Black Candidates and Black Turnout: A Study of Mayoral Elections in Louisiana*

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Abstract

What effect does candidate race have on co-racial voter turnout? Recent studies suggest that the presence of a black candidate results in an increase in black turnout. We argue that much of these findings can be attributed to the different design choices of previous researchers, and absence of attention paid to strategic candidate behavior. In this study we examine mayoral elections in the state of Louisiana between 1988 and 2011, matching cities along an important dimension size of the black population. We find that when we compare turnout levels in places with similar black populations, the effect of a black mayoral candidate are modest at best. By accounting for the strategic behavior of black candidates and black voters, our results bring into question studies which simply seek to assess the effects of black candidates on turnout by comparing blacks who have the option of voting for a black candidate with those who do not.

1 Introduction

On Tuesday, November 7, 2006 Cedric Glover was elected the first African American mayor of Shreveport, LA. Glover's election came as a surprise to many who doubted he could gather enough support to win in southern city where in years past blacks had attempted but failed to gain control of city hall. Glovers victory was ultimately attributed to his campaigns keen ability to exploit the racial politics of Shreveport through his ability to

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mobilize African American voters. The day after the election the local newspaper, *The Times*, surmised that Glovers victory was likely due at least in part to, "Several high-profile get-out-the-vote initiatives targeting black voters in the last week" that "energized Glovers core voter base." Similarly, one local commentator noted that, "Cedric did a stupendous job of turnout...Black turnout is way up from the primary, much closer to proportion" (Mahfoufi November 8, 2006).

The role that black turnout is believed to have played in the election of Shreveports first African American mayor illustrates a common explanation for black electoral success: that black candidates succeed by mobilizing black voters. This belief, while well known among political pundits, has existed for decades as a kind of anecdotally substantiated fact about black political behavior. Recently, however, this idea has attracted the attention of political scientists interested in understanding whether or not the presence of a black candidate on the ballot does indeed actually increase black voter turnout. Examining a number of elections and millions of black voters, this research has found higher rates of voter turnout among those blacks who have the option of voting for a black candidate compared to those who do not.

In this paper, we revisit the question of whether black candidates increase black voter turnout. Here we examine a unique data set on mayoral elections in Louisiana spanning more than two decades (1988-2011) to test whether or not the presence of a Black mayoral candidate on the ballot increases turnout among African American voters. What we find is that while black turnout is indeed higher in places that feature black mayoral candidates than it is in places that do not, this effect appears to be largely driven by differences in black candidate viability as measured by the percentage of black residents in the municipality. For example, in Census data, the city of Shreveport has gone from 45% African American in 1990 to 57% African American in 2010. Thus the success of Glover might easily be attributed to the increased number of African American voters in Shreveport.

We propose that African American candidates are strategic and tend to run in places

with large co-racial populations in order to increase their chances of winning. We find that when we compare turnout levels in places with similar black populations, the differences in turnout are modest at best. By accounting for the strategic behavior of black candidates, our results bring into question studies which simply seek to assess the effects of black candidates on turnout by comparing blacks who have the option of voting for a black candidate with those who do not.

2 Black Candidate and Black Turnout

Over the last twenty-five years, a great deal of research has been devoted to understanding the effect that minority candidates have on minority electoral behavior. This work has been inspired in part by a need to more fully comprehend the impact of the 1964 Voting Rights Act and its subsequent amendments on the electoral behavior of minority citizens. To that end, a number of political scientists, sociologists and economists have sought to empirically test the linkage between the presence of a minority candidate running for office and the turnout behavior of minority citizens within that district (Barreto, Segura and Woods 2004; Brace et al. 1995; Gay 2001; Griffin and Keane 2006; Tate 1991, 2003; Voss and Lublin 2001; Washington 2006; Whitby 2007).

Several studies have found a clear correlation between the race of the candidate and co-racial turnout Bobo and Gilliam (1990); Voss and Lublin (2001); Barreto, Segura and Woods (2004); Washington (2006). The dominant explanation for this correlation is that when minorities witness co-racial group members pursuing political office it brings a heightened sense of political empowerment (Barreto, Segura and Woods 2004; Bobo and Gilliam 1990; Browning, Marshall and Tabb 1984; Gilliam and Kaufman 1998; Leighley 2001). This theory, known as "empowerment theory," has come to be accepted as one of the dominant structural explanations for minority electoral behavior in the U.S. Of course, empowerment theory is a mechanistic explanation. It provides a reason for why co-racial candidates might increase turnout, but empowerment cannot be empirically verified from the correla-

tion between turnout and candidates. Mobilization efforts targeted at minorities by minority candidates are another plausible explanation for this correlation.

More recent work has, however, found little evidence that minority candidates spur increased turnout among co-racial voters (Sekhon, Titiunik and Henderson 2010; Keele and White 2011). These studies carefully account for the selection of voters into districts that have minority candidates. Accounting for such selection clearly reveals differences between the types of citizens who live in districts that have minority candidates on the ballot compared to those that do not, raising serious concerns about the inferences drawn from earlier studies and casting doubt on empowerment theory.

In our study, we focus on the link between co-racial candidates and turnout in mayoral elections which have several distinctive characteristics. First mayoral candidates tend to be more visible to voters in ways that even U.S. House members may not be as the mayor may receive attention in the local media. Mayors often have closer links to voters and can credit claim in highly visible ways. Second, municipal boundaries are generally not subject to manipulation via redistricting which often results in uncompetitive legislative elections. As such municipal elections for mayor are not tailor made for African Americans to win office. Third, the original empowerment claims were actually made about African American mayors (Bobo and Gilliam 1990). However, we believe that in order to understand the relationship between co-racial candidates and minority turnout in mayoral elections, it is necessary to first understand the strategic choices of minority candidates.

3 The Role of Candidate Strategy

Serious candidates with the credentials and money necessary to win an election will be unlikely to run in areas where they are unlikely to win. As Jacobson (1989, pg. 775) concluded about strong challengers in Congressional elections, they "do not emerge randomly; their occurrence varies with the prospects of victory." In short, viable candidates appear in races where they more likely to win. What determines candidate viability? Previous research

examining Congressional candidates has found links between viability and seniority (Kazee 1994), previous vote margins (Tofias 2005), incumbency (Carson 2005), and ideology (Johnson, Oppenheimer and Selin 2012). For minority representatives, viability has also been linked to previous representation in that office (Marschall, Ruhil and Shah 2010) as well as level of descriptive representation within the legislative body (Rocha et al. 2010). Thus, in much the same way that high quality Democratic challengers do not enter races in strong Republican districts, serious Black candidates do not enter races where they expect to lose, which means they may not enter races with large white electorates.

The logic of strategic candidates implies that we don't expect Black candidates to appear in places where blacks either make up a significant minority or constitute a majority of the voting population. This is especially true in the South where the partisanship of the electorate and racial demographics are so highly correlated. In fact, black candidates for mayor might not only attempt to run in places with large African American populations, but might also choose to run in places with above average turnout in that black population. Thus while we redistricting does not play a role in creating places where blacks are viable mayoral candidate, the candidates themselves will make choices with similar implications.

We might also ask what implications strategic candidate theory has for empowerment theory. On the face of it, there would appear to be some incompatibility, since empowerment theory focuses on how black candidates change attitudes and feeling among voters. However, we would argue that the two theories are compatible, suggesting mutually strategic candidates and voters. If black candidates are indeed not running in places where they believe they are less likely to win because of a perceived racial disadvantage," then to the extent that black voters living in these places are also aware of this disadvantage, they have no reason to turnout and vote, even when a black candidates does run. Black voters in these places are essentially disempowered, not by the lack of black candidates but by a chronic lack of black electoral power.

For blacks in low black population districts (and especially in places where blacks have few

viable coalition partners) it is not until black population numbers reach a certain threshold that they will perceive the group to have any electoral strength. Thus, black turnout in these communities is likely to remain low as voters doubt the prospects of electing candidates that they think will represent their interest. It is, of course, this very logic that drove the creation of majority-minority districts under the Voting Rights Act.

Our predictions are also consistent with research on candidate emergence which suggests that the under-representation of blacks in elected office is not an issue of potential candidates, but a shortage of elections Black candidates feel they have the potential to win. For example, one analysis of why so few Black House members do not choose to run for Senate seats points to the role of racial demographics (Johnson, Oppenheimer and Selin 2012). Similarly, Shah's (2013) analysis of black candidate emergence in local offices across Louisiana concludes black candidates are most likely to run when the demographics of the jurisdiction are in their favor. Thus, the issue does not seem to be a shortage of potential candidates, but a shortage of elections Black candidates feel they have the potential to win, based on demographics. Thus, any examination of the ability of black candidates to influence turnout should take into account the size of the black population as this is likely the primary determinant of why a black candidate runs and the degree to which black voters see that candidate as viable. We now outline our data before detailing a research design that accounts for strategic candidates.

4 Data

We created a unique data set to test whether black mayoral candidates increase turnout among African American voters. The state of Louisiana maintains three different data sources that we combined provide for our analysis. First, the state of Louisiana maintains a candidate database. This database contains information on candidates for all state and local elections. The information in the database includes candidate name, address, office, data, sex, and most importantly for our purposes candidate race. From the database, we extracted all mayoral candidates from 1988 to 2011. While information on race is typically reported,

candidate race is at times missing. We found that for all candidates in our time period, information on race was missing 3% of the time. While we could have used an imputation model for the missing race data, instead we used a bounds approach. We generated two additional treatment measures to assess the effect of missingness. In one, we code all missing data on race to white, and in the second we code all missing data on race to African American. We can then generate estimates for all three treatment indicators. We found the results were not sensitive to which measure we used, so we conclude that missingness on treatment is ignorable.

The candidate data base, however, does not contain any information about either election outcomes or turnout. Our research design exploits information about relative electoral outcomes, so the next data source we used was information on electoral returns also maintained by the state of Louisiana. Here, we simply merged the votes received by each candidate with the candidate database. Once election returns were matched to each candidate in the database, we converted the raw votes into percentages and denoted the candidates rank in the election outcomes. This step was necessary due to the unique structure of Louisiana elections. Mayoral elections in Louisiana are structured as a runoff systems. In what is considered to be the general election all candidates for an office are placed on a single ballot. This general election serves in many cases as both a primary and general election mechanism. If one candidate in the general election receives more than 50% of the vote, that candidate is the winner and no further elections are held. However, if no candidate manages to receive more than 50% of the vote, the top two vote getters in the general election then advance to a runoff election which is typically held between two weeks and a month after the general election. We ranked candidates in the general election since there are often three or more candidates. Ranking the candidates allows us to know which candidate was in third place for general elections that led to a runoff election; a feature in our research design.

The final part of our data collection consisted of compiling turnout for mayoral elections.

The state of Louisiana records precinct level turnout numbers by race and party.[1] These data are online from 1998 to the present. For earlier years, the state has paper records, which we scanned to convert to an electronic format. These data tables were then entered by hand into a spreadsheet using a data entry firm. Next, we matched the precincts to municipalities. In the electoral returns data, results for mayoral elections are reported at the precinct level which allowed us to map which precincts fall within specific city limits. We aggregated the precinct level turnout data for each municipality which results in a municipal level data set with indicators for whether at least one of the candidates in the mayoral election was black. We also added in Census data from 1990 on the population of each municipality and the percentage of African American residents. While a larger number of Census covariates are generally available, these covariates are not collected for most of the smaller towns that make up the bulk of our data.

5 Research Design

Next, we outline our research design which formalizes the problem caused by strategic candidates. First, we detail our notation using the the potential outcomes framework from the treatment effects literature (Holland 1986; Rubin 1974, 1990). Let $D_i \in \{0, 1\}$ be an indicator of treatment that is 1 if in a mayoral election at least one of the candidates is African American and 0 otherwise and Y_i records the turnout among African Americans expressed as a percentage for each municipality. We denote that for each municipality i, there exists a pair of potential outcomes: $Y_i(1)$ for the level of turnout if exposed to the treatment and $Y_i(0)$ if not exposed. In this framework, we define the causal effect of the treatment as the difference: $Y_i(1) - Y_i(0)$. The fundamental problem is that we cannot observe both $Y_i(1)$ and $Y_i(0)$. Instead we must estimate average effects of treatments over populations: $E[Y_i(1) - Y_i(0)]$ or $E[Y_i|D = 1] - E[Y_i|D = 0]$.[2] Of course for $E[Y_i|D = 1] - E[Y_i|D = 0]$ to be a valid estimate of the causal effect of the treatment D_i, we need to be confident that

[1] There are a few elections where the data were missing. We are currently working to acquire these data.

[2] In the analyses that follow, we estimate average treat on the treated: $ATT = E[Y_i(1) - Y_i(0)|D_i = 1]$.

$E[Y_i|D = 1] = E[Y_i|D = 0]$ *before* $D = 1$ goes in to effect, or formally $D_i \perp Y(d)$. In our context, we need this to be true *before* treated voters face an election with an African American candidate. If this is not true, any difference we observe might be due to a pre-treatment difference in turnout instead of the treatment.

Why might treated and control municipalities differ other than the presence of a black mayoral candidate? As we outlined above, strategic candidates induce a selection problem. By selection, we mean the process by which voters are selected for treatment. Unless we account for selection, estimates from standard statistical methods will be biased (Heckman 1979). If we assume that candidates are generally strategic, and they mount campaigns with some expectation of being competitive, then we suspect that African American candidates chose to run in particular types of municipalities. That is, we believe that African American candidates tend to run for mayor in places with large African American populations. Quite simply, the probability of winning a mayoral race as a black candidate is much larger in places where African Americans make up a larger share of the voting public. Alternatively, they may choose to run in places where turnout among blacks is high. Since the state maintains data on turnout by race, candidates will have information available on which municipalities would maximize the chance of election. Moreover, once an African American becomes mayor that may cause more African Americans to relocate to that municipality, since it now has a concentration of co-racial residents and co-racial political leadership. As such, the percentage of African Americans in a municipality should serve as a key covariate.

To emphasize how different our treated and control group are, we use Figure 1. Figure 1 displays the differences in the proportion of African American residents in a municipality for general elections across treatment status. The differences are striking. Typically, we observe at least one black candidate in municipalities where 60% of the population is African American. In races without any black candidates, the percentage of blacks is typically 20% in that town or city. While the medians are clearly different, the overall distributions are also quite distinct. The grey boxes represent the inter-quartile range for each distribution.

Here, we find that the inter-quartile ranges do not even overlap.

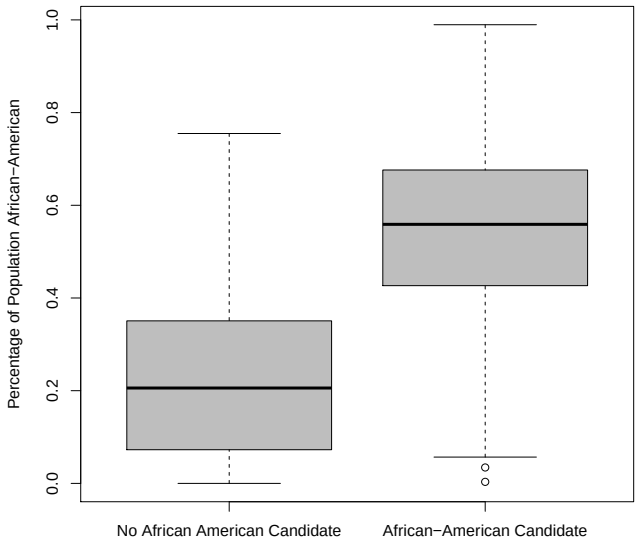

Figure 1: Differences in distribution for general election races with and without an African American candidate for mayor.

Our identification strategy given this selection problem is relatively simple. For identification, we assume that "selection on observables" holds. (Barnow, Cain and Goldberger 1980). Under this approach, analysts collect all known confounders and use a statistical estimator to make treated and control comparable while the treatment effect is estimated. Critically, selection on observables is a strong and nonrefutable, insofar as it cannot be verified with observed data (Manski 2007). Given our reliance on the selection on observables assumption, we focus on a sensitivity analysis described below to probe our inferences.

While we do not have a natural experiment to present, the structure of elections in Louisiana, does provide us with an opportunity to apply pattern specificity. Cook and Shadish (1994, pg. 95) write, "Successful prediction of a complex pattern of multivariate results often leaves few plausible alternative explanations." Here, analysts elaborate many different consequences of a causal hypothesis. If each separate prediction is confirmed, it may leave little doubt as to the validity of the causal hypothesis. We exploit the unusual structure

of Louisiana elections to that end. First, we separate general elections from runoff elections. We expect that when African American candidates are in a runoff election, turnout among Africans Americans will be higher, since the runoff election serves as a signal that the black candidate may win.

Next, we look at a particular set of runoff elections. We compare turnout in runoff elections where at least one of the candidates is African American to runoff elections where both candidates are white, but an African American finished third in the general election. In this type of runoff election, we expect even larger effects since in one runoff election the the African American electorate will have had a co-racial candidate come close to the runoff but fail. In sum, we are comparing African American turnout in a runoff election where one candidate is African American to another runoff election where no candidates are African American but an African American came in third and as such was relatively close to qualifying for that runoff. Ideally, we would restrict our analysis to candidates that not only finished third but also garnered a percentage of the vote that would nearly qualify them for the runoff. Unfortunately, we did not have enough cases of this type. We designate these runoff elections African American third (AAT) runoff elections. The key advantage of ATT runoffs is that we think the design increases the comparability of the elections. If an African American candidate places third in the general election and a runoff is triggered, we think this makes that ensuing runoff elections far more comparable than simply comparing runoff elections with and without African American candidates. In general, we expect estimates of increasing magnitude in each design. Finally, we didn't include New Orleans in any of our analyses, since we found it incomparable to any other city in the state.

6 Analysis

As we outlined above, we have a limited number of covariates that we can use to adjust for confounders. Specifically, we have the population of the municipality and the percentage of residents that are African American. As we also noted above, we suspect that the percentage

of African American residents will be particularly important. In the analysis, we use census data from 1990 instead of from 2000 or 2010. The reason we use 1990 data is that it may be the case the African Americans move to cities with African American mayors. If so, the percentage of black population may be affected by the treatment. Since the majority of our elections occur after 1990, conditioning on Census data from 1990 should reduce the possibility of bias from conditioning on a posttreatment variable. We also believe that year is an important variable to match on. That is we would prefer to find matches from within the same yearly electoral cycle, which will hold constant larger national or state level trends that might also drive turnout in a particular year.

We adjusted for these covariates using Genetic Matching. Genetic Matching is a multivariate matching method that uses an evolutionary search algorithm to determine the weight each covariate is given with the aim of maximizing the balance of observed potential confounders across treatment and control groups (Sekhon and Diamond 2012; Sekhon 2011). We matched on the natural log of municipal population and the proportion of African American residents. For these two continuous measures, we focused on ensuring that both central moments and the higher moments of the treated and control group distributions were similar. To check imbalances in higher moments, we use the Kolmogorov-Smirnov (KS) test. The KS test measures the distance between the empirical distribution functions of the treated and control groups.

We also attempted to exactly match on election year. Exact year matching was unproblematic for general elections, which occur more often. For runoff elections, we found it difficult to balance the other two covariates while also exactly matching on year. To that end, for runoff elections, we performed two separate matches. In one, we exactly matched on year, but this produced larger imbalances in the other covariates. In the second match, we matched on year but not exactly. This allowed us to better balance the other two covariates. For the AAT runoff elections, we matched on year but did not enforce an exact match, since imbalance on the other covariates was too large. In general, we found that producing

acceptable levels of balance required the use of a caliper. A caliper avoids poor matches by imposing a tolerance on the maximum distance between matched pairs (Cochran and Rubin 1973). For two cities i and j, let P_i and P_j be a score on a distance metric such as the Mahalanobis distance. Under a caliper, a match for city i is selected only if $||P_i - P_j|| < \epsilon$, where ϵ is a pre-specified tolerance. We applied calipers to both covariates in all designs. A caliper invariably results in dropping treated observations that do not have comparable matches. Here, we sought to maximize both balance and the number of treated observations used.

Given the limited number of covariates, it is critical we also perform a sensitivity analysis. In a sensitivity analysis, we quantify the degree to which a key assumption must be violated in order for our inference to be reversed. While there are a number of different methods of sensitivity analysis, we use a method based on randomization inference discussed in Rosenbaum (2002, ch. 4). We first apply randomization inference as our mode of statistical analysis. See Keele, McConnaughy and White (2012) for a basic introduction of randomization inference. Thus after matching, we apply Wilcoxon's signed rank test, which is an appropriate randomization test for paired data. Based on the Wilcoxon's signed rank test, we estimate a point estimate via the method of Hodges-Lehmman and an associated 95% confidence interval.

Under randomization inference, we assume that within matched pairs, receipt of the treatment is effectively random conditional on the matches. Formally, in our analysis, there are I matched pairs, $i = 1, \ldots, I$, with two subjects, $j = 1, 2$, one treated and one control or $2I$ total subjects. If the j^{th} subject in pair i receives the treatment, write $Z_{ij} = 1$, whereas if this subject receives the control, write $Z_{ij} = 0$, so $Z_{i1} + Z_{i2} = 1$, for $i = 1, \ldots, I$. In our study, each matched pair consists of one municipality with at least one African-American candidate and one municipality without any African-American candidates. Matching on observed covariates $\mathbf{x}_{ij}$ may have made cities and towns more similar in their chances of being exposed to the treatment. However, we may have failed to match on an important

unobserved covariate u_{ij} such that $\mathbf{x}_{ij} = \mathbf{x}_{ij'} \; \forall \; i, j, j'$, but possibly $u_{ij} \neq u_{ij'}$. If so, unlike in a randomized experiment, the probability of being exposed to treatment may not be the same within matched pairs. To explore this possibility, we use a sensitivity analysis that imagines that before matching, municipality j in pair i had a probability, π_{ij}, of being exposed to the candidate treatment. For two matched cities in pair i, say j and j', because they have the same observed covariates $\mathbf{x}_{ij} = \mathbf{x}_{ij'}$, it may be true that $\pi_{ij} = \pi_{ij'}$. However, if these two cities differ in an unobserved covariate, $u_{ij} \neq u_{ij'}$, then these two cities may differ in their odds of being exposed to the candidate race treatment by at most a factor of $\Gamma \geq 1$ such that

$$\frac{1}{\Gamma} \leq \frac{\pi_{ij}/(1-\pi_{ij'})}{\pi_{ij'}/(1-\pi_{ij})} \leq \Gamma, \;\; \forall \; i, j, j', \text{ with } \mathbf{x}_{ij} = \mathbf{x}_{ij'}.$$

If $\Gamma = 1$, then $\pi_{ij} = \pi_{ij'}$, and the randomization distribution for the sign rank test is valid. If $\Gamma > 1$, then quantities such as p-values and point estimates are unknown but are bounded by a known interval. In a sensitivity analysis, we use several values of Γ to compute bounds on the point estimate for the treatment effect estimate. We then observe at which value of Γ the lower bound on the point estimate crosses zero. If that value of Γ is large, we can be confident that it would take a large bias from a hidden confounder to reverse the conclusions of the study. If that value of Γ is small, then we have little confidence in the results since a relatively small amount of confounding could overturn our conclusions. Thus the sensitivity analysis indicates the magnitude of bias due to an unobserved covariate that would need to be present to alter the conclusions reached under the assumption that receipt of treatment is effectively random. While this form of sensitivity analysis is general, it requires specific adaptations for specific test statistics. We apply the sensitivity analysis to Wilcoxon's signed rank test. See Rosenbaum (2002, ch. 4) for the specific derivation of the sensitivity analysis of the sign rank test. We now turn to the results from our analysis.

7 Results

We begin with results from the balance analysis. Table 1 contains the difference in means and a KS test p-value for general elections, runoff elections and AAT runoff elections. A few items are worth noting. First, in general and runoff elections, African American candidates tend to be on the ballot in places with larger populations. Second, African American candidates primarily run in municipalities with larger African American populations. In general elections, African American candidates tend to run in cities that are 53% black as compared to places that are 21% black. In runoff elections, we tend to find African American candidates in cities that are nearly 60% black as compared to cities are only 27% African American. Next, the balance test results clearly vindicate looking at AAT runoff elections. First, we find that municipal populations are balanced by the design. More importantly we find better comparability in terms of the percentage of African Americans. While the percentage gap is still large, in the control group the percentage of African Americans is now 41%. That is, we are more likely to have control elections where the African American candidate is viable.

Next, we present unadjusted estimates from general elections, runoff elections, and AAT runoffs. The unadjusted estimates are simply comparisons between races with African American candidates and races without African American candidates. We report these results to compare to the adjusted estimates. If the estimates change, we may be able to make inferences about the amount of bias reduction that occurs given our adjustments. Table 2 contains the unadjusted estimates. In all three cases, we find African American turnout is higher when an African American candidate is in the mayoral race. For general elections, African American turnout is 7.5 percentage points higher and for runoff elections turnout is 9.1 percentage points higher. In the AAT runoffs, turnout is 5.9 percentage points higher. Estimates based on a naive comparison point to unambiguous racial effects. However, we should note that for the ATT runoffs the treatment effect is smaller rather than larger than

Table 1: Covariate Balance on Four Designs Before Matching.

	General Election			Runoff Election Exact Match Year		
	Treated Mean	Control Mean	KS test p-value	Treated Mean	Control Mean	KS test p-value
Log Population	7.98	7.38	.00	8.36	8.04	.48
Proportion African Americans	0.53	0.21	.00	0.59	0.27	.00

	Runoff Election Af-Am Candidate Third		
	Treated Mean	Control Mean	KS test p-value
Log Population	8.24	8.26	.89
Proportion African Americans	0.67	0.41	.00

the estimate for the all runoff elections. As we noted, the balance is better for AAT runoffs, which suggests that when the treated and control municipalities are more comparable the treatment effect size decreases. We next seek to further increase comparability through matching.

Figure 2 shows the distribution for the proportion of African American residents after matching, where we are able to greatly increase comparability. Achieving this level of comparability requires us, however, to use a much smaller subset of the data. For general elections, we started with 335 treated elections. To balance the covariates, we discarded 220 treated observations and found suitable matches for the remaining 115 treated elections. In sum, before matching we have an apples to oranges comparison, but after matching we are more confident that this is an apples to apples comparison.

In Table 3, we report the balance after we match. For general elections, we achieve good balance even with an exact match on election year. An exact match on election year, however, hurts balance for the other two covariates in runoff elections. If we exact match on election year, the imbalance in the proportion of African American residents remains at four

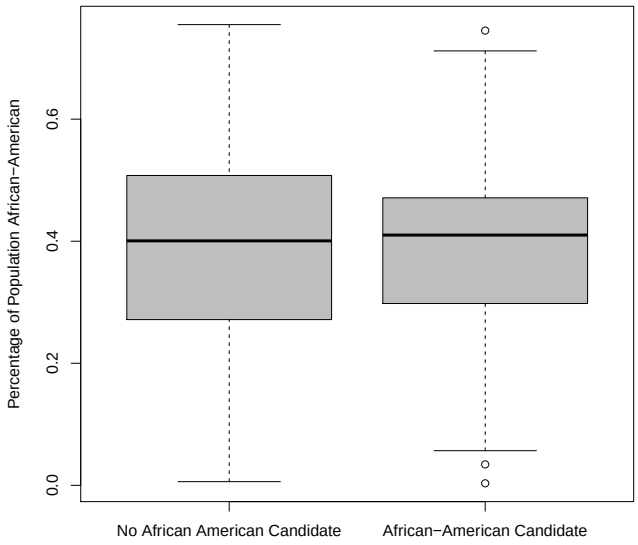

Figure 2: Differences in distribution after matching for the proportion of African American residents in a municipality.

Table 2: Unadjusted Estimates of The Effect of African American Candidates in Mayoral Elections in Louisiana, 1988-2011

	General Election	Runoff Election	Runoff Election Af-Am Candidate Third[a]
Point Estimate	7.5	9.1	5.9
95% Confidence Interval	$[5.36, \infty,]$	$[5.26, \infty]$	$[2.1, \infty]$
p-value	.001	.001	.109
N	946	164	45

Note: [a]This means an African-American candidate finished third in the general election and a runoff election was triggered. Point estimates are the Hodges-Lehmann estimates from the Wilcoxon sum rank test.

Table 3: Covariate Balance For Four Matched Designs.

	General Election			Runoff Election Exact Match Year		
	Treated Mean	Control Mean	KS test p-value	Treated Mean	Control Mean	KS test p-value
Log Population	7.81	7.82	.91	8.29	7.96	.44
Proportion African Americans	0.39	0.38	.61	0.40	0.36	.99
	Runoff Election No Exact Match Year			Runoff Election Af-Am Candidate Third		
	Treated Mean	Control Mean	KS test p-value	Treated Mean	Control Mean	KS test p-value
Log Population	8.87	8.84	1.0	9.44	8.39	.46
Proportion African Americans	0.45	0.43	.79	0.52	0.47	.49

percentage points. More troubling than the size of the gap is the fact that in the control group the proportion of African American residents is below .4. In U.S. Congressional districts, African American generally become viable when the district is 40% black (Cameron, Epstein and O'Halloran 1996). If that holds, here, then we would prefer the control group mean to be higher. If we relax the constraint on election year, we can produce better balance in terms of this covariate and log population, and we nearly double the number of observations from 24 to 44. For the AAT runoffs, the difference in proportions for African American residents is five points. While this difference is somewhat large, we doubt comparability is hurt much since in both treated and control locations, African American candidates should be viable since the average African American proportion is .47 in the control group while it is .52 in the treated group.

We now turn to the estimates from the matched analysis. In Table 4, we report point estimates, 95% confidence intervals, one-sided p-values, and the value for Γ the sensitivity analysis parameter. First, we discuss the results from the general elections. Recall that in the unadjusted data the point estimate was 7.5 percentage points, and once we match the

point estimate is now 1.8 percentage points and is not statistically significant. Moreover, if the odds of treatment (Γ) differ by as little as 19%, we would conclude that the actual treatment effect is zero. Our inference is clear, once we compare cities with similar racial distributions, the effect of an African American candidate is much more modest.

Next, we examine the results for runoff elections. We cannot, however, simply interpret these estimates in a naive way. We suspect that turnout is generally higher for runoffs than for general elections. When a runoff is triggered that signals to the electorate that a race is competitive, which may increase turnout. To that end, we ran another matched analysis. In this analysis, we matched on the same covariates with an exact match on year. We used whether an election was a runoff election as the treatment and again used black turnout as the outcome. We found that runoff elections increased turnout around 4 percentage points. This analysis suggests that we should subtract four percentage points from the estimates for runoff elections.

For runoff elections, when we exact match on year the effect actually increases to 14.5 percentage points. The sensitivity parameter is also quite large at $\Gamma = 4.6$, which implies that the odds of treatment would have differ by more than a factor of 4. However, it was for this design that we were unable to fully eliminate the imbalances on both covariates. If we more fully eliminate that imbalance through a more flexible match on year we find that the point estimate decreases from 9.1 in the unadjusted design to 5.9 points in the matched design. In this design, Γ is 1.52, which makes the match with better balance much more sensitive to bias from hidden confounder. Importantly this fits the pattern that as we eliminate the imbalance on the proportion of African American candidates the effect decreases. If we adjust for the runoff effect, the treatment effect is now just 1.9 percentage points. Finally, in the AAT runoffs, the estimate is correctly signed but is small at half a percentage point and the value for Γ is only 1.04, which implies that if the odds of treatment differ by as little as 4% that would explain the effect we observe.

As we have shown, African American candidates tend to run in places with large co-racial

Table 4: Adjusted Estimates of The Effect of African American Candidates in Mayoral Elections in Louisiana, 1988-2011

	General Election	Runoff Election Exact Match On Year	Runoff Election No Exact Match On Year	Runoff Election Af-Am Cand. Places Third[a]
Point Estimate	1.8	14.5	5.9	0.51
95% Confidence Interval	$[-0.97, \infty]$	$[4.93, \infty]$	$[-1.9, \infty]$	$[-7.9, \infty]$
p-value	.143	.026	.124	.406
Γ^b	1.19	4.6	1.52	1.04
N	230	24	44	14

Note: [a]In this design, an African-American candidate finished third in the general election and a runoff election was triggered. [b]We applied the sensitivity analysis to the point estimate and not the p-value. We match on proportion of the population that was African American in 1990, the log of municipal population in 1990, and election year.

populations. Once we compare comparable cities, the racial effect is much reduced. Given our results, we might conclude that the upper bound on the African American candidate effect is at most two percentage points. That is, in both general elections and the corrected runoffs, we observe effects just below two percentage points. Both effects, however, could be explained by hidden confounders that modestly alter the odds of treatment. While one estimate is larger than that, this estimate is based on a small subset of the data (12 treated and 12 control elections), and we were unable to fully eliminate the imbalance for the two covariates we matched on.

8 Discussion and Conclusion

The goal of this study was to tease out the effects of mayors race, controlling for an important and often overlooked selection effect size of the black population. While we find some modest evidence for a co-racial turnout effect, the larger story is that candidates and voters behave in a strategic manner. African American candidates run for mayor in places with a large base of co-racial support. As we demonstrated, places with at least one African American candidate on average have a population that is around 60% black. This leaves a number of

municipalities that have no African American candidates, largely because African American candidates choose not to run in these elections as they see the prospects for their victory as slim due to small black populations in these districts. Similarly black voters in these low black population municipalities also realize the relative electoral disadvantage of their racial group and as a consequence choose to abstain from participation in elections (**?**). These voters realize that even when there is a black candidate running that candidates chances of victory are slim (particularly if blacks have no other coalitional partners such as white democrats or Latinos) and thus voting in such an election would at best be a symbolic act.

These findings also underscore the problem of selection effects that have plagued many of the early observational studies attempting assess the effects of co-racial candidates on black and Latino voter turnout. Given that black candidates are clearly not randomly assigned to elections, simple comparisons of co-racial/ethnic candidates and black and/or Latino voter turnout are problematic and likely overstate the impact that co-racial/ethnic candidates have on minority turnout. The data and analytical approach presented above represent a good guideline for accurately assessing the effects of co-racial/ethnic candidates on minority turnout.

Our next steps include examining the effects of changing black population on black turnout. What happens as a city becomes more black? Is this often proceeded by the election of a black mayor? Do our findings hold in places that find themselves in population flux? We are also interested in studying more closely black mayoral tenure how does turnout differ for the first black mayor of a city (like our opening example of Shreveport), versus cities that have "always" had a black mayor? Unlike other datasets of single or short time periods, our data from Louisiana allows for more detailed over time analysis.

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