Gun Theft and Crime

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Abstract Some law enforcement officials and other observers have asserted that theft is the primary source of guns to crime. In fact, the role of theft in supplying the guns used in robbery, assault, and murder is unknown, and current evidence provides little guidance about whether an effective program to reduce gun theft would reduce gun violence. The current article analyzes publicly available national data on gun theft together with a unique data set for Chicago. The results tend to support a conclusion that stolen guns play only a minor role in crime. First, publicly available data are used to calculate that thefts are only about 1% of all gun transactions nationwide. Second, an analysis of original data from Chicago demonstrates that less than 3% of crime guns recovered by the police have been reported stolen to the Chicago Police Department (CPD). If a gun is reported stolen, there is a 20% chance that it will be recovered, usually in conjunction with an arrest for illegal carrying. Less than half of those picked up with a stolen gun have a criminal record that includes violent offenses. Third, results from surveys of convicted criminals, both nationally and in Chicago, suggest that it is rare for respondents to have stolen the gun used in their most recent crime. The data on which these results are based have various shortcomings. A research agenda is proposed that would provide more certainty about the role of theft.

Keywords Firearms · Theft · Violence · Evidence-based policy

Introduction

Various commentators, including scholars and police chiefs, have claimed that theft plays an outsized role when it comes to supplying gangs and other violent criminals with guns [1]. The media routinely report gun thefts from dealers and boxcars as a threat to public safety. Frank Occhipinti, deputy chief of the firearms operations division for the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), is quoted in a recent article: “The impact of gun theft is quite clear. It is devastating our communities.” [2].

That theft is closely linked to gun violence is entirely plausible. For one thing, when a gun is stolen, it is by definition in the hands of a criminal. But most likely, the thief will want to sell the gun rather than keep it for his own uses, and so the key question is just who is buying when stolen guns are on sale. It is possible that theft supplies a pipeline that leads directly to gang members and other violent criminals, but it is also possible that stolen guns are disposed of through the same channels as stolen electronics or jewelry. In fact, there is little systematic evidence on the extent to which those stolen guns do end up in the hands of violent criminals.

Better evidence on this issue would be helpful in directing law enforcement efforts. If theft is the predominant method by which guns are redirected to the underground market and end up in the hands of dangerous

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people, then there would be a strong case for a large public investment in reducing gun theft. If, on the other hand, only a small percentage of guns used in violent crimes have been stolen, then anti-theft measures could logically not have much effect on crime, and other strategies for keeping guns from dangerous offenders deserve priority.

This paper brings together the best available evidence on how many guns are stolen each year and the extent to which guns used in crime have been stolen. It then reports findings from an original analysis of data on guns which were reported stolen to the Chicago Police Department, with tentative conclusions about the extent to which these guns end up in the hands of active criminals. The final section suggests a research agenda, with the hope that law enforcement agencies will investigate relevant issues systematically, rather than relying on guesswork.

How Many Guns Are Stolen each Year?

There are two principal sources of data for estimating the national rate of gun theft: surveys, and tabulations of police reports. The most comprehensive and consistent source is the National Crime Victimization Survey (NCVS). A report from the Bureau of Justice Statistics provides detailed results for the period 2005–2010 [3]. The annual averages for this 6-year period were 232,400 guns stolen in the course of 153,900 thefts. Since respondents to the NCVS are only asked about their personal or household victimization, these figures do not include thefts from businesses.

In private correspondence, the Bureau of Justice Statistics provided an estimate based on the NCVS for the years 2010–2014 [4]. The average annual number of stolen guns was 251,300 during that period.

Residential burglary accounts for the majority of thefts (58% in 2005–2010). The mix of guns stolen in burglaries is heavily weighted to handguns—at least one handgun was stolen in 63% of cases. (In burglary, it is common to have two or more guns stolen.)

About 82% of gun thefts were reported to the police, according to NCVS data, for the period 2005–2010 [3]. The reporting rate was somewhat lower, 75%, for 2010–2014 [4]. Given this unexpectedly high rate of reporting [5], police data on gun theft should be quite complete. Unfortunately, the FBI's Uniform Crime Reports do not include a tabulation of the number of guns reported

stolen. (The Uniform Crime Reports do include the dollar value of stolen guns.) Law enforcement agencies submit detailed data on stolen guns to the FBI's National Crime Information Center (NCIC). The NCIC's resulting Gun File is available to law enforcement agencies for investigation purposes, but no federal agency publishes national statistics based on this file. The exception was 2012, when President Obama ordered the Bureau of ATF to provide such a report [6, 7]. A reporter for The Trace was recently able to obtain previously unreleased counts from NCIC for 2006–2016, providing a direct comparison with the NCVS estimate [2]. For example, for 2010–2014, the average NCIC count was 182,000, compared with 251,000 for the NCVS estimate. Multiplying the latter by the NCVS estimate of the reporting rate (75%) yields an estimate very close to the NCIC estimate (188 vs. 182,000). The fact that these two completely distinct sources provide compatible results offers reassurance that the NCVS estimate is approximately correct.

ATF does publish an annual compilation of reports from licensed dealers about guns stolen or lost from their businesses. That count has been increasing in recent years, but still represents only a fraction of the total volume of theft. In 2016, 9281 guns were reported stolen through burglary or larceny, mostly from retail outlets (<https://www.atf.gov/news/pr/atf-releases-2016-summary-firearms-reported-lost-and-stolen-ffls>). Another 9000 were reported lost, which no doubt includes “inventory shrinkage” due to shoplifting or other activities (such as off-the-books dealing). In any event, comparing these data to the estimate of thefts from private individuals (either from NCVS or NCIC), it is clear that the great bulk of gun theft is from private individuals and households.

The NCVS report provides trend data back to 1994 [3]. During that time, about 4% of completed burglaries included one or more guns as part of the loot, a fraction that was roughly constant through 2010, the last year of this analysis. The logical implication is that gun theft from burglary declined in proportion to the decline in overall burglary rates during this period. In line with the burglary rates, the peak rate of gun theft victimizations was in 1995, when the volume was twice as high as in 2010.

The NCIC count for 2016 was 238,000, substantially higher than in any of the previous 10 years [2]. If 75% of thefts were reported to the police in 2016, as indicated by recent NCVS reports, and the police reported all gun

thefts to the FBI (a somewhat dubious proposition) [7], then the true total was 317,000 ($238/.75 = 317$). That works out to 1 for every 123 gun-owning households (assuming 31% of 123 million households own at least one gun) [8]. The number of thefts can be compared with the annual number of assaults, robberies, and murders committed with guns each year. The average over the last decade is 456,000, including 442,000 nonfatal violent crimes (<https://www.bjs.gov/index.cfm?ty=nvat>), and 12,000 gun homicides [9]. The implication is that if each stolen gun were used to commit an average of one violent crime, then theft would be the source of 72% of all the guns for all violent gun crimes.

Another point of comparison is with the total number of gun transactions per year. The number of thefts is a small fraction of the total number of transactions. While there is no comprehensive measure of the number of transactions, ATF does publish monthly counts of background checks. It is reasonable to believe that these counts have roughly the same magnitude as the number of guns sold by or through licensed dealers, since most sales by licensed dealers must have a background check (unless in a state where having a gun license of some kind provides a substitute for a background check), and most background checks do involve retail sales. Gun transactions that do not involve a licensed dealer may or may not have a background check, and a single background check may be associated with several sales (or none, if the customer changes his mind, or if the check is for a license rather than a gun transaction). In any event, the number of background checks increased from about 10 million in 2006 to 27.5 million in 2016, dropping off to 25 million in 2017 [10]. Taking 25 million as a ballpark estimate of on-the-books gun transactions, we can increase it by an estimate of the number of off-the-books transactions. A recent national survey [11] found that 22% of all gun acquisitions did not involve a background check. Applying that an estimate to 25 million implies an additional 7 million transactions for a total of 32 million. Given an estimate of 317,000 gun thefts, the implication is that for every gun theft, there are about 100 other transactions.

Thus, there are two transaction flows that may be arming people who use guns in assault or robbery. On the one hand is the flood of transactions that arm most of the American public, and which consist of retail sales of new and used guns as well as informal but voluntary transactions of all sorts. Another is the relative trickle of stolen guns. It is unlikely on the face of it that the

“trickle” is providing the bulk of the armament for violent criminals, but direct evidence on that subject is needed.

Is Theft Prevalent in the Supply Chain of Crime Guns?

The media have documented numerous occasions when stolen guns have been used in violent crimes [2]. But it is difficult to obtain systematic statistics on the relative importance of theft in supplying violent criminals with guns.

Guns used in a violent crime have typically changed hands a number of times [12]. This series of transactions, or “supply chain,” may include one or more thefts. The gun may be stolen by the person who then uses it to commit violent crimes. Or it may be stolen earlier in the chain and then sold to a violent criminal or to a trafficker who supplies the underground market. An obvious question is what percentage of guns used in violent crime were stolen at some point in their history, or, relatedly, what percentage of such guns were diverted from legitimate use by theft. Unfortunately, the data to answer these questions either do not exist or are not available to researchers. The most directly relevant data come from surveys of offenders in which they are asked how they obtained their guns. Several such surveys have been conducted, and results from relatively recent surveys are summarized below. First, however, it is useful to explain why current data sources do not provide a comprehensive answer.

To determine the fraction of crime guns that have been stolen from administrative data would require detailed information (serial number, and preferably make and model) on a representative sample of guns used in assault and robbery, which could be matched against similar data on guns reported stolen. Here are the obstacles:

- Very few of the guns used in violent crimes are recovered by law enforcement and linked to specific acts. The guns that are recovered may not be representative of the guns used in assault and robbery.
- In most jurisdictions, victims tend to report stolen guns to the police. But the reports that do not include the serial number of the gun, presumably a substantial percentage, cannot be matched to guns that are recovered. Again that would not be a serious

problem if theft reports that included complete information were representative of the whole, but there is reason to be skeptical.

- Despite the doubts about representativeness, it would be of interest to determine the fraction of recovered crime guns that match against theft reports. When the police do obtain a gun that is connected to a particular violent crime, they may check to see if it has been reported stolen in their department or even in other jurisdictions. (Data on thefts in other jurisdictions can be checked by the police through data kept by the FBI's National Criminal Information Center—though only to the extent that other departments have reported detailed information on thefts to the FBI.) But even if such checks are made, it is rare for police departments to tabulate and release the results. Furthermore, outside analysts have not been able to access the results, or assess the quality of the matching process.

A Chicago Study

The University of Chicago Crime Lab was able to obtain detailed data on gun thefts reported to the Chicago Police Department (CPD) since 2001. In recent years, 2010 to 2016, there were a total of 4010 theft reports, an average of 573 per year. Of these, 2124 reports (53%) included a serial number and manufacturer name, which was enough information to match them against the guns recovered by the CPD during that period. For example, in 2016, 84 of these guns were found to match with one of the 5604 crime guns recovered in that year by the CPD and submitted for tracing. The match rate is 1.5% (84/5604).

The matching process involved several steps. The process began by matching serial numbers of all guns reported stolen from 2001 to 2016, to all guns recovered by the CPD during that period and submitted for tracing. Since different manufacturers sometimes use the same serial numbers, the serial-number matches were then checked to determine if the manufacturer was the same. That check utilized the three-digit manufacturer code when that was recorded, and otherwise used the manufacturer name. Matches were checked “by hand” when there was any question.

Given the heroic assumption that the 53% of theft reports that include serial numbers are representative of all those reported stolen, then the potential match rate

(including those where the owner did not report the serial number) is 2.8%. That rate is too low to support the claim that theft is an important part of the supply chain of crime guns. But before reaching that conclusion, it is prudent to consider these caveats:

- Gun thefts may be greatly underreported in Chicago. Until 2010, almost all of the handguns kept by residents in the city were technically illegal, since a near-blanket prohibition was in place. While that prohibition was found unconstitutional (*McDonald vs. City of Chicago*, 2010), and other local restrictions have since been repealed, it may still be true that residents are reluctant to draw police attention to a gun that had been in their possession by reporting it stolen. The NCIC national count for 2016, 238,000, translates into a rate of .73 per thousand US residents. Applied to Chicago, with a population of 2.7 million, that amounts to about 2000 gun thefts, compared with the 787 that were recorded by the CPD. It is possible that Chicago's true gun theft rate really is just 40% of the national rate, but that seems unlikely.
- The matches were limited to guns reported stolen to the Chicago PD. The crime guns in Chicago were first sold outside of the city (since there are no legal retailers in the city), and a majority originated in another state [13]. Thus, it is plausible that a large percentage had been stolen in another jurisdiction at some point. The Crime Lab attempted to obtain comprehensive national data from the NCIC, but the data that were ultimately provided were not useable. For that reason, there is no available data on how many of these guns had been stolen outside of Chicago.
- The matching in this exercise is against guns recovered by the CPD. Most of these guns were confiscated because they were possessed or carried illegally, rather than that they were known to be used in a specific robbery or assault. Whether the recovered guns are similar to guns used in violent crime is not known, because only a small (and possibly unrepresentative) percentage of guns used in violent crime are recovered.

So the evidence from this matching exercise is meager and hard to interpret. The result that 2.8% of crime guns had at some point been reported stolen in Chicago may safely be considered a lower bound on the

percentage of guns used in Chicago violence that had been stolen in Chicago or elsewhere. But whether the true figure is close to this bound, or much higher, is unknown.

The Last Link

Of the transactions in the supply chain that arm violent criminals, the best documented is the final transaction. Several surveys of inmates or other groups of offenders have asked if they had a gun before their arrest, and if so, the source and type of transaction. An early and well-known study of this sort, a survey of state prisoners by James Wright and Peter Rossi [14], is a prominent example, although based on a sample of convenience rather than a representative sample. The US Department of Justice conducted several waves of inmate surveys that were based on representative samples, the most recent of which was in 2004 (state and federal prisons) or 2002 (local jails). An analysis of the subset of respondents who were typical of violent gun offenders—males aged 18–40 who were in the first 2 years of their sentence and admitted to having a gun at the time of their arrest—found that only a small fraction indicated that their most recent gun had been obtained by theft: 4% of the prison and jail inmates, and just 1% of the federal prisoners [15]. Similar results have been found in recent surveys of male gun offenders in Cook County Jail [16] and of a similar population of Chicago residents in prison [17].

Of course it is possible that some survey respondents are unwilling to admit that they stole a gun. That would be understandable, but it should be noted that for most of them, any type of transaction with a gun is illegal because of their criminal record. In a recent survey of prisoners about guns, it was possible to check some answers against administrative records, with reassuring results concerning accuracy [17]. It is also possible that inmate samples are not representative of active offenders; for example, a prison sample includes very few whose current charges were for crimes committed before age 18.

The evidence from these national surveys, and from the surveys of Chicago residents, are consistent in finding that theft is relatively rare as a means of providing active criminals with their guns. Most indicate that they bought or traded for the gun, or were given it or shared it. Typical transactions are with members of their social network—family and acquaintances—or street sources.

There is very little systematic evidence on the prevalence of theft earlier in the supply chain for crime guns. It would of course be important to know whether theft is an important source to traffickers, but no such information is available.

What Happens to Guns after They Are Stolen?

The current theft rate is sufficient to provide the weapons for every violent gun crime committed each year. Yet a quite different possibility is that guns, once they are stolen, are not necessarily acquired by violent offenders, but rather enter the stream of stolen merchandise of all kinds, including everything from jewelry to cell phones. It may well be that criminals are overrepresented among the buyers of all kinds of stolen merchandise, but there is no reason to think that they constitute the majority of buyers, or that many of them are involved in serious violence. So what about buyers of stolen guns?

Again, very little is known about fencing stolen merchandise in general [18], or guns in particular. In conjunction with The Crime Lab, data from the Chicago Police Department on the recovery of stolen guns were utilized to answer one basic question—What is the likelihood that a gun stolen in Chicago will show up among the crime guns later recovered by the CPD? (These data were discussed above, where they were used for a different purpose.) Table 1 displays the results from 2010 on.

Table 1 Recovery of stolen guns, Chicago 2010–2016

Year reported stolen	Guns reported stolen with serial number	% recovered in same year	% recovered in following year	Cumulative % recovered by 2016
2010	364	6.0	4.9	20
2011	294	9.2	6.8	21
2012	229	12.2	2.6	21
2013	239	4.2	7.1	13
2014	296	12.2	5.4	20
2015	282	10.6	8.5	19
2016	420	8.8	–	–

Source: Unpublished data on guns reported stolen to CPD and guns reported recovered by CPD, matched using serial number and manufacturer

Based on theft and recovery reports going back to 2001 (not shown here), it is clear that the great bulk of gun recoveries occur within the first 3 years following the report of the theft. For example, for the 84 matches that occurred in 2016, 68 (81%) were with guns reported stolen in 2014 or later, while just 19% were guns reported in the 13 previous years. In recent years, as shown in the table, the cumulative recovery rate following theft report is about 20%. Note that these results are limited to guns reported stolen for which the victim was able to provide a serial number.

In most cases, these stolen guns were recovered in conjunction with an arrest (usually for illegal carrying or possession), and it is of interest to determine whether the arrestees could have used the guns in robbery or assault before this arrest. For the years 2012–2016, there were 169 such arrests in conjunction with the recovery of a stolen gun. Their Chicago arrest records indicate that less than half of them (44%) have a record of violent crime. Three quarters of them (74.6%) had been identified by the CPD as affiliated with a gang at some point.

To summarize, it appears that only about 20% of guns reported stolen are ever recovered. Furthermore, if a stolen gun is not recovered in 3 years, it is unlikely to ever be recovered by the CPD. The recoveries are usually coupled with an arrest, and the arrest in most cases is for illegal possession or carrying, although a subset of those arrested in this context have a history of arrests for violent crimes, and may well have used the gun in robbery or assault. These facts could be accounted for in a variety of ways, such as the following two scenarios:

- Scenario I: 20% of stolen guns move quickly into possession of people who are likely to get stopped by the CPD, and who carry guns illegally. Guns carried by such people are likely to be confiscated within 2 or 3 years. The other 80% are not exposed to confiscation by the CPD—for example, they are kept at home, perhaps for protection, or they end up in the hands of someone who is unlikely to be stopped by the CPD, or who has acquired the permit required to possess a gun in Illinois (the Firearm Owners Identification card). It is also possible that they leave the city, although that is probably rare, given that guns are likely to be more valuable in Chicago than elsewhere. Some of the guns that are confiscated—perhaps half—are likely to be used in violent crime, and those that are not confiscated are likely not used in violent crime.

- Scenario II: 100% of stolen guns at first move into the hands of active criminals in Chicago, but after being used in one or more assaults or robberies, they are either recovered by the CPD or disposed of by the criminal possessors. By the third year, those that are left in circulation are outside of the city or in the hands of someone who is unlikely to be arrested with the gun.

So the first scenario suggests that only about 10% of the stolen guns end up likely being used in violent crime, while the second suggests that 100% have a brief period of criminal use but that the CPD only has the opportunity to confiscate 20% before the guns are no longer on the street.

Would a Reduction in Gun Theft Reduce Gun Violence?

If stolen guns are a predominant source of the weapons used in violent crime, then it is reasonable to suggest that law enforcement should direct greater attention to combating gun theft. With fewer guns entering the underground market through theft, it is possible that prices and transactions costs would rise, and some robbers, gang members, and other dangerous people would have reduced access. As we have seen, the available evidence does not support the claim that a significant share of the guns used to rob and assault had been stolen. On the other hand, the evidence has enough limitations to leave reasonable doubt about this issue.

Is it possible to learn from the national experience with declining gun theft rates? As discussed above, most gun thefts occur in residential burglaries, and the burglary rate has declined sharply since 1994. The result appears to be a 20-year decline in gun theft rates, which, as it turns out, coincides with the long slide in rates of gun violence [19]. But it would be a mistake to think that the decline in gun theft was the cause of the decline in gun violence, even though they were roughly coincident. In fact, the mix of weapons chosen by perpetrators of serious violence has not changed much during much of this period of decline in both theft and violence rates, so there is no indication that gun availability has been driving the long trends in violent crime.

Cross-section data may also be informative about the role of gun theft in supplying guns. It is reasonable to suppose that the per capita rate of gun theft in a

jurisdiction will be closely tied to the residential burglary rate in combination with the household prevalence of gun ownership. There are large geographic disparities in household prevalence [20]. In a city with exceptionally low prevalence, such as Boston, burglary will be “unproductive,” which may contribute to the scarcity of guns available to gangs and other offenders in that city [21, 22].

Whether or not gun theft is an important contributor to gun violence, it does play some role, and it is only prudent to consider what authorities could do to combat it. The Center for American Progress has a useful discussion of policy alternatives in this area [23]. To reduce theft from licensed gun dealers, it makes sense for the dealers to adopt better security, and ATF has provided guidance to that effect. Unfortunately, ATF has no authority to require dealers to adopt particular security measures. State legislatures could legislate such requirements, but only a handful actually have.

The great bulk of gun theft is in residential burglaries and other thefts from households and individuals. Many gun owners do not secure them, thus facilitating theft both at home and from vehicles [24]. Again there is a possibility of state legislation that requires owners to secure their guns against theft. In a sense, the easiest, most comprehensive solution could be the development of “smart guns” that can only be fired by their owners. For people who felt they needed a gun readily available, at home or away from home, the smart gun would offer some protection against takeaways and thefts of guns that could be used in crime. But so far such guns are not available in the USA [25].

Another possibility has gotten little attention by commentators, but deserves a closer look. Law enforcement agencies could place a greater priority on understanding the market for stolen merchandise, and for guns in particular, to determine what sorts of interventions might be helpful to disrupting the disposition of stolen guns. The greatest success along these lines has occurred in the area of vehicle theft, where police have been able to trace stolen vehicles to “chop shops” and other intermediaries and then shut them down. Lojack and other tracking devices have been helpful in that regard [26]. As with vehicles, it would be very helpful if even a small fraction of guns exposed to theft were equipped with tracking devices that could be switched on if the gun were stolen, thus providing a path to the intermediaries. Arresting them might go a long way to ending the trade in stolen guns.

Thoughts toward a Research Agenda

This discussion highlights the gaps in our knowledge about the role of gun theft in violent crime. Systematic evidence, as opposed to speculation and guesswork, is severely lacking.

Some questions could conceivably be answered from available data:

1. What percentage of guns used in crime have been stolen? A first step would be to match crime guns that have been recovered by the police with NCIC records of guns reported stolen. The limitations of this analysis are explained above, but it appears feasible with sufficient cooperation from one or more large police departments. One important preliminary for this inquiry would be to assess the quality of the NCIC stolen guns data base, and thus the potential quality of matches.
2. To what extent are stolen guns used in shootings? Ballistics data on stolen guns that are recovered could be compared with data on ballistics data from crime-scene shell casings to determine the extent to which these guns have been used in criminal shootings.
3. After guns are stolen, what happens to them? There has been very little investigation of the channels in which stolen guns are sold, and the extent to which these channels are the same or different than those found in the market for other stolen merchandise. To some extent, this information could be obtained through systematic interviewing and undercover work. Another possibility is to put tracking devices on thousands of guns that are exposed to possible theft and then track them.

A more comprehensive version of this agenda should be viewed as an important part of a larger agenda to better understand and regulate the underground gun market that supplies dangerous offenders with most of their guns [27].

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