

## 1 Why Study Crime Trends?

We begin with a question: What is the crime rate? Not the definition of the crime rate (crimes divided by population) but the rate itself? How about the violent crime rate? The property crime rate? These are not rhetorical or trick questions; they have answers. Here they are: In 2020 the US violent crime rate was about 398 violent crimes per 100,000 population, the property crime rate was about 1,958 property crimes per 100,000, and the total crime rate was 2,356 crimes per 100,000, the sum of the violent and property crime rates.<sup>1</sup> I suspect most readers, even many social scientists, did not know the answers or even come close to them. Had I asked about the unemployment rate or inflation rate, however, many more readers would surely have come closer to the mark (about 3% and 6% at this writing). Why is the crime rate different?

Part of the answer is that most people think the crime rate, whatever it is, is always higher than it should be. Not so with unemployment and inflation. Labor market rigidities, stagnation, and other economic ailments brew when these conditions drop below a certain level. The US Federal Reserve and the central banks of other nations set these low points and do what they can to keep unemployment and inflation above them. We have an interest, therefore, in knowing the rates of these economic indicators so that we can tell whether they portend trouble, when they are too low as well as when they are too high. Because most people believe the crime rate can never be too low, there is no anchor point that gives it underlying value or meaning. All most of us really want to know about the crime rate is whether it is going up or down. While there are good reasons, discussed later, to worry when crime rates dip below their “normal” levels, the belief that what really matters about crime rates is how they are changing has a good deal of truth to it.

Crime is an inherently dynamic phenomenon. It moves over time and across space. We can take a snapshot of the crime rate at a single point in time and compare it with snapshots of other conditions at the same time; that is how most research on crime is done. These static pictures are not without merit, but they can be as misleading as a frozen smile in a photograph. Moving pictures provide a more complete and accurate portrayal of how crime alters and is altered by the rhythms of social life. The practitioner concerned with crime almost always turns to the question of change: What policy, strategy, or procedure can I change to reduce crime? To answer that question, the evidence-based practitioner must look to theory and research on change over time in crime rates.

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<sup>1</sup> The crime rates are based on offenses known to the police and are from the FBI’s Crime Data Explorer (<https://crime-data-explorer.app.cloud.gov/pages/explorer/crime/crime-trend>).

The study of crime rates has a venerable history in criminology. It emerged from the sociological positivism of the nineteenth century in the pioneering statistical analyses of crime and suicide rates by Quetelet, Guerry, and Durkheim. It assumes that crime is a fundamentally social phenomenon that should be investigated using the logic and statistical methods of the natural sciences. That said, Quetelet's and Guerry's research designs were predominantly cross-sectional (Donnelly 2016; Whitt and Reinking 2002). They were struck by the constancy of crime rates over time and their variability across place. By contrast, Durkheim's conception of anomic suicide linked suicide rates to the disruptive consequences of social change (Durkheim 1951[1897]). All of the early moral statisticians, however, were united in the belief that crime is a social fact, a patterned regularity of social life, and should be analyzed in relation to other social facts. Without these fundamentals, the study of crime trends would be unrecognizable.

The idea that crime is a "social fact," an attribute of a social system and not just of individuals, may strike some readers as overly abstract. But changes in crime over time have concrete consequences for both individuals and communities. The reasons seem obvious but are worth stating explicitly. The kinds of predatory crimes that are the focus of this Element constitute significant individual and social harms. They result in death, serious injury, and trauma. They deprive individuals of their liberty, property, and sense of security and safety. They cause fear. At high levels, they can destabilize entire communities. When predatory crime, especially violence, increases, politicians and pundits often use fear to win votes and promote policies, such as mass incarceration, that may do more harm than good. Crime trends have consequences, in other words, that everyone, not just criminologists, should care about.

### 1.1 Contents of the Element

*Crime Dynamics* considers many of the major theoretical and empirical contributions of the criminologists, sociologists, historians, and economists who have sought to explain the sources of change in crime rates. This study, like most crime trends research, is avowedly macroscopic in orientation. The focus is on crime trends in nations, cities, regions, and other large subnational units during the past several decades. Some potentially relevant topics, developmental and life-course research on individual change in criminal behavior, for example, are not covered comprehensively or are omitted. The Element also focuses on trends in street crime, primarily homicide, in the United States. Comparable data on trends in corporate, white-collar, and online crime do not exist, and homicide is the most serious, best measured, and most frequently studied

criminal offense in the crime trends research literature. Comparable studies of crime trends in other nations are left to others.

The sections in this Element cover the major data sources in the study of crime trends; the impact on violent crime of property crime, the prevalence of firearms, and imprisonment; the demography of crime trends; the relationship between crime and the economy; crime trends and institutional change; exogenous shocks that produce large and unexpected changes in crime rates; forecasting future crime rates; and where crime trends theory and research should go from here. Section 2 describes the most widely used sources of data in the study of crime trends. Some data sources are based on offenses recorded by police departments. Others are from public health sources and surveys of crime victims. Most of the data are collected and disseminated by government agencies, but data compiled by private entities play an increasingly prominent role in recent crime trends research. Each data source has strengths and limitations, and the different sources are best viewed as complementary rather than incompatible.

Section 3 discusses three sources of change in violent crime: property crime, firearms, and imprisonment. While some prominent criminologists have argued that property crime has little or no effect on violent crime, and homicide in particular, the section subjects this contention to critical scrutiny and offers reasons why the sheer volume of property crimes should be expected to exert a sizable influence on criminal violence. There is little dispute that homicide is related to the availability of firearms. More controversial, inside and outside of criminology, is whether widespread access to firearms increases or reduces rates of homicide and other violent crimes. The relationship between crime and imprisonment trends is also controversial. Recent research suggests that increases in imprisonment probably result in decreases in crime rates, but the effects generally are small and diminish even further at high levels of imprisonment.

Section 4 examines differences in crime trends by race, ethnicity, and gender. It may come as some surprise that the crime trends among males and females and in the Black, White, and Hispanic populations are quite similar. What distinguishes these groups is their *level* of crime, not the *change* in their crime rates over time. This could mean that the common group trends are a consequence of common causes. Not all group-specific crime trends are the same, however. For example, this section presents evidence that intimate-partner homicide has declined more rapidly over time among males than females.

Section 5 considers the relationship between crime trends and changes in the age composition of the population. Street crime rates peak in the late teens and

early twenties. As the adolescent and young adult segment of the population grows, as it did during the 1960s and 1970s resulting from the “baby boom” after the Second World War, crime rates turn up. As the baby boom cohorts were replaced by smaller age cohorts in the 1980s, crime rates came down. But not for long. Crime rates rose again beginning in the late 1980s, even as the size of the youthful population continued to decline. Changes in the size of this population place upward or downward pressure on crime rates, but other factors often outweigh the effect on crime trends of changes in the age composition of the population. Just as the size of age cohorts matters for crime trends, so does when the cohorts were born. Cohorts born at different times can differ in their current crime rates, quite apart from the effects of age or other current conditions. The influence on crime rates of the circumstances of birth and early development is an indispensable part of the story of why crime rates move up and down over time.

Research on the impact of economic conditions on crime rates is as old as the study of crime trends itself. Section 6 discusses the evolution of this research from early studies of the relationship between crime trends and the business cycle, to investigations of the effects of unemployment on crime rates, to recent research on how crime rates respond to changes in consumer sentiment and inflation. This is one of the most stimulating and important areas of inquiry in the study of crime trends because it bridges the theoretical interests and methodological tools of economists and criminologists, and it necessarily directs attention to policy and institutional realms well beyond the criminal justice system.

To this point, *Crime Dynamics* covers the data and much of the research on crime trends, but stops short of asking what it all means. What are the underlying structures, processes, and mechanisms that help to make sense of the disparate demographic, social, and economic influences on crime trends discussed thus far? In short, is there a *theory* of crime trends? Section 7 presents the outlines of such a theory that is rooted in what has been termed the “new institutionalism” in criminology. Social institutions are the guideposts of society. Institutional structure, regulation, and performance shape the incentives, opportunities, and constraints that result in both long- and short-run changes in crime rates over time.

Not all sources of change in crime rates are knowable in advance. On occasion crime rates change abruptly without prior warning. No one to my knowledge predicted the Covid-19 pandemic or the effects, which turned out to be quite complex, it would have on crime rates. Section 8 discusses the impact on crime rates of such “exogenous shocks” and how they elude the conventional explanatory tools of crime trends research. Exogenous shocks

not only upset “normal science” studies of past crime trends, they pose a significant challenge to forecasting future crime rates. Forecasting has all but disappeared from criminology, in no small part because of embarrassingly erroneous claims of an impending crime boom by a few prominent criminologists just as crime rates were beginning their historic decline in the 1990s. Section 9 contends that, when carefully done, crime forecasting can benefit both policymaking and theory testing and is a natural and needed extension of macrolevel research on crime. The final section of the Element points to improvements in theory, data, and research methods that portend a bright future for the study of crime trends.

This Element is written in nontechnical language and statistics are kept to a minimum. Where statistical terms and procedures are used, they are described in plain language in the text. Interested readers are directed to an appendix for supporting technical material on crime forecasting in Section 9. Much of the story is told in time-series graphs of crime rates and related phenomena (e.g., the age composition of the population, firearm prevalence, inflation, imprisonment, confidence in the police). The story begins in the following section with a description of the major sources of data on crime trends.

## 2 Crime Trends Data

As with anything else worth counting, an accurate description and valid explanations of crime trends require sound data and reliable measurement. This section describes the major data sources used in the study of crime trends.

### 2.1 Uniform Crime Reports

The nation’s major source of crime data is the Uniform Crime Reports (UCR). The UCR program began in 1930 and is housed at the FBI.<sup>2</sup> The data consist of eight major violent and property offenses and are based on crimes reported to and recorded by local law enforcement agencies. The violent crimes are criminal homicide, rape, robbery, and aggravated assault and the property crimes are burglary, larceny, motor vehicle theft, and arson. Other generally less serious crimes such as forgery, drug law violations, and simple assaults are also included in the FBI’s annual series *Crime in the United States*.

In 2021 the FBI transitioned from the UCR summary system to the National Incident-Based Reporting System (NIBRS), a far more detailed compilation of crime data that is based on individual crime incidents. Many agencies did not report NIBRS data for 2021, however, and the FBI did not include the 2021 data

<sup>2</sup> For a brief history of the UCR program, see <https://ucr.fbi.gov/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/aboutucrmain>.

in its multiyear trend presentations (<https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/crime-trend>). The problematic transition to NIBRS reveals a deeper problem in the nation's crime statistics based on law enforcement data: participation in the system is voluntary.

## 2.2 The NIBRS Transition

The FBI released its annual report on crime in the United States for the year 2021 on October 5, 2022. This was the first report under NIBRS, a new and far more detailed data format. NIBRS replaced the UCR “summary system” the FBI has used since the 1930s that includes major felony offenses and arrests recorded by local law enforcement agencies. NIBRS counts many more offenses and provides much greater detail about them, such as the age, sex, and race of victims and the circumstances of the crimes. NIBRS had been in the works since the 1980s, and so full conversion, even if it took nearly forty years to accomplish, has to be counted as good news.

The bad news is that the conversion to NIBRS was far from complete. Only 63% of law enforcement agencies, covering about 65% of the US population, had made the switch to NIBRS by the FBI's deadline of January 1, 2022. And many other agencies submitted NIBRS data that covered only part of the year – just 52% submitted data for all twelve months of 2021. The police departments of some of the nation's largest cities submitted no data at all, including the departments in New York, Los Angeles, Phoenix, and San Francisco. And some states were barely covered by the NIBRS data. Only 15 of California's 740 law enforcement agencies, 40 of Pennsylvania's 1,504 agencies, and 2 of Florida's 757 law enforcement agencies sent in data. The crime data for nonparticipating agencies had to be estimated based on data for prior years and comparisons with agencies of similar population size and composition.

With participation rates this low and uneven, and the need to estimate such a large number of unknowns, the FBI itself cautioned against comparing the 2021 data with data from previous years.<sup>3</sup> That meant that the nation's official crime statistics could not answer the most basic question about crime, whether it is going up or down. That would be a problem in any year. It was an especially serious problem in 2022, when crime had again moved to the forefront of public concerns and loomed as a leading issue in the fall midterm elections. The uncertainties surrounding the crime data were grist for the political mill. If your position is that crime increases are exaggerated, just cite the FBI's estimate

<sup>3</sup> The FBI noted: “Due to the full transition to NIBRS and the lack of data for agencies that are not fully transitioned, the 2021 data year cannot be added to the 5-, 10- or 20-year trend presentations that are based in traditional methodologies used with summary data” (<https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/crime-trend>).

that robbery went down by 9%. If you want voters to believe crime is out of control, cite the estimate that murder went up over 4%. Either way, who's to say you're right or wrong?

It did not have to be this way. The FBI should not be faulted for pushing hard on NIBRS. It is a much better statistical system and should have been fully implemented long before 2022. Moreover, law enforcement agencies were not caught unawares that NIBRS was coming. The Department of Justice announced the conversion to NIBRS in 2015 and distributed over \$120 million to prepare for the transition.<sup>4</sup> But the FBI knew well ahead of the January 2022 deadline that NIBRS participation would be much lower than the 85–95% participation rate in the former summary system and would therefore require far more estimation than needed in the past.<sup>5</sup> At that point, in the fall of 2021, the FBI could have decided to allow agencies that would not be able to meet the upcoming deadline to submit summary data in lieu of NIBRS. The FBI chose instead to require full compliance with NIBRS by the deadline with no exceptions.

The FBI knew that the NIBRS conversion would be a technical challenge for many agencies. That is why they were given fair warning years ago and funds to support the transition. But technical issues were not the primary stumbling block that slowed the transition. The major obstacle was that law enforcement agencies are not required to submit crime data to the FBI. Voluntary participation in the nation's crime reporting system might have made sense in 1930 when the FBI's Uniform Crime Reporting Program was established. Many law enforcement agencies, with venerable traditions of independence and local control, would have resisted a mandate to send sensitive information to Washington that would be made public and could be used to criticize their performance. But the days when crime data were treated as the personal property of the local sheriff or police chief are long gone. If the FBI cannot or will not require local law enforcement to submit their crime data, Congress can, and should.

A federal mandate to submit crime data to the FBI would not have guaranteed full participation in NIBRS, but it probably would have increased participation, reducing the need for extensive estimation. Meanwhile, the FBI put itself in the odd position of mandating that local agencies submit crime data under the NIBRS system while not requiring that they submit any crime data at all.<sup>6</sup> We are left with the hope that 2021 was a one-off anomaly in the nation's ninety-year-old crime

<sup>4</sup> See [www.justice.gov/opa/blog/new-and-better-crime-data-nation](http://www.justice.gov/opa/blog/new-and-better-crime-data-nation).

<sup>5</sup> See [www.fbi.gov/news/stories/five-things-to-know-about-nibrs-112520](http://www.fbi.gov/news/stories/five-things-to-know-about-nibrs-112520).

<sup>6</sup> Forty-nine states submit their crime data to a state UCR program, which does some quality control before sending the data on to the FBI. Some of these states require that local law enforcement agencies submit their data to the state, although the degree to which such mandates are enforced is unclear.



data infrastructure. A serious glitch to be sure, and one that could have been avoided, but a teachable moment that offers important lessons for how to operate a bona fide federal statistical system.

### 2.3 National Crime Victimization Survey

A strength of the UCR-NIBRS data is that they are available for counties, cities, metropolitan areas, and census regions as well as the nation as a whole. The data are subject to crime classification errors, however, and the county-level data are often incomplete (Maltz and Targonski 2002; Nolan et al. 2011). The chief drawback of the UCR data, however, is that they exclude crimes that are not reported to the police.

The second major source of US crime data and statistics is the National Crime Victimization Survey (NCVS). The NCVS is an annual survey since 1973 of the US household population that asks whether individuals age twelve and older have been the victim of a property crime or violent crime, excluding homicide, during the last six months. Respondents are also asked whether the crime was reported to the police. The extent of unreported crimes varies substantially across offense types. For example, in 2019 victims or others reported 79.5% of motor vehicle thefts to the police, compared with just 33.9% of rapes or other sexual assaults (Morgan and Thompson 2021).

NCVS data are currently available for the nation as a whole and a subset of states (Kena and Morgan 2023). One limitation is that persons who reside in institutional settings such as jails or nursing homes are not included in the survey. The NCVS does provide a more complete picture of crime than the UCR, however, and the two crime data systems should be viewed as complementing one another, with one filling in the gaps left by the other (Lynch and Addington 2007; Morgan and Thompson 2022).

### 2.4 Other Homicide Data Sources

Three additional US data sources are available for homicide. One is the FBI's Supplementary Homicide Reports (SHR), which provides data on homicide incidents by victim and offender (when known) age, race, and sex; weapon type; victim-offender relationship (e.g., family member, intimate partner, acquaintance, stranger); and attributes of the incident (e.g., drug-related, gang-related, argument). A second source is the Fatal Injury Reports from the National Vital Statistics System (NVSS), which compiles homicide and other data on cause of death from local coroners and medical examiners. Homicide counts and rates are typically somewhat higher than those from the UCR and SHR, in part because reporting to the NVSS is mandatory while reporting to the UCR is voluntary. Nonetheless, time trends derived from the two homicide data sources