Do Crime Rates Spike After a Democrat is Elected President?

Giulia Shaughnessy¹, Katherine D. Beadle¹, Sarah F. O'Dell¹, Raeanne N. Smith¹ and Paul M. Sommers#

¹Middlebury College, Middlebury, VT, USA
#Advisor

ABSTRACT

The authors examine state-level violent and property crime rates (as well as rates for murder, rape, and burglary) across all 50 states (including the District of Columbia) and within the four Census regions one year before and after U.S. presidential elections in 2008, 2012, and 2016. Violent and property crime rates in all states decreased significantly after Barack Obama’s (a Democrat’s) election in 2008 and re-election in 2012. Murder rates decreased significantly after both election years and burglary rates decreased significantly after 2012. Property crime rates also decreased significantly the year after Donald J. Trump’s (a Republican’s) election in 2016. But, rape rates were significantly higher in all states and murder rates were significantly higher in the West.

Introduction

During the 2020 presidential campaign, then-President Donald J. Trump, along with several other prominent Republicans, warned that crime rates would spike if Joe Biden, and Democrats in general, were elected that November. At the Republican National Convention, then-Vice President Mike Pence proclaimed: “The hard truth is you will not be safe in Joe Biden’s America” [1]. Since the election of Joe Biden, should Americans expect an increase in crime? Is there a link between Democratic leaders and increased crime?

In 2006, M. R. Hagerty [2] analyzed vote shares by state in U.S. presidential elections from 1972 to 1996. The author shows that changes in crime rates during the incumbent’s term before an election influence vote shares, but no attention was accorded to how crime rates changed in the year after presidential elections.

In 2016, the Brennan Center for Justice weighed in on then-presidential candidate Donald Trump’s statement that “[d]ecades of progress made in bringing down crime are now being reversed.” The Brennan Center for Justice cited a recent in-house study by Grawert and Cullen of overall crime rates and murder in America’s 30 largest cities from 2014 to 2015. The authors concluded that crime overall remained roughly the same as in 2014, decreasing by 0.1 percent across cities. Murder rates rose, but three cities (Baltimore, Chicago, and Washington, D.C.) accounted for more than half of the national increase in murders [3].

Previous research has primarily examined year-to-year changes in crime rates and has not focused on the years before and after presidential elections with an eye on which political party took control of the White House.

This paper will compare crime rates across all states and the four Census regions one year before and after each of the three presidential elections in 2008, 2012, and 2016.

The Data

Aggregated crime rates (per 100,000 people) against persons (also known as violent crimes) and property, as well as the specific rates defined for murders, rapes, and burglaries, reported by the Federal Bureau of Investigation (FBI)
were collected in the year before and the year after President Barack Obama’s election in 2008, President Obama’s re-election in 2012, and President Donald J. Trump’s election in 2016 [4].

All states were divided into four Census regions: the Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont); the Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin); the South (Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, Washington D.C., West Virginia); and the West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

The definition of rape was revised in 2013 when the legal standard that constitutes rape became more expansive to include a larger range of victims and situations [5]. Comparisons involving rape crime rates for the 2008 and 2012 elections use the FBI’s “rape_legacy” rate (the old definition) while comparisons in the year before and after the election in 2016 use the FBI’s “rape_revised” (the updated definition).

Methodology

To test whether or not crime rates changed from the year before to the year after the presidential elections in 2008, 2012, and 2016, we ran a series of paired t-tests involving all 50 states (including the District of Columbia) and the four Census regions. These t-tests compared (i) average violent crime rates (aggregated over all types of violent crimes including murder and negligent homicide, rape, robbery, and aggravated assault) and (ii) average property crime rates (aggregated over all types of property crimes including burglary, larceny, and motor vehicle theft). We then ran a series of paired t-tests on three specific types of crimes: (i) murder, (ii) rape, and (iii) burglary. Our null hypothesis is that the average crime rate in the year preceding the election is equal to the corresponding average crime rate in the year following the election. Under a two-tailed alternative, the two averages are not equal, although Republicans might argue that the average crime rate one year after the election would be higher if a Democrat is elected president and lower if a Republican is elected president.

The Results
Table 1 shows the results of the paired t-tests before and after President Barack Obama’s (a Democrat’s) election in 2008. Both violent and property crime rates for all 50 states changed significantly in 2009 compared to 2007. In both cases, average crime rates significantly decreased ($p < .0001$). Among the Census regions, the decrease was significant for both violent and property crimes in the South and the West (but only for property crimes in the Midwest). There was no discernable change for states in the Northeast.

|                | 2007  | 2009  | $p$-value on difference* |
|----------------|-------|-------|--------------------------|
| **Violent crimes** |       |       |                          |
| **All states**   | 427.20| 400.93| <.0001                   |
| **Regions**      |       |       |                          |
| Northeast ($n = 9$) | 272.70| 277.32| .6250                    |
| Midwest ($n = 12$) | 349.33| 333.28| .0965                    |
| South ($n = 17$)  | 577.50| 529.21| .0002                    |
| West ($n = 13$)   | 409.51| 381.21| .0006                    |
| **Property crimes** |       |       |                          |
| **All states**   | 3197.71| 2976.04| <.0001                   |
| **Regions**      |       |       |                          |
| Northeast ($n = 9$) | 2290.06| 2270.42| .6597                    |
| Midwest ($n = 12$) | 2955.30| 2710.54| .0003                    |
| South ($n = 17$)  | 3677.19| 3497.97| .0001                    |
| West ($n = 13$)   | 3422.82| 3027.09| <.0001                   |

*The $p$-values are for a two-tailed paired t-test.

*a Including the District of Columbia.

Sources: U.S. Department of Justice, Federal Bureau of Investigation, Table 4, Crime in the United States by Region, Geographic Division, and State, 2006-2007, [https://ucr.fbi.gov/crime-in-the-u.s/2007;](https://ucr.fbi.gov/crime-in-the-u.s/2007;)
Table 4, Crime in the United States by Region, Geographic Division, and State, 2008-2009, [https://ucr.fbi.gov/crime-in-the-u.s/2009](https://ucr.fbi.gov/crime-in-the-u.s/2009).
Table 2 shows that in the year following President Obama’s re-election in 2012, crime rates for all 50 states (both violent and property) fell significantly (compared to the year before his re-election). Among the Census regions, the decrease was significant for both crimes against persons and property in the South and Northeast (but only for property crimes in the Midwest).

| Violent crimes | 2011 | 2013 | p-value on difference |
|----------------|------|------|-----------------------|
| All states     | 369.40 | 356.64 | .0023               |
| Regions        |       |       |                       |
| Northeast (n = 9) | 272.96 | 260.13 | .0198                |
| Midwest (n = 12)  | 315.26 | 311.65 | .6750                |
| South (n = 17)   | 471.43 | 447.38 | .0132                |
| West (n = 13)    | 352.72 | 346.32 | .3100                |

| Property crimes | 2011 | 2013 | p-value on difference |
|-----------------|------|------|-----------------------|
| All states      | 2883.40 | 2739.94 | <.0001              |
| Regions         |       |       |                       |
| Northeast (n = 9) | 2280.74 | 2104.04 | .0001                |
| Midwest (n = 12)  | 2668.83 | 2491.86 | .0054                |
| South (n = 17)   | 3375.10 | 3132.21 | <.0001               |
| West (n = 13)    | 2855.71 | 2896.22 | .4319                |

*The p-values are for a two-tailed paired t-test.  
*Including the District of Columbia.

Sources: U.S. Department of Justice, Federal Bureau of Investigation, Table 4, Crime in the United States by Region, Geographic Division, and State, 2010-2011, https://ucr.fbi.gov/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/tables/table-4; Table 4, Crime in the United States by Region, Geographic Division, and State, 2012-2013, https://ucr.fbi.gov/crime-in-the-u.s./2013/crime-in-the-u.s.-2013/tabledatasetoverviewpdf/table_4_crime_in_the_united_states_by_region_geographic_division_and_state_2012-2013.xls.
Table 3 shows that in the year following President Trump’s (a Republican’s) election in 2016, property crime rates fell across all 50 states (including the District of Columbia), with notable decreases in the Northeast and South. Surprisingly, average violent crime rates not only edged higher (albeit not discernably), but they actually increased significantly in the Midwest.

| Violent crimes | All states<sup>a</sup> | 2015 | 2017 | p-value on difference<sup>b</sup> |
|---------------|---------------------|------|------|-------------------|
| Regions       |                     |      |      |                   |
| Northeast (<i>n</i> = 9) | 249.94             | 244.72 |      | .5336             |
| Midwest (<i>n</i> = 12)  | 341.49             | 366.75 |      | .0007             |
| South (<i>n</i> = 17)    | 466.16             | 461.57 |      | .7985             |
| West (<i>n</i> = 13)     | 392.35             | 416.20 |      | .2256             |

| Property crimes | All states<sup>a</sup> | 2015 | 2017 | p-value on difference<sup>b</sup> |
|-----------------|------------------------|------|------|-------------------|
| Regions         |                        |      |      |                   |
| Northeast (<i>n</i> = 9) | 1713.98             | 1555.91 |      | .0071             |
| Midwest (<i>n</i> = 12)  | 2264.68             | 2229.61 |      | .2440             |
| South (<i>n</i> = 17)    | 2864.47             | 2726.52 |      | .0002             |
| West (<i>n</i> = 13)     | 2840.99             | 2772.05 |      | .5136             |

<sup>a</sup>The <i>p</i>-values are for a two-tailed paired <i>t</i>-test.

<sup>b</sup>Including the District of Columbia.

Sources: U.S. Department of Justice, Federal Bureau of Investigation, Table 4, Crime in the United States by Region, Geographic Division, and State, 2014-2015, [https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-4](https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-4); Table 4, Crime in the United States by Region, Geographic Division, and State, 2016-2017, [https://ucr.fbi.gov/crime-in-the-u.s/2017/topic-pages/tables/table-4](https://ucr.fbi.gov/crime-in-the-u.s/2017/topic-pages/tables/table-4).
Table 4. Average Murder, Rape, and Burglary Crime Rates in the Years Before and After President Obama’s Election in 2008

| Crime       | All states | 2007  | 2009  | p-value on difference* |
|-------------|------------|-------|-------|------------------------|
| Murder      |            |       |       |                        |
| *Regions    |            |       |       |                        |
| Northeast (n = 9) | 2.97    | 2.81  | 0.4577 |
| Midwest (n = 12)  | 3.97    | 3.63  | 0.0682 |
| South (n = 17)   | 8.38    | 7.21  | 0.0148 |
| West (n = 13)    | 4.25    | 3.58  | 0.0849 |
| Rape         |            |       |       |                        |
| *Regions     |            |       |       |                        |
| Northeast (n = 9) | 22.01   | 22.71 | 0.3556 |
| Midwest (n = 12)  | 33.84   | 33.85 | 0.9960 |
| South (n = 17)   | 32.36   | 30.73 | 0.0288 |
| West (n = 13)    | 38.52   | 38.14 | 0.6595 |
| Burglary      |            |       |       |                        |
| *Regions     |            |       |       |                        |
| Northeast (n = 9) | 453.86  | 457.98| 0.6822 |
| Midwest (n = 12)  | 598.80  | 591.63| 0.5007 |
| South (n = 17)   | 876.64  | 893.36| 0.1257 |
| West (n = 13)    | 659.51  | 626.05| 0.0969 |

*The p-values are for a two-tailed paired t-test.

*Including the District of Columbia.

Sources: U.S. Department of Justice, Federal Bureau of Investigation, Table 4, Crime in the United States by Region, Geographic Division, and State, 2006-2007, https://ucr.fbi.gov/crime-in-the-u.s/2007.

Table 4, Crime in the United States by Region, Geographic Division, and State, 2008-2009, https://ucr.fbi.gov/crime-in-the-u.s/2009.
When we examined three specific types of crime (two violent and one property), in the years before and after President Obama’s election in 2008, Tables 4 and 5 show significant decreases in murder (across all 50 states, especially in the South) and significant decreases in rape in the South. In the years before and after his re-election in 2012, we observe significant decreases in murder in all states (especially in the South) and burglary (in all regions but the West). We note that Republican presidential candidate Mitt Romney won six of thirteen states in the West that year.
Table 6 shows that in the years before and after President Trump’s election in 2016, we observe significant decreases in burglary across all states (in all regions but the West), but increases in rape across all 50 states (especially in the Midwest) and significant increases in murder in the West.

**Concluding Remarks**

Neither violent nor property crime rates increased the year after Barack Obama (a Democrat) was elected and re-elected; in many cases, the crime rate decreases were statistically significant. By contrast, although property crimes in general (burglary, in particular) decreased after Donald Trump (a Republican) was elected in 2016, violent crime rates edged higher, rape increased across all states (notably in the Midwest) and so too did murder in the West.
The “hard truth” might be that people will be safer in Joe Biden’s America than if Donald Trump had been
re-elected.

Future research could examine the before-and-after crime rates in Joe Biden’s America as well as before-
and-after comparisons of presidents who preceded Barack Obama. An analysis of the Biden years, however, would
be complicated by the impact of the COVID-19 pandemic on crime (2019, largely pre-pandemic with the first case
not reported in the U.S. until January 2020, and 2021, in the midst of the pandemic). The COVID-19 pandemic has
impacted crime in ways that have had nothing to do with the party affiliation of the sitting U.S. president.

References

1. B. Naylor, “Fact Check: Trump’s and Biden’s Records on Criminal Justice,” National Public Radio,
   August 30, 2020, https://www.npr.org/2020/08/30/907026973/fact-check-trump-and-bidens-records-on-criminal-
   justice.

2. M. R. Hagerty, “Quality of Life from the Voting Booth: The Effect of Crime Rates and Income on Recent
   U.S. Presidential Elections.” Social Indicators Research, Vol. 77, No. 2 (Jun., 2006), pp. 197-210.

3. A. Grawert and J. Cullen, “Crime in 2015: A Final Analysis.” Brennan Center for Justice
   https://www.brennancenter.org/sites/default/files/analysis/Crime_in_2015_A_Final_Analysis.pdf.

4. U.S. Department of Justice, Federal Bureau of Investigation, Table 4, Crime in the United States by
   Region, Geographic Division, and State, 2006-2007, https://ucr.fbi.gov/crime-in-the-u.s/2007; Table 4, Crime in the
   United States by Region, Geographic Division, and State, 2008-2009, https://ucr.fbi.gov/crime-in-the-u.s/2009;
   Table 4, Crime in the United States by Region, Geographic Division, and State, 2010-2011, https://ucr.fbi.gov/crime-in-
   the-u.s/2011/crime-in-the-u.s.-2011/tables/table-4; and Table 4, Crime in the United States by Region, Geographic
   Division, and State, 2012-2013, https://ucr.fbi.gov/crime-in-the-u.s/2013/crime-in-the-u.s.-
   2013/tables/4tabledatadecoverviewpdf/table_4_crime_in_the_united_states_by_region_geographic_division_and_st
   ate_2012-2013.xls; Table 4, Crime in the United States by Region, Geographic Division, and State, 2014-2015,
   https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-4; and Table 4, Crime in the United
   States by Region, Geographic Division, and State, 2016-2017, https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-
   the-u.s.-2017/topic-pages/tables/table-4.

5. S. B. Carbon, “An Updated Definition of Rape.” U.S. Department of Justice, 6 January 2012,
   https://www.justice.gov/archives/opa/blog/updated-definition-rape.