



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**THE FERGUSON EFFECT—ARE POLICE ANXIETIES
TO BLAME?**

by

Stephen Edward Simonds Jr.

March 2017

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**THE FERGUSON EFFECT—ARE POLICE ANXIETIES TO
BLAME?**

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ABSTRACT

The “Ferguson Effect” is a relatively recent and controversial theory suggesting law enforcement officers across the country have become less proactive in their policing efforts following the August 2014 officer-involved shooting of Michael Brown in Ferguson, Missouri. This thesis attempts to settle the Ferguson Effect debate by determining whether open-source data about police productivity can be collected and analyzed either to support or contradict the Ferguson Effect.

Publicly available data repositories through the Public Safety Open Data Portal, Public Data Initiative, and related governmental links are utilized for raw dataset acquisition. Three agencies are chosen for data collection and analysis: (1) the Burlington Police Department, Burlington, Vermont, (2) the Montgomery County Police Department, Montgomery County, Maryland, and (3) the Philadelphia Police Department, Philadelphia, Pennsylvania. In each case study, the data is insufficient to confirm or deny the existence of the Ferguson Effect, although the limited data available does suggest that in these three cities, no noticeable de-policing is detected following the killing of Michael Brown.

The conclusion of the study yields several limitations. The most evident deficiency identified in this study involves the transparency initiative and Open Government program, specifically with regard to the Public Data Initiative (PDI) and gathering of police-related data. The PDI needs to establish stricter guidelines and compliance for participating agencies. Additionally, this thesis suggests that less emphasis should be placed on crime correlations and more value placed on de-policing and anxieties being experienced by officers to measure accurately the existence of a Ferguson Effect.

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LIST OF ACRONYMS AND ABBREVIATIONS

DEA	Drug Enforcement Administration
DOJ	Department of Justice
FBI	Federal Bureau of Investigation
FOIA	Freedom of Information Act
NIBRS	National Incident Based Reporting System
PDI	Police Data Initiative
SRS	Summary Reporting System
UCR	uniform crime reporting

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EXECUTIVE SUMMARY

The “Ferguson Effect” is a relatively recent and controversial theory suggesting law enforcement officers across the country have become less proactive in their policing efforts following the August 2014 officer-involved shooting of Michael Brown in Ferguson, Missouri. Many advocates of the Ferguson Effect believe violent crime rates have significantly increased in many major U.S. cities because of the void created by the withdrawal of police activity.

If police are becoming more hesitant in taking proactive approaches, logic would suggest these new practices should be measureable through a visible reduction in police productivity and quantifiable outputs. This thesis attempts to settle the Ferguson Effect debate by asking if open source data concerning police productivity can be collected and analyzed either to support or contradict the Ferguson Effect. If so, what would that data show?

The goal of the literature review is to acquire, review, and analyze available materials relating to the Ferguson Effect phenomenon. During the course of conducting the review, it has become evident that subsections of the public, government, and media differ in their acceptance or rejection of the theory. Additionally, the theory has become highly politicized and is an issue of debate amongst government officials. Despite varying degrees of accepted legitimacy, most literature conceded additional data was still needed to establish a scholarly conclusion.

The research sets out to resolve the Ferguson Effect debate by conducting three case studies utilizing trend analysis on law enforcement open source quantitative datasets. Publicly available data repositories through the Public Safety Open Data Portal, Public Data Initiative (PDI) and related governmental links are utilized for raw dataset acquisition. The scope of data sought includes at least two years before and after the shooting of Michael Brown.

Limitations in available datasets ultimately determined which three agencies were chosen for collection and analysis: (1) the Burlington Police Department, Burlington,

Vermont, (2) the Montgomery County Police Department, Montgomery County, Maryland, and (3) the Philadelphia Police Department, Philadelphia, Pennsylvania.

Initial data values seek productivity including information relating to traffic stops, pedestrian stops, arrests, call response times, use of sick leave, new applicants, hires, and retirees. Obtaining this data proved challenging through the PDI. On the other hand, crime related data was slightly more accessible, although each agency varied in reporting content, organization, and classification of information.

In each case study, data is insufficient to confirm or deny the existence of the Ferguson Effect, although the limited data available does suggest that in these three cities, no noticeable de-policing is detected following the killing of Michael Brown.

The conclusion of the study yields several limitations. The most evident deficiency involves the transparency initiative and Open Government program, specifically with regard to the PDI and gathering of police related data. The PDI needs to establish stricter guidelines and compliance for participating agencies. For those law enforcement agencies wishing to participate, minimum guidelines should be established and upheld. Additionally, those agencies not meeting those standards should be eliminated from participating in the program.

To date, conversations involving the Ferguson Effect are usually associated with crime statistics. This thesis suggests that less emphasis should be placed on crime correlations and more value placed on de-policing and anxieties being experienced by officers to measure accurately the existence of a Ferguson Effect. Despite the large amount of anecdotal evidence suggesting law enforcement is becoming less proactive, the limited data available does not seem to show a significant amount of de-policing following the events in Ferguson. More data is urgently needed to help determine whether de-policing is in fact a widespread trend.

Theoretically, big data should offer possible correlations between police productivity and the increase or reduction of crime. Likewise, data relating to productivity should offer independent insight into the existence of a Ferguson Effect regardless of reported crime. The reality is that access to this type of big data is not

readily available to the public. If the open data project matures into its intended vision, such data may provide insight into the existence of a Ferguson Effect. Currently, however, the data is insignificant and lends no insight whatsoever.

This study aspires to close previous gaps and offer a more complete picture of national sentiment by employing big data analytics for police productivity. Limitations in data prevented the research questions from being answered but highlighted a need for better data collection methods.

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I. INTRODUCTION

The “Ferguson Effect” is a relatively recent and controversial theory suggesting law enforcement officers across the country have become less proactive in their policing efforts following the August 2014 officer-involved shooting of Michael Brown in Ferguson, Missouri. Many advocates of the Ferguson Effect believe violent crime rates have significantly increased in many major U.S. cities as a result of the void created by the withdrawal of police activity. Until new crime data became available recently, the Ferguson Effect resulted in two levels of debate. Many critics of the concept questioned whether in fact a rise in violent crime had occurred, particularly with regard to homicide in some major cities post-Ferguson. This part of the debate was initially driven by a lack of available crime data on a national level for the year 2015. For those who acknowledged violent crime had spiked, the second level of debate concerned identifying possible causes for the increase and whether it could be linked to less aggressive policing.

In September 2016, the Federal Bureau of Investigation (FBI) released new data from the Uniform Crime Reporting (UCR) Program, which contained data through the end of 2015. The findings indicate, “Crime in the United States, 2015 reveals a 3.9 percent increase in the estimated number of violent crimes and a 2.6 percent decrease in the estimated number of property crimes last year when compared to 2014 data.”¹ This data appears to establish that a rise in violent crime on a national level has in fact occurred. However, a larger debate still remains, and is the subject of this thesis: Is the Ferguson Effect responsible for the spike in violent crime?

The recent change in violent crime may or may not be a consequence of the Ferguson Effect. Alternate theories, such as the impact of illegal drugs within communities, have been suggested as competing reasons for the spike. Regardless, crime itself should not be a prerequisite in determining if police are experiencing increased anxieties while performing sworn duties. If police are becoming hesitant in their

¹ “Latest Crime Statistics Released, Increase in Violent Crime, Decrease in Property Crime,” September 26, 2016, <https://www.fbi.gov/news/stories/latest-crime-statistics-released>.

proactivity, logic would suggest these new practices should be measureable through a visible reduction in police productivity and quantifiable outputs.

A number of documented instances are available in which individual officers are second guessing their actions for fear of adverse publicity. This development was recognized as early as August 2015 when a male police officer in Birmingham, Alabama, was pistol whipped unconscious with his own gun by a felon he had pulled over on a traffic stop. The officer told CNN that he hesitated to use force against the driver because he “didn’t want to be in the media like I am right now.”² A more recent example involves a veteran female Chicago police officer who was nearly beaten to death by a man on PCP on October 5, 2016. The officer stated she did not fire her weapon at the suspect because “she didn’t want her family or the department to have to go through the scrutiny the next day on national news.”³

Existing research, however, is largely inconclusive as to whether a Ferguson Effect is having a negative impact on police productivity. Some studies have examined the correlation between the number of arrests conducted and the level of violent crime within particular areas. Although helpful, this method does not address the question of whether police have become less proactive in general. Further opportunity remains to evaluate whether police are experiencing greater apprehension in performing their duties, and what, if any, long-term consequences this apprehension may pose. If police are becoming less proactive after Ferguson, then data relating to self-initiated productivity should demonstrate a relative decline. Research conducted thus far has not addressed police productivity independent of its presumed correlation with crime. As such, the possibility that the Ferguson Effect may be largely impacting areas that have not experienced a rise in violent crime has not been fully considered.

² Heather Mac Donald, “Officer Beaten by a Convicted Felon Hesitated for Fear of Being Called Racist: Welcome to Post-Ferguson Policing,” *National Review*, August 16, 2105, <http://www.nationalreview.com/article/422605/Birmingham-cop-beaten-unconscious-feared-racism-charge>.

³ Stephen Gossett, “Top Cop Says Beaten Officer Was Afraid to Shoot Due to Media Attention,” *Chicagoist*, October 6, 2016, http://chicagoist.com/2016/10/06/top_cop_says_beaten_officer_was_afr.php.

A. RESEARCH QUESTION AND HYPOTHESIS

This thesis attempts to settle the Ferguson Effect debate using open source data analysis. The study examines the prospect that police productivity related data can be collected, analyzed, and correlated either to support or contradict the Ferguson Effect.

The following research questions are addressed in this study.

- Can open source data concerning police productivity be collected and analyzed either to support or contradict the Ferguson Effect? If so, what does that data show?
- Has police productivity decreased overall since August 2014?
- What, if any, impact does a reduction in police productivity have on violent crime?
- What future challenges do law enforcement administrators face if the Ferguson Effect is deemed viable?

The hypothesis of this thesis is that open source data supports a notable reduction in police productivity following the events in Ferguson. To a lesser degree, the researcher expects to find that these reductions in police activity are correlated with sporadic increases in violent crime within some major U.S. cities post-Ferguson.

B. PURPOSE OF THE STUDY

What is the homeland security value in settling the debate of whether the Ferguson Effect is to blame for the rise in violent crime? The topic has already established itself as a homeland security issue due to public perceptions, media coverage, and perpetuating mass protests, many of which have resulted in violence and police fatalities. The value of conducting this research lends to identifying the root causes for increased crime and determining if officers are truly becoming less proactive in their policing as a result of the events sparked in Ferguson.

The researcher's law enforcement experience suggests a substantial percentage of officers across the nation are informally adopting reactive policing practices in place of proactive methods. Take for instance the example an officer who drives by a street corner in a known drug area and sees what could possibly be a hand-to-hand drug transaction.

Pre-Ferguson, the officer may opt to investigate by stopping and conducting field interviews with the subjects in question. Post-Ferguson, the same officer may choose to continue driving by without further investigation. This action is not to suggest officers are not responding to calls for service; i.e., someone calls in a loitering complaint with possible drug dealing on the same corner and the officer responds to address the complaint. However, if it is true that officers are becoming less proactive because of higher levels of anxiety, the matter should be resolved before such reductions in policing lend to a rise in crime.

C. METHODOLOGY

This thesis attempts to gather and analyze empirical data to support or contradict the Ferguson Effect, and to examine the implications of this theory as it relates to homeland security and safety.

The Taskforce on 21st Century Policing resulted in development of the Police Data Initiative (PDI), which “focuses on generating and implementing new data and technology innovations within key jurisdictions, civil society groups, and federal, state, and local agencies.”⁴ As a result of the initiative, many law enforcement agencies now share statistical data to include calls for service, traffic stops, use of force incidents, and arrests, to name a few. Currently, 120 law enforcement agencies participate in the sharing of statistical data. Information submitted by participating agencies can be accessed through the Public Safety Data Portal.⁵ Testing the Ferguson Effect Theory using the described methodology depends on the ability to access large amounts of productivity related information through the PDI.

In this thesis, PDI performance-related datasets are analyzed and graphed in attempt to identify patterns and associations visually before and after the incident in Ferguson. Additionally, violent crime data for the same selected jurisdictions is compared

⁴ “The Police Data Initiative (PDI),” accessed November 18, 2016, <https://publicsafetydataportal.org/participating-agencies/>.

⁵ “Public Safety Open Data Portal,” accessed October 9, 2016, <http://publicsafetydataportal.org/>.

and contrasted with acquired productivity data. The data visualization software, “Tableau for Students,”⁶ is utilized for this project.

Chapter II, Literature Review, discusses existing literature surrounding the Ferguson Effect including influence from multiple perspectives. Available studies are reviewed, compared, and contrasted. Chapter III, Methodology, explains procedures utilized within the study, to include desired productivity variables, case study selection factors, timeline parameters, data selection, and data analysis. Chapter IV, Results and Analysis, describes the agencies selected for the case study, results of the data, and visual trend analysis. Chapter V, Discussion, concludes with a discussion of case study limitations and recommendations for future research.

⁶ “Tableau for Students,” accessed August 15, 2016, <http://www.tableau.com/academic/students>.

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II. LITERATURE REVIEW

A. INTRODUCTION

The “Ferguson Effect” is a recent and controversial concept suggesting law enforcement officers across the country, and especially in larger cities, have become less proactive in public safety efforts following the August 2014 officer-involved shooting in Ferguson, Missouri. Many supporters of the Ferguson Effect believe violent crime rates have been directly and negatively impacted as a result of the void created by the withdrawal or absence of police presence in many communities.

Literature surrounding the Ferguson Effect continues to develop but is still limited due to the recentness of the event and because much of the terminology used is still evolving. Referenced materials are drawn from online sources to include newspaper articles, editorials, magazine articles, and blog commentaries. Additionally, academic studies and governmental papers are reviewed and analyzed. More value is placed on academic studies and news reports over editorials and commentaries.

The primary search term, “Ferguson Effect,” is utilized to acquire digital information through a variety of channels to include open source online searches, Google Scholar, the Naval Postgraduate School Dudley Knox Library, and ProQuest. Materials gathered for study include data from August 2014 through January 2017.

The goal of the literature review is to acquire, review, and analyze available materials relating to the Ferguson Effect phenomenon. During the course of conducting this review, it became evident that subsections of the public, government, and media differ in their acceptance or rejection of the theory. Additionally, the theory has become highly politicized and is an issue of debate amongst government officials. Despite varying degrees of accepted legitimacy, most literature conceded additional data was still needed to establish a scholarly conclusion. Subsequently, the deficiency of scholarly study presents a unique opportunity for empirical research towards either substantiating or discrediting the notion of a Ferguson Effect.

B. WHAT IS THE FERGUSON EFFECT?

According to a *New York Times* report in August 2015, “at least 35 of the nation’s cities [were] reporting increases in murders, violent crimes or both.”⁷ One city that experienced an uptick in violent crime following the events in Ferguson, Missouri, was St. Louis, which experienced a 60% increase in homicides from 2014 to 2015.⁸ St. Louis police Chief Sam Dotson recognized the spike early on and provided the following explanation during an interview with a reporter in November 2014, “It’s the Ferguson effect ... I see it not only on the law enforcement side, but the criminal element is feeling empowered by the environment.”⁹ Specifically, the environmental change Chief Dotson was referring to within St. Louis was a result of diminished police presence due to officers being diverted from normal assignments to assist Ferguson along with receiving additional civil unrest training. Chief Dotson has since been credited with the coining of the phrase, “Ferguson Effect.” His description of the term primarily deals with a noticed observation and suspected cause. At least in St. Louis, he believed the spike in violent crime occurred because fewer officers were on the street to deter crime and make arrests. It should be noted in the case of St. Louis that the proactive behavior of officers was circumstantial and not necessarily intentional.

Milwaukee Police Chief Edward Flynn presented a similar concept, “free-floating anxiety,” to articulate similar concerns about officers becoming less proactive. Flynn acknowledged a widespread angst being experienced within his own department and extended the belief to other officers across the nation. Flynn differs from Dotson in that he addresses an anxiety or unwillingness to be proactive, not because resources have been exhausted, but because officers are making a conscious decision to be less proactive. He advised, “There’s no denying that antipolice protests and viral videos that emerged after the fatal shooting of an unarmed black teenager in Ferguson, Mo., have unnerved the

⁷ Monica Davey and Mitch Smith, “Murder Rates Rising Sharply in Many U.S. Cities,” *New York Times*, August 31, 2015, <http://nyti.ms/1UiHLnX>.

⁸ Ibid.

⁹ Christin Byers, “Crime Up after Ferguson and More Police Needed, Top St. Louis Area Chiefs Say,” *St. Louis Post Dispatch*, November 15, 2014, http://www.stltoday.com/news/local/crime-and-courts/crime-up-after-ferguson-and-more-police-needed-top-st/article_04d9f99f-9a9a-51be-a231-1707a57b50d6.html.

rank and file.”¹⁰ His conviction stems from observing a decline in traffic stops and field interviews being performed by his officers in Milwaukee, despite police still “responding to crimes as they always have.”¹¹ While Flynn acknowledges increased officer anxieties and their impact on proactive policing, he did not believe they were the primary cause of increased crime in Milwaukee. Instead, Flynn faulted, “state budget cuts that reduced mental health services and other social programs, and a 2011 law that dramatically weakened the power of police to arrest people with guns,” to be the actual culprits.¹² Traffic stops and field interviews are just two examples of self-initiated activities conducted by police, but this kind of policy activity often appears to have been reduced following the events in Ferguson. Even the mayor of Ferguson, James Knowles III, said, “We barely pull anybody over anymore,” proposing “a sharp decline in traffic stops might actually be a sign that the police are afraid to do their job.”¹³

Some have used a completely different definition of the Ferguson Effect, believing the term “more accurately describes a political movement where oppressed black Americans are increasingly standing up for their rights.”¹⁴ For the purposes of this thesis, however, the more widely accepted description of the Ferguson Effect is used, meaning that police have become less proactive. Moreover, this thesis more specifically approaches the phenomenon from Flynn’s perspective, arguing that increased anxiety among law enforcement officers has lessened their proactiveness. The term often used to describe this practice is “de-policing.”

¹⁰ Darryl Fears, “In Milwaukee, Weak Evidence for ‘Ferguson Effect’,” *The Washington Post*, December 6, 2015, <http://search.proquest.com/docview/1739345776?accountid=12702>.

¹¹ Davey and Smith, “Murder Rates Rising Sharply in Many U.S. Cities.”

¹² Fears, “In Milwaukee, Weak Evidence for ‘Ferguson Effect’.”

¹³ M. International, N. York, and T. Paris, “A Year Later, Ferguson Remains Unsettled: Residents Dispute Extent of Changes Following Racially Charged Death,” 1–4, 2015, <http://search.proquest.com/docview/1701637793?accountid=12702>.

¹⁴ Patrik Johnson, “Just What is the ‘Ferguson Effect’? It Depends on How You View Police,” *The Christian Science Monitor*, June 12, 2015, <http://www.csmonitor.com/USA/Justice/2015/0612/Just-what-is-the-Ferguson-effect-It-depends-on-how-you-view-police>.

C. DEBATING THE FERGUSON EFFECT

To date, only a handful of scholarly articles have been written on the Ferguson Effect, and most of this research has focused on the impact of the events in Ferguson on the crime rate. One early study entitled, “Was There a ‘Ferguson Effect’ on Crime in St. Louis?,” was written by Richard Rosenfeld, PhD, University of Missouri—St. Louis, and released through the Sentencing Project in June 2015.¹⁵ Rosenfeld analyzed crime statistics for the city of St. Louis surrounding the timeframe Michael Brown was killed. His findings are based on tallying and comparing crime statistics in St. Louis before and after the Ferguson incident. With regard to homicide, Rosenfeld’s study concluded “with reasonable certainty that the events in Ferguson were not responsible for the steep rise in homicide in St. Louis.”¹⁶ That conclusion was based on the finding, “The increase in homicide in 2014 predated Michael Brown’s killing on August 9.”¹⁷ Rosenfeld noted, “If there was a Ferguson effect on crime in St. Louis, it was most pronounced in the growth of property crimes,” warning, “temporal consistency is not a sufficient condition to establish substantive proof.”¹⁸ Absent in the study were comparison statistics of proactive policing data for St. Louis before and after Ferguson, to include traffic stops and other self-initiated calls for service.

On October 23, 2015, FBI Director James Comey delivered a speech at the University of Chicago Law School addressing his concerns for the continued rise in violent crime and possible explanations. Although he does not mention the Ferguson Effect by name, this portion of Comey’s speech articulates the crux of the theory, and is worth quoting at length.

Most of America’s 50 largest cities have seen an increase in homicides and shootings this year, and many of them have seen a huge increase. These are cities with little in common except being American cities—

¹⁵ Richard Rosenfeld, *Was There a “Ferguson Effect” on Crime in St. Louis?* (Washington, DC: The Sentencing Project, 2015), <http://sentencingproject.org/wp-content/uploads/2015/09/Ferguson-Effect.pdf>.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

places like Chicago, Tampa, Minneapolis, Sacramento, Orlando, Cleveland, and Dallas.

In Washington, D.C., we've seen an increase in homicides of more than 20 percent in neighborhoods across the city. Baltimore, a city of 600,000 souls, is averaging more than one homicide a day—a rate higher than that of New York City, which has 13 times the people. Milwaukee's murder rate has nearly doubled over the past year.

And who's dying?

Police chiefs say the increase is almost entirely among young men of color, at crime scenes in bad neighborhoods where multiple guns are being recovered.

That's yet another problem that white America can drive around, but if we really believe that all lives matter, as we must, all of us have to understand what is happening.

Communities of color need to demand answers.

Police and civilian leaders need to demand answers.

Academic researchers need to hit this hard.

What could be driving an increase in murder in some cities across all regions of the country, all at the same time? What explains this map and this calendar? Why is it happening in all of different places, all over and all of a sudden?

I've been part of a lot of thoughtful conversations with law enforcement, elected officials, academics, and community members in recent weeks. I've heard a lot of theories—reasonable theories.

Maybe it's the return of violent offenders after serving jail terms. Maybe it's cheap heroin or synthetic drugs. Maybe after we busted up the large gangs, smaller groups are now fighting for turf. Maybe it's a change in the justice system's approach to bail or charging or sentencing. Maybe something has changed with respect to the availability of guns.

These are all useful suggestions, but to my mind none of them explain both the map and the calendar in disparate cities over the last 10 months.

But I've also heard another explanation, in conversations all over the country. Nobody says it on the record, nobody says it in public, but police and elected officials are quietly saying it to themselves. And they're saying it to me, and I'm going to say it to you. And it is the one

explanation that does explain the calendar and the map and that makes the most sense to me.

Maybe something in policing has changed.

In today's YouTube world, are officers reluctant to get out of their cars and do the work that controls violent crime? Are officers answering 911 calls but avoiding the informal contact that keeps bad guys from standing around, especially with guns?

I spoke to officers privately in one big city precinct who described being surrounded by young people with mobile phone cameras held high, taunting them the moment they get out of their cars. They told me, "We feel like we're under siege and we don't feel much like getting out of our cars."

I've been told about a senior police leader who urged his force to remember that their political leadership has no tolerance for a viral video.

So the suggestion, the question that has been asked of me, is whether these kinds of things are changing police behavior all over the country.

And the answer is, I don't know. I don't know whether this explains it entirely, but I do have a strong sense that some part of the explanation is a chill wind blowing through American law enforcement over the last year. And that wind is surely changing behavior.¹⁹

Director Comey indirectly refers to the Ferguson Effect as being a "chill wind blowing through American law enforcement over the last year,"²⁰ which is most closely related to Flynn's concept of "free floating anxiety." These types of occurrences and the labels given to them are not new and did not begin with Ferguson. In a recent study addressing "de-policing," Stephen Rushin and Griffin Edwards write that "Within the academic literature and public discourse, this phenomenon has taken on many different names including 'passive law enforcement,' 'selective disengagement,' 'tactical detachment,' or officer 'retreat.'"²¹ Their study used a "panel of American law

¹⁹ James B. Comey, "Law Enforcement and the Communities We Serve: Bending the Lines toward Safety and Justice" (speech, University of Chicago Law School, Chicago, Illinois, October 23, 2015), <https://www.fbi.gov/news/speeches/law-enforcement-and-the-communities-we-serve-bending-the-lines-toward-safety-and-justice>.

²⁰ Ibid.

²¹ Stephen Rushin and Griffin Edwards, "De-Policing," DRAFT, *Cornell Law Review* 102 (forthcoming, 2017): 13.

enforcement agencies and difference-in-difference regression analyses,” to examine “whether the introduction of public scrutiny and external regulation is associated with changes in crime rates.”²² The study indicated the “de-policing phenomenon is not entirely implausible,” and “represent[s] an important recognition of the possible negative side effects associated with external regulation of American law enforcement.”²³ They make it a point to add their findings “should not necessarily deter policymakers from enacting regulations” upon local law enforcement.²⁴

The notion of the Ferguson Effect being connected with increased crime partially stems from a May 29, 2015, opinion piece in *The Wall Street Journal* written by Manhattan Institute Fellow Heather Mac Donald. Mac Donald noted a rise in violent crime for the months following Ferguson in such cities as Baltimore, Milwaukee, St. Louis, Atlanta, Chicago, Los Angeles, and New York. Mac Donald also reported the rise in violent crime began during the second half of 2014, following the shooting of Michael Brown.²⁵ Mac Donald suspected correlations between the two, suggesting, “the most plausible explanation of the current surge in lawlessness is the intense agitation against American police departments over the past nine months,” adding the personal view, “acquittals of police officers for the use of deadly force against black suspects are now automatically presented as a miscarriage of justice.”²⁶

A year after her initial observations, Mac Donald wrote a follow-up op-ed, “The Nationwide Crime Wave Is Building,” with the subtitle, “As the homicide rate keeps rising in many cities, even some who dismissed the ‘Ferguson effect’ admit the phenomenon is real.”²⁷ The article recaps differences of political opinion surrounding the theory and provides further references towards a rise in violent crime. Mac Donald

²² Rushin and Edwards, “De-Policing,” 6.

²³ *Ibid.*, 54.

²⁴ *Ibid.*

²⁵ Heather Mac Donald, “The New Nationwide Crime Wave,” *The Wall Street Journal*, May 29, 2015, <http://www.wsj.com/articles/the-new-nationwide-crime-wave-1432938425>.

²⁶ *Ibid.*

²⁷ Heather Mac Donald, “The Nationwide Crime Wave Is Building,” *The Wall Street Journal*, May 23, 2016, <http://www.wsj.com/articles/the-nationwide-crime-wave-is-building-1464045462>.

articulates, “Despite this mounting evidence, the Ferguson effect continues to be distorted by its critics and even by its recent converts. The standard line is that it represents a peevish reaction from officers to ‘public scrutiny’ and expectations of increased accountability.”²⁸ She describes the problem as being “the activist-stoked hostility toward the police on the streets and ungrounded criticism of law enforcement that has flowed from the Obama administration and has been amplified by the media.”²⁹ Mac Donald believes “denial of the Ferguson effect is driven by a refusal to acknowledge the connection between proactive policing and public safety.”³⁰

Officer anxiety is an integral part of Mac Donald’s understanding of the Ferguson Effect, as she believes such anxiety leads to a reduction in proactive policing and directly correlates to public safety. Scholars who have studied officers’ anxiety and perceptions include Scott Wolfe and Justin Nix, who published a study in October 2015 that sought to use survey data to measure police sentiment.³¹ The study focused on a single geographic location within the United States, which attempted to establish empirical evidence through administering an online survey to an undisclosed mid-sized law enforcement agency. The survey involved a few hundred officers from the same department and focused on gathering police perspective on negative publicity and motivations.³² Wolfe and Nix analyzed the received responses, which indicated “there appear to be a relationship between reduced motivation as a result of negative publicity and less willingness to work directly with community members to solve problems.”³³

Others have sought to find other explanations for the rise in crime being experienced within many cities. Comey indicates some of these other possibilities in his speech, “Maybe it’s the return of violent offenders after serving jail terms. Maybe it’s

²⁸ Mac Donald, “The Nationwide Crime Wave Is Building.”

²⁹ Ibid.

³⁰ Ibid.

³¹ Scott E. Wolfe and Justin Nix, “The Alleged ‘Ferguson Effect’ and Police Willingness to Engage in Community Partnership,” *Law and Human Behavior* 40, no. 1 (2016): 1–10, <http://dx.doi.org/10.1037/lhb0000164>.

³² Sean Allocca, “The Facts Behind the ‘Ferguson Effect’,” *Forensic Magazine*, October 29, 2015, <http://www.forensicmag.com/article/2015/10/facts-behind-ferguson-effect>.

³³ Ibid.

cheap heroin or synthetic drugs. Maybe after we busted up the large gangs, smaller groups are now fighting for turf. Maybe it's a change in the justice system's approach to bail or charging or sentencing."³⁴ Others, like Milwaukee Police Chief Edward Flynn believe "state budget cuts and lax gun laws are more likely behind spike," in his jurisdiction.³⁵ "For police in Milwaukee, the real Ferguson effect has been a sudden and harsh cold shoulder from the public."³⁶

Criminology professors Tracy Sohoni and Charis Kubrin suggest the rise in violent crime hinges on the concept of a "legitimacy theory," which proposes, "When individuals lose trust in the police they are also more likely to take matters into their own hands when conflicts arise."³⁷ They write, "the highly publicized events in Ferguson, New York City, and Baltimore may pose a 'legitimacy challenge' to the criminal justice system, creating a legitimacy deficit that increases legal cynicism and encourages individuals to take the law into their own hands."³⁸

Rhys Blakely, U.S. editor at *The Times*, offers yet another explanation for the rise in violent crime, at least in the instances surrounding Baltimore. He claims "the higher rate of murders in Baltimore can be attributed to the riots interfering with the city's illegal drugs market."³⁹ *Christian Science Monitor* staff writer Henry Gass holds a different viewpoint, suggesting the Ferguson Effect seems to be in play at least for the Baltimore incident, noting that Freddie Gray was killed in April, and 43 homicides occurred the following month, making May the city's most "deadliest month in 40 years."⁴⁰

³⁴ Comey, "Law Enforcement and the Communities We Serve: Bending the Lines Toward Safety and Justice."

³⁵ Fears, "In Milwaukee, Weak Evidence for 'Ferguson Effect'."

³⁶ Ibid.

³⁷ Tracy Sohoni and Charis Kubrin, "Is the Ferguson Effect a Myth?," *The Baltimore Sun*, September 10, 2015, <http://www.baltimoresun.com/news/opinion/oped/bs-ed-ferguson-effect-20150910-story.html>.

³⁸ Ibid.

³⁹ Rhys Blakely, "U.S. Violent Crime Surges to 1970s Levels after Race Riots," *The Times*, June 3, 2015, <http://www.thetimes.co.uk/tto/news/world/americas/article4458700.ece>.

⁴⁰ Henry Gass, "FBI Chief Pins Crime Surge on 'Ferguson Effect.' Are Cops Afraid to Do Their Jobs?," *The Christian Science Monitor*, October 26, 2015, <http://www.csmonitor.com/USA/Justice/2015/1026/FBI-chief-pins-crime-surge-on-Ferguson-effect.-Are-cops-afraid-to-do-their-jobs>.

A study published by Stephen Morgan and Joel Pally of John Hopkins University in March 2016 analyzed the number of arrests in Baltimore City between the timeframe of March 2010 through December 2015. Researchers attempted to determine if the Ferguson Effect contributed to the civil unrest surrounding the death of Freddie Gray. With regard to the number of arrests analyzed, the study resulted in three primary conclusions: (1) “during the post-Ferguson, pre-Gray period from August 11, 2014 through April 19, 2015, changes in arrest rates are consistent with a Ferguson effect on police conduct.” With regard to less serious crime, arrests decreased significantly although, “non-discretionary arrests for violent crimes, such as murder and robbery, held steady during this period,” (2) “Arrests declined further by an additional 30% from April 20, 2015 through July 12, 2015, after removing the complex pattern of arrests that emerged during the week of unrest,” and (3) “Arrests increased during the remainder of 2015, after the appointment of a new police commissioner.”⁴¹

D. OPPONENTS OF THE FERGUSON EFFECT

Some critics of the Ferguson Effect continue to focus on the question of whether or not an increase in crime rates has occurred. David C. Pyrooz, for example, led a study titled, “Was There a Ferguson Effect on Crime Rates in Large U.S. Cities?”⁴² His research analyzed data for “81 U.S. cities with populations exceeding 200,000 persons,” using a “discontinuous growth model to determine if there was a redirection in seasonality-adjusted crime trends in the months following the Ferguson shooting.”⁴³ Pyrooz found no evidence to “support a systematic post-Ferguson change in overall, violent, and property crime trends,” although he observed robbery rates “increased in the months after Ferguson.”⁴⁴ His study acknowledged that some “select cities did experience increases in homicide,” adding, “overall, any Ferguson Effect is constrained

⁴¹ Stephen L. Morgan and Joel A. Pally, *Ferguson, Gray, and Davis, An Analysis of Recorded Crime Incidents and Arrests in Baltimore City, March 2010 through December 2015* (Baltimore, MD: Johns Hopkins University, 2016), 4, <http://socweb.soc.jhu.edu/faculty/morgan/papers/MorganPally2016.pdf>.

⁴² David C. Pyrooz et al., “Was There a Ferguson Effect on Crime Rates in Large U.S. Cities?” *Journal of Criminal Justice* 46 (2016): 1–8.

⁴³ Ibid.

⁴⁴ Ibid.

largely to cities with historically high levels of violence, a large composition of black residents, and socioeconomic disadvantages.”⁴⁵ Pyrooz’s study focused on crime, “What our analysis cannot speak to is the extent to which de-policing or a crisis in police legitimacy have occurred post-Ferguson, and if so, the impact it may have had on crime rates.”⁴⁶

Much of the controversy over the Ferguson Effect, however, has focused on the question of whether or not any increase in crime can be attributed to de-policing on the part of law enforcement officers. Several top government officials have publicly supported this view, including as noted previously the Director of the FBI.⁴⁷ Additionally, the acting chief of the Drug Enforcement Administration (DEA), Chuck Rosenberg, supports the likelihood of a Ferguson Effect and stated it may be responsible for the hesitancy of officers to do their jobs at the same levels of policing pre-Ferguson.⁴⁸

However, others have opposed this view of the Ferguson Effect, seeing in it a suggestion that police officers have become negligent in their duties. The White House and Department of Justice (DOJ) under President Obama saw the issue this way, in stark contrast with the views of the FBI and DEA. Obama White House Press Secretary Josh Earnest summarized the White House position in the following statement, “The fact is the evidence does not support the claim that somehow our law enforcement officers across the country are shirking their duties and failing to fulfill their responsibility to serve and protect the communities to which they are assigned.”⁴⁹ The wording of Earnest’s response contends officers are not committing a dereliction of duty, which is very different than entertaining the possibility that de-policing is occurring. Although Comey

⁴⁵ Pyrooz et al., “Was There a Ferguson Effect on Crime Rates in Large U.S. Cities?” 1–8.

⁴⁶ Ibid.

⁴⁷ For more on Comey’s views, see Gass, “FBI Chief Pins Crime Surge on ‘Ferguson Effect.’ Are Cops Afraid to Do Their Jobs?.”

⁴⁸ Eric LichtBlau, “Officials Debate Whether ‘Ferguson Effect’ Is Real,” *The New York Times*, November 4, 2015, <http://www.nytimes.com/2015/11/05/us/politics/officials-debate-effect-of-scrutiny-on-police.html>.

⁴⁹ Zeke Gillman, “FBI Director James Comey on the ‘Ferguson Effect’ at the Law School,” *The Chicago Maroon*, November 10, 2015, <https://chicagomaroon.com/2015/11/10/fbi-director-james-comey-on-the-ferguson-effect-at-the-law-school>.

said the Ferguson Effect is a possible explanation for the rise in crime, he also acknowledged more data is needed to get a better handle on what is happening.

Former Attorney General Loretta Lynch was also skeptical of the Ferguson Effect. Although she has not totally dismissed the idea, Lynch said she “has not seen anything resembling that in her experience,” adding, “we had a recent DOJ study that looked at that issue, and the conclusion was, we need more information.”⁵⁰ Lynch was likely referring to a study released the previous month under contract with support from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The DOJ study was led by Richard Rosenfeld, who found a rise in homicide occurring in 2015 across multiple cities. Unlike Rosenfeld’s previous Sentencing Project study, which only analyzed homicide statistics from the single city of St. Louis, the DOJ study was much broader and took into account year-end homicide data for 56 cities across the nation.

The DOJ study determined “the homicide rise in 2015 in the nation’s large cities was real and, while not unprecedented, comparatively large.”⁵¹ The significance of the DOJ study is that it acknowledged homicide rates in America’s largest cities did increase the year following Ferguson. However, while the study also confirmed that homicide rates had increased, no conclusive evidence was given as to the cause. Rosenfeld presented three possible explanations for the rise in homicide: (1) “an expansion of urban drug markets fueled by the heroin epidemic, (2) reductions in incarceration resulting in a growing number of released prisoners in the nation’s cities, and (3) a ‘Ferguson effect’ resulting from widely publicized incidents of police use of deadly force against minority citizens.”⁵² Rosenfeld did not endorse the Ferguson Effect as the sole reason for the rise in crime; he merely suggested it could be a factor.

⁵⁰ Pete Kasperowicz, “Lynch: I Have Not Seen Ferguson Effect,” *Washington Examiner*, July 1, 2016, <http://www.washingtonexaminer.com/lynch-i-have-not-seen-ferguson-effect/article/2595445>.

⁵¹ Richard Rosenfeld, *Documenting and Explaining the 2015 Homicide Rise: Research Directions* (Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, 2016), <https://www.ncjrs.gov/pdffiles1/nij/249895.pdf>.

⁵² *Ibid.*

Rosenfeld assesses the Ferguson Effect by using two opposing definitions of the term. On the one hand, he addresses the definition from the more widely accepted police perspective of community disengagement. On the other, he looks at the issue through the lens of longstanding grievances by the African American community with police. He refers to the latter perspective as a “legitimacy crisis.” Rosenfeld suggests the matter of de-policing can be gauged through information pertaining to self-initiated activity and arrest data.⁵³ He states in his hypothesis, “if de-policing was the operative mechanism, we should observe larger drops in arrests and other self-initiated police activities in cities that experienced the greatest homicide increases.”⁵⁴ Rosenfeld’s hypothesis sets the stage for future research but does not evaluate such speculation within this particular study.

This thesis further explores Rosenfeld’s assumptions by taking into account arrest and other self-initiated police activity. Where this thesis diverges is allowing productivity data to stand independent of any changes in homicide rates. Rosenfeld’s earlier study surrounding St. Louis found the Ferguson Effect was not a factor in increased homicide; the DOJ study, however—that may be more accurate because it analyzed a larger amount of data—offers the Ferguson Effect as a possible explanation for the rise in homicide within 56 cities.

E. CONCLUSION

Most studies of the Ferguson Effect assume the reduction of police productivity and increased crime are related, and that one must exist to support the other. Moreover, although a rise in violent crime may be caused by a reduction in proactive policing, this thesis argues that the conflation of the two factors complicates this discussion. A rise in violent crime is not vital for de-policing to exist, and the withdrawal of a police presence may or may not be evidenced by a spike in homicide rates or violent crime. This scenario is especially true in smaller jurisdictions that regularly experience low homicide rates in the first place. For this reason, this study seeks to evaluate police productivity data on its own merit to gauge sentiment and de-policing practices regardless of crime associations

⁵³ Rosenfeld, *Documenting and Explaining the 2015 Homicide Rise: Research Directions*.

⁵⁴ *Ibid.*

although crime statistics are reintroduced for consideration as an associated variable for comparative purposes.

Chapter III, Methodology, discusses the research approach used in obtaining data, agency selections, and data analysis.

III. METHODOLOGY

The study seeks to resolve a theoretical debate through social science research; especially, by conducting case studies of several police departments, and for each case, conducting quantitative dataset collection and trend analysis. Specifically, the study seeks to use police productivity data that can be aggregated through open sources, analyzed, and correlated, to either support or contradict the Ferguson Effect.

The following research questions are addressed in this study.

- Can open source data concerning police productivity be collected and analyzed either to support or contradict the Ferguson Effect? If so, what does that data show?
- Has police productivity decreased overall since August 2014?
- What, if any, impact does a reduction in police productivity have on violent crime?
- What future challenges do law enforcement administrators face if the Ferguson Effect is deemed viable?

The research method follows a multiple case study approach concentrating on quantitative open source dataset collection and trend analysis. The datasets are examined for common correlations in an attempt to determine if police productivity trends alone may be considered an accurate indicator or verifying factor in corroborating the existence of a Ferguson Effect. Evaluating the system as a whole, the most obvious conclusion may indicate reductions in police productivity lead to simultaneous increases in crime. The premise is based on the assumption that crime will flourish in areas where police have withdrawn, thus creating a void for criminal activity. As previously stated, the researcher does not believe a rise in crime is needed to establish merit for the Ferguson Effect. The hypothesis is grounded on the belief police productivity will tell its own story as to whether officers are becoming apprehensive in performing the functions of their job. Crime statistics are included as an independent variable that may or may not have correlations to police productivity or the Ferguson Effect in all instances.

Dispatched calls for service are obligatory and officers are bound to respond to such incidents. For this reason, dispatched calls for service are not a reliable indication of police productivity within the context of the argument. On the other hand, self-initiated calls are mostly reliant upon an individual officer's desire to be proactive and are largely dependent on that officer's discretion and temperament. Self-initiated calls may consist of traffic stops, pedestrian stops, premise checks, and certain types of arrests like warrant services. Secondary indicators are also sought in hopes of drawing additional correlations about newly formed police anxieties. These factors consist of police retirements, new hires, use of sick leave, and call response times.

A. PROCEDURES

The study collects law enforcement open data sets to develop three explanatory case studies highlighting quantitative data trends plotted on a graph for the purpose of drawing possible police productivity correlations consistent with the Ferguson Effect. Data sets were constrained to utilizing publically available government sponsored open data repositories.

The research set out to identify open data sources relating to police productivity. Data sets of interest include self-initiated calls for service, i.e., traffic stops. Also of interest but to a lesser degree is the number of arrests conducted by a department. Less emphasis is placed on arrest data because many arrests are outside the scope of discretionary measure; for example, arrests arising out of domestic violence situations. In these cases, officers are often mandated by state laws to conduct arrests if certain conditions are met. Lastly, data sets containing current and historical crime incident information are sought out through the same open sources channels.

The scope of data sought after includes at least two years both prior to and after the shooting of Michael Brown, as noted in Figure 1. Historical data leading up to the Ferguson incident is important in establishing baseline productivity trends. Data points occurring after Ferguson are compared and contrasted against any identified historical trends.

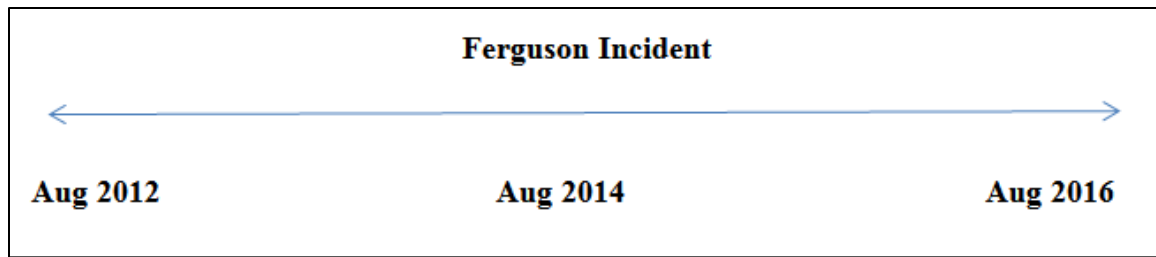


Figure 1. Scope of Data—Two Years Before and After Ferguson Incident

A matrix depicting ideal variables, shown in Table 1, is established outlining desired data set components relating to the categories of police productivity, morale, administrative function, and violent crime. The listed variables become the benchmark for choosing related datasets, which in turn, dictate which agencies may be best suited for case study.

Table 1. Desired Variables.

Productivity	Morale	Administrative	Crime
Traffic Stops	Use of Sick Leave	Applicants	Violent Crime
Pedestrian Stops		Retirees	
Arrests			
Other Self-Initiated Calls for Service			
Response Time to Calls			

The FBI’s UCR Program defines violent crime as being “composed of four offenses: murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault ... [and includes] offenses which involve force or threat of force.”⁵⁵

B. DATA SETS

On January 20, 2009, President Obama signed the Memorandum on Transparency and Open Government. The memorandum affirmed the Obama Administration’s pledge

⁵⁵ “UCR, 2015 Crime in the United States, Violent Crime,” accessed October 12, 2016, <https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/offenses-known-to-law-enforcement/violent-crime>.

to ensure trust with the public through openness in government transparency, participation, and collaboration. The memorandum provided recommendations for an Open Government Directive within the executive departments.⁵⁶ In December of the same year, the White House issued an Open Government Directive “requiring federal agencies to take immediate, specific steps to achieve key milestones in transparency, participation, and collaboration.”⁵⁷ The memorandum tasked executive departments and related agencies with the “goal of creating a more open government” through the following steps: “Publish Government Information Online, Improve the Quality of Government Information, Create and Institutionalize a Culture of Open Government, and Create an Enabling Policy Framework for Open Government.”⁵⁸

The final report of the President’s Task Force on 21st Century Policing was released in May 2015 and contributed to the development of the PDI, which took into account many of the technological recommendations defined in the document. The PDI was launched in May 2015 and immediately “mobilized 21 leading jurisdictions across the country to take fast action on concrete deliverables responding to these Task Force recommendations in the area of data and technology.”⁵⁹

U.S. Chief Data Scientist Dr. DJ Patil explains, “PDI is centered on two key components: (1) using open data to build transparency and increase community trust, and (2) using data to enhance internal accountability through effective analysis.”⁶⁰ The Police Foundation’s Public Safety Open Data Portal (<https://publicsafetydataportal.org>) was created to “serve as a central clearinghouse for accessing, visualizing and analyzing local and national law enforcement and public safety open datasets.”⁶¹ As a result of the

⁵⁶ “Transparency and Open Government,” accessed October 11, 2016, https://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment.

⁵⁷ “Open Government Initiative,” accessed October 11, 2016, <https://www.whitehouse.gov/open/about>.

⁵⁸ “Open Government Directive,” accessed October 11, 2016, <https://www.whitehouse.gov/open/documents/open-government-directive>.

⁵⁹ Megan Smith and Roy L. Austin, Jr. May 18, 2015 (6:00 a.m.), “Launching the Police Data Initiative,” *The White House Blog*, accessed October 11, 2016, <https://www.whitehouse.gov/blog/2015/05/18/launching-police-data-initiative>.

⁶⁰ “The Police Data Initiative (PDI).”

⁶¹ Ibid.

project, many law enforcement agencies are now sharing statistical datasets to include calls for service, traffic stops, use of force incidents, and arrests to name a few. The number of participating agencies has grown from the original 21 to 120 agencies currently.⁶² The Public Safety Open Data Portal itself is merely a pointer system to other local and state open data portals and does not store any of the listed datasets on their servers.

The referenced portal indexes a variety of law enforcement datasets organized by both category and agency name. Additionally, a search feature can locate datasets by inputting specific keyword(s). Portal data is categorized into the following dataset classifications: assaults on officers, calls for service, incidents, officer involved shooting, stops/citations/arrests, use of force and miscellaneous.⁶³

The Public Safety Open Data Portal was chosen as the primary repository for obtaining law enforcement datasets due to its appeal of transparency and sharing of datasets by 120 participating law enforcement agencies.

C. CASE STUDIES

Three police departments are chosen as case studies, selected based on dataset availability and data comprehensiveness. The following criteria are established and become the rationale behind final agency selections.

- Agencies utilized in the case studies are nominated from the list of participating agencies registered through the Public Safety Open Data Portal.
- Consideration is given to those agencies that had overlying variables for the desired timeframe of 24 months prior to the events in Ferguson and 24 months post incident. The two most common variables for the dates in question boil down to traffic stops and arrests. Datasets related to violent crime are chosen as the third common variable.
- Additional consideration is given to choosing three different departments that are varied in size (small, medium, and large) along with geographic separation (East, Midwest, and West).

⁶² “The Police Data Initiative (PDI).”

⁶³ Ibid.

D. DATA ANALYSIS

A visual analysis of the related case studies is plotted on a timeline to determine correlations and patterns with regard to productivity on one hand, and impacted crime on the other. Data visualization software is employed for this project, specifically, a program named, “Tableau for Students.”⁶⁴

The analytical technique of simple time trend analysis is used on each case study. “The essential logic underlying a time series design is the match between the observed (empirical) trend and either of the following: (a) a theoretically significant trend specified before the onset of the investigation or (b) some rival trend, also specified earlier.”⁶⁵ The final analytical step pertained to identifying potential “slope” patterns between the three case studies.

Prior to graphing or analyzing data, the anticipated hypothesis suggests a decline in police productivity in those months following the events in Ferguson, Missouri may be seen. Moreover, the researcher expects to observe direct correlations between reductions in police productivity and a rise in violent crime in more urbanized areas.

Chapter IV reveals the three police departments used as case studies and explains the rationale behind the selections. Each case study analyzes three key variables. The first two variables, traffic stops and arrests, are associated with police productivity. The third variable concentrates on the variance of violent crime. Datasets relating to each variable are graphed on a timeline in relationship to the shooting of Michael Brown.

⁶⁴ “Tableau for Students.”

⁶⁵ Robert K. Yin, *Case Study Research: Design and Methods* (Los Angeles: Sage Publications, 2009), 144–145.

IV. RESULTS AND ANALYSIS

The Public Safety Open Data Portal is used as a starting point for locating datasets that meet the ideal model variables relating to police productivity. However, the majority of datasets are incomplete, irrelevant, or outdated. As a result, model variables are reduced to just two feasible subsets, Variable 1—Traffic Stops, and Variable 2—Arrests. Correspondingly, dataset limitations constrained choice of candidate agencies. Ultimately, case study targets are picked strictly on data availability as opposed to randomness, agency size, or geographical consideration. The following police departments are designated on the lone premise of common dataset obtainability.

- Burlington Police Department, Burlington, Vermont
- Montgomery County Police Department, Montgomery County, Maryland
- Philadelphia Police Department, Philadelphia, Pennsylvania

Table 2 depicts the available variable datasets for each agency along with the timeframe span for each dataset. Historical data in all variables is restricted to two years prior to the shooting of Michael Brown, August 2012, for consistency purposes. Those datasets containing historical data prior to August 2012 are excluded from analysis. On the opposite side of the equation, the endpoint for current data is capped at August 2016 for the same justifications. Datasets with time and parameter shortcomings are ruled by available data within that particular set.

Table 2. Case Study Departments and Obtainable Variables.

CASE STUDY	Variable 1 Traffic Stops	Variable 2 Arrests	Variable 3 Violent Crime
Burlington Police Department	Aug 2012–Dec 2015	Aug 2012–Aug 2016	Aug 2012–Aug 2016
Montgomery County Police Department	Jan 2013–Aug 2016	Sep 12, 2016–Oct 12, 2016*	June 2013–Aug 2016
Philadelphia Police Department	Jan 2014–Aug 2016	Unavailable	Aug 2012–Aug 2016

*Online data limited to prior 30 days.

All three departments are geographically located on the east coast of the United States and range in size from 99 sworn officers to over 6,400 sworn officers. To provide a geographic frame of reference, Burlington, Vermont, is located approximately 1,100 miles northeast of Ferguson, Missouri.⁶⁶ Montgomery County, Maryland, is approximately 800 miles east of Ferguson,⁶⁷ while Philadelphia, Pennsylvania, is approximately 900 miles east of Ferguson.⁶⁸

Two critical dataset limitations have been discovered with regard to dataset availability for the chosen departments. The first concerned arrest data for the Montgomery County Police Department, which is limited to the last 30 days. The second deals with a total absence of arrest data for the Philadelphia Police Department. These issues are further addressed within the respective case study analysis sections.

A. CASE STUDY 1—BURLINGTON POLICE DEPARTMENT, BURLINGTON, VERMONT

Case Study 1 focused on the Burlington Police Department, located in Burlington, Vermont. The Burlington Police Department has 99 sworn officers and serves a population of 42,160.⁶⁹ Census data from 2010 indicates the following percentage breakdown of race and ethnicity: 88.9% White alone, 3.9% Black or African American alone, 0.3% American Indian or Alaska Native alone, 3.6% Asian alone, 2.6% Two or More Races, and 2.7% Hispanic or Latino alone.⁷⁰ Whites make up the predominate race in Burlington, Vermont.

⁶⁶ “Directions from Ferguson, Missouri to Burlington, Vermont,” Google Maps, accessed October 11, 2016, <https://goo.gl/maps/vL4zb6LN8KL2>.

⁶⁷ “Directions from Ferguson, Missouri to Montgomery County, Maryland,” Google Maps, accessed October 11, 2016, <https://goo.gl/maps/8d1FyPZ6DBp>.

⁶⁸ “Directions from Ferguson, Missouri to Philadelphia, Pennsylvania,” Google Maps, accessed October 11, 2016, <https://goo.gl/maps/xRUbjTYQ5cJ2>.

⁶⁹ “2015 Crime in the United States, Table 78, Vermont, Full-Time Law Enforcement Employees by City, 2015,” accessed October 11, 2016, https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-78/table-78-state-pieces/table_78_full_time_law_enforcement_employees_vermont_by_cities_2015.xls.

⁷⁰ “QuickFacts, Burlington City, Vermont,” accessed October 13, 2016, <http://www.census.gov/quickfacts/table/PST045215/5010675>.

1. Variable 1—Traffic Stops

Traffic stop information includes data points from August 2012 through December 2015, as demonstrated in Figure 2. No statistics are readily available for the months of January 2016 through August 2016. The red line is a marker overlaid on August 2014 that indicates on the timeline the beginning events in Ferguson, Missouri. The red line is subsequently displayed for the same time period on each ensuing graph.

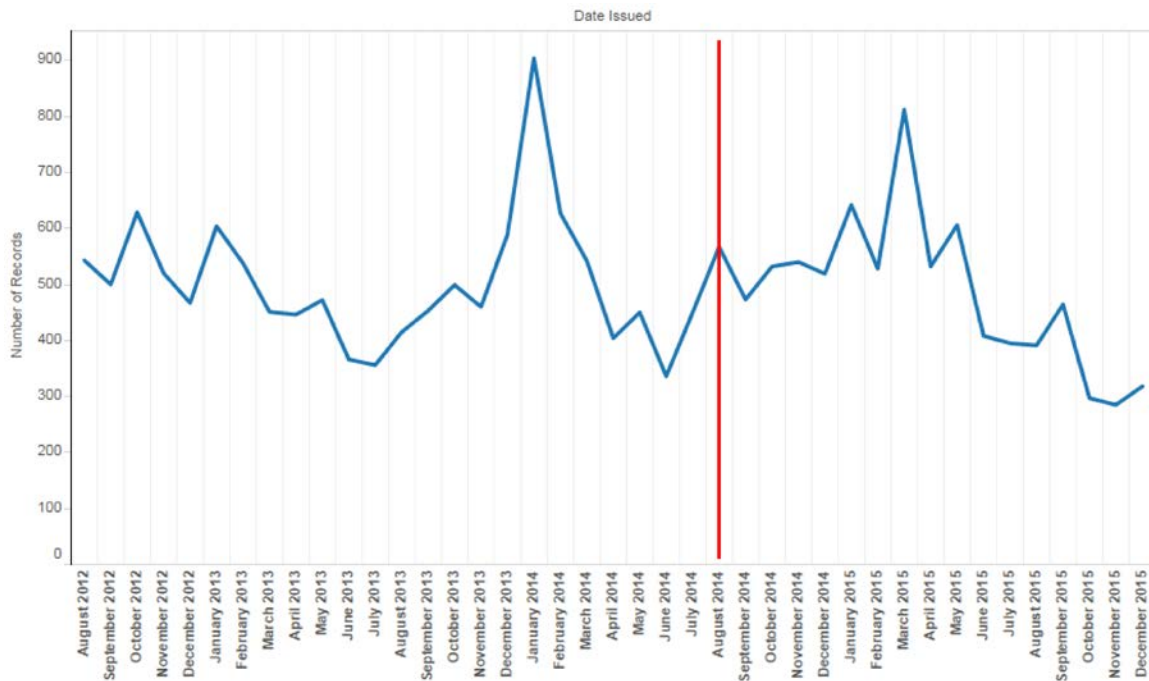


Figure 2. Burlington Police Department, Variable 1—Traffic Stops (August 2012–December 2015).⁷¹

The total number of traffic stops decreased from 567 in August 2014 to 473 the following month of September 2014. The number of traffic stops rebound the month of October and November, slightly decrease in December, and jump to 642 traffic stops during the month of January 2015. Historical data indicates fewer monthly traffic stops for the five months leading up to August 2014. Overall traffic stop trends for the time

⁷¹ Source: “Burlington Police Department Traffic Stops,” accessed October 8, 2016, <https://www.burlingtonvt.gov/police/data/traffic>.

period in question indicates a series of bell curves generally beginning in June or July and ending the following year around the same time. Approximately three of these bell curves are distinguishable in the timeline. August 2014 was in the same ballpark on the curve for August 2012, August 2013, and August 2014. The pattern of traffic stops in Burlington, Vermont appears largely unaffected by the events in Ferguson.

2. Variable 2—Arrests

In Figure 3, arrest information includes data points from August 2012 through August 2016. All departmental arrest information is included in the graph and no distinction is made between felony, misdemeanor, or traffic related arrests.

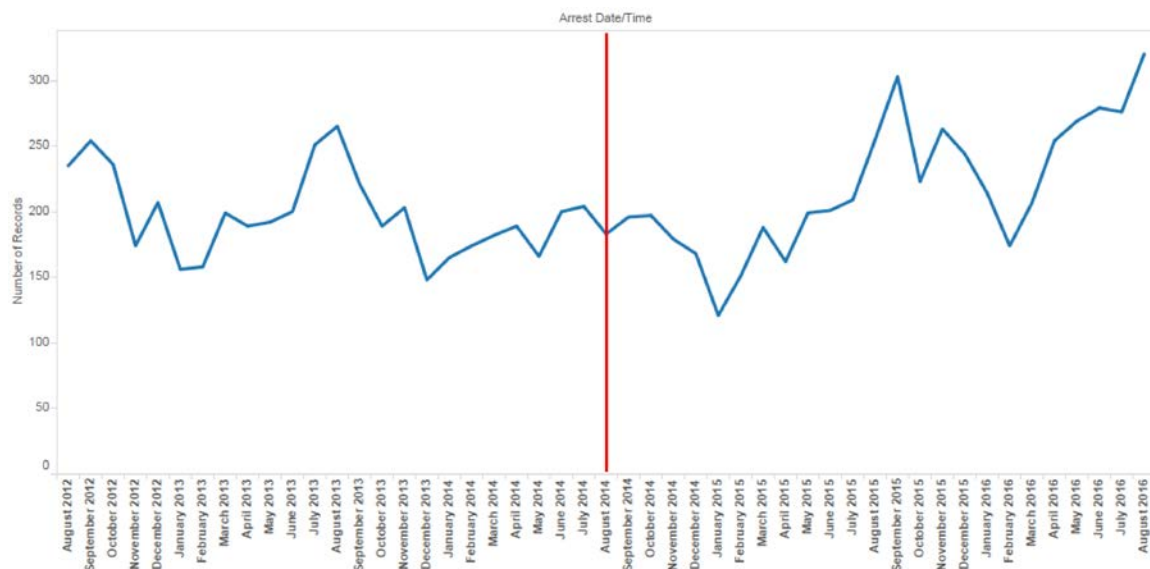


Figure 3. Burlington Police Department, Variable 2—Arrests (August 2012–August 2016).⁷²

The number of total arrests actually increased the two months following August 2014. Arrests begin to decline proportionately in November 2014 through January of 2015 when compared to other yearly cycles. Roughly four bell curve cycles are evident on the timeline. August 2014 is slightly lower than peak for the prior and following six-

⁷² Source: “Burlington Police Department Arrests,” accessed October 9, 2016, <https://www.burlingtonvt.gov/police/data/arrests>.

month period. It is not possible to determine if August 2014's total arrests were slightly lower on the curve because of the Ferguson incident or another cause.

3. Variable 3—Violent Crime

Violent crime is not necessarily an indication of police productivity but it is included in each case study for added correlation consideration. Violent crime consists of murder, rape, aggravated assault, and robbery. The violent crime dataset spans the desired timeline from August 2012 through August 2106, as seen in Figure 4. Violent crime data was filtered from reported calls for service reported by the Burlington Police Department. It is important to note that “calls for service” are not necessarily an exact match to final offense count numbers later submitted to the FBI’s UCR Program.

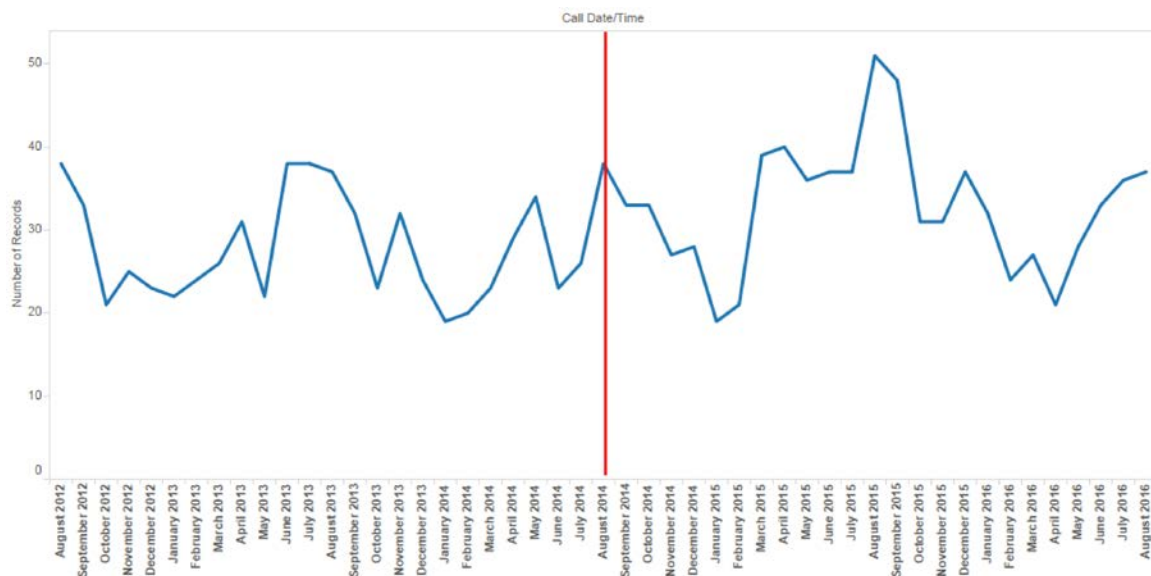


Figure 4. Burlington Police Department, Variable 3—Violent Crime (August 2012–August 2016).⁷³

Violent crime rates for the five consecutive months following Ferguson, September 2014 through February 2015, were lower each of these months than they were in August 2014. No patterns or apparent correlations exist implicating the fact violent

⁷³ Source: “Burlington Police Department Calls for Service,” accessed October 9, 2016, <https://www.burlingtonvt.gov/police/data/dashboard>.

crime was affected by the Ferguson Effect in Burlington, Vermont, during the timeframe in question.

B. CASE STUDY 2—MONTGOMERY COUNTY POLICE DEPARTMENT, MONTGOMERY COUNTY, MARYLAND

Case Study 2 concentrates on the Montgomery County Police Department, located in Montgomery County, Maryland. The Montgomery County Police Department has 1,378 sworn officers⁷⁴ and serves a population of 1,040,116. July 1, 2015 census data indicates the following percentage breakdown of race and ethnicity: 57.5% White alone, 19.1% Black or African American, 0.7% American Indian or Alaska Native, 15.4% Asian alone, 0.1% Native Hawaiian and Other Pacific Islander alone, 3.3% Two or More Races, and 19% Hispanic or Latino.⁷⁵ Montgomery County is the most culturally diverse region among the three case studies.

1. Variable 1—Traffic Stops

Traffic stop information for the Montgomery County Police Department includes data points from January 2013 through August 2016, as displayed in Figure 5. No statistics are readily available for the months of August 2012 through December 2012. The amount of traffic stops were roughly 30 times greater than the amount of traffic stops conducted by the Burlington Police Department for the same month of August 2014.

⁷⁴ “2015 Crime in the United States, Table 80, Maryland, Full-Time Law Enforcement Employees by Metropolitan and Nonmetropolitan Counties, 2015,” accessed October 11, 2016, https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-80/table-80-state-pieces/table_80_full_time_law_enforcement_employees_maryland_by_metropolitan_and_nonmetropolitan_counties_2015.xls.

⁷⁵ “QuickFacts, Montgomery County, Maryland,” accessed October 13, 2016, <http://www.census.gov/quickfacts/table/PST045215/24031>.

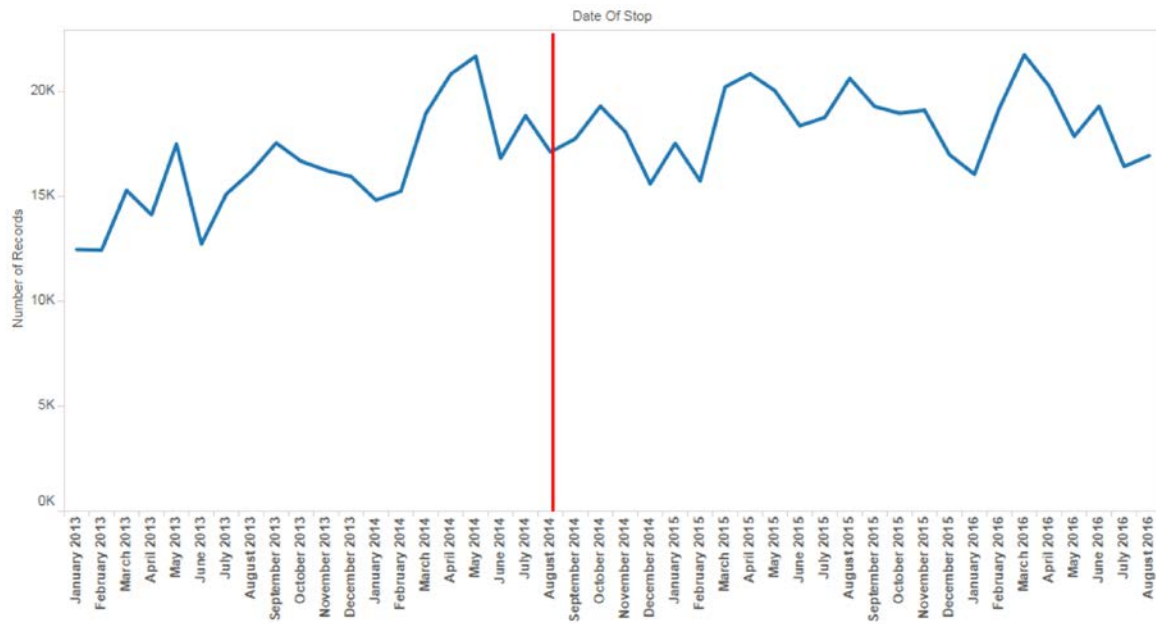


Figure 5. Montgomery County Police Department, Variable 1—Traffic Stops (January 2013–August 2016).⁷⁶

In the month of August 2014, 17,132 traffic stops were conducted, which was 1,733 less than the previous month of July 2014. Typically, traffic stops increased during the months of August from July for every other year on the timeline: 2013, 2015, and 2016. Not every September in the timeline had increases in traffic stops over August months although September and October 2014 brought introduced increased traffic stops for both months. No indication can be seen that the Ferguson Effect influenced the total number of traffic stops being conducted during the months following events in Ferguson.

2. Variable 2—Arrests

Unlike arrest information supplied by the Burlington Police Department in Case Study 1, the Montgomery County Police Department does not strip Personal Identifiable Information (PII) from their arrest datasets, which is likely the reason they only post access to the last 30 days of arrest data. Arrest information is only available from September 12 through October 12, 2016.

⁷⁶ Source: “Montgomery County Police Department Vehicle Stops,” accessed October 8, 2016, <https://data.montgomerycountymd.gov/Public-Safety/Traffic-Violations/4mse-ku6q>.

The Montgomery County Police Department arrest dataset does not contain enough data points to compare any historical data or subsequent months. For this reason, no inferences can be drawn from this limited dataset.

3. Variable 3—Violent Crime

As provided in Figure 6, violent crime information for the Montgomery County Police Department includes data points from July 2013 through August 2016. Similar to Case Study 1, it is important to remember the chart is adapted from a “calls for service” dataset that is not always equal to the final offense count numbers submitted by the agency to the FBI’s UCR Program.

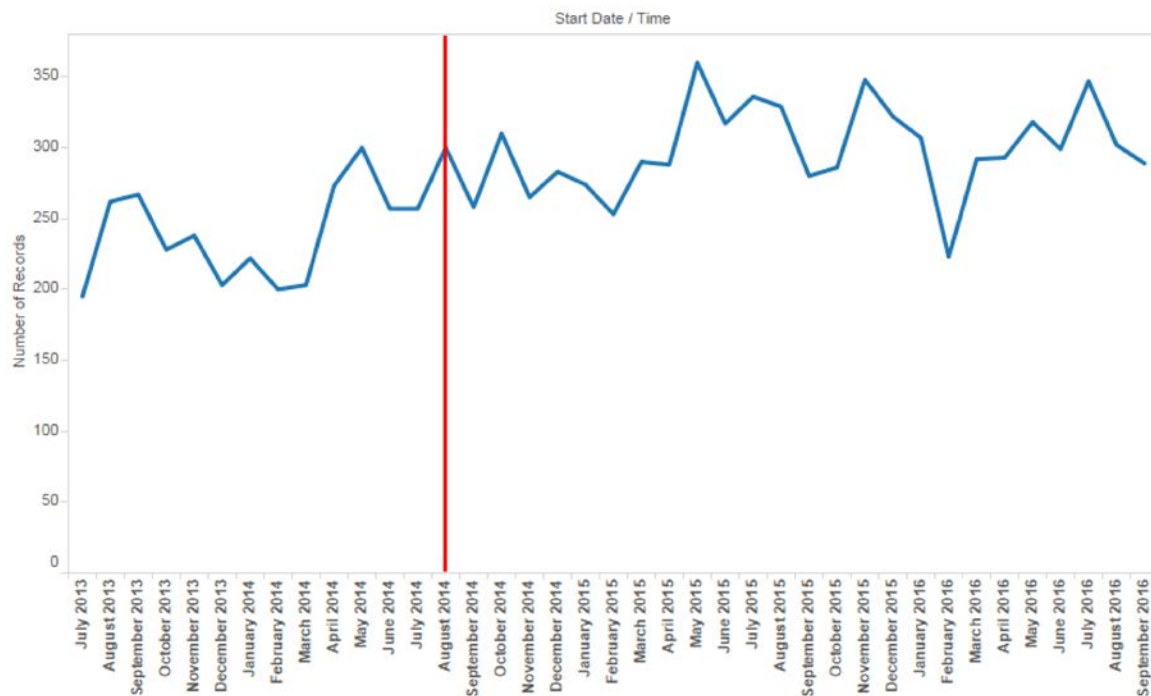


Figure 6. Montgomery County Police Department, Variable 3—Violent Crime (July 2013–August 2016).⁷⁷

The violent crime rate in Montgomery County for August 2014 was 255. Violent crime dropped to 202 in September 2014 and rose to 247 in October 2014. The last half

⁷⁷ Source: “Montgomery County Police Department Violent Crime,” accessed October 9, 2016, <https://data.montgomerycountymd.gov/api/views/4mse-ku6q/rows.csv?accessType=DOWNLOAD>.

of 2013 appears to be the lowest period of violent crime on the timeline. The highest amount of violent crime occurred in November 2015 when 287 incidents occurred. Again, no obvious pattern appears to impact a significant rise or decline in violent crime during the timeframe in question.

C. CASE STUDY 3—PHILADELPHIA POLICE DEPARTMENT, PHILADELPHIA, PENNSYLVANIA

Case Study 3 evaluates the Philadelphia Police Department, located in Philadelphia, Pennsylvania. The Philadelphia Police Department has 6,413 officers and serves a population of 1,567,810.⁷⁸ Census data from 2010 indicates the following percentage breakdown of race and ethnicity: 41% White alone, 43.4% Black or African American alone, 0.5% American Indian or Alaska Native alone, 6.3% Asian alone, 2.8% Two or More Races, and 12.3% Hispanic or Latino alone.⁷⁹ The black population is 2.4% greater than white residents although the majority of the city's demographics are basically split between these two groups.

1. Variable 1—Traffic Stops

Traffic stop information for the Philadelphia Police Department in Figure 7 includes data points from January 2014 through August 2016. No statistics are readily available for the months of August 2012 through December 2013. Also included in the dataset is information relating to pedestrian stops. Although the number of pedestrian stops is a relevant indicator of productivity, the data is not analyzed or graphed because comparable information is not available for the case studies involving Burlington and Montgomery County.

⁷⁸ "2015 Crime in the United States, Table 78, Pennsylvania, Full-Time Law Enforcement Employees by City, 2015," accessed October 11, 2016, <https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-78/table-78-state-pieces/table-78-pennsylvania-new>.

⁷⁹ "QuickFacts, Philadelphia City, Pennsylvania," accessed October 13, 2016, <http://www.census.gov/quickfacts/table/PST045215/4260000>.

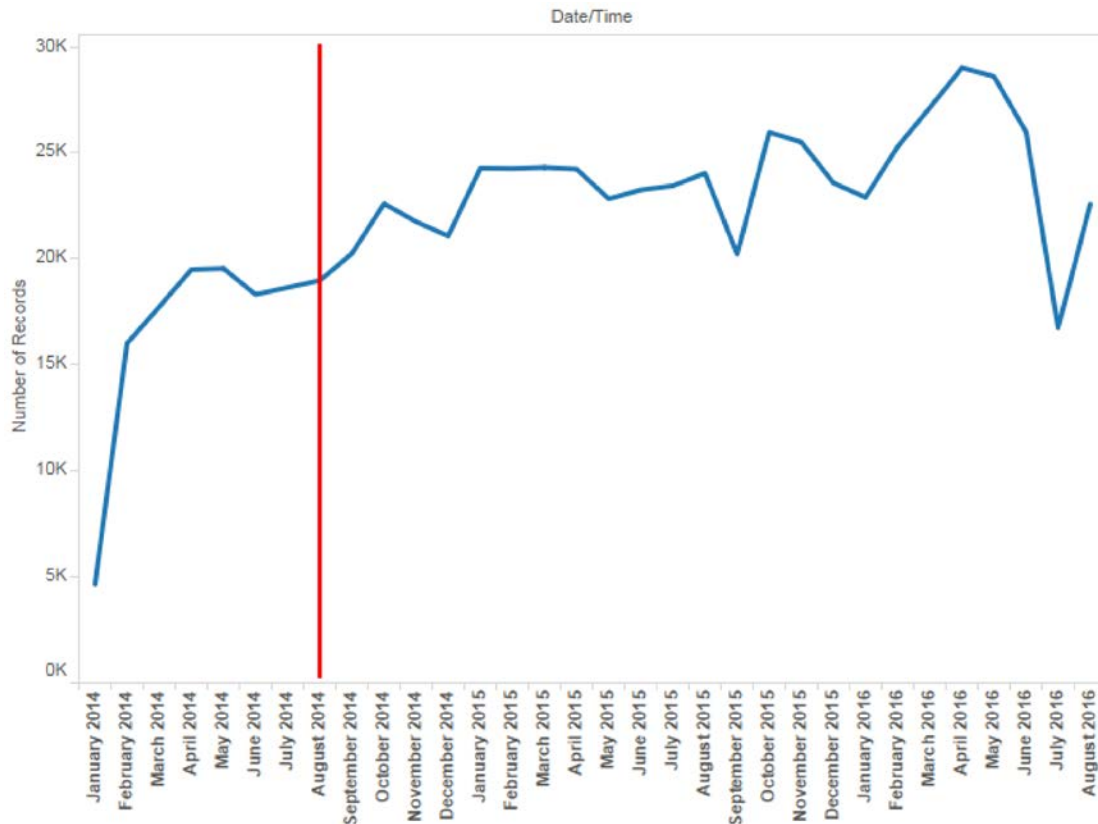


Figure 7. Philadelphia Police Department, Variable 1—Traffic Stops (July 2013–August 2016).⁸⁰

The average amount of traffic stops conducted during this time period is 21,976. Regrettably, little historical data is available. Furthermore, the number of stops conducted in January 2014 is suspiciously low. It is unknown if this number is actually the number of stops that were actually conducted, if a clerical error occurred, or the information is simply omitted from the dataset. The number of traffic stops conducted during the month of August 2014 is 18,977. Traffic stops continued to be higher for each consecutive month all the way through July 2016 when they dipped to 16,745. Case Study 3 is no different from the other two case studies regarding no noticeable trends pertaining to traffic stops.

⁸⁰ Source: “Philadelphia Police Department Vehicle Stops,” accessed October 18, 2016, <https://www.opendataphilly.org/dataset/vehicle-pedestrian-investigations/resource/e02050c1-51a4-48ff-80d2-88b290047837>.

2. Variable 2—Arrests

The Philadelphia Police Department offered no available datasets pertaining to arrests through its open data portal, which proved to be a significant drawback for a study comparison.

3. Variable 3—Violent Crime

In Figure 8, the violent crime dataset for the city of Philadelphia spans the desired timeline from August 2012 through August 2106. Case Study 3, like the other two case studies, is adapted from a “calls for service” dataset that is not always equal to the final offense count numbers submitted by the agency to the FBI’s UCR Program.

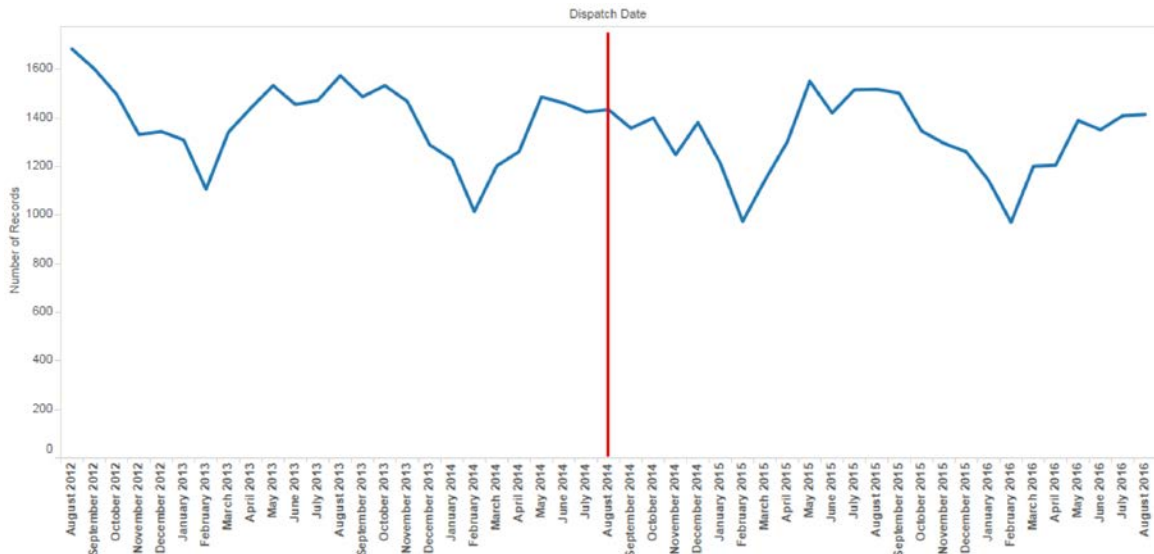


Figure 8. Philadelphia Police Department, Variable 3—Violent Crime (August 2012–August 2016).⁸¹

No evident positive or negative patterns of violent crime in response to the alleged Ferguson Effect appear during the timeframe in question.

⁸¹ Source: “Philadelphia Police Department Violent Crime,” accessed October 9, 2016, <https://data.phila.gov/api/views/sspu-uyfa/rows.csv?accessType=DOWNLOAD>.

D. CASE STUDY COMPARISON

Although the individual case studies offer no valid insights into settling the Ferguson Effect debate, the cases are compared and contrasted in attempt to identify common themes or patterns.

A common theme surrounding the analysis of violent crime included recognition of patterns of activity that appeared to run consistently along bell curves on a yearly basis from one year to another. Despite this pattern, it has no apparent correlation with the phenomenon referred to as the Ferguson Effect.

No commonalities are observed on the productivity side of the comparison, which especially holds true for Variable 1, traffic stops. Not only does each individual case study fall short of patterns or slopes, the case studies observed as a whole offer no additional awareness.

Variable 2, arrests, is largely hindered by the amount of available data sets. Case Study 1 involving the Burlington Police Department is the only agency that contained a full dataset to analyze. Even so, being a smaller department, Burlington's data is inconsequential due to the miniscule amount of data points it actually contains. Arrest data for Montgomery County may have given better understanding if the data contained the needed historical data past the 30 days offered. Likewise, a significant gap is left concerning the lack of arrest data for the Philadelphia Police Department. No intelligible inferences can be established from the arrest data available for the case studies.

The final discussion chapter primarily addresses the limitations and weaknesses encountered during the study. Additionally, several recommendations are set forth for consideration in future studies.

V. DISCUSSION

The shooting of an unarmed black teenager, Michael Brown, by a police officer, Darren Wilson, in Ferguson, Missouri, on August 9, 2014, led to criticisms against the Ferguson Police Department and national policing practices in general. The incident prompted public allegations of excessive use of force, police misconduct, civil rights violations, and racial divide between police and community members. Concerns of injustice for Michael Brown rallied local and national protests in Ferguson and other cities throughout the country. Ferguson gained national media attention early on and remained in media headlines for months to follow. In November 2014, a St. Louis Grand Jury announced Darren Wilson would not be indicted on charges of murder or manslaughter, which resulted in additional civil unrest and riots occurring in Ferguson.⁸² The DOJ conducted its own investigation and ultimately determined, "...it is not appropriate to present this matter to a federal grand jury for indictment, and it should therefore be closed without prosecution."⁸³

The research set out to resolve the Ferguson Effect debate by conducting three case studies utilizing trend analysis on law enforcement open source quantitative datasets. Publicly available data repositories through the Public Safety Open Data Portal, Public Data Initiative and related governmental links were utilized for raw dataset acquisition.

Limitations in available datasets determined which three agencies were chosen for collection and analysis: (1) the Burlington Police Department, Burlington, Vermont, (2) the Montgomery County Police Department, Montgomery County, Maryland, and (3) the Philadelphia Police Department, Philadelphia, Pennsylvania. Data sought for productivity value included information relating to traffic stops, pedestrian stops, arrests, call response times, use of sick leave, new applicants, and retirees. Productivity related datasets proved

⁸² Erin McClam, "Ferguson Cop Darren Wilson Not Indicted in Shooting of Michael Brown," *NBC News*, November 25, 2014, <http://www.nbcnews.com/storyline/michael-brown-shooting/ferguson-cop-darren-wilson-not-indicted-shooting-michael-brown-n255391>.

⁸³ Department of Justice, *Department of Justice Report Regarding the Criminal Investigation into the Shooting Death of Michael Brown by Ferguson Missouri Police Officer Darren Wilson (Memorandum)* (Washington, DC: Department of Justice, 2014), 5, https://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/doj_report_on_shooting_of_michael_brown_1.pdf.

challenging to obtain through the PDI. On the other hand, crime related data was slightly more accessible although each agency varied in reporting content, organization, and classification.

In each case, the data was insufficient to confirm or deny the existence of the Ferguson Effect, although the limited data available did suggest that in these three cities, no noticeable de-policing occurred following the killing of Michael Brown. Several limitations became evident upon the conclusion of the study, with the most striking revelation being that major deficiencies appeared in the federal government's transparency initiative and Open Government program.

A. LIMITATIONS AND WEAKNESSES

The three case studies were dependent on attaining complete datasets for the desired variables and timeframe to begin with a sound analytical framework. The ability to locate needed historical and recent datasets for each variable and agency would likely have established a clearer picture for correlation and comparison purposes.

An alternate method for obtaining the needed information would have entailed completing a Freedom of Information Act (FOIA) request for each respective agency. A potential disadvantage in using FOIA requests as a data collection method is the often lengthy turnaround time. The Open Data Initiative was originally set up in part to relieve traditional FOIA requests to streamline the process of government openness and transparency.

In hindsight, too much preliminary value was placed on the Open Data Initiative program along with the amount of expected available information. Aside from obtaining substandard data, numerous deficiencies in the program were exposed during the research process.

- Incomplete and partial datasets
- Minimum participation criteria and accountability
- Effective program management and maintenance

The Public Data Initiative boasts the participation of 120 law enforcement agencies, and the limitations of the data can be seen through the example of the Camden, New Jersey, Police Department, which was one of the original 21 agencies to participate in the program. In May 2015, President Obama visited Camden to discuss the program's merit and direction. The White House wrote about Camden's participation in a subsequent blog entry on its website:

By upgrading its technology practices, the Camden County PD will have more efficient data supply chains, and will be better positioned to use that data to improve its internal operations and to identify and solve policing problems in a timelier manner. The lessons learned in Camden can help law enforcement around the country both by example and also directly since some of the development work can be shared through open source best practice.⁸⁴

Despite the fanfare, the Public Safety Open Data Portal's webpage listing of "Participating Agencies" depicts the hyperlink to Camden's data portal as "Not Currently Identifiable."⁸⁵ Moreover, a basic Google search for the term, "Camden New Jersey Open Data Portal," reveals a hyperlink to Camden's open data portal (<http://camdencountynj.ccdpw.opendata.arcgis.com/>). The landing page highlights eight recently added datasets, none of which are law enforcement related. An "Explore County Data" link reveals the same eight datasets when accessed. A visible search bar is available at the top of the page and when the keyword "police" is typed, the results return the message, "No Datasets Found."

B. RECOMMENDATIONS

The most evident deficiency identified in this study involves the transparency initiative and Open Government program, specifically with regard to the PDI and gathering of police related data. The PDI needs to establish stricter guidelines and compliance for participating agencies. For those law enforcement agencies wishing to participate, minimum guidelines should be established and met. Additionally, those

⁸⁴ Smith and Austin, "Launching the Police Data Initiative."

⁸⁵ "The Police Data Initiative (PDI)."

agencies not meeting those standards should be eliminated from participating in the program.

To date, conversations involving the Ferguson Effect are usually associated with crime statistics. This thesis suggests that less emphasis should be placed on crime correlations and more value placed on de-policing and anxieties being experienced by officers. Despite the large amount of anecdotal evidence suggesting law enforcement is becoming less proactive, the limited data available does not seem to show a significant amount of de-policing following the events in Ferguson. More data is urgently needed to help determine whether de-policing is in fact a widespread trend.

Another method for further study is to conduct surveys of law enforcement officers to gauge police self-perception and how those perceptions have influenced performance of duties post-Ferguson. As this thesis was being concluded, one such survey was completed by the Pew Research Center. The study found, “majorities of police officers say that recent high-profile fatal encounters between black citizens and police officers have made their jobs riskier, aggravated tensions between police and blacks, and left many officers reluctant to fully carry out some of their duties.”⁸⁶ The national survey is “one of the largest ever conducted” and “draws on the attitudes and experiences of nearly 8,000 policemen and women from departments with at least 100 officers.”⁸⁷ While important, survey data can only afford limited insight. Ultimately, evidence concerning the Ferguson Effect must be centered on hard data surrounding police activity and productivity, and it is perhaps the primary finding of this thesis that reveals such data is grossly inadequate.

C. CONCLUSION

Theoretically, big data should offer possible correlations between police productivity and the increase or decrease in crime. Likewise, data relating to productivity should offer independent insight into the existence of a Ferguson Effect regardless of

⁸⁶ “Behind the Badge,” January 11, 2017, <http://www.pewsocialtrends.org/2017/01/11/behind-the-badge/>.

⁸⁷ Ibid.

reported crime. The reality is that access to this type of big data is not readily available to the public. If the open data project matures into its intended vision, such data may provide insight into the existence of a Ferguson Effect. Currently, however, the data is insignificant and lends no insight whatsoever.

The FBI acknowledges a need for better data collection and “recently announced that the National Incident Based Reporting System, or NIBRS, would become the Uniform Crime Reporting Program (UCR) standard by January 1, 2021.”⁸⁸ NIBRS was implemented in 1989 to accommodate the increased volume of information being collected about crime. The system “provides for 52 offense classifications,” and provides better insight into national crime. Due to the voluntary nature of NIBRS, participation from law enforcement has grown at a slow pace, which in turn, has “caused the FBI to maintain both the SRS and NIBRS.”⁸⁹ Moreover, “the FBI will conduct a NIBRS modernization study to “assess the current law enforcement agencies practices and evaluate a possible updating of NIBRS.”⁹⁰

This study aspired to close those gaps and offer a more complete picture of national sentiment by employing big data analytics for police productivity. Limitations in data prevented the research questions from being answered but highlighted a need for better data collection methods.

⁸⁸ James Kent, “A Long Time Coming: The FBI’s Goal of Pushing Uniform Crime Reporting into the 21st Century,” Homeland Security Digital Library, December 15, 2016, <https://www.hsdl.org/c/a-long-time-coming-the-fbis-goal-of-pushing-uniform-crime-reporting-into-the-21st-century/>.

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