Do Bureaucrats Change Their Behavior During Electoral Cycles? Understanding Arrest Rates in New York State

Sunyoung Pyo

Corresponding Author:
Sunyoung Pyo (spyo@albany.edu)
Rockefeller College of Public Affairs & Policy, University at Albany, Albany, NY, USA

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Abstract

Although there is vast literature on whether and how bureaucratic decision-making is changed according to the policy preference of elected officials, we know little about whether bureaucratic decision-making is also influenced by electoral incentive of elected officials. To understand the effect of electoral incentives on bureaucratic behavior, this study uses the case of New York county sheriffs and arrest rates among their officers. This study evaluates whether and how the number of arrests changes before and after the reelection of incumbent sheriffs and whether changes in the number of arrests are more prominent with competitive reelections. An analysis shows no evidence that sheriffs’ electoral cycles and competitiveness significantly influence the average number of arrests under a range of alternative model specifications. This finding is evidence that officers’ decision-making is not influenced by their elected superiors if that influence is to enhance their elected superior’s chance of winning at reelection, which implies that political influence on bureaucratic behavior can be shown differently according to the reason behind politicians’ influence.
Introduction

Elections have an important influence on bureaucratic decision-making because they may change the elected superior of a bureaucracy. There can be two different mechanisms for how an election influences bureaucratic decision-making. The first mechanism is that electoral events change the policy direction driven by newly-elected officials and, consequently, influence bureaucratic decision-making. In this first mechanism, change in bureaucratic decision-making occurs after electoral events, influenced by the policy preferences of their newly-elected leader. The second mechanism is that electoral incentives motivate incumbent politicians to influence bureaucratic decision-making in the departments they supervise to show their competence to the voters before their reelection. The second mechanism is based on the political business cycle. In this second mechanism, change in bureaucratic decision-making will occur before electoral events, influenced by the electoral incentive of their incumbent elected leader.

There are many studies that empirically examine the first mechanism—elections resulting in new leadership—and they show that federal agencies tend to change their decision to align with the political ideology of the new president after a presidential election (Moe, 1982; Moe, 1985; Wood, 1988; Stewart Jr. and Cromartie, 1982). However, the second mechanism—elections motivating incumbent politicians to enhance their electoral incentive—has not been examined specifically for the outcome of bureaucratic decision-making. Although studies look at the changes in policy or elected officials’ own decision-making influenced by their electoral incentives (Rogoff, 1990; Rogoff and Sibert, 1988; Beck, 1982; Akhmedov and Zhuravskaya, 2004; Berdejo and Yuchtman, 2013), they do not consider whether the same incentives also influence the bureaucracy that they supervise. Therefore, we have little knowledge on whether
governmental agencies change their decision when influenced by elected officials if that influence is not to implement the policy preference of elected officials but to enhance the electoral incentive of their elected supervisor.

To understand the effect of electoral incentives of incumbent elected officials on bureaucratic decision-making, this study uses the case of New York county sheriffs and arrest rates among their officers. This study evaluates (1) whether the number of arrests changes prior to the reelection of incumbent sheriffs, (2) whether the number of arrests subsequently reverts back to status quo in post-reelection years, and (3) whether changes in the number of arrests are more prominent with competitive reelectons. The result will provide evidence of whether the political business cycle influences decisions within agencies. If the number of arrests significantly changes before the reelection but returns to status quo right after the reelection, as predicted by the political business cycle model, this change can be considered as due to a sheriff’s gaming by influencing the arrest decisions of their subordinates to enhance their reelection efforts. On the other hand, if the number of arrests does not significantly change during a reelection period, it can be considered that an electoral incentive of the incumbent sheriff is not the factor that influences the discretionary arrest decisions of officers.

The finding of this study shows that an average number of arrests per quarter was not significantly changed in the reelection year or post-reelection year. The presence of a challenger or close contest did not alter these findings, suggesting that sheriffs’ electoral incentives do not influence the discretionary arrest decisions of officers of a sheriff department. This means that, in sheriff elections, electoral proximity and electoral competitiveness are not significantly associated with discretionary arrest decisions among officers, indicating that electoral incentives are not associated with law enforcement officers’ discretionary decisions.
This article starts with a review of the studies that are based on two different mechanisms on how politicians influence bureaucratic decision-making by taking a chance at election, in order to identify the gap in literature in terms of which aspect of a politician’s influence on bureaucratic decision-making has not yet been tested. Next, the article provides an explanation of how this gap in previous studies can be explored using the case of sheriff election and arrest rates among officers and suggests hypotheses. A detailed explanation on data and analytic methods are provided. Finally, the findings of an analysis and the implications of these findings are discussed.

**Literature Review**

Politicians can influence bureaucratic decision-making in various ways and for a variety of reasons, and there is vast literature that empirically examines the political influence on bureaucracy from diverse perspectives. However, there exists two distinct mechanisms that are specifically related to how politicians influence bureaucratic decision-making by taking a chance on their electoral events. In the first mechanism, politicians as policy makers can influence bureaucratic decision-making that aligns with their policy preference or political ideology once they take the office after they are elected. There are many studies that empirically examine whether governmental agencies significantly change their decisions to align with the policy preference of their newly-elected leader (Moe, 1982; Moe, 1985; Eisner and Meier, 1990; Wood, 1988; Stewart Jr. et al., 1982; Beck, 1982; Wood and Waterman, 1991). However, politicians are not only policy makers who are the agents of the citizens, but also they are ordinary people who care about their political careers (Fiorina, 1989). Therefore, politicians can use elections both as a chance to apply their policy preference after they are elected and as a chance to enhance their
political career before their election. Given this, incumbent politicians may be motivated to manipulate bureaucratic decision-making under their supervision as voters desire in order to enhance their chance of winning at reelection, which consists of the second mechanism. Although there is numerous evidence that shows how incumbent politicians manipulate policy or their own decision-making as voters desire before their reelection, there is little evidence as to whether they influence bureaucratic decision-making that is under their control as a way to show their competence to voters.

The first mechanism—elections resulting in new leadership—is mainly examined at the federal level (Moe, 1982; Moe, 1985; Eisner et al., 1990; Wood, 1988; Stewart Jr. et al., 1982; Beck, 1982; Wood et al., 1991). Most of these studies examine whether federal agencies tend to make decisions in favor of labor when a Democratic president takes office, while they tend to make decisions in favor of business when a Republican president takes office. However, they did not suggest consistent results. For example, the remedial action in the area of unfair labor practice determined by the National Labor Relational Board (NLRB) significantly shifted to a pro-business direction after turnover to the Eisenhower and the Nixon-Ford administrations and also significantly shifted to a pro-labor direction after turnover to the Kennedy and the Carter administrations (Moe, 1982; Moe, 1985). However, the percentage of antitrust actions committed by the Economic Policy Office (EPO) is not significantly increased after a turnover to democratic presidencies (Eisner et al., 1990).

This difference in the results may relate to the specific characteristics of each independent agency’s decisions. While the decisions of the NLRB and Federal Trade Commission (FTC) are mostly significantly differed across different presidential administrations (Moe, 1982; Moe, 1985), the decisions of the EPO and Federal Reserve (Fed) appear not to be
influenced by presidential intervention (Eisner et al., 1990; Beck, 1982). Since the issues that the NLRB and FTC handle are highly politicized—they are generally based on political debates regarding pro-labor and pro-business factions—the decisions regarding these issues can be affected greatly by the political ideology of the new president. The decisions of the EPO and Fed, however, are highly dependent on the advice of experts in economics, meaning that there is not much room for political ideology to influence them. Therefore, these studies based on the first mechanism are proffered as evidence that an election acts as an opportunity to change the elected superiors of governmental agencies and, in the process, cause a change in the ideologically-motivated decisions of these agencies.

The second mechanism—elections motivating incumbent politicians to enhance electoral incentive—is first introduced in the political business cycle model by Nordhaus (1975). The initial political business cycle model explains the pattern of policy change caused by the electoral incentive of incumbent politicians; incumbent politicians have strong electoral incentives to show their competence right before their reelection when voters can clearly remember what they accomplish, for example, causing change in unemployment rates or public spending right before an election. However, this changed unemployment rate or public spending goes back to trend level right after reelection as electoral pressure sharply decreases (Nordhaus 1975; Rogoff, 1990; Rogoff et al., 1988). There are many studies that empirically examine whether policy changes during an election period follow this political business cycle, but they do not demonstrate consistent results; for example, a study by Akhmedov et al. (2004) shows that regional budget expenditures in Russia significantly increase a few months before the election of a governor and fall one or two months after election. Conversely, a study by Beck (1982) shows that monetary policy in the U.S. did not significantly change right before the reelection of President Nixon.
Some studies suggest an explanation for inconsistent results among empirical findings on the existence of the political business cycle by reasoning that this cycle may be more prominently shown in countries where democracy is less developed (Akhmedov et al., 2004; Shi and Svensson, 2002).

This political business cycle is further applied to examine how incumbent politicians’ own decisions are changed before and after elections driven by electoral incentive. Many of these studies use the case of elected judges and prosecutors and show how their sentencing decisions or conviction decisions are changed to show their competence to voters by taking advantage of the electoral event. Berdejó et al. (2013) show that incumbent elected judges tend to increase sentence severity in the final year of their terms, and there is a sharp decline in sentence severity just after their reelection. There are also many other studies that examine this cycle using sentencing and conviction cases, but most of them only consider how the decisions of incumbent judges and prosecutors are changed before their reelections and do not consider how that decision is changed after reelection (Huber et al., 2004; Bandyopadhyay and McCannon, 2014a; Bandyopadhyay and McCannon, 2014b; Dyke, 2007; McCannon, 2013). These studies show that incumbent judges tend to increase the length of a prison or jail sentence as their reelection nears (Huber et al., 2004), and incumbent prosecutors tend to increase the number of jury trial convictions and are more likely to convict with the most serious charges as their reelection nears (Bandyopadhyay et al., 2014a; Dyke, 2007).

Although there is a broad array of literature that examines whether a political business cycle exists in policy change or change in an incumbent elected officials’ own decision-making, there is limited evidence on whether this cycle also exists in bureaucratic decision-making influenced by the electoral incentives of incumbent elected officials. If incumbent politicians
manipulate policy or their own decision-making before their reelection to increase the possibility of their winning, it is also possible that they manipulate bureaucratic decision-making under their control in order to show their competence to voters. Although this hypothesis has not been studied yet, there are several studies that suggest that electoral incentives of incumbent politicians can be a factor influencing bureaucratic decision-making.

First of all, the tendency of credit-claiming by politicians suggested by Fiorina (1989) supports this possibility, suggesting that congressmen tend to use governmental resources actively to get support from the constituents in their district. He even suggests that congressmen tend to support a government program that is difficult to implement for bureaucracy, thereby helping constituents who confront problems with bureaucracy in using this program by putting the blame on bureaucracy for causing problems in the program’s implementation. Moreover, it suggests that governmental agencies also tend to accept that politicians use them just to appeal their competence to constituents (Fiorina and Noll, 1978). Second, there is one empirical study that shows the possibility that bureaucrats help their elected superior gain support from the constituents. Makowsky and Stratmann (2009) show that police officers are more likely to issue traffic citations to out-of-town and out-of-state drivers who are not the potential voters of local elections in their towns, thereby implying that police officers are discouraged from issuing citations to potential constituents of local politicians in their jurisdiction. These studies suggest that the effect of electoral incentives of incumbent elected officials on bureaucratic decision-making is a feasible causal mechanism. Particularly, given that many county and local level governments are governed by elected officials in the U.S., it can be hypothesized that these officials want to influence the decision of bureaucrats within their agencies to enhance the
probability of winning at reelection. However, this hypothesis has not been examined in any context.

**Hypotheses**

To fill the gap in literature, as suggested in the previous section, this study evaluates the effect of an electoral incentive of an incumbent elected superior on bureaucratic decision-making within the agencies, using the case of New York county sheriffs and arrest rates among their officers. Specifically, this study evaluates the following research questions: (1) whether arrest decisions of street-level officers are changed before reelection of an incumbent sheriff, (2) whether these changed arrest decisions of street-level officers return to status quo after reelection of an incumbent sheriff, and (3) whether changes in arrest decisions are more prominent with competitive reelections.

First, I hypothesize that the number of arrests conducted by officers increases before reelection of a sheriff and decreases after reelection.

*H1-1* The number of arrests will increase during a year before the reelection month of an incumbent sheriff.

*H1-2* The number of arrests will decrease right after the reelection month of an incumbent sheriff and will approach trend level.

Many studies on the political business cycle show that incumbent politicians manipulate policy or their own decision-making prior to their reelection to align with voters’ preference and change it back to trend level right after the reelection. Therefore, this study also expects that arrest decisions of officers are changed somehow before the reelection of a sheriff and return to an
average trend level after the reelection of a sheriff, as predicted by the political business cycle model. Particularly, it has been known that politicians in the criminal justice sector tend to appeal to voters by showing off their punitive nature (Blumstein, 2007; Berdejo et al., 2013; Huber et al., 2004; Bandyopadhyay et al., 2014a; Dyke, 2007). Therefore, we can assume that sheriffs would also try to show off their punitive measures as their election nears. One of the most direct ways to show their punitive tendency is by conducting more arrests. Therefore, it is expected that the number of arrests conducted by officers increases before reelection of a sheriff and reverts back to status quo after reelection.

My second hypothesis is that incumbent sheriffs may put more effort into increasing the number of arrests if they have a challenger in the reelection.

\[ H2 \text{ The number of arrests will increase at a higher rate during a year before the reelection month when there is at least one challenger against the incumbent, compared to an increase before the reelection month in the result for H1-1.} \]

If politicians expect that there will be at least one challenger against them at an upcoming reelection, they will experience higher pressure to show their competence before their reelection. Several studies also suggest that incumbent elected judges and prosecutors tend to change their behavior more prominently if they expect a challenger at the upcoming reelection (Berdejo et al., 2013; Bandyopadhyay et al., 2014a); for example, the study by Bandyopadhyay et al. (2014a) shows that prosecutors take more cases to jury trial when they run for reelection and there is a challenger against the incumbent, compared to those who expect a non-challenged reelection. Therefore, it is expected that arrest frequency increases at a higher rate if a sheriff expects a challenger in the upcoming reelection, compared to an increase in the result for H1-1.
My third hypothesis is that incumbent sheriffs may put more effort into increasing the number of arrests if they have a close contest with a challenger in the reelection.

H3  The number of arrests will increase at a higher rate during a year before a reelection month when the race between the incumbent and challenger(s) is a close contest, compared to an increase before the reelection month in the result for H2.

Incumbent politicians would feel even higher pressure if they expected a close contest with a challenger at the upcoming reelection. Several studies show that politicians are under higher electoral pressures as they expect higher electoral competitiveness at the upcoming reelection, and as a result, they are more likely to manipulate public spending or their own decision-making as voters desire (Ingram, 2013; Vergne, 2009; Gordon and Huber, 2007); for example, the study by Ingram (2013) shows that elected officials in Mexico increase public spending more as margins of victory decrease. By analogy, it is expected that arrest frequency increases at a higher rate if a sheriff expects a close contest with a challenger in the upcoming reelection, compared to an increase in the result for H2.

It should be noted that the third hypothesis is based on reelection logic, which is that politicians are more likely to be responsive to voters’ demands as the competition among candidates grows stronger (Ingram, 2016). There are opposite arguments to this reelection logic about politicians incentives, particularly in the area of judicial empowerment, which is that incumbent politicians are less likely to change their behavior or institutions when they have strong competition with their challengers because they have incentive to blind their true power so that they can earn the support from their competitor for their future preferred policy (Ingram, 2016; Ginsburg, 2003). However, this study focuses on reelection logic as many studies on the effect of the electoral cycle on judges’ and prosecutors’ decisions examine their hypotheses
based on reelection logic. Based on this reelection logic, this study assumes that an elected sheriff will be more likely to show off their competence as they expect stronger competition with a challenger.

**Research Design**

A panel design assessed changes in arrest rates around election cycles among 55 New York county sheriff departments from January 2000 to December 2013. A panel design takes advantage of different election cycles across the state and variation in the degree to which they are contested. Among a total of 62 counties in New York State, 7 counties do not have an election system for the sheriff, so they were excluded from the sample.¹

**Variables**

The outcome variable is the number of arrests conducted by a sheriff’s department per county and month. As described in the analytic methods below, the count is standardized by county population through the use of county-level fixed effects. The data on the number of arrests are collected from the Federal Bureau of Investigation’s Uniform Crime Reporting Program Data, maintained by the Inter-university Consortium for Political and Social Research. This data consists of a monthly number of arrests reported by each law enforcement agency in the U.S. The data includes arrest counts by age, sex, race, and offense type.

¹ 7 counties excluded from the sample are Bronx, Kings, Nassau, New York City, Queens, Richmond, and Westchester.
The main independent variables are reelection years, post-reelection years, and indicator variables for whether the election has a challenger (thus being contested) and whether the race between incumbent sheriff and challenger(s) is a close contest. In this study, the race is defined as a close contest if the percentage of the number of votes that the incumbent gets at that reelection among the total votes is smaller than 70%. This threshold was selected because among the 187 election cases in the current data, only 50 were challenged, and the 70% threshold yielded 30 closely-contested elections. Nevertheless, I conducted sensitivity analyses that use 50%, 60%, and 80% as thresholds, and the results are mostly robust across different thresholds except for the result of the analysis that uses 50% as the threshold.

Sheriff election data came from Board of Elections websites and from directly contacting staff when data was not available online. The local online news articles that had the information on unofficial election results were also used to collect election results of counties that did not keep official records of the past election results. The Annual New York State Red Book, which contains information on politicians and policy makers of state, county, and local governments, was also referred to in order to get the list of incumbent sheriffs.

Six control variables are used in this study. The first control variable is the number of arrests per month conducted by local police departments. In New York State, there are several local police departments that belong to each county that are governed by an appointed police chief, while the sheriff’s department is a county-level law enforcement agency that is governed by an elected sheriff. The number of arrests per month conducted by local police departments control for underlying factors that induced a change in the number of arrests of law enforcement agencies in each county, such as the occurrence of high-profile incidents or the county-level governmental decision affecting the decision of law enforcement agencies. The data on the
number of arrests conducted by local police departments are also collected from the Federal Bureau of Investigation’s Uniform Crime Reporting Program Data, maintained by the Inter-university Consortium for Political and Social Research.

The second control variable is the number of years that the incumbent sheriff served in office, to control for the possibility that an incumbent sheriff who serves for a long time in office is less likely to change their behavior according to electoral incentive compared to the incumbent sheriff who serves for a short time in office. To account for a non-linear relationship between the number of years of service and the number of arrests, this variable is used as a quadratic term in the model. The data on the number of years of service of an incumbent sheriff is also collected from general official election results of each county, the NYS Red Book, and several news articles about incumbent sheriffs.

Four additional variables that are commonly used in election cycle research control for the demographic and economic characteristics of each county: population density, male population, black population, and unemployment (Bandyopadhyay et al. 2014a; Ingram, 2013; Levitt, 1997; Akhmedov et al. 2004). Population density is the population number per year divided by the land area of 2010 in each county. The population data came from the Annual Estimates of the Resident Population for Counties of New York State on census.gov. The percentage of black and male residents at the county level was updated every 10 years (2000 and 2010), and this data was from the 2000 Published Census Volumes and 2010 Census Interactive Population Search. Since the data on population density and black and male population were not offered by month, I used linear interpolation to construct the data on monthly population density and monthly percentage of black and male residents. Finally, the monthly unemployment rate from the U.S. Bureau of Labor Statistics controlled for economic status.
**Model Specification**

Three models were used to examine the three questions, whether there were any changes prior to and after the reelection, and whether the presence of a challenger or the competitiveness of the reelection intensify the impact of reelection. For the primary analysis, these models used an ordinary least squares regression with county-level fixed effects to control for population size and other unobservable characteristics. Although this paper uses monthly data for every variable, basic model specification is designed to examine the quarterly change of arrest to simplify the model. Examining quarterly change is an advanced approach compared to prior studies on the electoral cycle that focus on annual variance of the decision of politicians (Dyke, 2007; Bandyopadhyay et al., 2014a).

The specification of each model is as follows:

(1) \[ \text{Arrest}_{it} = \alpha_0 + \alpha_1 \times Q_t + \alpha_2 \times \text{Reelection year}_{it} + \alpha_3 \times \text{Reelection Year}_{it} \times Q_t + \alpha_4 \times \text{Post reelection year}_{it} + \alpha_5 \times \text{Post reelection year}_{it} \times Q_t + \alpha_6 \times X_{it} + \alpha_7 \times C_{i} + \alpha_8 \times Y_t \]

In the equation (1), subscript \( i \) indicates county and subscript \( t \) indicates month. \( Q_t \) is dummy variables indicating the first quarter, the second quarter, and the third quarter. Quarter dummies are included for controlling seasonal variance of the number of arrests. Figure A1 in the Appendix shows that there is seasonal variance in monthly arrest rates of sheriff departments in New York State, suggesting that controlling for seasonality of arrests is necessary. Given that
local elections are held every November, this study considers November as the first month of each year for the purpose of defining quarters and years. Reelection year is a dummy variable coded as 1 if the time period is within 12 months before the reelection month in each county, and Post reelection year is a dummy variable coded as 1 if the time period is within 12 months after the reelection in each county. This study also includes interaction terms between Reelection year / Post reelection year and quarter dummies (Reelection Year*Q, and Post reelection year*Q). This is to examine the quarterly arrest change driven by the reelection incentive of the incumbent sheriff. X indicates the six control variables, Ci is county-fixed effects, and Yt is dummy variables for each year.

The second set of regressions tests whether the presence of a challenger intensifies the impact of reelection and takes the following form:

\[
(2) \quad \text{Arrest}_{it} = \beta_0 + \beta_1 \times Q_t + \beta_2 \times \text{Challenged reelection year}_{it} \\
+ \beta_3 \times \text{Challenged reelection year}_{it} \times Q_t \\
+ \beta_4 \times \text{Post challenged reelection year}_{it} \\
+ \beta_5 \times \text{Post challenged reelection year}_{it} \times Q_t \\
+ \beta_6 \times X_{it} + \beta_7 \times C_i + \beta_8 \times Y_t
\]

where Challenged reelection year is a dummy variable coded as 1 if the time period is within 12 months before the reelection month when there is at least one challenger against an incumbent sheriff, and Post challenged reelection year is a dummy variable coded as 1 if the time period is within 12 months after the reelection month when there is at least one challenger.

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2 Local elections including sheriff elections are held every November across counties in New York State: for example, Erie county sheriff elections were held in Nov. 2001, Nov. 2005, Nov. 2009, and Nov. 2013, etc., and Onondaga county sheriff elections were held in Nov. 2002, Nov. 2006, Nov. 2010, and Nov. 2014, etc.
The third set of regressions tests whether the competitiveness of the reelection intensifies the impact of reelection and takes the following form:

\[
\text{Arrest}_{it} = \gamma_0 + \gamma_1 \times Q_{it} + \gamma_2 \times \text{Competitive reelection year}_{it} \\
+ \gamma_3 \times \text{Competitive reelection year}_{it} \times Q_{it} \\
+ \gamma_4 \times \text{Post competitive reelection year}_{it} + \\
+ \gamma_5 \times \text{Post competitive reelection year}_{it} \times Q_{it} \\
+ \gamma_6 \times X_{it} + \gamma_7 \times C_i + \gamma_8 \times Y_{it}
\]

where \( \text{Competitive reelection year}_{it} \) is a dummy variable coded as 1 if the time period is within 12 months before the reelection month when the race between incumbent and challenger(s) is a close contest, and \( \text{Post competitive reelection year}_{it} \) is a dummy variable coded as 1 if the time period is within 12 months after the reelection month when the race is a close contest.

**Alternative Explanations**

I conducted three additional analyses for addressing alternative explanations on the effect of electoral cycle and electoral competitiveness in sheriff reelection on arrest behavior among officers. First, even if elected sheriffs try to influence the arrest decision according to their electoral incentive, it may not be possible to manipulate the arrest decision of officers if the arrest is for serious offenses. To address this, I limited the analysis to the number of arrests for serious offenses only, and then to the number of arrests for non-serious offenses only, and compared results to see whether the effect of electoral incentive on arrests for serious offenses is smaller than the effect on arrests for non-serious offenses. UCR data classifies the arrests according to the type of offenses that the arrestees committed, and these offenses can be
categorized into Part 1 offenses and Part 2 offenses. According to the FBI, Part 1 offenses consist of serious crimes that include criminal homicide, rape, robbery, aggravated assault, burglary, motor vehicle theft, and arson. Other offenses that are not included in Part 1 offenses, including fraud, drug abuse violations, gambling, etc., consist of Part 2 offenses. To ease the interpretation of the result, Part 1 offenses are named serious offenses and Part 2 offenses are named non-serious offenses in this paper.

Second, it is possible that sheriffs in rural versus urban areas would have different incentives in enforcing law. Given that Crank (1990) mentioned “community characteristics of rural area are more homogeneous, pro-police, and conservative” (p.169), local politicians of rural areas would have more incentive to apply their effort to forming amicable relationships with the citizens rather than applying more strict legalistic enforcement of law. Therefore, I expect that a change of arrest rate according to the electoral cycle is more prominent in an urban area compared to that of a rural area. I evaluated this by conducting the analyses for rural counties only and urban counties only and examining the difference in results. According to the U.S. Census Bureau, an urbanized area is defined as “50,000 or more people,” and “rural is all population, housing, and territory not included within an urban area.” Based on this criterion, 15 counties (27.3%) are categorized into rural, and 40 counties (72.7%) are categorized into urban areas.

Third, I conducted additional analyses for equation (3) using different thresholds in defining close contest between incumbent and challenger(s). Although this study uses 70% as the baseline threshold to define a close contest for a practical reason, the sensitivity analyses that use

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4 https://www.census.gov/geo/reference/ua/urban-rural-2010.html
50%, 60%, and 80% as alternative thresholds are conducted to check the robustness of the findings.

**Robustness Check**

I presented the robustness of the results by using alternative model specifications. I replicated all analyses using Poisson with fixed effects, OLS with fixed effects, and a log-transformed dependent variable, given that dependent variable of current study is count data and not perfectly normally distributed. The results of these sensitivity analyses are in Table A3 in the Appendix.

Finally, I conducted Multiple-Imputation to address the issue related to missing values in the number of arrests conducted by the sheriff department and local police department in the current UCR arrest data. Some agencies did not report the arrest counts every month, and it is possible that they just did not report it even if they had the arrest cases, or they did not report it because there was no arrest case for those months. Since it is not possible to confirm which reason accounts for missing records, the arrest counts for these specific agency-month observations are all replaced with missing values. I reported the main result that is based on a listwise deletion of observations with missing values and additionally conducted a Multiple-Imputation procedure to replace missing values with imputed values in order to check whether the result is still robust. The result of this sensitivity check is in Table A4 in the Appendix.
Results

County Characteristics

Table 1 shows the descriptive statistics of the number of arrests and demographic variables of the sample of this study. The average number of arrests conducted by officers of 55 sheriff departments in New York State from 2000 to 2013 is 67.24. Given that average number of arrests over 14 years for each county varied between 2.3 and 298.6, there is quite a big difference in average number of arrests conducted by the sheriff department across 55 counties in New York State. This table also shows that average number of arrests conducted by sheriff departments is almost five times smaller compared to that conducted by local police departments in each county (333.1).

There was a total of 187 sheriff elections in 55 counties in NYS from 2000 to 2013. Among them, 141 elections (75.4%) were reelections of incumbent sheriffs, and among 141 reelections, 50 reelections (35.5%) were contested reelections where there was at least one challenger against the incumbent sheriff.

Table 2 shows the bivariate analysis of unadjusted differences in the average number of arrests a year before reelection, a year after reelection, and during a non-reelection period. The mean arrests in these three periods are 70.4, 71.0, and 65.4, and the ANOVA test is statistically significant indicating these rates differ. The Bonferroni post-hoc test shows that while the average number of arrests for both a year before and a year after reelection month significantly

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This number of average arrests can be higher than it was supposed to be because it is possible that many zero value arrest counts are replaced with missing values.
differs from that of a non-reelection period, the average numbers of arrests between a year before and a year after reelection month are not significantly different.

Figure 1 shows the arrest trend more clearly. It shows an average number of arrests per capita that is centered on reelection month in each county from 12 months before and after reelection month. Zero at x-axis denotes the reelection month in each county. There is a similar cyclical trend both before and after the reelection month, suggesting that there is no big difference in arrest trends before and after the reelection month.

**Main Results on the Effect of Reelections of Sheriffs on Arrest Rates**

Table 3 shows the result of the baseline model for whether arrests change in the year before and after the reelection month. Specification 1 shows the result of analysis that only regresses main independent variables on average number of arrests, specification 2 adds controls, and specification 3 adds controls and year dummies to specification 1. The result of specification 1 shows that the coefficient of *Reelection year* is not statistically significant, which suggests that the average number of arrests for the first quarter in the reelection year is not significantly different with that of the non-reelection period ($\beta=-1.44$, $p=0.381$). None of the coefficients of interaction terms between *Reelection year* and quarter dummies are statistically significant (quarter 2: $\beta=-0.74$, $p=0.538$; quarter 3: $\beta=1.87$, $p=0.519$; quarter 4: $\beta=2.27$, $p=0.213$), suggesting that average number of arrests are similar in all time periods during a year before the reelection month.

The result for the post-reelection year also shows that the average number of arrests for the first quarter is not statistically different than that of the non-reelection period, given that the
coefficient of Post-reelection year is not statistically significant ($\beta=-0.06$, $p=0.968$). The interaction terms between Post-reelection year and quarter dummies are also not statistically significant (quarter 2: $\beta=0.64$, $p=0.755$; quarter 3: $\beta=2.44$, $p=0.465$; quarter 4: $\beta=2.06$, $p=0.484$), which means that average numbers of arrests for each quarter do not significantly differ during a year after reelection month. These results are not changed in specification 2 and 3 in terms of significance of the coefficients of main independent variables. These results of Table 3 show that the arrest decisions of officers are not significantly affected by the reelection incentive of incumbent sheriffs.

Table 4 shows the result of the regression analysis on whether average number of arrests per quarter is significantly changed for the period 12 months before and after the reelection month for the subset of elections when there is at least one challenger against incumbent sheriff (column 1) and when the race between challenger and incumbent is a close contest (column 2). I used a full model that includes the main independent variables, control variables, and year dummies. When restricting the analysis to these election cases, the null effect from Table 3 still holds, given that the coefficients of neither Reelection year and Post reelection year and interaction terms between these two main variables and quarter dummies are statistically significant. These results show that the effect of the reelection incentive of an incumbent sheriff is not intensified according to electoral competitiveness.

**Alternative Explanations**

The first sensitivity check, which stratifies results by arrests for Part 1 offenses (serious offenses) and arrests for Part 2 offenses (non-serious offenses), is in Table 5. The first column of
Table 5 shows the result of regression on average number of arrests for serious offenses of main independent variables in equation (1), and the second column shows the result of regression on average number of arrests for non-serious offenses of main independent variables, adjusting for county-fixed effects. Although the magnitudes of all the coefficients of interaction terms between *Reelection year* and quarter dummies for arrests for serious offenses (*Reelection year*: $\beta=0.03$, $p=0.944$; *Reelection year*\*quarter 2: $\beta=0.09$, $p=0.877$; *Reelection year*\*quarter 3: $\beta=0.49$, $p=0.545$; *Reelection year*\*quarter 4: $\beta=-0.04$, $p=0.943$) are smaller than those for non-serious offenses (*Reelection year*: $\beta=-2.05$, $p=0.142$; *Reelection year*\*quarter 2: $\beta=0.14$, $p=0.903$; *Reelection year*\*quarter 3: $\beta=2.46$, $p=0.331$; *Reelection year*\*quarter 4: $\beta=3.08$, $p=0.055$), none of them are statistically significant. The coefficients of *Post reelection year* and interaction terms between *Post reelection year* and quarter dummies are also not statistically significant for both serious and non-serious offenses. Further limiting the analysis to election cases with at least one challenger or a close race also yielded null results (see Table A1 in Appendix).

The second sensitivity check, which stratifies results by rural area and urban area, is in Table 6. The first and second column in Table 6 show that the coefficients of main independent variables are all statistically insignificant, which suggests that the result of Table 3 is robust even when considering urbanicity of counties. However, the results for the subsample of elections with at least one challenger in rural areas somewhat showed an expected pattern predicted by the political business cycle (column 3 and column 4 of Table 6) because the coefficient of the interaction term between *Reelection year* and the dummy for the second quarter is positive and significant, and the coefficients of interaction terms between *Post reelection year* and the dummies for the second and the fourth quarter are negative and significant. This can be interpreted that arrest counts of the sheriff departments in rural areas increase a few months
before the challenged reelection of the sheriff but decrease a few months after the challenged reelection, while arrest counts of those in urban area do not change before and after a challenged reelection. This may be evidence that sheriffs in rural areas tend to show more punitive tendency before their reelection compared to those in urban areas, when they expect a challenger in the upcoming reelection. Although this result is inconsistent with the original expectation, which is that change in arrest rates will be more prominent in urban areas, it requires caution towards accepting the result at face value, particularly given that the result that uses election cases with a close race yielded null results (see Table A2 in Appendix). To strengthen the evidence of significant change in arrest during an election cycle when there is at least one challenger in a rural area, therefore, there should be more studies that examine this difference of arrest counts between rural and urban areas in other states.

The third sensitivity check, which uses different thresholds (50%, 60%, and 80%) for the definition of a close contest between an incumbent and challenger(s), is in Table 7. The null effect still holds across different choices for thresholds of 60% and 80% as shown in the second and the third column of Table 7. Although there are significant coefficients of Post reelection year and interaction terms between Post Reelection year and quarter dummies when using 50% as a threshold in the first column of Table 7, there are only 3 cases that belong to close contest in this case, suggesting that it is difficult to infer from this result.

**Robustness Check**

The results of the robustness check, which use a Poisson model for count data and a log-transformed dependent variable, are in Table A3 in the Appendix. The first column shows the
result of Poisson with fixed effects, and the second column shows the result of OLS regression with fixed effects that use a log-transformed dependent variable. The results in both columns still show that most of the coefficients of main independent variables are not statistically significant, which suggests that the main result in Table 3 is robust across the alternative model specifications. Further limiting the analysis to election cases with at least one challenger or a close race also yielded null results (see from column 3 to column 6 in Table A3 in Appendix).

The final sensitivity checks, which use the Multiple-Imputation method for replacing missing values, are in Table A4 in the Appendix. The result shows that the coefficients of main independent variables of equation (1), (2), and (3) are all statistically insignificant even after missing values are replaced with alternative values generated by the Multiple Imputation method, which suggests that the results of Table 3 that are based on listwise deletion are robust.

**Discussion**

Although many studies have shown that the decisions of several governmental agencies are significantly influenced by policy preference or the political ideology of newly-elected officials after electoral events, we know little about whether decisions of governmental agencies are also influenced by electoral incentives of incumbent elected officials before electoral events. Using election cycles among New York sheriffs, this study examines whether reelections and the presence of challengers changes the number of arrests conducted by officers in their agencies. I find no evidence that sheriffs’ electoral incentives influence the average number of arrests under a range of alternative model specifications. These results are robust, with the null findings holding models that use main independent variables only, include controls, and include both
controls and year dummy. This finding holds when only considering reelections where there is a challenger and further considering reelections where the race between the incumbent and challenger(s) is a close contest. I also get the same null effects under different specifications: stratifying by serious offenses or non-serious offenses only, stratifying by rural versus urban counties, using different thresholds of 60% or 80% in defining close contests between incumbents and challengers for equation (3), and using different model specifications such as Poisson with fixed effects and OLS with fixed effects that used log-transformed dependent variables. The exceptions of the null effect are observed under the specification that uses subsample of reelections with at least one challenger in a rural area, showing a significant increase in two quarters before reelection and significant decrease in two and four quarters after reelection, and that uses 50% as a threshold in defining close contest, showing a significant decrease in average number of arrests in the post-reelection period.

This null effect has implications for under what circumstances politicians can or cannot exert significant influence in bureaucratic decision-making by taking a chance on electoral events. We know from previous studies that bureaucratic decision-making is significantly changed after an election according to policy preference or the political ideology of a newly-elected superior in many cases (Moe, 1982; Moe, 1985; Wood, 1988; Stewart Jr. et al., 1982; Wood et al., 1991). However, the finding of the current study suggests that bureaucratic decision-making is not influenced by their elected superiors if that influence is to enhance the electoral incentive of these superiors. While many studies on the political business cycle have shown that incumbent elected officials have strong motivation to manipulate policy or their own decision before their reelection (Rogoff, 1990; Rogoff et al., 1988; Akhmedov et al., 2004; Huber et al., 2004; Bandyopadhyay et al., 2014a; Bandyopadhyay et al., 2014b; Dyke, 2007;
McCannon, 2013), this study suggests that this motivation of elected officials is not enough to manipulate the discretionary decisions of their supervisees. This can be interpreted as the influence of policy preference of elected superiors of bureaucracy significantly changing what bureaucrats do, but their influences for enhancing individual electoral incentive cannot affect bureaucratic decision-making.

However, the null finding of this study may be caused by other reasons, which may be avenues for future research. First of all, there is a lack of competition in the sheriff election in NYS, which suggests that the sheriff in NYS may not have a strong incentive to show their competence to win at their upcoming reelection. The current data show that only 35.4% of total sheriff reelectios from 2000 to 2013 are challenged reelectios, and among these challenged reelectios, only 6% of them are an extremely competitive race when incumbents get less than 50% of votes among the total votes. Particularly, the result of a sensitivity analysis that uses 50% as a threshold in defining electoral competitiveness (the first column of Table 7) shows a somewhat expected pattern of the political business cycle because most of the coefficients of the variables indicating pre-reelection periods are positive and the coefficients of the variables indicating post-reelection periods are significant and negative. Although it is difficult to infer from this result, because there are only three reelection cases that are used in this analysis, this finding at least suggests the possibility that incumbent elected officials may significantly influence bureaucratic decision-making for enhancing their electoral incentives only when they expect strong competition with challengers. To figure out whether the effect of an electoral incentive on bureaucratic decision-making is conditional on electoral competitiveness, future studies need to examine the same research questions in different states with more competition in
sheriff elections or using different local agencies governed by elected officials where there is more competition in New York State.

Second, the characteristics of sheriff departments may be attributed to the null finding of the current finding. Sheriff departments have diverse duties including law enforcement, protection of the county court, maintaining the county jail and correctional facilities, and in some states, collecting many county taxes and fees (Falcon and Wells, 1995). This suggests that law enforcement activity may not be a major role of all sheriff departments. Therefore, even though a sheriff has a strong incentive to be sensitive to what the local constituents want, they may not try to show their qualities by enforcing law more rigorously. Particularly, given the lack of studies on sheriffs as locally-elected officials, we know very little about how strongly incumbent sheriffs are motivated to behave differently as their reelection nears or how they want to show their value to the voters. This motivates future studies on sheriffs as locally-elected officials and the sheriff department as local agencies.

Third, the null finding can be induced by the limitation of the data. The statistical power of this study is not strong given the small number of election cases in the current data. Although New York State has numerous counties, and I used a time span of 14 years, there are only 187 elections and 141 reelections of incumbent sheriffs during this period. Once I divide these election cases into several sub-categories according to whether the reelection is challenged and whether the race between incumbent and challenger(s) is a close contest, the number of elections for each sub-category becomes even smaller. Not only that, but the limitations that UCR arrest data have, including non-uniformed reporting system across the local police departments, the possibility of underreported statistics, and missing records (Adler, Mueller, and Laufer, 2007), may cause the bias in the result. Although this study does a sensitivity check by replicating the
main results after filling out missing values using the Multiple-Imputation method, there is still a possibility that the results of this study are biased because of other limitations in the UCR arrest data. To strengthen the evidence suggested in this study, therefore, future studies are necessary and ought to examine the same research question using the case of other agencies or other regions as previously suggested.

This study can be a starting point for expanding our knowledge on the political influence on bureaucratic decision-making. First of all, this study is helpful to understand which aspects of political influence determine bureaucratic decision-making by suggesting an opportunity to compare the influences of policy preferences of politicians and influences of electoral incentives of politicians. While there have been studies that examine what types of bureaucratic decisions are subject to political influence (Winter, 2003; May and Winter, 2007), what aspects of political influence can significantly change bureaucratic decision-making have not been considered. This study further contributes to prior knowledge by questioning whether political influence on bureaucracy is always desirable even when politicians opportunistically manipulate bureaucratic decision-making by taking a chance on election. According to Scholz, Twombly, and Headrick (1991), “few political scientists would argue with the proposition that politics has a tremendous impact on the behavior of government bureaucracies. There is less agreement, however, on exactly how politics influence bureaucratic behavior and whether the influence is good or bad” (p. 84). This study attempts to fill this gap by asking whether politicians are gaming in using their power to control bureaucracy just to enhance their electoral incentive.
Acknowledgement

The author would like to acknowledge the contributions of Dr. Shawn Bushway and Dr. Matthew Ingram in developing the idea, design, and model specification for this work. The current study evolved out of their project that examined the effect of sheriff election cycles on arrests in NY. The author would also like to thank Dr. Patricia Strach, Dr. Erika Martin, and Dr. Ellen Rubin for helpful comments on draft versions of this paper.
### Tables and Figure

Table 1. Descriptive statistics of the number of arrests and demographic characteristics of 55 counties in New York State, 2000 to 2013

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Across counties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
</tr>
<tr>
<td><strong>Average number of arrests per month in each county</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheriff department</td>
<td>67.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Part 1 offenses</td>
<td>12.5</td>
<td>0</td>
</tr>
<tr>
<td>Part 2 offenses</td>
<td>54.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Local Police Departments</td>
<td>333.1</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Average number of arrests per month in each county, adjusted by county population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheriff department</td>
<td>0.0006</td>
<td>0.00004</td>
</tr>
<tr>
<td>Part 1 offenses</td>
<td>0.0001</td>
<td>0</td>
</tr>
<tr>
<td>Part 2 offenses</td>
<td>0.0005</td>
<td>0.0003</td>
</tr>
<tr>
<td>Local Police Departments</td>
<td>0.002</td>
<td>0.0005</td>
</tr>
<tr>
<td><strong>Demographics (in each county)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population (person)</td>
<td>160,618</td>
<td>5,043.4</td>
</tr>
<tr>
<td>Black population percentage</td>
<td>4.3</td>
<td>0.58</td>
</tr>
<tr>
<td>Male population percentage</td>
<td>49.8</td>
<td>48.0</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>6.2</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.7</td>
</tr>
</tbody>
</table>
Table 2. Unadjusted comparison of average number of arrests among the period one year before reelection, the period one year after reelection, and non-reelection period, using one-way ANOVA test

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Frequency</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The period one year before the reelection month</td>
<td>70.4</td>
<td>65.9</td>
<td>1,556</td>
<td></td>
</tr>
<tr>
<td>The period one year after the reelection month</td>
<td>71</td>
<td>71.3</td>
<td>1,430</td>
<td>6.38**</td>
</tr>
<tr>
<td>Non-reelection period</td>
<td>65.4</td>
<td>63.5</td>
<td>5,490</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>67.2</td>
<td>65.4</td>
<td>9,240</td>
<td></td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001
Figure 1. The trend of average number of arrests per capita for 12 months before and after reelection month in 55 counties in New York State, 2000 to 2013

Note: This figure shows average number of arrests per capita that is centered on the reelection month in each county from 12 months before and after the reelection month. 0 at x-axis denotes the reelection month, -1 to -12 at x-axis denotes one to twelve months before the reelection month, and 1 to 12 at x-axis denotes one to twelve months after the reelection month in each county.
Table 3. The change of average number of arrests per quarter conducted by officers of sheriff departments for the period 12 months before and after reelection month, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Specification 1</th>
<th>Specification 2</th>
<th>Specification 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β (standard error)</td>
<td>β (standard error)</td>
<td>β (standard error)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>2.52*** (0.65)</td>
<td>2.58*** (0.64)</td>
<td>2.48** (0.68)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>11.83*** (1.63)</td>
<td>11.12*** (1.55)</td>
<td>11.28*** (1.43)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>8.62*** (1.13)</td>
<td>7.65*** (1.12)</td>
<td>7.83*** (1.04)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>-1.44 (1.63)</td>
<td>-1.64 (1.63)</td>
<td>-2.02 (1.63)</td>
</tr>
<tr>
<td>Reelection year * Quarter 2</td>
<td>-0.74 (1.19)</td>
<td>-0.79 (1.30)</td>
<td>0.23 (1.36)</td>
</tr>
<tr>
<td>Reelection year * Quarter 3</td>
<td>1.87 (2.88)</td>
<td>1.89 (2.98)</td>
<td>2.95 (3.03)</td>
</tr>
<tr>
<td>Reelection year * Quarter 4</td>
<td>2.27 (1.80)</td>
<td>2.00 (1.91)</td>
<td>3.04 (1.87)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>-0.06 (1.41)</td>
<td>-0.17 (1.29)</td>
<td>0.21 (1.23)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 2</td>
<td>0.64 (2.05)</td>
<td>1.10 (2.03)</td>
<td>0.82 (1.86)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 3</td>
<td>2.44 (3.31)</td>
<td>2.83 (3.16)</td>
<td>2.51 (3.18)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 4</td>
<td>2.06 (2.92)</td>
<td>2.47 (2.86)</td>
<td>2.19 (2.71)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.002 (0.008)</td>
<td>0.002 (0.007)</td>
<td></td>
</tr>
<tr>
<td>Population density</td>
<td>0.07 (0.06)</td>
<td>0.08 (0.05)</td>
<td></td>
</tr>
<tr>
<td>Black population</td>
<td>0.80 (5.36)</td>
<td>3.94 (5.27)</td>
<td></td>
</tr>
<tr>
<td>Male population</td>
<td>-4.53 (6.26)</td>
<td>1.44 (5.45)</td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.95* (0.47)</td>
<td>-0.55 (0.80)</td>
<td></td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>-0.003 (0.006)</td>
<td>0.002 (0.006)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>61.38*** (0.83)</td>
<td>272.00 (294.43)</td>
<td>-39.89 (254.723)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.006</td>
<td>0.203</td>
<td>0.209</td>
</tr>
<tr>
<td>Obs.</td>
<td>8476</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Note: This table shows OLS results of equation (1). Specification 1 shows the result of analysis that only regresses main independent variables on average number of arrests, and specification 2 adds controls and specification 3 adds controls and year dummy to specification 1. The standard errors in the parentheses are cluster-robust standard error.

The reason that the number of observations of specifications 2 and 3 are different with that of specification 1 is because the observations that have missing values in Total number of arrests by local PD are deleted in specification 2 and 3.
Table 4. The change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year among challenged and competitive reelection, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Challenged Reelection</th>
<th>Competitive Reelection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β (s.e.)</td>
<td>β (s.e.)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>2.26** (0.62)</td>
<td>2.38*** (0.62)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>11.83*** (1.71)</td>
<td>12.11*** (1.72)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>8.38*** (1.02)</td>
<td>8.44*** (1.05)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>-3.00 (3.87)</td>
<td>-3.20 (2.65)</td>
</tr>
<tr>
<td>Reelection Year *Quarter2</td>
<td>0.87 (2.58)</td>
<td>3.54 (2.38)</td>
</tr>
<tr>
<td>Reelection Year *Quarter3</td>
<td>0.91 (3.40)</td>
<td>1.68 (4.44)</td>
</tr>
<tr>
<td>Reelection Year *Quarter4</td>
<td>2.20 (3.58)</td>
<td>4.42 (4.45)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>1.56 (2.53)</td>
<td>1.98 (2.79)</td>
</tr>
<tr>
<td>Post reelection year *Quarter2</td>
<td>5.49 (4.11)</td>
<td>2.09 (2.48)</td>
</tr>
<tr>
<td>Post reelection year *Quarter3</td>
<td>5.82 (5.81)</td>
<td>1.30 (4.57)</td>
</tr>
<tr>
<td>Post reelection year *Quarter4</td>
<td>4.11 (6.51)</td>
<td>2.75 (4.66)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>0.08 (0.05)</td>
<td>0.09 (0.05)</td>
</tr>
<tr>
<td>Black population</td>
<td>3.89 (5.28)</td>
<td>3.86 (5.28)</td>
</tr>
<tr>
<td>Male population</td>
<td>1.44 (5.48)</td>
<td>1.39 (5.49)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.54 (0.78)</td>
<td>-0.53 (0.79)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-39.61 (256.04)</td>
<td>-37.27 (256.95)</td>
</tr>
<tr>
<td>R-Squared</td>
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<td>0.207</td>
</tr>
<tr>
<td>Obs.</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001
Note: This table shows OLS results of equation (2) and (3). This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table 5. Sensitivity analyses of the change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year, stratified by offense type, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Serious offenses β (s.e.)</th>
<th>Non-serious offenses β (s.e.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 2</td>
<td>-0.71 (0.36)</td>
<td>3.19*** (0.58)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>0.56 (0.31)</td>
<td>10.72*** (1.34)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>0.87** (0.28)</td>
<td>6.97*** (0.91)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>0.03 (0.49)</td>
<td>-2.05 (1.38)</td>
</tr>
<tr>
<td>Reelection Year *Quarter2</td>
<td>0.09 (0.61)</td>
<td>0.14 (1.14)</td>
</tr>
<tr>
<td>Reelection Year *Quarter3</td>
<td>0.49 (0.80)</td>
<td>2.46 (2.51)</td>
</tr>
<tr>
<td>Reelection Year *Quarter4</td>
<td>-0.04 (0.62)</td>
<td>3.08 (1.57)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>0.003 (0.39)</td>
<td>0.21 (1.08)</td>
</tr>
<tr>
<td>Post reelection year *Quarter2</td>
<td>-0.41 (0.45)</td>
<td>1.22 (1.74)</td>
</tr>
<tr>
<td>Post reelection year *Quarter3</td>
<td>0.11 (0.56)</td>
<td>2.40 (3.03)</td>
</tr>
<tr>
<td>Post reelection year *Quarter4</td>
<td>-0.37 (0.47)</td>
<td>2.56 (2.59)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.001 (0.001)</td>
<td>0.001 (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>-0.01 (0.01)</td>
<td>0.09 (0.06)</td>
</tr>
<tr>
<td>Black population</td>
<td>1.29 (1.02)</td>
<td>2.65 (5.31)</td>
</tr>
<tr>
<td>Male population</td>
<td>0.36 (1.49)</td>
<td>1.09 (5.84)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.07 (0.14)</td>
<td>-0.48 (0.71)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>0.001 (0.002)</td>
<td>0.001 (0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-9.86 (71.58)</td>
<td>-30.03 (272.73)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.135</td>
<td>0.193</td>
</tr>
<tr>
<td>Obs.</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Note: This table shows OLS results of equation (1), stratified by offense type. This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table 6. Sensitivity analyses of the change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year, stratified by urbanicity, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Rural β (s.e.)</th>
<th>Urban β (s.e.)</th>
<th>Rural β (s.e.)</th>
<th>Urban β (s.e.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 2</td>
<td>1.05 (0.55)</td>
<td>3.11** (0.91)</td>
<td>0.74 (0.50)</td>
<td>2.93** (0.82)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>5.89*** (1.03)</td>
<td>12.73*** (1.81)</td>
<td>5.51*** (1.10)</td>
<td>13.75*** (2.19)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>4.83** (1.09)</td>
<td>8.16*** (1.26)</td>
<td>4.99*** (1.06)</td>
<td>8.88*** (1.23)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>0.13 (1.50)</td>
<td>-2.61 (2.05)</td>
<td>0.52 (1.25)</td>
<td>-3.59 (4.75)</td>
</tr>
<tr>
<td>Relection Year *Quarter2</td>
<td>0.67 (1.30)</td>
<td>0.02 (1.82)</td>
<td>6.29* (2.63)</td>
<td>-0.36 (3.16)</td>
</tr>
<tr>
<td>Relection Year *Quarter3</td>
<td>0.28 (1.87)</td>
<td>3.91 (4.00)</td>
<td>1.17 (1.34)</td>
<td>0.46 (4.28)</td>
</tr>
<tr>
<td>Relection Year *Quarter4</td>
<td>1.00 (1.54)</td>
<td>3.65 (2.43)</td>
<td>1.63 (1.45)</td>
<td>2.36 (4.58)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>3.03 (1.58)</td>
<td>-0.70 (1.50)</td>
<td>5.46 (2.06)</td>
<td>1.05 (3.06)</td>
</tr>
<tr>
<td>Post reelection year *Quarter2</td>
<td>-0.76 (1.96)</td>
<td>1.39 (2.47)</td>
<td>-0.19* (1.25)</td>
<td>6.60 (4.88)</td>
</tr>
<tr>
<td>Post reelection year *Quarter3</td>
<td>-3.17 (2.17)</td>
<td>4.82 (4.23)</td>
<td>-2.85 (2.34)</td>
<td>7.10 (6.88)</td>
</tr>
<tr>
<td>Post reelection year *Quarter4</td>
<td>-1.87 (1.75)</td>
<td>3.72 (3.59)</td>
<td>-7.51* (2.72)</td>
<td>6.30 (7.51)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.03* (0.01)</td>
<td>0.002 (0.01)</td>
<td>0.03* (0.01)</td>
<td>0.002 (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>1.94* (0.84)</td>
<td>0.09 (0.05)</td>
<td>1.77* (0.78)</td>
<td>0.08 (0.05)</td>
</tr>
<tr>
<td>Black population</td>
<td>-3.49 (4.17)</td>
<td>7.13 (6.21)</td>
<td>-4.00 (4.10)</td>
<td>7.11 (6.20)</td>
</tr>
<tr>
<td>Male population</td>
<td>3.17 (4.30)</td>
<td>0.05 (9.43)</td>
<td>3.95 (4.23)</td>
<td>0.14 (9.53)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.27 (0.36)</td>
<td>-1.48 (1.33)</td>
<td>-0.23 (0.34)</td>
<td>-1.47 (1.30)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>-0.004 (0.003)</td>
<td>0.01 (0.01)</td>
<td>-0.004 (0.003)</td>
<td>0.01 (0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-249.83 (212.71)</td>
<td>22.72 (452.83)</td>
<td>-276.60 (205.30)</td>
<td>18.06 (457.83)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.313</td>
<td>0.177</td>
<td>0.323</td>
<td>0.177</td>
</tr>
<tr>
<td>Obs.</td>
<td>2195</td>
<td>6161</td>
<td>2195</td>
<td>6161</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Note: This table shows OLS results of equation (1) and (2), stratified by urbanicity. This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table 7. Sensitivity analyses of the change of average number of arrests per quarter conducted by officers of sheriff departments for the period 12 months before and after reelection month using different thresholds to define close contest between incumbent and challenger(s), New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>50%: 3 cases</th>
<th>60%: 23 cases</th>
<th>80%: 47 cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β (s.e.)</td>
<td>β (s.e.)</td>
<td>β (s.e.)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>2.70*** (0.62)</td>
<td>2.49*** (0.61)</td>
<td>2.20** (0.60)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>12.30*** (1.72)</td>
<td>12.30*** (1.72)</td>
<td>11.77*** (1.73)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>8.83*** (1.15)</td>
<td>8.58*** (1.07)</td>
<td>8.37*** (1.06)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>10.05** (3.23)</td>
<td>-6.12 (4.36)</td>
<td>-2.77 (3.19)</td>
</tr>
<tr>
<td>Reelection Year *Quarter2</td>
<td>0.78 (1.87)</td>
<td>4.90 (3.01)</td>
<td>1.03 (2.32)</td>
</tr>
<tr>
<td>Reelection Year *Quarter3</td>
<td>2.34 (3.60)</td>
<td>4.03 (6.06)</td>
<td>1.01 (3.41)</td>
</tr>
<tr>
<td>Reelection Year *Quarter4</td>
<td>-1.70 (1.71)</td>
<td>6.75 (6.16)</td>
<td>1.36 (3.44)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>16.57*** (2.43)</td>
<td>3.97 (3.21)</td>
<td>0.87 (2.46)</td>
</tr>
<tr>
<td>Post reelection year *Quarter2</td>
<td>-12.47 (8.79)</td>
<td>0.59 (2.88)</td>
<td>6.43 (4.11)</td>
</tr>
<tr>
<td>Post reelection year *Quarter3</td>
<td>-18.19* (8.66)</td>
<td>-6.33 (4.17)</td>
<td>6.84 (5.84)</td>
</tr>
<tr>
<td>Post reelection year *Quarter4</td>
<td>-15.88*** (3.35)</td>
<td>-0.21 (5.09)</td>
<td>5.34 (6.52)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>0.08 (0.05)</td>
<td>0.08 (0.05)</td>
<td>0.08 (0.05)</td>
</tr>
<tr>
<td>Black population</td>
<td>3.98 (5.29)</td>
<td>3.94 (5.30)</td>
<td>3.85 (5.29)</td>
</tr>
<tr>
<td>Male population</td>
<td>1.27 (5.47)</td>
<td>1.42 (5.46)</td>
<td>1.44 (5.50)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.52 (0.80)</td>
<td>-0.52 (0.79)</td>
<td>-0.54 (0.79)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
<td>0.002 (0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-32.25 (255.79)</td>
<td>-39.31 (255.42)</td>
<td>-39.57 (257.03)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.210</td>
<td>0.209</td>
<td>0.208</td>
</tr>
<tr>
<td>Obs.</td>
<td>8356</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001
Note: This table shows OLS results of equation (3) that each uses different thresholds to define close contest between incumbent and challenger(s). This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
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*Presidential Studies Quarterly* 12(4): 568-573


United States Department of Labor. Bureau of Labor Statistics. *Unemployment Rate* [Data file], Retrieved from

Winter, Søren C. 2003. “Political Control, Street-level Bureaucrats and Information Asymmetry in Regulatory and Social Policies,” Paper presented at the annual meeting of the Association for Public Policy Analysis and Management held in Washington DC, November 6-8, Copenhagen, Denmark: Danish National Institute of Social Research,


APPENDIX

Figure A1. The trend of average number of arrests of 55 counties per calendar month for detecting seasonal variance, New York State, 2000 to 2013

Note: To detect seasonal variance of the average number of arrests that are not affected by the reelection incentive of an incumbent sheriff, the arrest data after dropping 12 months of the reelection year are used to create this figure.
Table A1. The change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year by considering electoral competitiveness and the offense type, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th></th>
<th>Challenged reelection</th>
<th>Competitive reelection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Serious offense β (s.e)</td>
<td>Non-serious offense β (s.e)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>-0.71* (0.31)</td>
<td>2.97*** (0.52)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>0.70* (0.31)</td>
<td>11.13*** (1.51)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>0.88** (0.24)</td>
<td>7.50*** (0.90)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>0.20 (1.00)</td>
<td>-3.20 (3.35)</td>
</tr>
<tr>
<td>Relection Year *Quarter2</td>
<td>0.04 (1.36)</td>
<td>0.83 (2.19)</td>
</tr>
<tr>
<td>Relection Year *Quarter3</td>
<td>0.36 (1.35)</td>
<td>0.55 (3.05)</td>
</tr>
<tr>
<td>Relection Year *Quarter4</td>
<td>-0.07 (1.12)</td>
<td>2.27 (3.23)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>0.66 (1.05)</td>
<td>0.90 (2.11)</td>
</tr>
<tr>
<td>Post reelection year *Quarter2</td>
<td>-0.85 (0.85)</td>
<td>6.34 (4.04)</td>
</tr>
<tr>
<td>Post reelection year *Quarter3</td>
<td>-0.78 (0.65)</td>
<td>6.60 (5.73)</td>
</tr>
<tr>
<td>Post reelection year *Quarter4</td>
<td>-1.09 (0.85)</td>
<td>5.20 (6.20)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.001 (0.001)</td>
<td>0.001 (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>-0.01 (0.01)</td>
<td>0.09 (0.06)</td>
</tr>
<tr>
<td>Black population</td>
<td>1.28 (1.01)</td>
<td>2.61 (5.30)</td>
</tr>
<tr>
<td>Male population</td>
<td>0.35 (1.49)</td>
<td>1.09 (5.83)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.06 (0.14)</td>
<td>-0.48 (0.70)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>0.001 (0.002)</td>
<td>0.001 (0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>-9.81 (71.66)</td>
<td>-29.79 (272.26)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.139</td>
<td>0.193</td>
</tr>
<tr>
<td>Obs.</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Note: This table shows OLS results of equation (2) and (3), stratified by offense type. This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table A2. The change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year by considering electoral competitiveness and urbanicity, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th></th>
<th>Competitive reelection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural $\beta$ (s.e)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>0.83 (0.55)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>5.68*** (1.15)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>4.89*** (1.02)</td>
</tr>
<tr>
<td>Reelection year</td>
<td>1.14 (1.56)</td>
</tr>
<tr>
<td>Reelection Year *Quarter 2</td>
<td>6.90* (2.88)</td>
</tr>
<tr>
<td>Reelection Year *Quarter 3</td>
<td>-1.49 (1.37)</td>
</tr>
<tr>
<td>Reelection Year *Quarter 4</td>
<td>1.15 (1.72)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>5.24 (2.70)</td>
</tr>
<tr>
<td>Post reelection year *Quarter 2</td>
<td>-1.83 (1.18)</td>
</tr>
<tr>
<td>Post reelection year *Quarter 3</td>
<td>-5.68* (2.60)</td>
</tr>
<tr>
<td>Post reelection year *Quarter 4</td>
<td>-6.11* (2.69)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.03* (0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>1.74 (0.81)</td>
</tr>
<tr>
<td>Black population</td>
<td>-3.39 (4.22)</td>
</tr>
<tr>
<td>Male population</td>
<td>3.23 (4.25)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.24 (0.34)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>-0.003 (0.003)</td>
</tr>
<tr>
<td>Constant</td>
<td>-239.81 (209.59)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.313</td>
</tr>
<tr>
<td>Obs.</td>
<td>2195</td>
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</table>

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Note: This table shows OLS results of equation (3), stratified by urbanicity. This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table A3. The change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year using alternative specifications, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th></th>
<th>Basic model (Equation 1)</th>
<th>Challenged reelection (Equation 2)</th>
<th>Competitive reelection (Equation 3)</th>
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<tr>
<td></td>
<td>Poisson $e^\beta$ (s.e)</td>
<td>Log-transformed $\beta$ (s.e)</td>
<td>Poisson $e^\beta$ (s.e)</td>
</tr>
<tr>
<td>Quarter 2</td>
<td>1.05*** (0.01)</td>
<td>0.06** (0.02)</td>
<td>1.04*** (0.01)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.05*** (0.01)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>1.18*** (0.02)</td>
<td>0.19*** (0.02)</td>
<td>1.19*** (0.03)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.19*** (0.03)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>1.11*** (0.02)</td>
<td>0.15*** (0.02)</td>
<td>1.12*** (0.02)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.12*** (0.02)</td>
</tr>
<tr>
<td>Relection year</td>
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<td>0.99 (0.04)</td>
<td>0.99 (0.05)</td>
</tr>
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<td>*Quarter 2</td>
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<td>-0.02 (0.03)</td>
<td>1.01 (0.03)</td>
</tr>
<tr>
<td>Relection Year</td>
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<td>0.003 (0.04)</td>
<td>0.98 (0.04)</td>
</tr>
<tr>
<td>*Quarter 3</td>
<td>1.03 (0.03)</td>
<td>0.02 (0.04)</td>
<td>1.00 (0.04)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>1.01 (0.02)</td>
<td>0.03 (0.03)</td>
<td>1.04 (0.03)</td>
</tr>
<tr>
<td>*Quarter 2</td>
<td>1.01 (0.03)</td>
<td>-0.02 (0.03)</td>
<td>1.05 (0.03)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>1.02 (0.04)</td>
<td>-0.03 (0.04)</td>
<td>1.01 (0.04)</td>
</tr>
<tr>
<td>*Quarter 3</td>
<td>1.02 (0.03)</td>
<td>-0.05 (0.03)</td>
<td>1.01 (0.05)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>1.00 (0.00004)</td>
<td>-1.91e-06 (0.00001)</td>
<td>1.00 (0.00004)</td>
</tr>
<tr>
<td>*Quarter 4</td>
<td></td>
<td></td>
<td>1.00 (0.00004)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>1.11 (0.07)</td>
<td>0.20 (0.12)</td>
<td>1.11 (0.07)</td>
</tr>
<tr>
<td>Population density</td>
<td>1.00 (0.0001)</td>
<td>0.002* (0.001)</td>
<td>1.00 (0.0001)</td>
</tr>
<tr>
<td>Black population</td>
<td>0.98 (0.09)</td>
<td>-0.19 (0.12)</td>
<td>0.98 (0.09)</td>
</tr>
<tr>
<td>Male population</td>
<td>0.97* (0.01)</td>
<td>-0.01 (0.01)</td>
<td>0.97* (0.01)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>1.00 (0.0001)</td>
<td>0.00002 (0.00001)</td>
<td>1.00 (0.00001)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>-</td>
<td>11.75 (5.66)</td>
<td>-11.77* (5.67)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log- pseudolikelihood</td>
<td>-4666.89</td>
<td>-46614.31</td>
<td>-46657.12</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.135</td>
<td>0.134</td>
<td>0.134</td>
</tr>
<tr>
<td>Obs.</td>
<td>8356</td>
<td>8356</td>
<td>8356</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001  
Note: This result is based on the model that includes main independent variables, controls, and year dummy. The standard errors in the parentheses are cluster-robust standard error.
Table A4. The change of average number of arrests per quarter conducted by officers of sheriff departments in the reelection year and in the post reelection year by replacing missing value using the Multiple Imputation, New York State, 2000 to 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Relection</th>
<th>Challenged reelection</th>
<th>Competitive reelection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 2</td>
<td>2.27*</td>
<td>2.13*</td>
<td>2.29*</td>
</tr>
<tr>
<td></td>
<td>(1.01)</td>
<td>(0.89)</td>
<td>(0.85)</td>
</tr>
<tr>
<td>Quarter 3</td>
<td>10.95**</td>
<td>11.48***</td>
<td>11.85***</td>
</tr>
<tr>
<td></td>
<td>(1.58)</td>
<td>(1.80)</td>
<td>(1.76)</td>
</tr>
<tr>
<td>Quarter 4</td>
<td>7.85**</td>
<td>8.41***</td>
<td>8.56***</td>
</tr>
<tr>
<td></td>
<td>(1.28)</td>
<td>(1.24)</td>
<td>(1.23)</td>
</tr>
<tr>
<td>Relection year</td>
<td>-1.89</td>
<td>-2.21</td>
<td>-1.56</td>
</tr>
<tr>
<td></td>
<td>(2.11)</td>
<td>(4.36)</td>
<td>(3.08)</td>
</tr>
<tr>
<td>Relection Year * Quarter 2</td>
<td>1.11</td>
<td>0.87</td>
<td>2.37</td>
</tr>
<tr>
<td></td>
<td>(2.03)</td>
<td>(3.34)</td>
<td>(3.44)</td>
</tr>
<tr>
<td>Relection Year * Quarter 3</td>
<td>3.17</td>
<td>0.65</td>
<td>-0.18</td>
</tr>
<tr>
<td></td>
<td>(3.14)</td>
<td>(4.36)</td>
<td>(4.90)</td>
</tr>
<tr>
<td>Relection Year * Quarter 4</td>
<td>3.66</td>
<td>2.48</td>
<td>3.26</td>
</tr>
<tr>
<td></td>
<td>(2.42)</td>
<td>(4.55)</td>
<td>(4.80)</td>
</tr>
<tr>
<td>Post reelection year</td>
<td>1.07</td>
<td>3.64</td>
<td>3.60</td>
</tr>
<tr>
<td></td>
<td>(1.76)</td>
<td>(2.77)</td>
<td>(3.38)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 2</td>
<td>-0.31</td>
<td>3.05</td>
<td>-0.43</td>
</tr>
<tr>
<td></td>
<td>(2.23)</td>
<td>(4.18)</td>
<td>(3.37)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 3</td>
<td>1.70</td>
<td>4.22</td>
<td>-0.39</td>
</tr>
<tr>
<td></td>
<td>(3.20)</td>
<td>(5.57)</td>
<td>(4.95)</td>
</tr>
<tr>
<td>Post reelection year * Quarter 4</td>
<td>0.57</td>
<td>-0.13</td>
<td>-2.08</td>
</tr>
<tr>
<td></td>
<td>(3.13)</td>
<td>(6.45)</td>
<td>(5.91)</td>
</tr>
<tr>
<td>The number of arrests by local PD</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Population density</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Black population</td>
<td>4.27</td>
<td>4.26</td>
<td>4.33</td>
</tr>
<tr>
<td></td>
<td>(4.81)</td>
<td>(4.85)</td>
<td>(4.81)</td>
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<tr>
<td>Male population</td>
<td>-0.72</td>
<td>-0.67</td>
<td>-0.72</td>
</tr>
<tr>
<td></td>
<td>(5.15)</td>
<td>(5.23)</td>
<td>(5.21)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.30</td>
<td>-0.28</td>
<td>-0.27</td>
</tr>
<tr>
<td></td>
<td>(0.76)</td>
<td>(0.75)</td>
<td>(0.76)</td>
</tr>
<tr>
<td>Years of service (squared)</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Constant</td>
<td>66.90</td>
<td>64.30</td>
<td>66.18</td>
</tr>
<tr>
<td></td>
<td>(242.59)</td>
<td>(246.39)</td>
<td>(245.64)</td>
</tr>
<tr>
<td># of imputation</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Average RVI</td>
<td>52.03(^7)</td>
<td>46.44</td>
<td>57.36</td>
</tr>
<tr>
<td>Obs.</td>
<td>9240</td>
<td>9240</td>
<td>9240</td>
</tr>
</tbody>
</table>

\(^7\) High value of Average RVI is caused by the variable of The number of arrests by local PD that also has missing values. The Average RVI was less than 0.3 in the model that did not include The number of arrests by local PD in the analysis.