over one additional clearance per 1,000 incidents, against a mean of 233. Besides being insignificant statistically, the effect of forfeiture is very small in a practical sense.

I applied the same methodology to three other dependent variables: Index 1 crime, property crime, and violent crime. As usually defined, Index 1 crime does not include two of the 01 to 09 codes, those for negligent manslaughter (01B) and simple assault (08). This can matter because simple assault has a very large number of reported offenses. Removing these categories to create a variable CLEAR1, I obtained the output shown in the column headed Index 1 Crimes in Table B2. The forfeiture coefficient increases relative to all reported crime but remains statistically insignificant. A further breakout is between violent crime (columns headed Violent Crimes, which includes codes 01A, 02, 03 and 04) and property crime (columns headed Property Crimes, which includes codes 05, 06, 07 and 09). The effects of forfeiture on subsequent policing reach a weak level of statistical significance (at the 10% level) for property crime but remain small in practical terms. For violent crime, the coefficient was statistically significant at the 5% level but was negative, meaning that greater forfeiture was associated with a lower clearance rate. At -7.055, the coefficient is arguably material, but the quadratic gradually reduces it as the level of forfeiture increases.

Table B3 provides the results of a structurally identical regression that uses combined state and local forfeiture proceeds and federal equitable sharing proceeds for the forfeiture variable. For three of the four regressions, the forfeiture variable has no statistically significant impact on clearance rates. The exception is violent crimes, for which the coefficient is negative and statistically significant at the 5% level but only about half the level as for state and local forfeiture proceeds alone.

Finally, I note that statistical significance must be interpreted appropriately in this context. First, the databases include all agencies for which I had data for the panel period. They do not include agencies, which were mostly small, that failed to report for parts of the nine-year panel period. Also, of course, the results are for a collection of five
out of 50 states. States were selected for the study because they had both expansive forfeiture laws and necessary data—specifically data tying forfeitures under state law to specific agencies over the study period of 2005 to 2013. And agencies within those states were selected based purely on data availability. Statistical significance is thus a measure of the reliability of the results if applied to states or agencies not included in the data, but better state reporting of forfeiture remains an important part of improving the accuracy of the analysis. Second, I have reported the results of several regressions. The odds of a false positive—of statistical significance indicated when none exists—are thus increased beyond the indicated power of the tests (1%, 5%, 10% levels). This should inform the reader’s interpretation of the statistical significance—at the 5% level—associated with the negative coefficient on violent crimes.
Table B1: Codes Used in the UCR Crime Reports

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01A</td>
<td>Murder and non-negligent manslaughter</td>
</tr>
<tr>
<td>01B</td>
<td>Manslaughter by negligence</td>
</tr>
<tr>
<td>02</td>
<td>Forcible rape</td>
</tr>
<tr>
<td>03</td>
<td>Robbery</td>
</tr>
<tr>
<td>04</td>
<td>Aggravated assault</td>
</tr>
<tr>
<td>05</td>
<td>Burglary (breaking or entering)</td>
</tr>
<tr>
<td>06</td>
<td>Larceny theft (not motor vehicles)</td>
</tr>
<tr>
<td>07</td>
<td>Motor vehicle theft</td>
</tr>
<tr>
<td>09</td>
<td>Arson</td>
</tr>
<tr>
<td>08</td>
<td>Other assaults (i.e., simple assault)</td>
</tr>
<tr>
<td>10</td>
<td>Forgery and counterfeiting</td>
</tr>
<tr>
<td>11</td>
<td>Fraud</td>
</tr>
<tr>
<td>12</td>
<td>Embezzlement</td>
</tr>
<tr>
<td>13</td>
<td>Stolen property (buy, receive, possess)</td>
</tr>
<tr>
<td>14</td>
<td>Vandalism</td>
</tr>
<tr>
<td>15</td>
<td>Weapons (carry, possess, etc.)</td>
</tr>
<tr>
<td>16</td>
<td>Prostitution and commercialized vice</td>
</tr>
<tr>
<td>17</td>
<td>Sex offenses (not rape or prostitution)</td>
</tr>
<tr>
<td>18</td>
<td>Drug abuse violations (total)</td>
</tr>
<tr>
<td>18A</td>
<td>Sale/manufacture of opium, cocaine and their derivatives</td>
</tr>
<tr>
<td>18B</td>
<td>Sale/manufacture of marijuana</td>
</tr>
<tr>
<td>18C</td>
<td>Sale/manufacture of truly addicting synthetic narcotics</td>
</tr>
<tr>
<td>18D</td>
<td>Sale/manufacture other dangerous nonnarcotic drugs</td>
</tr>
<tr>
<td>18E</td>
<td>Possession of opium, cocaine and their derivatives</td>
</tr>
<tr>
<td>18F</td>
<td>Possession of marijuana</td>
</tr>
<tr>
<td>18G</td>
<td>Possession of truly addicting synthetic narcotics</td>
</tr>
<tr>
<td>18H</td>
<td>Possession of other dangerous nonnarcotic drugs</td>
</tr>
<tr>
<td>19</td>
<td>Gambling (total)</td>
</tr>
<tr>
<td>19A</td>
<td>Bookmaking (horse and sports)</td>
</tr>
<tr>
<td>19B</td>
<td>Number and lottery</td>
</tr>
<tr>
<td>19C</td>
<td>All other gambling</td>
</tr>
<tr>
<td>20</td>
<td>Offenses against family and children</td>
</tr>
<tr>
<td>21</td>
<td>Driving under the influence</td>
</tr>
<tr>
<td>22</td>
<td>Liquor laws</td>
</tr>
<tr>
<td>23</td>
<td>Drunkenness</td>
</tr>
<tr>
<td>24</td>
<td>Disorderly conduct</td>
</tr>
<tr>
<td>25</td>
<td>Vagrancy</td>
</tr>
<tr>
<td>26</td>
<td>All other non-traffic offenses</td>
</tr>
<tr>
<td>27</td>
<td>Suspicion</td>
</tr>
<tr>
<td>28</td>
<td>Curfew and loitering violations</td>
</tr>
<tr>
<td>29</td>
<td>Runaways</td>
</tr>
<tr>
<td>998</td>
<td>(M) Not applicable</td>
</tr>
</tbody>
</table>

Note: The UCR Offenses Known ("Return A") data report number of offenses for each of the "Part I" crimes (including code 01B) as well as for simple assaults (code 08), a non-Part I crime. The UCR Arrests by Age, Sex and Race data report arrest data for all crime codes. Codes other than Part I are referred to as "Part II."
### Table B2: Effects of Forfeiture on Crime Clearance Rates
Results for State and Local Forfeiture Proceeds Only

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Reported Crimes</th>
<th>Index 1 Crimes</th>
<th>Violent Crimes</th>
<th>Property Crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S.E.</td>
<td>Coefficient</td>
<td>S.E.</td>
</tr>
<tr>
<td>Forfeiture</td>
<td>1.113</td>
<td>1.614</td>
<td>2.135</td>
<td>1.372</td>
</tr>
<tr>
<td>Forfeiture</td>
<td>-0.010</td>
<td>0.011</td>
<td>-0.015</td>
<td>0.010</td>
</tr>
<tr>
<td># of Officers</td>
<td>-1.491</td>
<td>1.785</td>
<td>**-4.243</td>
<td>1.729</td>
</tr>
<tr>
<td>Year 2008</td>
<td>***34.817</td>
<td>4.802</td>
<td>***31.342</td>
<td>4.568</td>
</tr>
<tr>
<td>Year 2009</td>
<td>***40.240</td>
<td>5.399</td>
<td>***35.676</td>
<td>4.750</td>
</tr>
<tr>
<td>Year 2011</td>
<td>***54.858</td>
<td>7.097</td>
<td>***42.947</td>
<td>6.198</td>
</tr>
<tr>
<td>Year 2013</td>
<td>***65.942</td>
<td>7.597</td>
<td>***58.097</td>
<td>6.845</td>
</tr>
<tr>
<td>R²</td>
<td>0.731</td>
<td>0.741</td>
<td>0.594</td>
<td>0.759</td>
</tr>
<tr>
<td>F Test</td>
<td>21.29**</td>
<td>21.64**</td>
<td>12.38**</td>
<td>23.94**</td>
</tr>
</tbody>
</table>

*** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10

**Definitions – dependent variables. Units are clearance rates per 1,000 reported crimes:**
- All Reported Crimes: Clearance rates for crime codes 01 through 09, including 01B and 08.
- Index 1 Crimes: Clearance rates for crime codes 01 through 09, excluding 01B and 08.
- Violent Crimes: Clearance rates for crime codes 01A, 02, 03 and 04.
- Property Crimes: Clearance rates for crime codes 05, 06, 07 and 09.

**Definitions – regressors, per agency basis:**
- Forfeiture: Forfeiture proceeds per sworn officer.
- # of Officers: 1,000 x number of sworn officers per population served.
- Population: Natural logarithm of the population served by the agency.
- Year 2006 through Year 2013: Year fixed effects relative to year 2005.
### Table B3: Effects of Forfeiture on Crime Clearance Rates

Results for Combined State and Local Forfeiture and Equitable Sharing Proceeds

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Reported Crimes</th>
<th>Index 1 Crimes</th>
<th>Violent Crimes</th>
<th>Property Crimes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S.E.</td>
<td>Coefficient</td>
<td>S.E.</td>
</tr>
<tr>
<td>Forfeiture</td>
<td>-0.139</td>
<td>0.826</td>
<td>0.088</td>
<td>0.744</td>
</tr>
<tr>
<td>Forfeiture^2</td>
<td>-0.001</td>
<td>0.006</td>
<td>-0.001</td>
<td>0.005</td>
</tr>
<tr>
<td># of Officers</td>
<td>-0.877</td>
<td>1.960</td>
<td>-3.096</td>
<td>2.391</td>
</tr>
<tr>
<td>Year 2009</td>
<td>***41.303</td>
<td>5.435</td>
<td>***33.816</td>
<td>4.920</td>
</tr>
<tr>
<td>Year 2010</td>
<td>***40.981</td>
<td>6.365</td>
<td>***34.889</td>
<td>5.618</td>
</tr>
<tr>
<td>Year 2011</td>
<td>***52.509</td>
<td>6.778</td>
<td>***39.697</td>
<td>6.038</td>
</tr>
<tr>
<td>Year 2012</td>
<td>***64.028</td>
<td>7.793</td>
<td>***55.842</td>
<td>7.158</td>
</tr>
<tr>
<td>R^2</td>
<td>0.762</td>
<td></td>
<td>0.751</td>
<td></td>
</tr>
<tr>
<td>F Test</td>
<td>25.10***</td>
<td></td>
<td>22.89**</td>
<td></td>
</tr>
</tbody>
</table>

*** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10

**Definitions – dependent variables. Units are clearance rates per 1,000 reported crimes:**

- **All Reported Crimes**: Clearance rates for crime codes 01 through 09, including 01B and 08.
- **Index 1 Crimes**: Clearance rates for crime codes 01 through 09, excluding 01B and 08.
- **Violent Crimes**: Clearance rates for crime codes 01A, 02, 03 and 04.
- **Property Crimes**: Clearance rates for crime codes 05, 06, 07 and 09.

**Definitions – regressors, per agency basis:**

- **Forfeiture**: Forfeiture proceeds per sworn officer.
- **# of Officers**: 1,000 x number of sworn officers per population.
- **Population**: Natural logarithm of the population served by the agency.
- **Year 2006 through Year 2013**: Year fixed effects relative to year 2005.
FORFEITURE PROCEEDS AND DRUG USE

The purpose of these tests was to investigate whether forfeiture has a measurable impact on illicit drug use, as measured by the Substance Abuse and Mental Health Services Administration through the National Survey on Drug Use and Health. Structurally, I used annual data organized as a fixed effects panel, with the drug outcomes included as the three-year overlapping averages that NSDUH reports.


To place the other variables on the same basis as the NSDUH outcomes, I averaged them for three-year periods. I averaged forfeiture amounts for the three-year periods ending with the central year of the three-month NSDUH moving averages, creating an overlap with the first two years of those averages. I had two reasons for this. First, any effect on drug use from receipt of forfeiture proceeds would likely be delayed, so allowing a delay between the independent (forfeiture) and dependent (drug usage measures) variables makes sense. Second, there is a possible identification problem: Since many forfeitures result from drug arrests, one would expect increased drug use to be associated with increased forfeiture. Equitable sharing distributions lag property seizures by somewhat over a year on average, although state figures are hard to develop, so the overlap of seizures with the NSDUH periods is minimized by introducing the one-year lag from the average forfeiture amount to the average from the NSDUH surveys.

The NSDUH outcomes are published as proportions of the population; I multiplied these by one hundred, converting them to percentages of the population, to make interpretation of the coefficients easier. I used a log transform of the forfeiture amounts to reflect likely declining marginal product for forfeiture and to allow a more intuitive interpretation of the results. I used log transforms for the number of sworn officers and for the population served for the same reason.

I included three commonly asserted covariates for drug use: the unemployment rate, minority proportion of the population and percentage of the population age 15–24 years. The unemployment rate was used as published, as a percentage. The minority proportions are numbers such as 0.10. The occasionally large coefficients on the minority proportions and the percentages age 15–24 represent the impact of a hypothetical increase of 1 and so should be interpreted with caution; their main purpose in these regressions is as covariates. For each of the covariates, I calculated the average rates for the three years corresponding to the NSDUH years. I included year dummies for the last four of the five periods.

Table B4 provides the regression results for the four dependent variables for state and local forfeiture proceeds. The forfeiture coefficients are uniformly small and not statistically significant. For example, the coefficient for all illicit drug use in the previous year is -0.0008 when taken to four decimal places. This estimate suggests that a 1% increase in forfeiture proceeds is associated with a 0.0008 percentage point decrease in illicit drug use. The estimate is not statistically significant, being dwarfed by the standard error. This was true across the regressions: Forfeiture had no statistically significant impact on drug usage measures. Table B5 provides similar output using the sum of state and local forfeiture proceeds and federal equitable sharing proceeds; again, the coefficients on forfeiture are very small and not statistically significant.
## Table B4: Effects of Forfeiture on Illicit Drug Use
### Results for State and Local Forfeiture Proceeds Only
#### Annual Data, Rolling Average NSDUH Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Illicit Drug Use</th>
<th>Marijuana Use</th>
<th>Nonmed Prescription</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S.E.</td>
<td>Coefficient</td>
<td>S.E.</td>
</tr>
<tr>
<td>Forfeiture</td>
<td>-0.0008</td>
<td>0.0101</td>
<td>-0.0050</td>
<td>0.0126</td>
</tr>
<tr>
<td># of Officers</td>
<td>-0.05610</td>
<td>0.2980</td>
<td>-0.2830</td>
<td>0.3260</td>
</tr>
<tr>
<td>Population</td>
<td>-0.3960</td>
<td>0.3020</td>
<td>0.0058</td>
<td>0.3290</td>
</tr>
<tr>
<td>Unemployment</td>
<td><strong>0.1496</strong></td>
<td>0.0241</td>
<td><strong>0.0663</strong></td>
<td>0.0260</td>
</tr>
<tr>
<td>Minority</td>
<td>***-42.9040</td>
<td>4.5800</td>
<td>***-63.2900</td>
<td>5.7400</td>
</tr>
<tr>
<td>% 15-24</td>
<td>10.0801</td>
<td>10.9000</td>
<td>-4.1080</td>
<td>12.8900</td>
</tr>
<tr>
<td>Year 2007</td>
<td>***0.1761</td>
<td>0.0592</td>
<td>-0.1200</td>
<td>0.0739</td>
</tr>
<tr>
<td>Year 2009</td>
<td>-0.0190</td>
<td>0.1510</td>
<td>***0.5032</td>
<td>0.1870</td>
</tr>
<tr>
<td>Year 2011</td>
<td>***1.0202</td>
<td>0.1120</td>
<td>***1.5190</td>
<td>0.1350</td>
</tr>
<tr>
<td>Year 2013</td>
<td>***1.7051</td>
<td>0.1010</td>
<td>***2.6701</td>
<td>0.1230</td>
</tr>
<tr>
<td>R²</td>
<td>0.818</td>
<td>0.825</td>
<td>0.839</td>
<td>0.879</td>
</tr>
<tr>
<td>F Test</td>
<td>794**</td>
<td>9.85**</td>
<td>8.37**</td>
<td>9.07**</td>
</tr>
</tbody>
</table>

*** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10.

**Definitions – dependent variables.** Units are the proportion of the respondents who have engaged in the listed activity in the previous year:
- All Illicit Drugs: Use of any illicit drug.
- Marijuana: Use of marijuana.
- Nonmed Use: Nonmedical use of prescription drugs.
- Cocaine: Use of cocaine.

**Definitions – regressors, per agency basis:**
- Forfeiture: Natural logarithm of forfeiture proceeds per sworn officer.
- # of Officers: Natural logarithm of the number of sworn officers.
- Population: Natural logarithm of the population served by the agency.
- Unemployment: Unemployment rate.
- Minority: Minority proportion in the population.
- Year 2007, Year 2009, Year 2011 and Year 2013: Year fixed effects relative to year 2005, where the year is the middle of the three-year NSDUH rolling average period.
Table B5: Effects of Forfeiture on Illicit Drug Use
Results for Combined State and Local Forfeiture and Equitable Sharing Proceeds
Annual Data, Rolling Average NSDUH Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Illicit Drug Use</th>
<th>Marijuana Use</th>
<th>Nonmed Prescription</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S.E.</td>
<td>Coefficient</td>
<td>S.E.</td>
</tr>
<tr>
<td>Forfeiture</td>
<td>0.0000</td>
<td>0.0163</td>
<td>-0.0390</td>
<td>0.0246</td>
</tr>
<tr>
<td># of Officers</td>
<td>0.6654</td>
<td>0.4430</td>
<td>0.2489</td>
<td>0.5220</td>
</tr>
<tr>
<td>Population</td>
<td>-0.0060</td>
<td>0.2770</td>
<td>0.6959</td>
<td>0.4730</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.0400</td>
<td>0.0697</td>
<td>-0.0530</td>
<td>0.1060</td>
</tr>
<tr>
<td>Minority</td>
<td>***28.3758</td>
<td>7.3900</td>
<td>11.6029</td>
<td>10.7100</td>
</tr>
<tr>
<td>Year 2007</td>
<td>-0.1190</td>
<td>0.0891</td>
<td>**-0.3190</td>
<td>0.1450</td>
</tr>
<tr>
<td>Year 2009</td>
<td>***-0.8600</td>
<td>0.2790</td>
<td>-0.2900</td>
<td>0.4480</td>
</tr>
<tr>
<td>Year 2011</td>
<td>-0.1160</td>
<td>0.2140</td>
<td>-0.1050</td>
<td>0.3390</td>
</tr>
<tr>
<td>Year 2013</td>
<td>-0.0670</td>
<td>0.1560</td>
<td>**0.5089</td>
<td>0.2460</td>
</tr>
<tr>
<td>R²</td>
<td>0.716</td>
<td>0.629</td>
<td>0.864</td>
<td>0.944</td>
</tr>
<tr>
<td>F Test</td>
<td>6.58***</td>
<td>3.43***</td>
<td>11.07***</td>
<td>5.59***</td>
</tr>
</tbody>
</table>

*** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10.

Definitions – dependent variables. Units are the proportion of the respondents who have engaged in the listed activity in the previous year:
All Illicit Drugs: Use of any illicit drug.
Marijuana: Use of marijuana.
Nonmed Use: Nonmedical use of prescription drugs.
Cocaine: Use of cocaine.

Definitions – regressors, per agency basis:
Forfeiture: Natural logarithm of forfeiture proceeds per sworn officer.
# of Officers: Natural logarithm of the number of sworn officers.
Population: Natural logarithm of the population served by the agency.
Unemployment: Unemployment rate.
Minority: Minority proportion in the population.
Year 2007, Year 2009, Year 2011 and Year 2013: Year fixed effects relative to year 2005, where the year is the middle of the three-year NSDUH rolling average period.
FISCAL STRESS AND FORFEITURE ACTIVITY

These tests address whether increased financial stress on police agencies causes them to pursue forfeiture more actively. In contrast to the preceding regressions, here forfeiture is the dependent variable, and I use covariates of fiscal stress to determine whether such stress has a significant association with forfeiture. The structure was annual data for all variables.

As regressors, I included the number of sworn officers as directly influencing the amount of seized assets, the unemployment and personal income of each county as proxies for fiscal stress, the minority proportion of the population and proportion of the population age 15–24 as widely used correlates of police activity, the number of offenses reported as a measure of demands upon police, and the population served. My regressions were in logarithms on the forfeiture proceeds, number of sworn officers, number of offenses and population served. The model for one example took the form:

\[
\text{Log of forfeiture proceeds}_{it} = \beta_0 (\text{Log of number of officers}_{it}) + \beta_1 (\text{unemployment rate}_{it}) + \beta_2 (\text{personal income}_{it}) + \beta_3 (\text{Minority proportion}_{it}) + \beta_4 (\text{proportion aged 15–24}_{it}) + \beta_5 (\text{Log of population served}_{it}) + \beta_6 (\text{Year 2006 dummy}_{it}) + \beta_7 (\text{Year 2007 dummy}_{it}) + \beta_8 (\text{Year 2008 dummy}_{it}) + \beta_9 (\text{Year 2009 dummy}_{it}) + \beta_{10} (\text{Year 2010 dummy}_{it}) + \beta_{11} (\text{Year 2011 dummy}_{it}) + \beta_{12} (\text{Year 2012 dummy}_{it}) + \beta_{13} (\text{Year 2013 dummy}_{it}) + \epsilon_{it},
\]

Where \( i \) indicates the \( i \)th agency and \( t \) indicates the change in the level of the variable from period \( t-1 \) to \( t \). The unemployment rate, personal income and minority proportions are measured at the county level, then applied to the agencies within the respective counties.

The dependent variable was either state and local forfeiture proceeds alone or state and local forfeiture proceeds plus federal equitable sharing proceeds. Results for both are provided in Table B6. The unemployment rate is a statistically significant and material predictor of forfeiture under either definition. The estimate of 0.119 in the first column, for example, implies that a one percentage point increase in the unemployment rate induces an 11.9% increase in state and local forfeiture proceeds. The relative unimportance of the number of sworn officers, personal income, minority proportion of the population and total population holds across all regressions, as does the importance of some of the year dummies. Proportion of the population age 15–24 has a statistically significant negative coefficient, indicating a negative relationship between changes in this proportion and changes in forfeiture. However, the level of the coefficient is very small.

All sets of the regressions showed reasonably strong goodness of fit, with \( R^2 \) values ranging from 0.6 to 0.8. Additionally, the \( F \) test decisively rejected the null of no joint significance of the regressors in all cases.
### Table B6: Effects of Fiscal Stress on Forfeiture

<table>
<thead>
<tr>
<th></th>
<th>State and Local Forfeiture Proceeds Only</th>
<th>Combined State and Local Forfeiture and Equitable Sharing Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S.E.</td>
</tr>
<tr>
<td>Unemployment</td>
<td>*0.119</td>
<td>0.062</td>
</tr>
<tr>
<td>Personal Income</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td># of Officers</td>
<td>0.593</td>
<td>0.612</td>
</tr>
<tr>
<td># of Offenses</td>
<td>-0.323</td>
<td>0.234</td>
</tr>
<tr>
<td>Minority</td>
<td>0.007</td>
<td>0.124</td>
</tr>
<tr>
<td>Proportion 15–24</td>
<td>***-0.907</td>
<td>0.334</td>
</tr>
<tr>
<td>Population</td>
<td>1.439</td>
<td>0.909</td>
</tr>
<tr>
<td>Year 2006</td>
<td>**0.405</td>
<td>0.190</td>
</tr>
<tr>
<td>Year 2007</td>
<td>**0.529</td>
<td>0.224</td>
</tr>
<tr>
<td>Year 2008</td>
<td>-0.083</td>
<td>0.255</td>
</tr>
<tr>
<td>Year 2009</td>
<td>-0.650</td>
<td>0.455</td>
</tr>
<tr>
<td>Year 2010</td>
<td>-0.564</td>
<td>0.439</td>
</tr>
<tr>
<td>Year 2011</td>
<td>-0.221</td>
<td>0.378</td>
</tr>
<tr>
<td>Year 2012</td>
<td>-0.402</td>
<td>0.329</td>
</tr>
<tr>
<td>Year 2013</td>
<td>-0.208</td>
<td>0.326</td>
</tr>
<tr>
<td>R²</td>
<td>0.783</td>
<td></td>
</tr>
<tr>
<td>F Test</td>
<td>21.56**</td>
<td></td>
</tr>
</tbody>
</table>

*** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10.

**Definitions – dependent variables:**

Forfeiture Proceeds: Natural logarithm of the dollar value of forfeiture proceeds by agency.

**Definitions – regressors, per agency basis:**

Unemployment: Unemployment rate, in percentage points.  
Personal Income: Per capita personal income.  
# of Officers: Natural logarithm of the number of sworn officers per population.  
# of Offenses: Natural logarithm of number of offenses reported to police.  
Minority: Minority proportion in the population.  
Population: Natural logarithm of the population served by the agency.  
Year 2006 through Year 2013: Year fixed effects relative to year 2005.
Legally, the presence of cash is not sufficient to establish
Knepper et al., 2020.
For a primer on forfeiture,
In a previous study, I tested the same claims using forfeiture
Knepper, L., McDonald, J., Sanchez, K., & Pohl, E. S. (2020).
ENDNOTES
2 Id.
3 Id.
7 In a previous study, I tested the same claims using forfeiture data from the federal government’s equitable sharing program and a limited set of state and local data, but detailed data about forfeitures conducted under state law have been notoriously difficult to gather. Kelly, B. D. (2019). Fighting crime or raising revenue? Testing opposing views of forfeiture. Arlington, VA: Institute for Justice. https://ij.org/report/fighting-crime-or-raising-revenue/
9 Knepper et al., 2020.
10 A recent study found that in the four states that track whether a claim was filed for return of seized property, claims are filed in 22% of cases or fewer. Knepper et al., 2020.
11 Legally, the presence of cash is not sufficient to establish probable cause. See, e.g., United States v. A) $58,920.00 in U.S. Currency, B) $38,670.00 in U.S. Currency, 385 F. Supp. 2d 144, 151 (D.P.R. 2005); United States v. $191,910.00 in U.S. Currency, 16 F.3d 1051, 1072 (9th Cir. 1994); United States v. $186,416.00 in U.S. Currency, 590 F.3d 942, 954–55 (9th Cir. 2010); United States v. Wilson, No. 14-cr-209-1, 2016 WL 11642732, at *7 (E.D. Pa. Oct. 27, 2016), aff’d, 960 F.3d 136 (3d Cir. 2020). However, in practice, police officers frequently take the presence of cash as probable cause, often citing a drug dog alert or the fact that money was bundled like drug money or hidden or claiming a person seemed nervous or evasive, had no good explanation for why they had the cash, or fit the profile of a drug courier. See, e.g., United States v. U.S. Currency, $30,060.00, 39 F.3d 1039, 1042 (9th Cir. 1994); United States v. $215,300 U.S. Currency, 882 F.2d 417, 419 (9th Cir. 1989); United States v. $60,020.00 U.S. Currency, 41 F. Supp. 3d 277, 286–89 (W.D.N.Y. 2011); United States v. Mathurin, 561 F.3d 170, 179 (3d Cir. 2009).
12 Knepper et al., 2020.
19 Knepper et al., 2020.
Knepper et al., 2020.


31. The most important such decision was Caplin & Drysdale, Chartered v. United States, 491 U.S. 617 (1989), which weighed constitutional protections against asserted compelling government interests in helping fund law enforcement, compensate crime victims and attack organized crime. The Supreme Court concluded that the government interests outweighed the Sixth Amendment right to counsel and applied similar reasoning in United States v. Monsanto, 491 U.S. 600 (1989), decided the same day. In a more recent case, the Court stated, referring to Caplin and Monsanto: “On the single day the Court decided both those cases, it cast the die on this one too.” Kaley v. United States, 571 U.S. 320, 326 (2014).


bedrock principle known as the ‘American Rule’: Each litigant pays his own attorney’s fees, win or lose, unless a statute or contract provides otherwise.” (internal quotations omitted).

46 See ¶ 10.08 in Smith, 2018.

47 For example, under the Civil Forfeiture Reform Act of 2000, attorney fees may be paid from the general treasury. See 28 U.S.C. § 2465 (“[I]n any civil proceeding to forfeit property under any provision of Federal law in which the claimant substantially prevails, the United States shall be liable for—(A) reasonable attorney fees and other litigation costs reasonably incurred by the claimant.”). This is in contrast to the Equal Access to Justice Act, another statute under which attorney fees are available in forfeiture and other cases, which specifies that agencies must pay attorney fees out of their own budgets. See 28 U.S.C. § 2412(d)(4) (“Fees and other expenses awarded under this subsection to a party shall be paid by any agency over which the party prevails from any funds made available to the agency by appropriation or otherwise.”).

48 See, e.g., Williams et al., 2010; Carpenter et al., 2015; Kneppler et al., 2020.


52 The five states included here received D or D- grades for their civil forfeiture laws in the second edition of *Policing for Profit*. Carpenter et al., 2015. Ideally, I would have included more states with low grades in this study. However, most lacked reliable revenue data specific to agencies for some or all of the study period. Louisiana and Virginia had limited data for the time period, preventing their inclusion, while Pennsylvania’s data for the time period were unclear.

53 Arizona has since raised its standard of proof to clear and convincing evidence, a moderately high standard, though still far short of the proof beyond a reasonable doubt required in criminal trials. Ariz. Rev. Stat. §§ 13-4311(M), -4312(H)(5)(a).


55 Ariz. Rev. Stat. §§ 13-2314.01(D), -03(D), 13-4315.


59 Iowa has since adopted a provision requiring a conviction, though not necessarily of the property owner, for forfeitures worth less than $5,000 when a claim is filed. After this provision is satisfied, prosecutors must show the property is subject to forfeiture by clear and convincing evidence. Iowa Code §§ 809A.1(4), 809A.12A(1), (1)(a), (1)(d), (8), 809A.13(7).

60 Iowa Code §§ 809A.12(7), .13(7).

61 Iowa Code § 809A.17.

62 Michigan now has a provision requiring the conviction of “a defendant”—not necessarily the property owner—for contested forfeitures of property worth less than $50,000. After securing a conviction, prosecutors must link property to a drug crime by clear and convincing evidence or to any other crime by a preponderance of the evidence. Mich. Comp. Laws §§ 333.7521a(1–2), a(6), (2), 600.4707(6).

63 In innocent owner claims, the government now bears the burden of proof in most cases. Mich. Comp. Laws §§ 333.7523a(2) (b) (burden on government in drug-related forfeitures), 600.4707(6)(b) (burden on government in other forfeitures); see id. §§ 333.7521a(6), .7523a(1) (procedures do not apply in drug-related forfeitures of property valued over $50,000); see also id. §§ 333.7521(1)(d)(ii), (f), 333.7531(1) (burden on owner in drug-related forfeitures under pre-reform procedure).


65 Minnesota now has a provision requiring a conviction in some forfeiture cases. The provision does not apply to administrative forfeitures, only judicial ones. And for property worth up to $50,000, it applies only if an owner contests the administrative forfeiture of her property by asking for a judicial determination, forcing her to bear the burden of a costly legal battle to try to regain her seized property. The provision does not require the owner to be convicted—only a person—and it does not apply if the person has agreed to help investigators in order to avoid criminal charges. Once the provision is satisfied, prosecutors must link property to the crime by clear and convincing evidence. Minn. Stat. § 609.5311, subd. 2–3, § 609.531, subd. 6a(b), 6a(b)(2), 6a(d).

66 Minn. Stat. § 609.5311, subd. 3(d); *Jacobson v. *$55,900 in U.S. Currency, 728 N.W.2d 510, 519–20 & n.6 (Minn. 2007); Blanche v. *1995 Pontiac Grand Prix, 599 N.W.2d 161, 167 (Minn. 1999); see also Minn. Stat. §§ 609.5314, subdiv. 1(b), 169A.63, subsd. 7(d), 9(e).


68 Minn. Stat. §§ 609.5315, subds. 5, 5a–5c, 169A.63, subd. 10(b).

69 Kneppler et al., 2020. Similarly, 84% of DOJ forfeitures were civil between 2000 and 2019; the other 16% were criminal forfeitures. Kneppler et al., 2020.

70 Examples of such studies are Worrall, J. L., & Kovandzic, T. V. (2008). Is policing for profit? Answers from asset forfeiture. *Criminology and Public Policy, 7*(2), 219–244; Holcomb et al., 2011; and Holcomb et al., 2018.

The Arizona data were labeled as state or local forfeiture monies only. IJ’s calculations of Michigan’s forfeitures by agency excluded federal equitable sharing proceeds. The custodians of Hawaii’s, Iowa’s and Minnesota’s records confirmed that those states’ data do not contain federal forfeitures. G. Senaga. (personal communication, October 23, 2019); J. Jernberg. (personal communication, Sept. 12, 2019); T. Ferguson (personal communication, Aug. 14, 2019).

For example, Michigan agency data were provided at the agency level and included proceeds as well as other information such as the number of forfeitures and the number of forfeitures still pending. Using this information, IJ was able to deduce that most instances where proceeds were left blank in reports were true zeros.

Iowa and Minnesota agency data were provided at the property level. If proceeds relating to a particular property were blank, it was impossible to know whether this was because there were no proceeds (e.g., because the property was retained for agency use, donated or destroyed or because the forfeiture was pending) or the agency failed to report them.

I also omitted a large number of mostly small Michigan agencies due to problems with their crime data. Specifically, I omitted agencies that reported incidents but no clearances in one or more years as it was impossible to tell whether the agencies had no clearances in those years or had clearances but failed to report them. Including these agencies would have created large jumps in percentage clearance rates, introducing statistical noise from what are likely poor data. The dropped agencies represent about half of Michigan’s agencies. However, these agencies are overwhelmingly small and thus represent a much smaller proportion of the population served.

Police agencies provide data to the FBI concerning the number of reported crimes and clearances for serious violent and property crimes. This information is collated and provided publicly through the Uniform Crime Reporting Program’s Offenses Known datasets.

See, e.g., Caplin & Drysdale, Chartered v. United States, 491 U.S. 617, 629 (1989). It should be noted that some states require forfeiture proceeds be spent on drug enforcement efforts. See, e.g., 42 Pa. Cons. Stat. § 5803(g), (i) and S.C. Code Ann. § 44-53-530(g). Money is, of course, fungible.


A separate question, beyond the scope of this study, would be to examine the negative effects of forfeiture on property owners in periods of fiscal stress versus periods of expansion. When unemployment is high, the greater need for funds by the agencies may coincide with a greater cost to losing assets for property owners.

Knepper et al., 2020.

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