After It's Too Late: Estimating the Policy Impacts of Black Mayors Using Regression Discontinuity Design

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June 11th, 2010

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Abstract

Does the election of a black mayor influence a city's subsequent fiscal or employment policies? Theheatedrhetoricsurroundingelectionscontestedbyblackandwhitecandidates suggests that it might. Yet this question has not been addressed by researchers in a decade, and never with more than 20 observations of black mayoralties. This paper uses two novel data sets including 108 separate black mayors to examine their impact on fiscal and employment policies. Empirically, it uses regression discontinuity design. In the vast majority of observable policy areas, the narrow election of a black mayor leads to policies that are indistinguishable from cities where black candidates lose. Police hiring, pay, and diversity represent the likely exceptions. These results suggest a disconnect between the racially polarized elections that produce black mayors and the governance that follows. They also reinforce the centrality of criminal justice as a contested urban political issue.
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Introduction

In Los Angeles's 1969 mayoral campaign, one memorable attack was about public safety, with newspaper advertisements showing Tom Bradley's picture and asking: "Will Your City Be Safe with This Man?"(Sonenshein, 1993, pg. 91). The rhetoric in other cities was no less hysterical, from the 1973 slogan that "Atlanta's too young to die"(Stone, 1989, pg. 80) to a 1983 Chicago candidate's warning to support him, "Before It's Too Late." When big-city mayoral elections pit black and white candidates against one another, the rhetoric is frequently alarmist, especially in cities with no history of black mayors (Hajnal, 2007). This paper examines the fiscal and employment policies that follow the contentious election. Do black mayors actually govern large U.S. cities in ways that are observably different from white mayors?

Whether the answer is yes or no, it will challenge at least one prominent theoretical approach to urban politics. Not long after the election of the first black, big-city mayors in 1967, observers began to question whether control over cities was a "hollow prize" given their fiscal and economic dependence (Friesema, 1969; Kraus and Swanstrom, 2001; Self, 2003). Building from Peterson's 1981 claim that city policy is sharply constrained by economic competition, this research tradition emphasizes the external limitations on autonomous urban policymaking (e.g. Morgan and Watson, 1995; Nivola, 2002; Rae, 2003). It expects that mayoral influence on local policymaking is highly circumscribed, and that similar limitations apply irrespective of the mayor's race or political coalition.

[1]Another strain of urban politics research leads to the opposite expectation. This work emphasizes the significant levels of ethnic and racial conflict underpinning political competition in many cities (e.g. Mollenkopf, 1992; Sonenshein, 1993; Alesina, Baqir and Easterly, 1999; Self, 2003; Kaufmann, 2004; Kruse, 2005; Lassiter, 2006; Hajnal, 2007). Elections contested by black and white candidates can produce voting that is highly polarized by

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[1]Through this paper, "white" will indicate "non-Hispanic white."

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[2]race, and can also generate the inflammatory rhetoric that opened this paper. At the same time, the possibility of a black mayoralty can produce high levels of interest and heightened expectations of city government in black communities (Nelson, 1978; Stone, 1989; Mollenkopf, 1992; Sonenshein, 1993; Thompson, 2006).In turn, those expectations could encourage black mayors to attempt to challenge the status quo. If electoral cleavages have any relationship to governing decisions, we should expect that black mayors' policy choices will differ from those of non-black mayors on average.

Research on black elected officials and descriptive representation has considered the difference between black and non-black legislators in some depth, typically focusing on the U.S. House of Representatives (e.g. Swain, 1995; Whitby, 1997). This research is primarily interested in whether black representatives are more likely to advance legislation benefiting black communities than their non-black counterparts. In federal politics, the focus on legislators rather than executives is a necessary one: we have observed one black president in U.S. history. But at the local level, the study of black mayors holds considerable promise as a way to understand the possibilities and limits of descriptive representation. Hundreds of black candidates have been elected mayor of large U.S. cities since 1967. Moreover, mayors are executives, a fact which facilitates identifying the connection between policy changes and the responsible officials.

To be sure, past studies have also considered the impact of black mayors on cities' fiscal policies and employment levels. Yet these studies were understandably limited by data availability, leading to sample sizes as small as six, ten, or twelve cities (e.g. Keller, 1978; Browning, Marshall and Tabb, 1984; Pelissero, Holian and Tomaka, 2000). Even the more extensive data set employed by Karnig and Welch (1980)includes only 17 cities that elected black mayors before 1979. Here, we use extensive newspaper and record searches to create two new data sets that allow us to observe the impact of black mayors with considerably

[2]These effects are not limited to the elections themselves: black mayoral victories can influence blacks and whites' assessments of local government, as shown by Gilliam (1996), Marschall and Ruhil (2007), and Hajnal (2007).

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more precision. The first includes 67 "breakthrough" elections from large U.S. cities, and the second includes 107 elections since 1990 in which a black candidate and a non-black candidate competed for the mayoralty. The two data sets have minimal overlap, meaning that they include 161 unique elections and 108 separate black mayoralties. Examined jointly, these two data sets also allow us to consider whether the impact of black mayors has changed over time. Observers commonly separate the first wave of Civil Rights Era black mayors from the more technocratic black mayors of recent years (e.g. Thompson, 2006). Can we detect similar distinctions in how cities allocate resources?

The manuscript seeks to make a methodological contribution as well. The challenge of identifying comparable cities that happen to elect black or non-black mayors is a vexing one (Marschall and Ruhil, 2006). We do not want to attribute to the mayor what is actually a feature of cities that tend to elect black mayors. Given the sample size, we are able to employ a regression discontinuity design comparing those cities that narrowly elect a black mayor to those that do not. This research design has grown increasingly popular in recent years (e.g. Lee, Moretti and Butler, 2004; Leigh, 2007; Gerber, Kessler and Meredith, N.d.; Ferreira and Gyourko, 2009; Folke, N.d.; Meredith, 2009; Mullainathan and Washington, 2009; Trounstine, N.d.), due in no small part to its ability to recover unbiased causal estimates from observational data (Hahn, Todd and der Klauuw, 2001; Cook, Shaddish and Cook, 2005; Imbens and Lemieux, 2008; Green et al., 2009).

We focus primarily on how fiscal and employment policies vary across cities. Such policies have been the focus of past work (e.g. Pelissero, Holian and Tomaka, 2000; Alesina, Baqir and Easterly, 1999; Karnig and Welch, 1980), and for good reason: they force cities to declare their priorities in a way that is publicly observable and comparable across both time and space (Jacoby and Schneider, 2001). Still, there are important limits to this approach. It is plausible that mayors' policy influence is concentrated in precisely those areas that are not easily compared across cities, such as the removal of a controversial police commissioner or the championing of a sports stadium. Undoubtedly, black mayors

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could have significant distributional impacts within cities (e.g. Mollenkopf, 1992) as well. But given the lack of neighborhood-level data on cities' resource allocation, those impacts are best pursued separately, and on a city-by-city basis. Following past work, we focus here on comparable choices about budgeting and employment facing many U.S. cities.

To preview the findings, in the wake of a "breakthrough" election, we detect no strong changes in how cities raise orspend money or how they make employment decisions. This is true both during the early period of black mayoral victories (1970-1990)and in more recent years. The regression discontinuity-based results reinforce this finding by showing that narrow black victories do not induce many policy changes. Cities with black mayors spend comparable amounts on housing and policing to cities with white mayors, for instance, and their revenue streams are indistinguishable as well. The only areas where we do detect impacts are in police pay, staffing, and diversity. Cities that elect black mayors can expect that three years later, smaller shares of city employees will be police officers, and smaller shares of city payrolls will go to policing. At the same time, a larger share of the police force will be black. This pattern of results suggests that criminal justice issues are unique in showing a connection between mayoral campaign issues and subsequent policy actions.

The next section establishes that black mayors typically come into office with the support of liberal coalitions committed to a variety of policy goals. Thus the absence of many policy effects indicates a systematic disconnect between the issues that structure mayoral elections andthepolicies subjecttomayoralauthority. Afterelectionday, whenthecharged campaign rhetoric subsides, we are left with a reality where the mayor's race rarely predicts how the city allocates resources. The conclusion considers what these results mean for our understanding of urban elections, public policy, and representation.
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Theorizing Black Mayors

We know what their challengers say. But what does past research suggest about the likely policy impact of the election of a black mayor? Drawing on research into black political incorporation and urban political coalitions, this section first outlines why we might expect marked policy changes when black mayors are elected. Yet a second set of hypotheses, developed from research on urban governance, points instead to the external constraints that limit black mayors' impacts.

Political Coalitions and Black Mayors

We begin by considering the electoral coalitions that support black candidates, as those coalitions will give some indication of the mayor's likely policy preferences once elected. In elections between black and white candidates, the black candidate can count on very high levels of support from the black community (Dawson, 1994; Kinder and Winter, 2001; Tate, 1993), especially at the local level (Hajnal, 2007; McCrary, 1990; Hero and Beatty, 1989; Karnig and Welch, 1980). Black voters are known to be quite liberal (Kinder and Sanders, 1996; Radcliff and Saiz, 1995), irrespective of their own socioeconomic status (Dawson, 1994; Hochschild, 1995; Gay, 2004). So, too, are the non-black groups that give substantial support to black candidates (Sonenshein, 1993).

It is not enough to characterize black mayors' coalitions: studying their impact requires us to compare them with white mayors who govern similar cities. And certainly, there have been liberal white mayors, from New York's John Lindsay to Atlanta's Bill Hartsfield. Yet many white mayors run with the support of more conservative political coalitions, including New York's Ed Koch, Los Angeles's Sam Yorty, Chicago's Richard J. Daley, and Philadelphia's Frank Rizzo (see respectively Mollenkopf 1992, Sonenshein 1993, Royko 1971, and Thompson 2006). In fact, from the existing case studies, we were unable to identify any well-known instances in which a black candidate consistently takes more

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[3]conservative stances than his or her white competitor.To the extent that mayors are able to pursue the policies favored by their supporters, black mayors are more likely than white mayors to shift cities' public policy in a liberal direction. Such shifts may be especially pronounced for "breakthrough" black mayors, or for black mayors assuming office from more conservative predecessors.

[4]But what concrete policy actions do black mayors' coalitions typically advocate? Certainly, we might expect that black mayors will invest more city resources in welfare and public housing, two of the most redistributive functions at the local level (Alesina, Baqir and Easterly, 1999; Hajnal, 2009).Reinforcing this hypothesis, one study of black mayoralties in the 1970s finds an increase in social welfare spending (Karnig and Welch, 1980), although another does not (Keller, 1978). On the revenue side, a more liberal mayor might attempt to increase taxes, and to focus such increases (as Newark's Kenneth Gibson did) on progressive revenue sources like business or property taxes. However, local taxing authority is typically constrained by state law and state politics (Nelson, 1978; Ladd and Yinger, 1989), a fact which might mute any differences in either the amount or type of revenues.

If Alesina, Baqir and Easterly (2000) are correct in terming urban public employment "redistributive," we mightalso expectgrowing city payrolls oremploymenttargeted to blacks following the election of a black mayor. Such impacts might be especially pronounced following "breakthrough" elections, when the city's first black mayor takes office. It is clear that during his first tenure as Mayor of Washington, D.C., Marion Barry significantly expanded both city employment and city contracting targeted to blacks (Jaffe and Sherwood, 1994). In that, he was not alone: black mayors have been shown to increase both the share of the municipal workforce that is black (Eisinger 1982; but see Kerr and Mladenka 1994)

[3]Therearetwopossibleexceptionsinourdataset. ThefirstisElbertHenderson, ablackandRepublican candidate for mayor of Baltimore in 2004 who garnered just 12% of the two-party vote. The second is Martin Barnes, a black Republican who lost the Patterson, New Jersey mayor's race in 1994.
[4]This was a course of action taken by New York's John Lindsay (Cannato, 2002), an archetypal urban liberal.

and the share of the city's overall workforce that is black (Nye, Rainer and Stratmann 2010).

[5]At the same time, black mayors have commonly found themselves at odds with police departments. Criminal justice policy has been a contentious and racially fraught issue in many cities, from the STRESS crackdown in Detroit which preceded Coleman Young's 1973 victory in Detroit (Thompson, 2001) to the Rodney King incident in Los Angeles (Sonenshein, 1993) or the bombing of MOVE members in Philadelphia (Thompson, 2006). One researcher, writing about the early black mayors, notes: "One of the first things on these mayors' agendas was to rein in police departments that had been considered brutal and oppressive to blacks"(Thompson, 2006, pg. 4). For decades, policing issues have put black mayors in the middle of the often contentious relationship between the black communities that elected them and the police departments that they oversee (Saltzstein, 1989). Here, one potential expectation is that black mayors will target resources to other priorities, reducing the relative share of local resources devoted to policing.Alternately, we might expect that black mayors' impact will be on the composition of police spending, as they try to increase black representation on the police force as well as its emphasis on community policing and strict oversight.

Mayors' Limits

For black mayors to systematically influence urban policy, it is not enough that they and their supporters hold distinctive policy preferences. They must also be able to shift policies accordingly. A significant body of research casts doubt on this prospect. For instance, Meier and England (1984) argue that municipal expenditures are limited by "law and economics," and beyond the control of the mayor. This perspective is reinforced by many studies emphasizing how legal, fiscal, economic, and political conditions combine to render mayors weak figures, even if their institutional authority is nominally strong. Observing

[5]It is worth noting that in a small-sample empirical study, Keller (1978) actually finds the opposite.

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the 1960s mobilization to elect black mayors, Martin Luther King Jr. concluded that "mayors are relatively unimportant figures in the scheme of national politics"(Thompson, 2006, pg. 123).

There are several reasons why King's statement resonates decades later. Legally, cities are creatures of the states: their authorities are limited to those that states grant (Briffault, 1990). They are subject to considerable mandates from both the federal and state levels (Nivola, 2002). Politically, mayors commonly face hostile state legislatures and local political fragmentation (Fuchs, 1992; Weir, 2000; Dreier, Mollenkopf and Swanstrom, 2001; Self, 2003; Weir, Wolman and Swanstrom, 2005). Even at the local level, they often require the aid of other actors, be they business leaders (Stone, 1989) or other elected officials (Browning, Marshall and Tabb, 1984). Economically, cities must compete for residents, a fact which all but eliminates significant attempts at redistribution (Peterson, 1981). And they must do so as deindustrialization and suburbanization erode their economic base (Sugrue, 1996; Wilson, 1996; Rae, 2003). Past scholarship has also suggested that these fiscal and economic constraints are especially binding in the cities that tend to elect black mayors (Friesema, 1969; Howard, 1978; Nelson, 1978; Kraus and Swanstrom, 2001). Irrespective of their preferences, the hypothesis that emerges is one of mayors unable to challenge status quo policies. Perhaps for these reasons, Pelissero, Holian and Tomaka (2000) do not find significant differences in fiscal policy over time between cities with black orHispanic mayors and those with white mayors from 1972 to 1992.

[6]Still, we should acknowledge an alternative literature suggesting that such claims about city limits are themselves limited. Consider Wolman, Strate and Melchior (1996), who find that cities that elect new mayors see significant changes in their expenditures despite these limitations (see also Morgan and Watson 1995 and Levitt 1997).We might instead adopt an intermediate hypothesis that constraint will vary by policy area. It seems plausible that these limitations influence taxing and spending, leaving mayors more discretion to influence

[6]Moreover, Sellers (2001) finds that local governments are gaining authority.

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the city's workforce or its priorities.

Data: "Breakthrough" Mayors

On January 1st, 1968, Carl Stokes took office in Cleveland, Ohio, and Richard Hatcher took office in Gary, Indiana, making them the first black mayors of major U.S. cities. Since then, the American racial landscape has changed considerably, although "breakthrough" elections have remained highly contentious in many places (Hajnal, 2007). This paper's empirical analyses thus begin by considering the impact of a city's first black mayor on its subsequent fiscal and employment policies.

[7]Studying fiscal and employment policies offers both conceptual and operational advantages. Conceptually, budgets reflect the trade-offs that cities' leaders must make, and thus allow us to measure cities' evolving priorities (Clarke and Ferguson, 1983; Fuchs, 1992). Also, taxing and spending data are reported annually, allowing researchers to compare large numbers of cities across decades without additional data collection. For precisely those reasons, past research on multiple cities has typically used spending shares to analyze local policy priorities (see also Peterson, 1981; Wolman, Strate and Melchior, 1996; Alesina, Baqir and Easterly, 1999;Jacoby and Schneider, 2001;Ferreira and Gyourko, 2009; Hajnal, 2009).In this section, the variation discussed is within cities over time. There is no existing database of mayoral election results across U.S. cities. We began by

collecting information on "breakthrough" elections for the largest 130 cities in the U.S. as of 2007. The 130th largest city is Brownsville, Texas, with approximately 170,000 people. Of these cities, only 49 had ever elected a black mayor, so we augmented the sample with smaller cities that are home to significant black populations. One key limitation of past

[7]Of course, this focus on budgeting and employment in no way assumes that these are the only relevant policies. One of the central issues that mayors must face is the question of downtown development (e.g. Stone, 1989), a policy area which is commonly conducted through tax breaks not visible in our fiscal data. Mayors also make appointments (Lowi, 1964) and make decisions about policy implementation. Nonetheless, budgets provide a statement of how policy areas are being prioritized, and their comparability across time and space makes them an unparalleled starting point.

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work has been small sample sizes, and correspondingly low statistical power. Pelissero, Holian and Tomaka (2000), for example, considers 12 cities. To further reduce the uncertainty inherent in small samples, we also collected data for the next largest 65 cities that were more than 20% black as of 2000. A city's black population size is among the strongest predictors of electing a black mayor (Marschall and Ruhil, 2006). The largest of these cities is Dayton, Ohio, while the smallest is Petersburg, Virginia. Among these cities, we identified another 46 mayors who were the first elected African Americans in their cities. Cities that do not elect mayors by popular vote cannot be included in this sample.

Ourmeasurement approach is toidentify changes incity spending patterns in the period following the first election of a black mayor (see also Pelissero, Holian and Tomaka, 2000). To do so, we matched each breakthrough election to the city's spending in the election year and the subsequent three fiscal years. We choose this length of time to give the mayor's policies time to influence outcomes, but also to limit censoring among the recent cases. Our sources of urban fiscal data are the U.S. Census Bureau's Annual Survey of Governments and its Census of Governments, which provide detailed breakdowns of city revenues, expenditures, and employment from 1970 to 2006. We were able to match 67 breakthrough elections to spending data, from the 1971 election of Lyman Parks in Grand Rapids, Michigan to the 2005 election of Jay Williams in Youngstown, Ohio.

We then considered whether there were any detectable changes in the revenues, spending, or employment in these 67 cities in the three fiscal years following the election of the city's first black mayor. Specifically, we consider 27 dependent variables. Eleven of these variables indicate the share of the city's operating budget devoted to various spending priorities, such as policing, roads, fire, parks, and libraries. Two of the variables measure the composition of the city's revenues that come from property taxes or sales taxes; one might expect that black mayors elected by lower-income populations would favor the property tax over the sales tax where possible. Another revenue-related measure identifies the extent to which the city uses taxes of any kind to finance its operations. To see whether black
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mayors impact cities' overall revenues, the analyses also consider the logged total taxes as well as the total taxes per capita.

[8]Giventheextensive discussions of"redistributive publicemployment" andblackmayors' impact on city hiring (Eisinger, 1982), we also consider a variety of employment measures, includingthecity's shareofemployees invarioussectors, itsloggedtotalpayrollandnumber of employees. Here, we concentrate on their impact on the size of the workforce overall and its distribution across functions. In analyses below, we observe the share of the police force that is black as well.

Policing appears to be an especially contentious and high-priority area for black mayors. Saltzstein (1989) shows that black mayors induce higher levels of black representation on police forces. At the same time, Browning, Marshall and Tabb (1984, pg. 168) show that minority political incorporation encourages the creation of police review boards. For policing, we consider the ratio of police payrolls to total payrolls. To address the possibility of out-migration, our final dependent variable is the change in the logged population over the same three-year period.

Tobeascomparabletotheolderresearch aspossible(e.g.Pelissero, HolianandTomaka, 2000; Karnig and Welch, 1980; Keller, 1978; Nelson, 1978), we begin by considering only the 34 elections that took place prior to 1990. These were the elections that generated slogans such as "Atlanta's too young to die" or "Before It's Too Late." Many were the contentious "breakthrough" elections that saw high turnout and high polarization (Hajnal, 2007). They were also the elections that generated the mixed findings of past research (Keller, 1978; Karnig and Welch, 1980; Pelissero, Holian and Tomaka, 2000). To start, we use two-sample t-tests to detect any differences for any of the measures of city fiscal or employment policy in the first three years of the new mayoral administration. The

[8]U.S. cities are required to file information with the Equal Employment Opportunity Commission about the racial composition of their workforce. However, such data are provided only in aggregated form, making itimpossible to link specific mayorsto specific workforcechangeswithoutadditional data collection (Kerr and Mladenka, 1994; McClain, 1993; Eisinger, 1982). For more, see http://www.eeoc.gov/eeoc/statistics/employment/jobpat-eeo4/2005/jobs/Type3City.html

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first column in Table 1 presents the mean for each spending category in the baseline year while the second presents the mean three fiscal years later. From the first column, we see the major spending categories of city government: policing (9.8% of city expenditures at baseline), fire (6.9%), and roads (6.3%). We also see smaller categories, either because they are relatively inexpensive (e.g. libraries and parks) or because they aren't spending areas for most cities (e.g. health care and welfare). On the revenue side, the table illustrates cities' overall dependence on the property tax, which accounts for 58.1% of tax revenues. It also shows their reliance on non-tax revenues such as user fees, since taxes make up only 52.7% of revenues.

As Table 1 shows, these patterns remain very stable after the election of a city's first black mayor. The differences before and after the election are consistently insignificant, both statistically and substantively. Given the small sample size, this simply indicates that the doomsday rhetoric was overstated: the 34 sampled U.S. cities that elected black mayors between 1971 and 1990did not see dramatic short-term changes in how they raised or spent money–or in the number of people they employed. Their logged total payroll did increase slightly, but the result is not nearly statistically significant, and some level of increase would be expected due to inflation alone. These cities' number of employees remained almost constant, with the average city adding 55 workers to a workforce of 4,532. To the extent that black mayors were hiring African Americans, it was likely at the expense of other groups (McClain, 1993). There is no detectable population change either.

[Table 1 here]

The prior empirical studies of black mayors' policy impacts cover the period up until 1992 (e.g. Pelissero, Holian and Tomaka, 2000; Karnig and Welch, 1980; Keller, 1978; Nelson, 1978). Since that year, our sample of cities has seen dozens of additional "breakthrough" elections in places as varied as Houston, Texas and Minneapolis, Minnesota. The second analysis considers this full sample of 67 elections, and allows us to track patterns

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for 35 years after 1971. Table 2 presents the results. The core conclusion holds for this broader set of breakthrough elections as well: there is not a single statistically significant spending difference or revenue difference in the first three fiscal years after a black mayor is elected. We again see no evidence of broad changes in fiscal priorities, and only a few spending categories (such as parks and housing) that even hint at a change. In those two cases, park spending appears to drop by an average of 0.4 percentage points, and housing spending appears to rise by a similar margin. Overall, employment and population are almost entirely static as well. Among the types of changes that we can detect, we detect no large changes.

Still, these analyses are limited in their statistical power, even if their samples are much larger than those found in past work. And they are unable to differentiate changes that are due to the black mayor's election itself from other broad shifts that might be commonacrossallcities. Thisperiodsawout-migration,deindustrialization(Sugrue,1996), declining federal assistance (Mollenkopf, 1983; Dreier, Mollenkopf and Swanstrom, 2001) and increasing legal and fiscal constraints on cities (Nivola, 2002; Rae, 2003), meaning that winning the mayoralty might well have been a "hollow prize"(Kraus and Swanstrom, 2001; Friesema, 1969). To address both concerns, the next section uses regression discontinuity design on a broader and more recent set of urban elections.

[Table 2 Here]

A Regression Discontinuity Design

This section employs the same target cities, but a different and more robust mode of analysis. Instead of the over-time variation employed above, this section uses a regression discontinuity design (Hahn, Todd and der Klauuw, 2001; Lee, Moretti and Butler, 2004; Imbens and Lemieux, 2008; Green et al., 2009) to compare fiscal policies in cities that narrowly elected black mayors with those where black candidates were narrowly defeated. 15

This empirical strategy is known to be conservative, requiring more observations than would a randomized experiment to offer the same level of precision (Schochet, 2009). Still, as detailed below, this approach allows us to credibly attribute any observed differences to the mayor's race, since there is no reason to expect underlying differences between cities where the black mayor narrowly wins and those where he or she narrowly loses. It thus solves the problem of non-random selection that Marschall and Ruhil (2006, pg. 829) observe by focusing only on cities that plausibly could have had a mayor of either race. Consider the example of Memphis, Tennessee: its first black Mayor, Willie Herenton, was elected by a razor-thin margin of 172 votes out of more than 240,000 cast. With such a small margin, the actual outcome can be treated as if it were random. Our research design exploits that and other close races to compare cases where black mayors actually governed with cases where they might have but did not.

Data Set: 1990-2006

Having identified the 195 target cities above, we used Lexis-Nexis and local government websites to obtain all available general election results from 1990 to 2006. To conduct our analyses, we need to know the racial background of the election's winner and loser, and we also need to know the votes cast for both candidates. These prove to be a demanding set of criteria: even with exhaustive Lexis-Nexis searches using the relevant state's newspapers, we recovered the racial background of the winning candidate in only 613 separate elections held in 105 different cities. Black candidates are typically identified as such in at least some coverage, but white candidates' racialbackground is notalways identified. Notsurprisingly, learning the race of the losing candidate is more difficult, leaving us with 372 elections observed in 83 different cities.

[9]Our quantity of interest is defined only for the subset of cities where an identifiably black candidate ran against an identifiably non-black candidate.This reduces the sample

[9]In every case but two, "non-black" means "white." In Rochester, New York's 2001 election, the losing
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[10]to 107 elections held in 57 different cities between 1990 and 2006.In these elections, the black candidate won 54 times and lost 53 times, providing some initial support for the assumption that there are no systematic differences between cases where blacks narrowly lose and where they narrowly win.

[11]Table 3 describes this set of cities in more detail. Their median population is 364,000, with a high average 1991 crime rate of 10,890 crimes per 100,000 people. Levels of poverty are high, averaging 20.6% as of 1990. These cities are on average 37% black in 1990. Yet only 19% of the elections come from cities that were majority black in 1990. In 65% of these elections, the winner is a Democrat. Sixty-nine percent of elections took place in a typical Mayor-Council system. This is not a random subset of cities, but it is a subset of cities that could plausibly elect either a black mayor or a white mayor. It is thus a subset where the causal question of interest is well defined.[12]We address missing data through multiple imputation (Schafer, 1997; King et al., 2001).

[Table 3 Here]

Regression Discontinuity Results

Regressiondiscontinuity designs isolatethevariationinelectionoutcomesthatisreasonably attributed to chance. They do so by conditioning on the underlying continuous variable (or the "forcing" variable) that gives rise to the treatment of interest. A city that backs a black mayoral candidate with 49.9% of its support is seen as little different from a city that offers 50.1%, with the critical difference that in the second case, the black candidate wins and becomes mayor. Our RDD models thus condition on several functions of the

candidate wasLatino, and in Oakland, California's1994election, the losingcandidate wasAsian American.
   [10]Here, 82% of the cities are at least 20% black.
   [11]For more on the precursors of electing black mayors, see Marschall and Ruhil (2006).
[12]Specifically, due to censoring, we are missing four observations for the independent and dependent variables derived from the Annual Survey of Governments. This includes the fiscal year end date and dependent variablessuch as the shareof spending devoted to a given policy area. There is more missingness on the employment variables, with levels ranging from 6 to 27 observations. All of the paper's results are robust to using listwise deletion instead.

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vote share for the black candidate, including the raw percentage, the percentage squared, and the percentage cubed. Following past practice (e.g. Lee, Moretti and Butler, 2004), the models also interact each of these forcing variables with the indicator for whether the black candidate won, to allow the functions to vary on either side of the discontinuity. The RDD significantly reduces the threat from omitted variables, as any such omitted variables would themselves need to be discontinuous at the point where the black mayor wins or loses. We thus begin with two baseline models. The first has only the various functions of the percent supporting the black candidate described above. The second adds a small number of covariates, including indicator variables for whether the fiscal year ends in December and whether the losing candidate was an Independent. It also includes the city's intergovernmental revenue per capita in the year of the election, its logged population in 1990, its percent black in 1990, and its logged median household income.

[Table 4 Here]

[13]Using these two initial models, we then estimate the impact of a narrow victory for the black candidate on subsequent city spending and employment. Again, we focus on the change between the fiscal year of the election (whose budget is determined prior to the election) and the third fiscal year after the election. We fit these models for each of the dependent variables, summarized in Table 4, and then estimate the expected change in that dependent variable over the three post-election fiscal years if the black candidate wins. Since this data set is drawn exclusively from the period following 1990, we are able to use the triennial Law Enforcement Management and Administrative Statistics to measure the share of police officers who are black.For one important subset of the city workforce, we can thus consider changes in workforce composition as well as its size. One example of a full, fitted model predicting the share of total payrolls devoted to the police is available in

[13]This measure is updated every three years, so we set each city's share of black police officers to its observed level for that year and the two subsequent years. The data are available via the Bureau of Justice Statistics at http://bjs.ojp.usdoj.gov.

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Table 5 in the Appendix.

[Figure 1 Here]

Figure 1 depicts the results, with Table 6 in the Appendix providing exact numerical values. The grey triangle indicates the estimated impact from a model with only the various functions of the percent supporting the black candidate as covariates. The dashed line surrounding the triangle indicates the 95% confidence interval. For the models with the additional covariates, the black dot indicates the estimated impact, and the solid line spans the 95% confidence interval. The figure makes clear that overall, black mayors do not allocate resources in ways that differ markedly from other mayors. Given their typically liberal political coalitions (Mollenkopf, 1992;Sonenshein, 1993;Thompson, 2006), we might expect a shift from the more regressive sales tax to the more progressive property tax. But we observe no such shifts. We might have expected increased resources devoted to housing and health, which are among the most redistributive forms of city spending (Hajnal, 2009; Peterson, 1981). But again, we observe no such shifts.

[Figure 2 Here]

Of the 28 dependent variables considered, only 4 show significant impacts in any specification: the logged total number of city employees, the share of city employees working for the police, the share of total payrolls devoted to the police, and the share of the police that are black. The city workforce-related result does match the Washington experience of Marion Barry, but it is not quite significant when we include other covariates in the model. Moreover, we see no strong impact when looking at employees per capita, the metric used by past research (e.g. Alesina, Baqir and Easterly, 2000).

The other cases where we observe detectable impacts of black mayors are all related to policing and public safety. Given the earlier discussion of the often heated disputes between black mayors and police departments, this is not surprising. Based on the model with no

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covariates, we estimate that a city with a narrow black victory will reduce that city's police pay relative to total payrolls by 3.6 percentage points, with a 95% confidence interval from 0 percentage points to 7.3 percentage points. This impact is illustrated in the top left panel of Figure 2. For police employment, the change is similar, with an expected 3.5 percentage point decline in police department employees as a share of total city employees. Here, the 95% confidence interval runs from 0.3 to 6.7 percentage points, and the impact is presented graphically in the middle panel of Figure 2. It is worth noticing that the estimated impact on the share of operating expenditures going to the police is essentially zero, so black mayors do not appear to be withdrawing their cities' investment in public safety. Instead, they are reducing the share of police employees relative to total employees, and reducing the share of payrolls targeted to the police as well.

[14]Black mayors also appear to be increasing the share of police officers who are black. In fact, the estimated impact using the basic RDD model is quite large: 4.4 percentage points, with a 95% confidence interval from 0.6 to 8.6. Close inspection of Figure 2 shows that one observation is especially influential: Cincinnati, which narrowly elected Dwight Tillery mayor in 1991, and then saw the share of African Americans on its police force grow by 18.2 percentage points in the subsequent three years. This data point is not an error. Tillery was in fact an outspoken proponent of bringing the city into compliance with a 1981 court ruling on police force diversity (Leavy, 1992).We can thus reinforce the earlier findings that black mayors influence the composition of the city workforce. Still, these are three measures out of more than two dozen. With criminal justice as an important exception, black mayors are not observably different from their white counterparts in most respects. Across a variety of other measures, their policies do not appear to be more liberal than white mayors elected in similar cities.

[14]Without Cincinnati, the estimated effect is 3.0 percentage points, with a 95% confidence interval from -0.4 to 6.3 percentage points.

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Robustness

[15]It is worth subjecting the findings related to the police to additional robustness checks. One such check, recommended by Imbens and Lemieux (2008) and Green et al. (2009), is to remove the data points that are furthest from the discontinuity, and then re-estimate the model. The resulting estimates should be less prone to model dependence, but also potentially less certain. Consider a data set with only the 89 observations where the black candidate garnered between 25% and 75% of the vote. There, the impact on the share of police employees grows to -3.8 percentage points, with a two-sided p-value of less than 0.01.[16]To err on the conservative side, we remove Cincinnati's 1991 election for all robustness checks with the share of the police who are black. Doing so, the estimated impact on the percentage of the police who are black remains substantively significant, at 3.9 percentage points. However, the increased uncertainty yields a 95% confidence interval spanning from -0.6 to 8.3 percentage points.For the share of payroll going to the police, however, the impact drops to -1.7 percentage points, with a p-value that does not approach statistical significance.

In theory, the regression discontinuity design eliminates concerns about omitted variables, since there is no reason that cities where black candidates edge out white candidates should differ from those where they do not. Still, given the results of Caughey (N.d.), and the possibility of strategic action or election fraud near the discontinuity, it is worth testing the results in the presence of potentially omitted variables. Figure 3 does precisely that. Each graph begins with the baseline model that uses covariates, and then illustrates how the estimated treatment effect changes in the presence of each new covariate. In all three cases, the substantive effect is generally robust, with no sharp declines due to a single omitted variable. Still, in each case, there are covariates that render the effect insignificant at

[15]In fact, the result holds even when considering only the 70 observations between 35% and 65%, with a two-sided p-value of 0.06.

[16]With the inclusion of Cincinnati, the mean estimate grows to 6.8 percentage points.

the p < 0.05 level. When considering the impact on the share of pay devoted to the police, the median estimate is -3.2 percentage points, with a two-sided p-value of 0.03. For the share of police employees, the median estimate is -3.1 percentage points, with a two-sided p-value of 0.07. And for the police force's percent black, it is 3.1 percentage points, again with a two-sided p-value of 0.07. Here, too, Cincinnati's 1991 election is not included. The pattern of reduced investments in police staffing and increased black hiring is generally stable, although there are specifications that push the result into insignificance.

[Figure 3 Here]

[17]The estimated effects grow in strength when we use listwise deletion, to -4.3 percentage points for police employment, -4.5 percentage points for police pay, and 3.1 percentage points for the share of the police force that is black.Considered as a whole, the results areclearly suggestive, andvery consistent in their substantive magnitude. Againand again, they point to criminal justice as the lone area of impact. But given the number of results that cross the threshold into insignificance, we should stop short of calling them definitive.

We do not observe the share of blacks within other city departments. But these results on police staffing, pay, and diversity are certainly compatible with research reporting that black mayors increase the share of blacks elsewhere in the city workforce (Eisinger, 1982). Moreover, if police departments have proportionately fewer blacks than other city agencies, shifting away frompolice hiring could be aconsequence ofemphasizing black hires citywide.

Past research has emphasized that black-white contention is especially likely in cities where the two groups are similar in size–and thus where the threat of a political takeover is more credible (Hajnal, 2007). It has also underscored that mayors of color may need local allies to pursue their agenda (Browning, Marshall and Tabb, 1984). To test these possible moderators, we considered whether the effects of black mayoralties were stronger in cities that were at least 35% black in 1990, or where the city council was at least 25% black as of

[17]The 95% confidence intervals, respectively, are -1.0 to -7.5 percentage points, 0.1 to -9.1 percentage points, and 0.0 to 6.3 percentage points.

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[18]1987. In most cases, the effects highlighted above do not grow notably stronger or weaker in cities with more black political power. In all cases, we observe a negative relationship between black mayoralties on police pay and staffing alongside a positive relationship on black police officers. There is some suggestion that the impact of black mayors on police force diversity is stronger in cities that are more than 35% black, but the difference is not in itself statistically significant.To the extent that this tendency holds, it makes intuitive sense, since it is easier to expand the share of the police force that is black in cities with more black citizens.

Conclusion

From past work, we know that the election of a black mayor can influence politics in various ways. It can shape the views of both black and non-black residents, empowering the former group while dispelling the fears of the latter (e.g. Gilliam, 1996; Marschall and Ruhil, 2007; Hajnal, 2007). Black mayoral victories can potentially serve as a springboard to higher office. At the same time, black mayors may be able to redirect resources within the city (Jaffe and Sherwood, 1994; Cannato, 2002), a possibility we are pursuing elsewhere. Still, the results presented here underscore the fundamental limitations of big-city policymaking. Allocating local resources across policy areas is a central decision that cities must make, so finding that black mayors have few impacts on these decisions illustrates the fundamental constraints that they face.

Certainly, black mayors are not all alike. They differ in their coalitions, their political environments, and their policy goals, such that we should not confuse a mayor like Los Angeles's Tom Bradley with a mayor like Detroit's Coleman Young. The latter focused publicly on condemning racism in a way that the former never did (Sonenshein, 1993;

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[18]Specifically, the mean impact for cities with a large African American population is 6.1 percentage points, while for cities with fewer African Americans it is 2.1 percentage points. Using simulation, we calculate a one-sided p-value that the first figure is larger of 0.16.

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Thompson, 2001, 2006). Even so, when running against white candidates, black mayors almost always build coalitions that are on the left side of the local political spectrum, whether in Los Angeles, Detroit, or elsewhere. And yet when governing, there is little evidence that such positions lead to systematic departures from the status quo. Across a range of measures of taxing, spending, and hiring, we find few differences between black mayors and their white counterparts. This conclusion holds using two different data sets and estimation strategies.

Such results point to the limits of political representation in contemporary U.S. cities. There is clearly a disjoint between the divisive, racialized campaigns that lead up to the election of black mayors and the status quo-preserving policies that black-run cities adopt after the election. The stark divisions that appear in black-white mayoral contests are largely muted when it comes to the forms of governance observed here. Put differently, in black-white contests, voters are being asked to choose between mayoral candidates based on charged rhetoric, as well as claims and criteria that will have little bearing on observable policy outcomes.

The potential exception is in the area of criminal justice, and specifically in the staffing, pay, and diversity of the police. This research uncovers some evidence that black mayors reduce the share of city employees in the police department and the share of total payrolls devoted to the police, while at the same time increasing the share of the police force that is black. Such findings reinforce what past case studies have suggested: that policing is a uniquely politicized issue in urban governance (see also Sonenshein 1993; Kirtzman 2000; Thompson 2001, 2006). When they highlight policing issues, mayoral campaigns do focus on an issue that they are likely to influence once elected.
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Tables

	Mean Year 0	Mean Year 3	P-value
Police Share	0.098	0.099	0.91
Share, Police Pay	0.140	0.174	0.17
Share, Police Employees	0.109	0.135	0.22
Natural Resources Share	0.000	0.000	0.17
Inspection Share	0.006	0.007	0.25
Administration Share	0.021	0.020	0.86
Housing Share	0.036	0.038	0.78
Share, Housing Employees	0.024	0.023	0.82
Sanitation Share	0.035	0.034	0.96
Share, Sanitation Employees	0.077	0.083	0.74
Parks Share	0.046	0.047	0.90
Roads Share	0.063	0.065	0.90
Share, Road Employees	0.049	0.045	0.66
Health Share	0.009	0.009	0.98
Library Share	0.011	0.011	0.79
Share, Library Employees	0.024	0.025	0.83
Fire Share	0.069	0.069	0.96
Share, Fire Employees	0.107	0.109	0.90
Taxes / Revenues	0.527	0.523	0.91
Sales Tax Share	0.116	0.114	0.96
Property Tax Share	0.581	0.568	0.82
Logged Total Taxes	10.928	11.150	0.61
Total Taxes per Capita	0.373	0.457	0.38
Logged Total Payrolls	15.624	15.931	0.53
Logged Total Employees	8.419	8.431	0.98
Employees per Capita	0.024	0.025	0.65
Logged Population	12.217	12.228	0.97

Table 1: For the 34 breakthrough elections prior to 1990, this table shows the mean for each of the dependent variables in the election year and three years later. It also provides p-values from a t-test that the means are drawn from the same distribution.

	Mean Year 0	Mean Year 3	P-value
Police Share	0.105	0.108	0.77
Share, Police Pay	0.165	0.178	0.52
Share, Police Employees	0.129	0.137	0.62
Natural Resources Share	0.000	0.000	0.68
Inspection Share	0.007	0.007	0.99
Administration Share	0.022	0.021	0.72
Housing Share	0.038	0.043	0.46
Share, Housing Employees	0.021	0.021	0.87
Sanitation Share	0.035	0.034	0.96
Share, Sanitation Employees	0.073	0.079	0.62
Parks Share	0.048	0.044	0.46
Roads Share	0.064	0.062	0.79
Share, Road Employees	0.049	0.045	0.58
Health Share	0.009	0.011	0.47
Library Share	0.010	0.010	0.94
Share, Library Employees	0.023	0.024	0.90
Fire Share	0.070	0.069	0.78
Share, Fire Employees	0.110	0.103	0.53
Taxes / Revenues	0.492	0.492	0.98
Sales Tax Share	0.144	0.149	0.88
Property Tax Share	0.547	0.531	0.73
Logged Total Taxes	11.181	11.359	0.49
Total Taxes Per Capita	0.459	0.540	0.17
Logged Total Payrolls	15.861	15.944	0.81
Logged Total Employees	8.332	8.323	0.98
Employees per Capita	0.026	0.025	0.82
Logged Population	12.182	12.187	0.98

Table 2: For all 67 observed "breakthrough" elections, this table presents both the mean for each category in the election year and then three years later. The p-value indicates a two-sided t-test that the means are draw from the same distribution.

	Mean	SD	Min	Max	Black
Candidate Wins	0.505	0.502	0.000	1.000	
% Support Black Candidate	0.492	0.167	0.086	0.844	
Democratic Winner	0.645	0.481	0.000	1.000	
Independent Opponent	0.103	0.305	0.000	1.000	
Home Rule	0.709	0.457	0.000	1.000	
% At Large	0.366	0.371	0.000	1.000	
Mayor-Council	0.689	0.465	0.000	1.000	
Lower House Share Dem.	0.549	0.130	0.280	0.840	
Upper House Share Dem.	0.537	0.136	0.320	0.870	
Republican Gov.	0.548	0.500	0.000	1.000	
December FY	0.379	0.487	0.000	1.000	
Log Population 90	12.660	0.974	10.706	15.806	
Log Med. Hsh. Income 90	10.109	0.185	9.637	10.502	
Crime Rate 91	10889	2287	5458	16031	
% Black 90	0.368	0.159	0.041	0.801	
Pop. Density 90	2.033	1.603	0.172	9.151	
% Same County 90	0.814	0.069	0.603	0.921	
% on Public Assistance 90	0.118	0.046	0.039	0.238	
% on Social Security 90	0.253	0.044	0.138	0.370	
% Homeowner 90	0.488	0.089	0.236	0.730	
% Poor 90	0.206	0.063	0.074	0.378	
Med. Home Value 90	79700	47587	31300	294800	
Avg. Commute 90	21.424	4.060	15.900	36.500	
South	0.393	0.491	0.000	1.000	
West	0.103	0.305	0.000	1.000	
Northeast	0.112	0.317	0.000	1.000	
Homogeneity 90	0.480	0.105	0.283	0.807	
% Hispanic 90	0.069	0.087	0.004	0.405	
Δ Log Med. Hsh. Income 90-00	0.341	0.096	0.114	0.767	
% Immigrant 90	0.072	0.075	0.010	0.340	
Δ Logged Population 90-00	0.076	0.235	-0.139	1.477	
Δ % Black 90-00	0.017	0.040	-0.083	0.148	
% with BA 90	0.221	0.074	0.081	0.420	

Table 3: This table summarizes the independent variables for the sample of 107 big-city elections contested by black and white candidates.

	Mean	SD	Min	Max
Total Taxes per Capita	0.808	0.825	0.000	5.643
Police Share	0.111	0.046	0.000	0.234
Police % Black	0.232	0.140	0.030	0.690
Share, Police Pay	0.206	0.074	0.052	0.402
Share, Police Employees	0.162	0.062	0.033	0.345
Natural Resources Share	0.002	0.008	0.000	0.043
Inspection Share	0.009	0.012	0.000	0.100
Administration Share	0.014	0.010	0.000	0.045
Housing Share	0.041	0.031	0.000	0.165
Share, Housing Employees	0.024	0.024	0.000	0.101
Sanitation Share	0.033	0.026	0.000	0.128
Share, Sanitation Employees	0.073	0.045	0.000	0.195
Parks Share	0.044	0.027	0.000	0.133
Roads Share	0.061	0.037	0.000	0.184
Share, Roads Employees	0.050	0.031	0.000	0.159
Health Share	0.019	0.025	0.000	0.150
Library Share	0.008	0.009	0.000	0.033
Share, Library Employees	0.022	0.021	0.000	0.077
Fire Share	0.064	0.028	0.000	0.148
Share, Fire Employees	0.111	0.042	0.030	0.209
Taxes / Revenues	0.455	0.164	0.000	0.826
Sales Tax Share	0.150	0.201	0.000	0.753
Property Tax Share	0.505	0.290	0.065	0.990
Logged Total Taxes	12.324	1.178	9.901	16.689
Logged Total Payroll	16.745	1.134	14.332	20.969
Logged Total Employees	8.789	1.048	6.739	12.952
Employees per Capita	0.022	0.014	0.005	0.077
Log Population	12.730	0.922	10.799	15.806

Table 4: This table provides descriptive statistics for the dependent variables. Most indicate the share of spending or city employees devoted to specific functions such as fire or policing. Additional variables measure the city's revenue sources, payroll, and number of employees.

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Figures

Figure 1: For each of the dependent variables listed, the figure shows the estimated treatment effect using a regression discontinuity design.

Predicting Police Pay

Predicting Police Employees
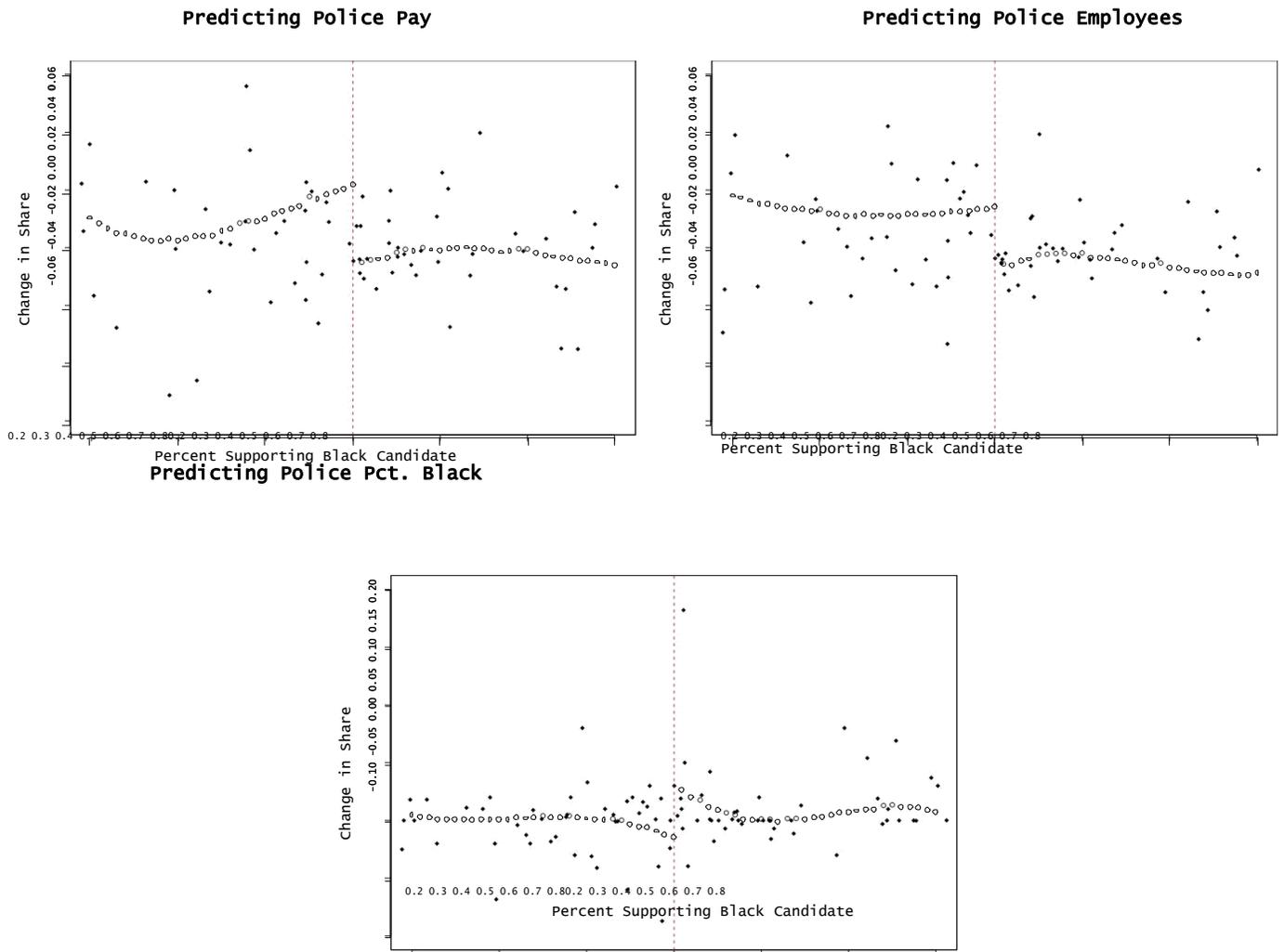

Predicting Police Pct. Black

Figure 2: These figures plot both the bivariate relationships and the predicted outcomes from the models. At left, the dependent variable is the change in the share of pay devoted to the police while at right it is the change in the share of police employees. At bottom, it is the share of police officers who are black.

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Police Pay
Omitted Variables?

Change Pct Black
Pct Soc Security
90
Pct Hispanic 00
Democratic Winner
Incumbent
Council-Manager
Pct Immig 90
Med Home Price 90
Change Lg Med Income
Pct Same House 90
Pct Homeowner 00
Northeast
Change Lg Population
Party Change
Homogeneity 00
At Large
West
South
Pct Poor 90
Council Size
Avg Commute 90
State Leg Lower Dem
Mayor-Council
Rep Governor
Democrat
Change, Crime
State Leg Upper Dem
Crime Rate 91
Pop Density 90
Council Pct
Black
Pct Public Assist
90
Pct with BA 90
Home Rule

-0.08 -0.06 -0.04 -0.02 0.00 0.02 0.04

Effect of Black
Mayor

Police Employees
Omitted Variables?

Pct Immig 90
Pct Poor 90
Pct with BA 90
Pct Homeowner 00
West
Incumbent
Council Pct
Black
Pct Soc Security
90
Home Rule
Pct Public Assist
90
Med Home Price 90
Change Lg Population
At Large
Democratic Winner
Pct Same House 90
Council-Manager
Change Pct Black
State Leg Upper Dem
State Leg Lower Dem
Homogeneity 00
Pop Density 90
South
Party Change
Democrat
Change, Crime
Northeast
Mayor-Council
Crime Rate 91
Council Size
Rep Governor
Avg Commute 90
Pct Hispanic 00
Change Lg Med Income

-0.08 -0.06 -0.04 -0.02 0.00 0.02 0.04

Effect of Black Mayor

Police Pct. Black
Omitted Variables?

Pct Homeowner 90
Pct Soc Security 90
Pct Hispanic 90
Med Home Price 90
Home Rule
Council Pct Black
Change, Crime
Pop Density 90
Council Size
Mayor-Council
State Leg Upper Dem
Democrat
State Leg Lower Dem
Pct Same House 90
West
Avg Commute 90
At Large
Pct with BA 90
Pct Immig 90
Party Change
Democratic Winner
South
Incumbent
Crime Rate 91
Change Lg Population
Pct Poor 90
Pct Public Assist 90
Northeast
Rep Governor
Homogeneity 90
Council-Manager
Change Pct Black

Change Lg Med Income
0.00 0.02 0.04 0.06 0.08 0.10 0.12

Effect of Black Mayor

Figure 3: This figure presents the estimated treatment effect when each of the listed independent variables is included separately in the basic models.

Appendix

	ß	SE	
Intercept	0.47	0.35	
Black Candidate Wins	-1.14	2.18	%
Supporting Black Candidate	-0.71	1.28	
% Black Share Squared	1.40	4.68	%
Black Share Cubed	-0.57	5.26	
Independent Opponent	-0.01	0.02	
December FY	-0.00	0.01	
Logged Population	-0.00	0.00	
% Black	0.00	0.04	
Logged Median Income	-0.04	0.03	
Intergov't Revenue	0.00	0.01	Black
Victory x % Vote Black	5.40	10.33	
Black Victory x % Vote Black Squared	-8.35	16.50	
Black Victory x % Vote Black Cubed	3.94	9.60	

Table 5: This table presents a fitted OLS model predicting police pay as a share of total pay for the 107 contested black-white mayoral elections.

	Impact	SD	2.5th	97.5th
Property Tax Share	-0.066	0.038	-0.141	0.009
Share, Police Pay	-0.036	0.018	-0.073	-0.000
Share, Police Employees	-0.035	0.016	-0.067	-0.003
Police % Black	0.044	0.021	0.006	0.086
Total Taxes per Capita	-0.015	0.011	-0.038	0.007
Housing Share	-0.012	0.012	-0.036	0.011
Share, Road Employees	-0.011	0.014	-0.038	0.015
Parks Share	-0.010	0.012	-0.034	0.015
Share, Fire Employees	-0.009	0.013	-0.035	0.015
Share, Housing Employees	-0.008	0.011	-0.031	0.013
Fire Share	-0.007	0.006	-0.019	0.005
Logged Population	-0.005	0.027	-0.058	0.049
Share, Library Employees	-0.004	0.005	-0.014	0.005
Log, Total Taxes	-0.002	0.007	-0.016	0.011
Police Share	-0.001	0.010	-0.021	0.018
Inspection Share	0.001	0.007	-0.013	0.014
Natural Resources Share	0.001	0.003	-0.005	0.007
Library Share	0.002	0.006	-0.009	0.014
Administration Share	0.002	0.004	-0.005	0.010
Share, Sanitation Employees	0.004	0.014	-0.023	0.030
Employees per Capita	0.004	0.004	-0.004	0.012
Sanitation Share	0.004	0.009	-0.013	0.022
Health Share	0.006	0.006	-0.006	0.018
Logged Total Payrolls	0.013	0.017	-0.022	0.047
Roads Share	0.015	0.019	-0.023	0.054
Logged Total Employees	0.028	0.015	-0.002	0.058
Sales Tax Share	0.035	0.024	-0.011	0.082
Taxes / Total Revenues	0.037	0.039	-0.039	0.113

Table 6: This table presents the estimated impacts and 95% confidence intervals for each dependent variable analyzed. These results come from models using only various functions of the percent backing the black candidate.