The Obama Effect on Economic Outcomes: Evidence from Event Studies*

Stefano DellaVigna

UC Berkeley and NBER

sdellavi@berkeley.edu

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Abstract

Racial differences in economic outcomes are wide-spread and persistent. Theories of statistical discrimination and of identity, but not of taste-based discrimination, posit that these differences are the effect of perceptions—of skills and of identity. Whether racial outcomes respond to change in racial perceptions, therefore, can shed some evidence on the nature of the observed racial differences. In this paper, I study the impact of an event that has plausibly changed the perceptions of what African Americans can achieve: Barack Obama's election. I use an event study methodology and focus on key election events, such as the first primary victory (Jan. '08), the convention (Aug. '08), the general election (Nov. '08) and the inauguration (Jan. '09). I consider first the impact on a measure of discrimination, racial bias in traffic stops. I find evidence of discrimination against Blacks, but the extent of discrimination does not change with the Obama events. I then consider the impact on crime rates, labor force participation, applications to Law School, contribution to public goods (measured by organ donations), and time spent in investment activities. Across these outcomes, the Obama election events did not have an immediate impact for Blacks compared to Whites, with the possible exception of Law School applications. While the Obama election could change beliefs over the long term, in the short-term it does not appear to have changed behavior.

1 Introduction

Racial differences in economic outcomes are wide-spread and persistent, from wages (Blinder, 1973; Neal and Johnson, 1996) to call-back rates in interviews (Bertrand and Mullainathan, 2004). The differences extend beyond the workplace to political choices (Washington, 2006), health (Blanton et al., 1996), and bargaining outcomes (List, 2004).

One classical explanation for these racial differences is taste-based discrimination (Becker, 1971): Blacks earn lower salaries because of discriminatory preferences of the (mostly White) employers. The differences, however, could also be due to statistical discrimination (Arrow, 1973): an employer is less likely to call back an applicant who belongs to a group that is perceived as less qualified on average. Some of the differences in outcomes may also be due to different identities (Akerlof and Kranton, 2000 and Austen-Smith and Fryer, 2005): Blacks make different educational choices because of perceived group-specific social norms.

The theories of statistical discrimination and of identity, but not of taste-based discrimination, share one prediction: that racial outcomes can be quite responsive to changes in perceptions—of skill, of discrimination, and of identity. If police-officers update their opinion of a racial group, they respond in their search decisions. Groups who believe that they have become less discriminated put more workplace effort because they believe that it will pay off, and are also less likely to embrace a counter-cultural identity. If racial differences instead are due to underlying tastes, changes in perceptions are unlikely to have a significant impact.[1]

Whether racial outcomes respond to change in racial perceptions, therefore, can provide evidence on the nature of the observed racial differences. Unfortunately, this prediction is hard to test because few events change racial perceptions abruptly and significantly.

In this paper, I study the impact of an event that unfolded relatively quickly and that has plausibly altered the perceptions of what Blacks can achieve: Barack Obama's nomination and election as 44th President of the United States. This salient and successful role model is likely to have changed how Blacks are perceived by Whites, as well as the perceptions of discrimination: in most primary elections and in the general election, a large fraction of Whites voted for Barack Obama, to the surprise of many. Hence, if perceptions matter, the election may have affected discriminatory behavior by Whites and economic outcomes for Blacks.

I document that racial perceptions indeed changed in the year of Obama's election. In a series of Gallup polls (Figure 1), respondents were asked whether they thought that '*relations between whites and blacks will always be a problem for the United States, or [...] a solution will eventually be worked out*'. The share of optimistic White respondents was 56 percent in 2006 and 54 percent in 2007, a share consistent with historical patterns, but increased to 60 percent in June of 2008, and further increased to 66 percent on November 5, 2008, right after the election. As Figure 1 shows, the increase for Black respondents is even larger. Survey

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[1] This relies on the assumption that the discriminatory preferences do not depend on perceptions of ability.

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questions from all but one similar polls display parallel patterns.

Did Obama's election, then, change discriminatory behavior by Whites and economic outcomes for Blacks? I focus on key election events, such as the first primary elections (January '08), the Democratic convention (August '08), the general election (November '08), and the inauguration (January '09). These events discretely changed the beliefs about Obama's electability (the election events), or increased his prominence (the convention and the inauguration). To control for confounding factors, such as the economic crisis, I estimate high-frequency (daily or monthly) event studies controlling for seasonality, and focus on differential outcomes for Blacks compared to Whites.

As a high-frequency measure of discrimination, I use the measure of racial profiling in car searches of Knowles, Persico, and Todd (2001). For a race-blind police, the probability of finding drugs or weapons conditional on conducting a search should be the same for drivers of different races. A police that discriminates against a racial group, instead, will conduct excess searches of individuals of that group, leading to a *lower* share of drivers with drugs among the searched drivers of that group. Using data for over 4 million traffic stops in Illinois, I find evidence consistent with discrimination against Blacks in the year preceding Obama's election, in 2007. Conditional on a search being conducted, Blacks are 25 percent less likely to be found carrying drugs or weapons. While the race of the police officer is not observable, this is consistent with discrimination by the police body as a whole.

I then consider whether key events in Obama's election affect this pattern of discrimination. Using either a monthly or daily event study, I find no evidence of an effect of the Obama events on the success rate in car stops. I can reject that the events reduced the success rate by more than 8 percent. I obtain a similar finding using, as an alternative measure of discrimination, how often drivers of a race are searched: I can reject that the Obama events lowered the search rate by more than 3.6 percent. Using a second data set of all traffic stops in Texas, I also find no evidence that the Obama-related events affected either of the measures of racial profiling in car stops, though the evidence of baseline profiling against Black is mixed.

The null effect of the Obama event could be due to heterogeneity of effects. For example, it is possible that Obama's election increased the discriminatory behavior among police officers that were already prejudiced, while it lowered discriminatory behavior among the other officers. To test this indirectly, we examine the heterogeneity with respect to a measure of revealed racial preferences: the vote share for Obama, relative to the vote share for Kerry, in the county of the police agency. Presumably, individuals in counties that hold more negative attitudes towards Blacks are less likely to have voted for Obama, relative to their vote for Kerry. We find no evidence of a difference in the results for the different types of counties in Illinois.[2]

Having considered the impact on discriminatory behavior, I examine the impact on five economic outcomes for Blacks: (i) crime rates; (ii) labor force participation; (iii) application

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[2]Unfortunately, the Texas data does not report the location of the stop.

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to a top professional school, Boalt Law School; (iv) contribution to public goods, measured by organ donations; and (v) time spent in investment activities, such as work, as opposed to leisure activities, such as watching television. Changes in a role model and lowered perception of discrimination can plausibly lead to improvements in outcomes for Blacks, i.e., lower crime rates or higher labor force participation. For all of these outcomes, I use daily (monthly in the case of labor force participation) data and consider decision where changes in perceptions can in principle have an immediate effect: avoiding criminal endeavours, joining the labor force, sending an additional graduate school application, giving the assent to an organ donation, or helping more in the household. As above, to address the concerns about alternative factors, I examine the short-run response to events and use Whites as a control group.

Across these outcomes, I find no evidence of an Obama effect, with the possible exception of Law School applications. There is no impact on crime rates for Blacks (or for Whites), no evidence of an impact on labor force participation, on organ donation, or on net time use on investment activities. For at least some of the outcomes, I am able to rule out reasonably small effects. For example, I can rule out with 95 percent confidence that an Obama event increased the labor force participation of Blacks by more than 1.5 percent, or that it lowered crime by Blacks in the next week by more than 1.2 percent. I do find instead evidence of a differential increase of Law School applications by 11.5 percent for Blacks in the Obama event months, although the effect is only marginally significant.

It is, of course, possible that the Obama effect on perceptions and economic outcomes is small in the short-run but large in the long-run. However, the survey evidence suggests that the highest optimism about racial relations occurred around Obama's election, and reverted to baseline levels by October 2009 (Figure 1), consistent with survey responses being driven by emotional responses (e.g., pride). An economic response to the Obama role model, if any, is likely to have been strongest in the short-run.

The evidence in this paper, therefore, implies that even a salient role model change which induced a change in perceptions did not affect racial differentials across a range of economic outcomes. While several interpretations are possible, our favorite interpretation is that observed racial discrimination and racial differentials in economic behavior are relatively impervious to changes in perception. This resilience is more consistent with taste-based discrimination (as also found by Charles and Guryan, 2008) rather than statistical discrimination or identity. As such, this paper contributes to the literature on discrimination.

This paper is also related to a small literature in psychology and sociology that attempts to identify the effect of Obama's candidacy on beliefs and behavior. These studies are mostly laboratory-based and typically use variation in exposure to pictures of Obama to examine the effect on racial attitudes (Aronson et al., 2009; Plant et al., 2009). In contrast, we present field evidence on economic outcomes. One study (Marx, Ko, and Friedman, 2009) considers the Obama effect on test scores by comparing a small sample of respondents that took a (fictitious)

test before and after the Democratic convention. This study finds an increase in test score for the Blacks students in the group taking the test after the convention, but the effect only holds for the self-selected group that chose to listen to Obama's acceptance speech.

More generally, this paper relates to the literature on the impact of political role models on behavior. Mullainathan and Washington (2009) examines the lasting impact of voting on political polarization. Beaman et al. (forthcoming) finds that (randomized) exposure to female legislators improves perceptions of female leader effectiveness and ultimately leads to electoral gains for women. It is an important question along which dimensions exposure to political role models changes behavior, and when it does not.

This paper also relates to the literature on racial profiling in car stops. Knowles et al. (2001), using data from a specific highway in Maryland, do not find evidence of discrimination against Blacks using the success-ratio measure. Antonovics and Knight (2009) and Anwar and Fang (2006) use data sets which, unlike most such data, indicate the race of the officers. Antonovics and Knight (2009) document that officers are more likely to search if officer race and driver race differ, indicating that search decisions are unlikely driven purely by statistical discrimination. Anwar and Fang (2006), using a different test, instead fail to reject that troopers of different races exhibit similar racial prejudice.

The paper proceeds as follows. In section 2 I introduce the key events in the Obama election and provide evidence from surveys on changes in racial perceptions. In Section 3 I introduce the data sets and then present in Section 4 the event study results for racial profiling in car stops and in Section 5 the event study results on other economic outcomes for Blacks.

2 Events and Survey Evidence on Perceptions

Obama Events. Panel A of Table 1 lists the 10 daily events (8 positive and 2 negative) categorized as most prominent and which we use for the daily event study. As a partial validation of the event selection, we use data from the online betting market inTrade regarding the price of the security for whether Obama would become to Democratic primary nominee for the period January-July 2008 (Figure 2).[3]

The first (positive) event is the unexpected victory in the Iowa Democratic primary on January 3, 2008. This electoral result was significant because an almost entirely white State voted for a Black candidate by a significant margin, upsetting the expectations that Hillary Clinton would win. In the InTrade market (Figure 2), this event increased the implied probability of nomination for Obama from about 25 percent up to 70 percent. This electoral victory was quickly followed by a primary lost to Hillary Clinton in New Hampshire on January 8, with Obama coming in as a close second. Following this event, the Intrade security price decreases

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[3]We do not have data for the price of the security for the general election.

from 70 percent to about 40 percent and it hovers around this price for most of the rest of the month. We code this event as a negative event.

The next daily event is the major round of concentrated primaries, the so-called Super Tuesday on February 5, 2008. The narrow victor in the count of delegates for Obama on this day drew substantial headlines given the clustering of 22 Democratic primaries on this day. While the price of the Intrade security briefly declines, it then increases significantly over the following week to over 50 percent. Following Super Tuesday, a number of smaller primaries increase the lead of Barack Obama, but it is hard to point to a major individual event. There is, however, a significant negative event when, after a string of eleven consecutive primary election wins, Obama loses the Ohio primary on March 4. In the three days surrounding this primary, the Intrade security declines by 13 percentage points.

The next (positive) event is the speech on race ('*A More Perfect Union*') that on March 18, 2008 Obama gave in response to the controversy over the Rev. Wright statements about religion, race, and politics. This speech is regarded as one of Obama's best speeches and largely put the Rev. Wright controversy to rest. This event did not have an immediate impact on the Intrade security price, but it is followed by an increase in the price. In addition, the speech is likely to have had an impact (presumably positive) on perceived racial relations, aside from affecting Obama's probability of election. In the weeks following the March 18 speech on race, Clinton and Obama trade victories in the primaries. The most significant event according to the Intrade price is the May 6 North Carolina primary, a victory for Obama. Over 4 days, the Intrade security price increases from 74 to 90 percent.

The final event of the primary season is the concession speech by Hillary Clinton on June 7, 2008. Previous to this speech, the conclusion of the primary season on June 3, 2008 had left significant uncertainty as to Hillary Clinton's exit strategy. The concession speech made it near certain that Obama would be the first African American to become the Democratic Party candidate for a Presidential election. The end of the primary season is followed by the The Democratic Convention at the end of August 2008. The convention was perceived to be successful and a unifying event after the divisions in the Democratic primary season. We classify as a positive event Obama's speech on August 28, 2008.

The next event is the general election on November 4, 2008 over John McCain. With Obama's election, it becomes apparent that racial barriers do not stop a Black candidate from occupying the highest office in the country. The final event is the inauguration as 44th President of the United States on January 20, 2009. This event, while completely expected, was a highly covered event coincident with very high approval ratings for Obama.

In the monthly event studies we consider only 4 events (Panel B): the initial primaries (January 2008), the Convention (August 2008), the final election victory (November 2008), and the Inauguration (January 2009). This classification combines the two most important election victories—the first primary in Iowa and the final election—and two expected, ceremo-

nial events—the Convention and the Inauguration. These events are all categorized as positive events, including January 2008. Despite the New Hampshire and Nevada losses, after the Iowa victory the probability of election for Obama hovers around 30 to 40 percent, still significantly higher than the 20 percent pre-primaries probability.

This categorization of events is admittedly subjective and subject to criticism. To address this concern, I report the raw month-by-month series for each outcome variables to illustrate the identification. The daily event studies results do not depend on any particular event.

Survey Evidence. We now present evidence on perceptions of racial relations and discrimination in the years surrounding the Obama election, from 2007 to 2009. We would ideally like to assemble a daily and monthly measure of such perceptions to parallel the event study methodology in Sections 4 and 5. Unfortunately, no survey with questions about racial relations has a large enough sample to permit analysis at such fine level. Instead, we assemble the evidence from several different nationally-representative surveys with information about racial relations (Table 2). Unfortunately, these surveys are not run continuously and the wording of the questions differs to some extent. Still, Table 2 demonstrates some qualitative patterns.

Column (1) reports the response to a question about the evolution of racial relations in Gallup polls (see also Figure 1) and in CNN polls. The Gallup poll documents an increase of optimism about racial relations by June 2008, and a large increase by Nov. 2008, after the election, with stronger patterns for Black respondents. This is consistent with the general election having a large impact on racial perception (although we cannot know when exactly the increase took place between June and November 2008). Surprisingly, CNN polls with similar wording detect no such increase in optimism.

Given the difference in result, we turn to other polls that ask related questions. A series of CNN polls about the seriousness of racial discrimination (Column (2)) documents a substantial increase in the share of optimists from March 2008 to November 2008 after the election. A set of polls by CBS News/New York Times (Column (3)) displays a similar increase in share of respondents who believe that Blacks have similar chances to succeed compared to Whites, from 60% in July 2008 to 71% at the end of October 2008 (for White respondents). While it is possible that the share would be even higher immediately after the election, this indicates that some of the increase is likely to have occurred already leading before the election, perhaps during the Democratic Convention. A series of surveys by NBC News/Wall Street Journal (Column (4)) indicates a similar increase in the share of respondents that evaluate positive race relations in the US from April 2007 to January 2009.

All of these surveys, with the lone exception of the CNN surveys in Column (1), document a substantial improvement in the perception of racial relations between mid-2008 and the Elections. This pattern is confirmed also by additional CBS News/New York Times and Quinnipiac surveys (Column (5)) and Rasmussen Reports (Column (6)). The surveys instead differ in the extent to which the change in perception is long-lasting. According to the surveys

in Columns (1), (2), and (6) the increased optimism is largely gone by mid 2009, while the surveys in Columns (3), (4), and (5) are consistent with a higher persistence.

Unfortunately, given the timing of the surveys, it is impossible to tell whether the early primary elections in January 2008, or the Democratic convention in August 2008, had an effect on racial perceptions. Still, while this evidence does not provide a measure of the effect of each event on racial perceptions, it does indicate that racial perceptions changed in the second half of 2008 consistent with an effect of the final months of the Obama election, over the period including the Democratic convention and the general election.

3   Data

Traffic Stops. Discrimination in traffic stops has long been alleged based on the fact that Blacks are disproportionately searched as a share of the population. Disproportionate searches, however, are not direct evidence of taste-based discrimination. Blacks may, for example, drive in areas with higher incidence of criminal behavior; as such, a police force that is attempting to control crime would indeed search them more frequently. Knowles et al. (2001) propose a test of taste-based discrimination that focuses on differences in the ratio of searches that lead to findings of drugs, weapons, or other illegal elements across demographic groups. A demographic group is discriminated against by the police if the share of searches that are successful is lower for that group than for other groups. That is, the police searches a group too often, given the fact that *ex post* there is a lower success rate in the searches. I employ this success ratio measure as the benchmark measure of discrimination, and the frequency of searches as a fraction of the population of that group as a second measure.

The data in this paper includes all traffic stops in Illinois and all stops by the Texas Highway Patrol and Commercial Vehicle Enforcement from 2005 to 2008.[4] The data indicates whether the stop led to a search, the race of the person searched (though not the race of the police officer conducting the search) and, in case of a search, whether there is a drug violation or other crime violation.[5] The Illinois data, but not the Texas data, also reports the agency responsible for the stop; we use the county of the agency for the analysis of the geographic heterogeneity.

For the Illinois data, since the findings of the searches are reported with a consistent format only from 2007 on, I focus the analysis on 2007 and 2008. In these years, the average number of daily searches is 200.67 for White drivers and 93.31 for Black drivers.[6] For the Texas data, I use the years 2005-2008, over which the average number of daily searches is 121.52 for White

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[4]We also obtained the data on traffic stops from Maryland, but unfortunately from 2008 on the data does not include any more the date of the stop, making it unusable for our purposes.

[5]In the Illinois data, but not in the Texas data, the other crime category is further broken down to alcohol, contraband, stolen propery, weapon, and paraphernalia.

[6]The results do not change if we use the older years as well as a control group.

drivers and 31.69 for Black drivers.

Crime. The crime data is from the Monthly Arrest and Citation Register (MACR) database of the California Department of Justice.[7] The data consists of all incidents of crime covering the years 2006-2008, amounting to 5,741,812 records. It includes information on the race of the offender though not on the race of the victim. We use this data set to construct a monthly and daily time series of crimes. At the daily level, the average number of crime incidents committed is 1,788.02 with a White offender and 871.76 with a Back offender.

Labor Force Participation. The labor force participation is the labor force as a percent of the civilian non-institutionalized population (source: BLS). The data covers the years 2006-2009.

Application to Law School. The application records include all applications submitted for the Classes of 2006, 2007, 2008, and 2009 to Boalt Law School, a highly-ranked law school. Applications are rolling and are submitted typically between October and early February of the previous academic year, with a small number of applications in the month before or after this period. The records contain the exact date of receipt of the application, which is the date of application for online submissions (the overwhelming majority) and the date of processing for mail submissions. We include only US applicants, for whom the applications indicate the race of the applicant, for a total of 15,174 applications by either White or Black applicants. We drop 400 applications received before October 1 or after the deadline for applications (which is February 1 in 2006-2008 and February 2 in 2009). In the daily event study, we keep all dates between October 1 and the February deadline. The average number of daily applications for the dates in the sample are 23.71 for White applicants and 2.79 for Black applicants.

Organ Donations. As a measure of public good contribution, we use the records of organ donations for the donors that are involved in a fatal accident. In the case of an accident, the family of the victim is typically contacted for a decision about the organ donation. While in principle assent of the family is not required if the victim had expressed the intention to be an organ donor, in practice in most States the authorities do not proceed with an organ explant if the family objects to it. Hence, we observe a measure of pro-social behavior by the family of the victim. We have records of all organ donations with the date of the donation and the race of the donor from the United Network for Organ Sharing (UNOS) for the years 2006-2008. The average daily number of donations is 14.77 for white donors and 3.55 for black donors.

Time Use. The daily diaries from the ATUS data provide information on time spent on different activities from 2006 to 2008. Each respondent indicates all the activities undertaken in one day in 15 minutes increments. On average, there are 34.62 respondents on a given day, of which 13.25 percent are black. We construct a measure of time spent in investment activities, net of time spent in leisure activities. The investment activities are work (166.71 minutes on average), educational activities (16.71 minutes), sports (17.59 minutes), volunteering (9.77

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[7]As of the time of writing, the NIBRS comprehensive national data set does not yet include the 2008 data.

minutes), help in household (34.51 minutes), and help for other households (8.95 minutes). The leisure activities are watching television (167.23 minutes), eating and drinking outside the home (13.92 minutes), gambling (0.8 minute), smoking (0.38 minute) and partying (6.92 minutes). The final measure of time spent on net investment activities averages 72.02 minutes (s.d. 362.15) for White respondents and -4.49 minutes (s.d. 400.66) for Black respondents.

4   Racial Profiling in Car Stops

As a measure of discrimination in high-frequency decision, we examine racial profiling by the police in traffic stops. We use as a benchmark measure the success ratio in searches (Knowles et al., 2001). For each time period, we compute by race the share of all car searches that lead to drugs violations or other crimes. A race-blind police force should search drivers up to the point where the marginal probability of detecting drugs is the same for drivers of different races. A police that discriminates against a racial group, instead, will search individuals of that group excessively. Discrimination in the data, hence, will be detected as a *lower* share of drivers with drugs among the searched drivers of that racial group.

Figure 3a documents the monthly series for $y_{m,r}$, the share of successful searches in month m for race r (Black/White), over the years 2007-2008 for Illinois. In each of the 24 months in the sample, the share of successful searches is lower for Black searched drivers than for White searched drivers, *prima facie* evidence of discrimination against Blacks. This result differs from the finding of Knowles et al. (2001) who find no statistical difference between the share of successful searches for Black and White drivers, *but are similar to the findings of ****. Given the substantial racial differential measured in 2007, key Obama events could partially close this gap if Barack Obama's election changes positively the perceptions that police officers have of Black drivers. In the key months for the Obama events (January '08, August '08, and November '08), there is however no discernible pattern of changes in the share of successful searches. In January '08, the share increases for Blacks, but it rises equally for Whites, and in the other two event months there is no sizeable movement. Figure 3b presents the parallel data for the years 2005-2008 for Texas. In Texas the share of successful searches is *higher* for Blacks, indicating if anything discrimination against Whites.[8] Most importantly for this paper, we do not find any distinctive patterns in the three event months.

Monthly Event Studies. To provide a statistical test, we estimate the following regression model using the monthly data. Denote by d_m^O an indicator variable for the months with positive events regarding Obama's election, as per Panel B of Table 1. Also denote by d_r^B an

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[8]A possible confound to this finding is that Hispanics (who have a much lower success ratio measure) may be lumped with Whites by some officers.

indicator variable for race $r = Black$. We estimate the OLS regression

$$y_{m,r} = \alpha + \beta d_m^O + \beta^B d_m^O * d_r^B + \gamma d_r^B + \Delta X_m + \Delta^B X_m * d_r^B + \varepsilon_{m,r}, \qquad (1)$$

where the controls X_m consist of 12 month-of-year indicators to capture seasonality and year indicators to capture time trends. We interact these controls with the race indicators to allow for differential seasonality and year effects by race. The standard errors are clustered by month, so as to allow for correlation between the monthly observations for Whites and Blacks. The coefficient β captures the increase in outcome y for Whites in months with positive Obama events, controlling for seasonality. The coefficient β^B captures the differential increase for Blacks relative to Whites in correspondence to the Obama events. We can thus test three hypotheses: (i) the Obama events did not have any effect ($\beta = \beta^B = 0$); (ii) the Obama events had an effect, and this effect does not differ across races ($\beta \neq 0$, $\beta^B = 0$); (iii) the Obama events had an effect on Blacks, but not on whites ($\beta = 0 \neq \beta^B$).

Column (1) in Table 4 shows estimates of (1) in the Illinois sample. We do not find any evidence of a change in the success ratio (the measure of discrimination) in the months associated with salient Obama events for Whites ($\hat{\beta}$). The estimate of the differential effect on Blacks, $\hat{\beta}^B = -.0042$, indicates an (insignificant) decrease in the success ratio corresponding to a 2 percent change relative to the baseline. The precision of the estimates is such that we can reject that the events increased the success ratio for Black drivers by more than 1.4 percentage points, or 8 percent of the baseline level. A specification using a narrower definition of success of searches including only drug crimes yields very similar results (unreported).

One may be concerned about the Knowles et al. (2001) proxy for discrimination. As an alternative test, we investigates whether the Obama events changed the extent to which Blacks are searched at all, compared to Whites. In Column (2) we re-estimate specification (1) using as dependent variable $y_{m,r}$ the log of the number of drivers of race r that are searched in month, divided by the state-wide population of that race. This specification provides similar result: Blacks are substantially more likely to be searched, and this pattern does not change significantly with the Obama events. We can reject that the events lowered the searches for Blacks by more than 3.6 percent.

In Columns (3) and (4) we report the results for the Texas sample using respectively the success ratio and the log shares of searches. According to either measure, there is no systematic relationship between the events and the indicators of racial profiling.

Daily Event Studies. The monthly event studies are not designed to capture the dynamic response of the outcomes to the Obama events. For example, they treat events occurring at the beginning of a month and events occurring at the end of a month in a similar fashion, and they would not adequately capture an Obama effect that lasts for only one week after the event. The monthly event studies, in addition, do not utilize the additional events, such as the Super Tuesday primaries and the speech on race (Table 1).

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To capture the dynamics of the response and to incorporate the full set of events, we perform daily event study regressions. Denote by $y_{t,r}$ the share of successful searches on day t for race r (Black/White).[9] Calling t_{EV} the date of an event, we denote by $d^O_{t,[s,S]}$ a variable that is 1 (respectively, -1) for days $[t_{EV} + s, t_{EV} + S]$ of a positive (negative) event, and zero otherwise. For example, $d^O_{t,[0,6]} = 1$ indicates days within the first week after a positive event, and $d^O_{t,[-7,-1]} = -1$ indicate days in the week before a negative event. We estimate the OLS model

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\begin{aligned}
y_{t,r} &= \alpha + \beta_{[-7,-1]} d^O_{t,[-7,-1]} + \beta_{[0,6]} d^O_{t,[0,6]} + \beta_{[7,13]} d^O_{t,[7,13]} \\
&\quad + \beta^B_{[-7,-1]} d^O_{t,[-7,-1]} d^B_r + \beta^B_{[0,6]} d^O_{t,[0,6]} d^B_r + \beta^B_{[7,13]} d^O_{t,[7,13]} d^B_r \\
&\quad + \gamma d^B_r + \Delta X_t + \Delta^B X_t * d^B_r + \varepsilon_{t,r}.
\end{aligned}
\tag{2}
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The controls X_m consist of 7 day-of-week indicators to capture within-week variation, year indicators to capture time trends, 365 day-of-year indicators to capture time-invariant seasonality, and holiday indicators for major holidays that do not always fall on the same day-of-year[10]. As above, these controls are interacted with a race indicator to allow for different controls by race. The standard errors are clustered at the month level to capture any autocorrelation within a month as well as correlation across races (within a month). This specification allows us to test for immediate (that is, one-week) effects of the Obama events ($\beta_{[0,6]}$ and $\beta^B_{[0,6]}$), as well as effects delayed by one week ($\beta_{[7,13]}$ and $\beta^B_{[7,13]}$). In addition, it presents 'placebo' results of the events in the previous week ($\beta_{[-7,-1]}$ and $\gamma_{[-7,-1]}$). In order to increase power, this specification makes the restriction that a negative event has the same effect of opposite sign as a positive event.

In Table 5 we present the results of the estimates. In the Illinois data, using either the benchmark measure of success ratio of searches (Column (1)) or the log of the number of searches over population (Column (2)), we find no evidence of a change in the first or second week following an Obama event, either for Blacks or for Whites. In the Texas data (Columns (3) and (4)), the results are very similar.

Finally, to analyze the impact of the events at a higher frequency, we estimate the regression

$$
y_{t,r} = \alpha + \sum_{s=-20}^{+20} \beta^W_s d^O_{t,[s,s]} \left(1 - d^B_r\right) + \sum_{s=-20}^{+20} \beta^B_s d^O_{t,[s,s]} d^B_r + \gamma d^B_r + \Delta X_t + \Delta^B X_t * d^B_r + \varepsilon_{t,r}, \tag{3}
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with the same controls X_t as in regression (2). The estimated coefficients β^W_s and β^B_s (Appendix Figure 1a) show no indication of a change in the behaviors following the event.

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[9] In the Illinois sample, only 3 days out of 731 involve fewer than 30 stops for one of the races (typically Blacks), and the ratio is quite precisely estimated even at the daily level. In the Texas sample, 722 days have less than 30 searches for Blacks, and 36 days have fewer than 10 searches, implying that the ratio is more noisily estimated.

[10] We include controls for M.L.K. day, Presidential day, Memorial day, Labor day, Columbus day, Thanksgiving, Thanksgiving weekend, Easter Sunday, and Superbowl Sunday.

Heterogeneity. The evidence at the monthly or daily level implies that the Obama events did not on aggregate have a significant effect on discriminatory behavior towards Blacks by police officers in Illinois or Texas. The aggregate null effects, however, may mask substantial heterogeneity. It is possible, for example, that the election of Obama was associated with a decrease of discrimination among officers who were already more favorably oriented towards Blacks, but an increase in discrimination among the more discriminatory officers. In this case, the election of a Black president further polarized racial attitudes.

Unfortunately, this data set (like most data sets on car stops) does not include information about the police officer that could allow for such tests. However, in the Illinois data we can exploit the information about the location of the car stops. Most police officers in this data set are likely to be working in locations within their county of residence, given that the data on car stops comes from the Department of Transportation, as opposed to the Highway Administration. While no data set we know of includes measures of discriminatory attitudes at such a fine level as the county[11], we can use the reveled preferences in the form of the voting behavior in the 2008 general election. Counties that vote more in favor of Barack Obama are more likely to have positive attitudes towards Blacks than counties that do not. An obvious confound is that Barack Obama and John McCain differ in multiple ways in addition to their race. As a partial way to address this confound, we use as measure of county-level racial preferences the difference between the Democratic 2-party vote share in 2008 and in 2004: $v_{08}^D - v_{04}^D$. By comparing Obama to Kerry and McCain to Bush, we can partially control for political preferences of the electorate.[12]

We thus split counties into three groups: Pro-McCain countries ($v_{08}^D - v_{04}^D < .05$, denoted with $d^{Mc} = 1$), intermediate counties ($.05 < v_{08}^D - v_{04}^D < .10$, denoted with $d^{Int} = 1$) and pro-Obama counties ($.10 < v_{08}^D - v_{04}^D$, denoted with $d^{Ob} = 1$). We then estimate the monthly event study regression:

$$y_{m,W} - y_{m,B} = \alpha + \beta d_m^O + \beta^{Int} d_m^O * d^{Int} + \beta^{Ob} d_m^O * d^{Ob} + \gamma^{Int} d^{Int} + \gamma^{Ob} d^{Ob} + \Delta X_m + \varepsilon_{m,r}.$$

The dependent variable is the difference in the discriminatory behavior (such as the success ratio of a car search) for White drivers relative to Black drivers in month m. An increase in this variable can be interpreted as an increase in discrimination against Blacks. The coefficient β^{Ob} captures whether discrimination responds differently to the Obama events in counties that vote more pro-Obama than in counties that vote more pro-McCain. Similarly, one can interpret β^{Int}.

The results in Table 6 indicate that the effect of the Obama events does not differ significantly across the three groups of counties. Indeed, the pattern of the effects is not even

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[11]For example, Charles and Guryan (2008) in their study of the impact of discrimination in labor markets use measures of survey-based discrimination from the GSS, aggregated at the Census region level.

[12]The event study results are similar if we simply use the vote share for Obama in 2008.

monotonic across the three groups. This pattern of findings holds for both the benchmark measure of success ratio (Column (1)), the measure that uses only drugs (Column (2)), and the measure based on number of searches (Column (3)). This suggests that the key finding in the aggregate event studies—that key events associated with Obama's election did not induce a change in this pattern of discrimination—is not due to heterogeneous effects of opposing signs.[13]

5   Economic Outcomes for Blacks

I now examine the impact on five additional economic outcomes for Blacks: (i) crime rates; (ii) labor force participation; (iii) application to a professional school (Law School); (iv) contribution to public goods, measured by organ donations; and (v) time spent in investment activities, such as work, as opposed to leisure activities, such as watching television. Changes in a role model and lowered perception of discrimination can plausibly lead to improvements in outcomes for Blacks, i.e., lower crime rates or higher labor force participation. For all of these outcomes, I use daily (monthly in the case of labor force participation) data and consider decision where changes in perceptions can in principle have an immediate effect: avoiding criminal endeavours, joining the labor force, sending an additional graduate school application, giving the assent to an organ donation, or helping more in the household.

Crime. Figure 4 plots the monthly data for crime occurrences in California with a Black offender and a White offender for the years 2006-2008. There is no systematic difference in crime in the months with the most significant Obama events in the data—January, August, and November 2008—relative to other months, for either Whites or Blacks. The regression results in Column (1) of Table 7 confirms the patterns in Figure 4: there is no significant impact of the Obama event months for either Whites or Blacks.

In the daily event study estimates, we use a Poisson count model, using otherwise specification (2). The estimates in Column (1) of Table 8 are broadly consistent with the monthly results: Compared to the effect for Whites, there is no significant change in the crime rate for Blacks in either the first week or the second week after the Obama events, as one can see also from the day-by-day estimates of Appendix Figure 1c. The estimates are sufficiently precise so that we can reject that an Obama event lowered crime by Blacks by more than 1.2 percent in the following week. Overall, the evidence does not support the idea that Obama's election affected the crime rate among Blacks.

Labor Force Participation. Figure 5 presents the labor force participation for Blacks and Whites over the years 2006-2009. There is no evidence in the data of an increase in labor force participation for Blacks in the key months for the election, except for August 2008. The

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[13] A surprising finding is that counties which vote more in favor of Obama (relative to Kerry) are not associated with a lower racial differential in success rate, indicating if anything the opposite in Columns (2) and (3).

point estimates of the monthly event study regression in Table 4 indicates a precise null effect: Given the stability of the labor force participation series, we can reject an increase in the participation rate for Blacks (compared to Whites) of 0.95 percentage points, off of a basis of 63 percentage points, that is, a 1.5 percent effect. For this outcome, given that the data is at the monthly level, we do not estimate the daily event study models.

Application to Law School. Criminal behavior and labor force participation do not appear to have been responsive to the Obama events. However, it is conceivable that the Obama election may have changed the economic behavior of Blacks in other dimensions that are more closely associated with Obama's background. The most obvious example is Obama's Law School education which was extensively covered by the media. As such, we consider the impact on applications to a top-ranked Law School, Boalt Law School at UC Berkeley.

Given the relatively short horizon of the event study, we do not attempt to capture the extensive margin decision—whether to apply to Law School at all. Instead, we focus on the intensive margin decision—how many schools to apply for. Once the LSDAS file is complete, an additional application typically costs between $50 and $150, and can be submitted online within a short time frame. To the extent that Obama motivates Blacks to apply to Law Schools, it is likely to also induce them to apply to more schools to increase the likelihood of acceptance, and/or to apply to higher-ranked law schools, such as Boalt. While the applications are made on a rolling basis, the large majority of applications come in between October and a February 1 (or 2) deadline. Hence, we focus on these months, lumping the applications received on February 1 and 2 with the January applications.

The data for Blacks (Figure 6a) shows a distinct year-on-year increase for three months: January 2008, November 2008, and January 2009. These months coincide precisely with the three Obama event months in this sample. While it is not easy to separate an Obama effect from a time-series increase in applications due to the economic crisis, there is no such increase either in the months before January 2008, in October 2008, or in December 2008. The data for White applicants (Figure 6b) shows smaller increases in November 2008 and January 2009, as for Blacks, though not in January 2008. The monthly event study specification (Column (3) in Table 7) indicates a (marginally significant) 11.5 percent higher increase for Blacks applications, compared to White applications, in correspondence to the Obama event months. The daily event study specification (Column (2) of Table 8) indicates an estimated increase of Black applications (compared to Whites) of 6.8 percent in the first week after the event, and of 24.5 percent in the second week after the event, with this second difference being statistically significant. The graph of the daily event study (Appendix Figure 1d) indicates a fairly noisy effect. Overall, key Obama events may have contributed to a substantial increase in the number of applications to a top Law School, though the estimates are fairly imprecise given the clustering of applications over four months.[14]

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[14]We collected data on applications to a Business School to attempt to separate the impact on Law Schools

Organ Donations. Next, we examine the decision (taken by the family) to explant the organs in the case of a fatal accident. Organ donation is an altruistic decision that benefits an anonymous recipient. Given that the Blacks are a minority in the US, the decision to donate organs quite possibly benefits a non-Black. As such, I interpret the disposition to donate the organ by Blacks as a measure of social preferences of Blacks toward Whites.

The monthly time series (Figure 7) provides no evidence that the Obama event months are associated with a higher willingness to donate organs by either Blacks or Whites, except perhaps for an increase for Blacks in November 2008. The monthly event study estimates (Column (4) in Table 7) point to a statistically insignificant 7.4 percent increase for Blacks relative to Whites on event months. The daily event studies (Column (3) in Table 8 and Appendix Figure 1e) also provide no evidence of an impact of the Obama election events on a specific form of public good contribution, the decision to donate the organs.[15]

Time Use. A final set of outcomes that could be impacted is the allocation of time. The Obama role model represents a case in which the time spent on 'investment' activities such as work and education paid off, and individuals, inspired by his example, may also decide to spend more time on such investment activities. Using the ATUS time diaries, I compute a measure of minutes spent on investment activities, net of the time spent on leisure activities (see Section 3). Notice that this measure can be negative if the time spent on leisure activities is larger than the time spend on investment activities.

The monthly average of this daily measure is lower for Blacks than for Whites (Figure 8), and most importantly there is no consistent evidence of increases of the time spent on investment activities in the Obama event months. The regression findings (Column (5) in Table 7) suggest that the Obama event months are not associated with any difference in the time use of Black relative to whites. Given these estimates, we can reject that the Obama events increased the time spent in net investment activities (for example, through less TV watching) for Blacks by more than 42 minutes per day. The evidence from the daily event study regressions document, if anything, a negative effect of the Obama events on the time spent on investment activities. The lack of a systematic pattern is confirmed when we consider the individual components, such as television usage and time spent helping in the household.

6 Conclusion

In this paper, I have used an event study methodology to provide evidence on whether Obama's election has affected racial discrimination against Blacks and economic outcomes for Blacks

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in particular from the impact on all educational programs. Unfortunately, the baseline number of applications by Blacks is significantly smaller, and hence it is difficult to provide precise evidence in regard.

[15]We collected data on applications to Teach for America as a measure of service to the community. Unfortunately, however, the applications to this program are all essentially bunched at one annual deadline.

by changing perceptions. I first examine the impact on discrimination in car stops by police officers. Across a variety of measures, there is no evidence that key events in Obama's election changed the racial patterns in car searches. This pattern holds even when we separate counties based on a proxy of racial attitudes. I then examine the effect on a range of economic outcomes for Blacks, from criminal behavior to time use. On most outcomes, there is no systematic evidence of a differential change in outcomes due to the events for Blacks relative to Whites. I can reject fairly small effects, for example a 1.2 percent decrease in crime. There is, however, suggestive evidence that the events significantly increased the number of applications to a Law School, suggesting perhaps that the larger impact of the Obama role model is for a highly-educated population.

These findings raise the question of whether the epochal election of Barack Obama has changed only beliefs about racial relations, but not economic outcomes. A possibility is that the election has induced changes, but these changes are limited to the political realm where the Obama example resides. For example, it is possible that the extremely heavy Black turnout of the 2008 Presidential election will persist and apply to future elections as well. A new generation of Black voters may also be motivated to participate in politics. We leave these conjectures to future research.

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Figure 1. Survey Question about Race Relations (Gallup Polls)

Do you think that relations between blacks and whites will always be a problem for the United States, or that a solution will eventually be worked out?
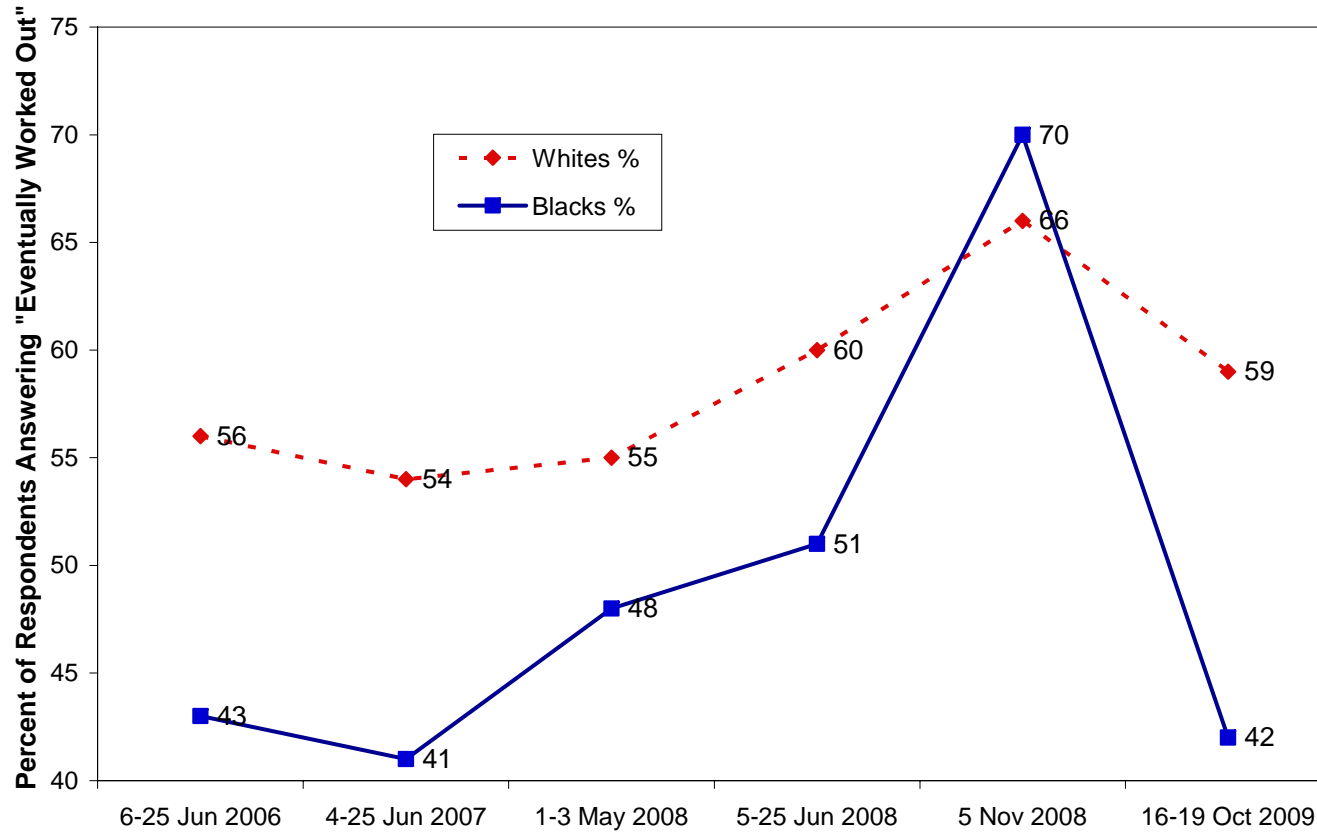
Note: Figure 1 reports the percent of survey respondents to a series of Gallup polls that respond to the question "Do you think that relations between blacks and whites will always be a problem for the United State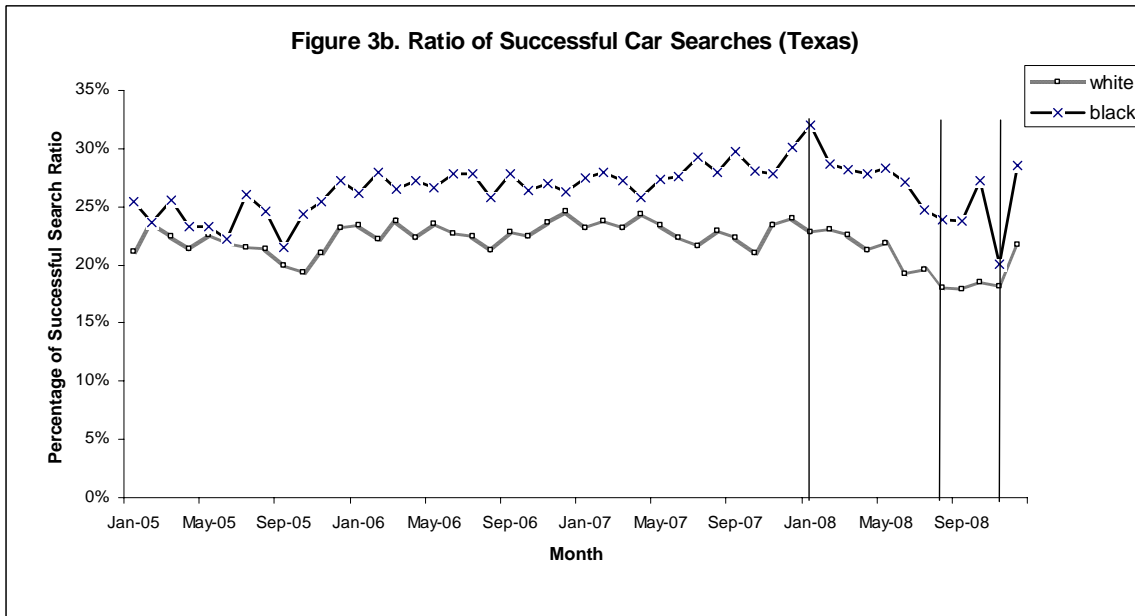s, or that a solution will eventually be worked out?" by answering "It will eventually be worked out". The Figure reports separately the responses for Black and White respondents. Column (1) of Table 2 reports additional information on these polls.

Figure 2. InTrade Security on Obama Primary Win and Events

(Intrade Price: Obama winning the Democr. Primary vs. Date)

Events marked on the figure:
- 1/3/2008 IA Primary
- 1/8/2008 NH Primary
- 2/5/2008 SuperTuesday
- 3/4/2008 OH Primary
- 3/18/2008 Speech on Race
- 5/6/2008 NC Primary
- 6/7/2008 Clinton Concession Speech
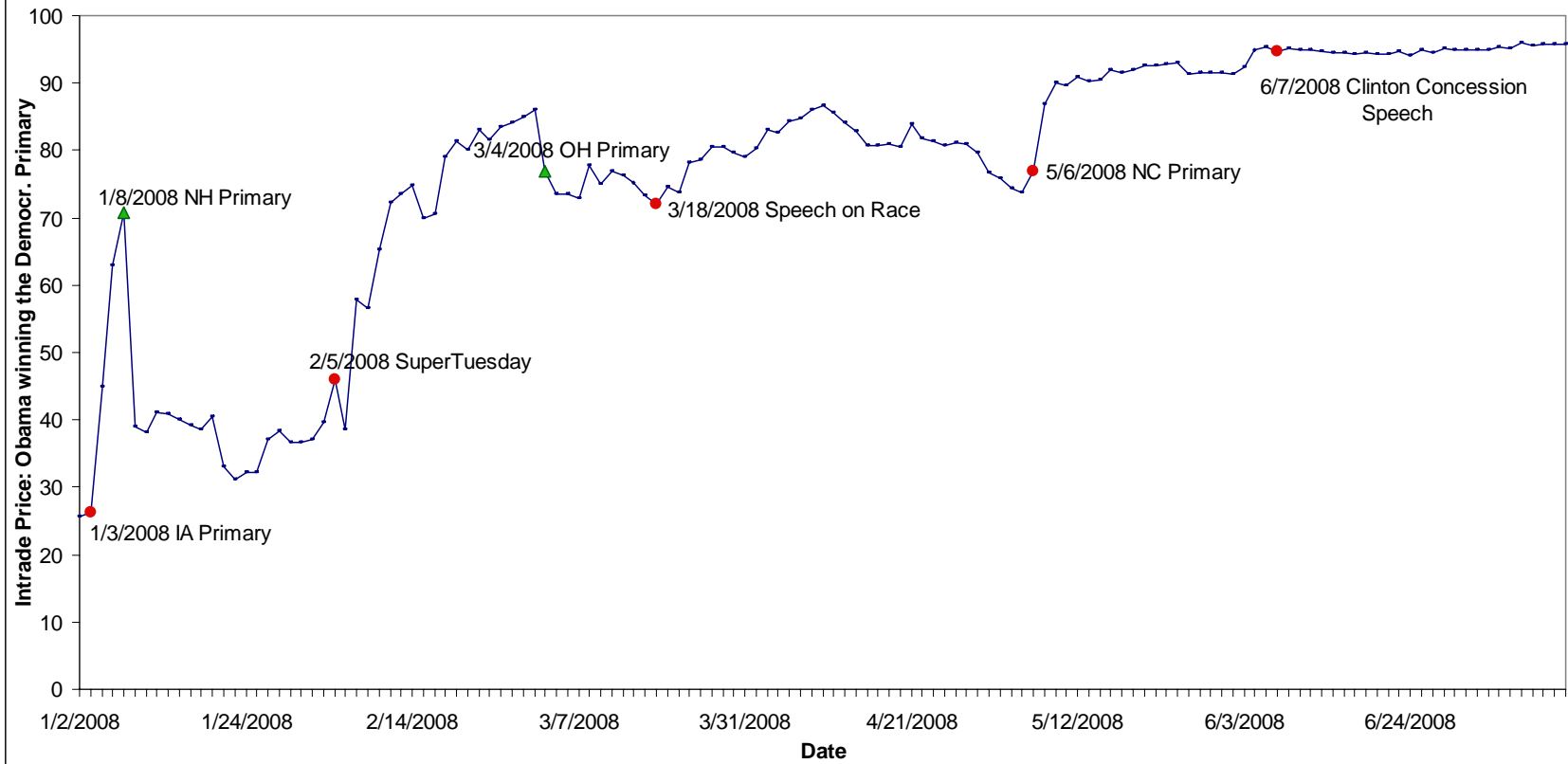
Note: Figure 2 plots the price of the Intrade security for the event that Obama will secure the Democratic Primary at different dates. Emphasized in the figure are seven events that we use in the event study. A red circle indicates events favorable to Obama, while a green triangle indicates unfavorable events. This Figure lists only events up to June 2008, see Table 2 for a list of all the events.

Figure 3a. Ratio of Successful Car Searches (Illinois)

Figure 3b. Ratio of Successful Car Searches (Texas)
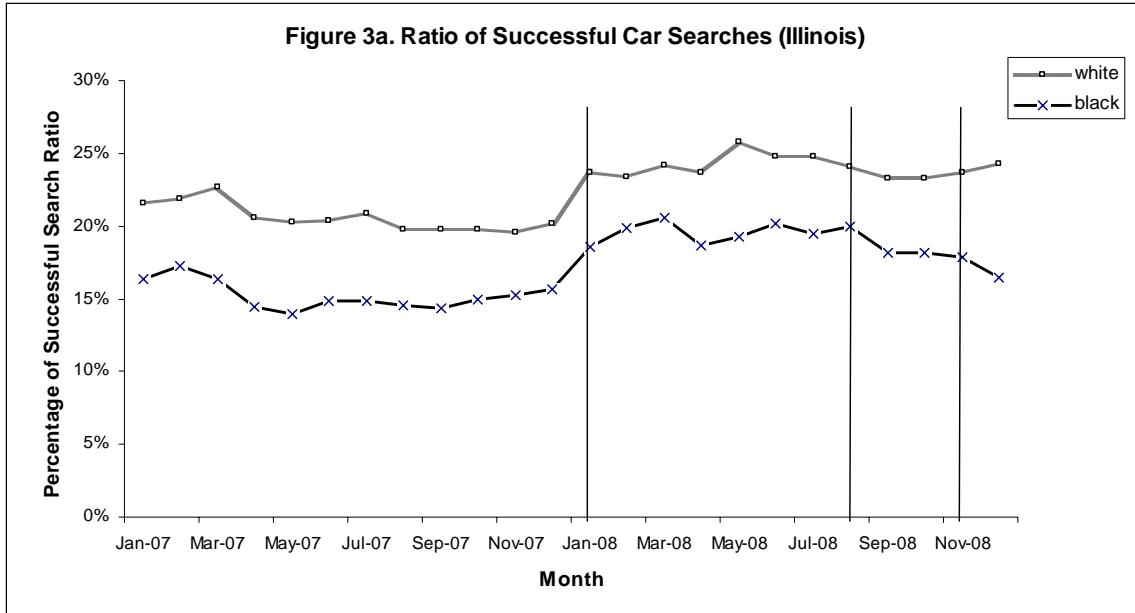
Note: Figures 3a and 3b report the ratio of searches leading to drug infractions or other crimes as a fraction of all searches undertaken in month *t* for race *j*. Figure 3a refers to car stops in Illinois, and Figure 3b in Texas. A lower value of this ratio for a demographic group is evidence of discrimination against that group (Knowles et al., 2001). The three vertical bars indicate the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008), and the general election (Nov. 2008).

Figure 4. Number of Crime Reports
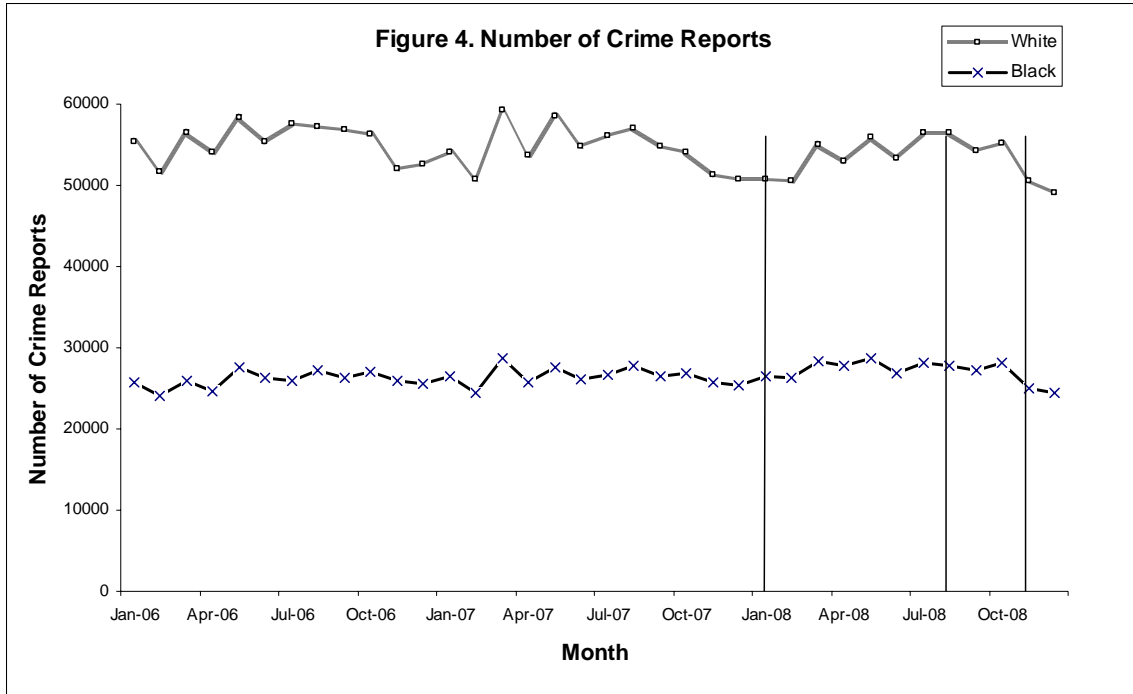
Note: Figure 4 reports monthly counts of incidents of crime from the MACR data set of the California Department of Justice by race of the offender. The three vertical bars indicate the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008), and the general election (Nov. 2008).

Figure 5. Labor Force Participation
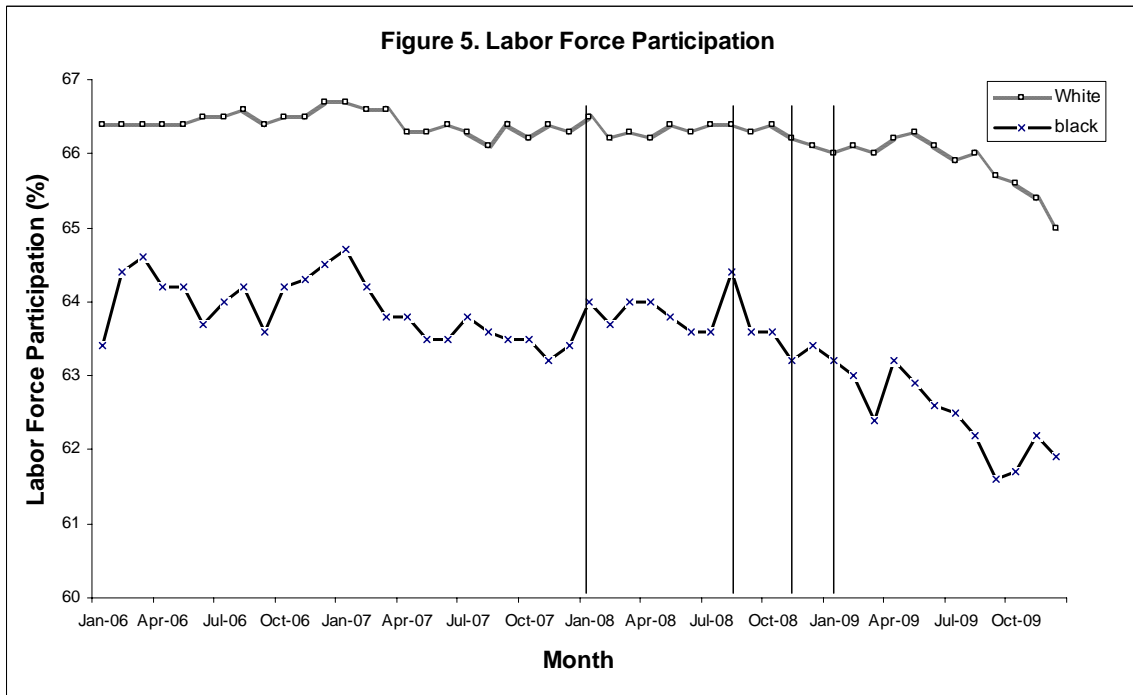
Note: Figure 5 reports the labor force participation (in %) from the BLS at the monthly level by race. The four vertical bars indicate the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008), the general election (Nov. 2008), and the Inauguration (Jan. 2009).

Figure 6a. Number of Law School Applications (Black Appl.)

Figure 6b. Number of Law School Applications (White Appl.)
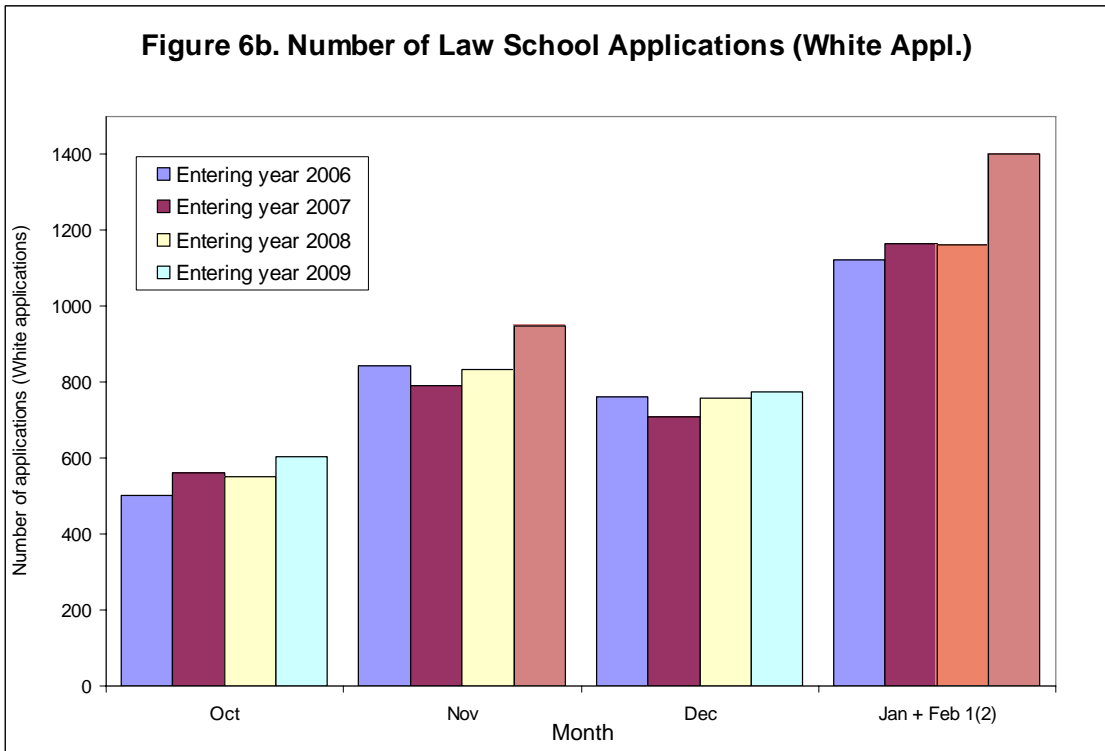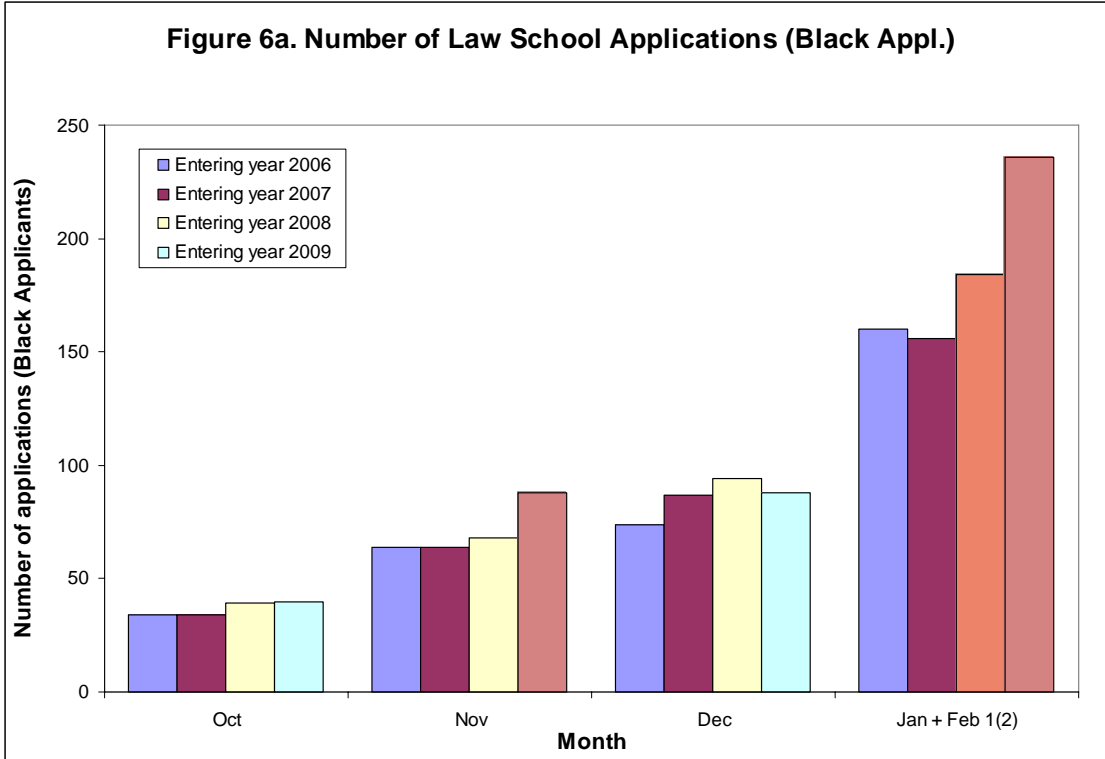
Note: The data refers to the applications to Boalt Law School at UC Berkeley, a top-ranked Law School. The Figures include only applications in the top four months (October to January), plus the applications up to the February deadline, February 1 on most years. The applications excluded are for September 2005 (118 applications by Whites and 9 by Blacks), March 2008 (2 by Whites), June 2008 (20 by Whites), July 2008 (7 by Whites) and April 2009 (2 by Whites, 1 by Black). The shaded bars indicate the first primary in IA (Jan. 2008), the general election (Nov. 2008), and the Inauguration (Jan. 2009).

Figure 7. Number of Organ Donations

Note: The data covers all organ donations for the case of fatal accidents in the US. The three vertical bars indicate the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008) and the general election (Nov. 2008).
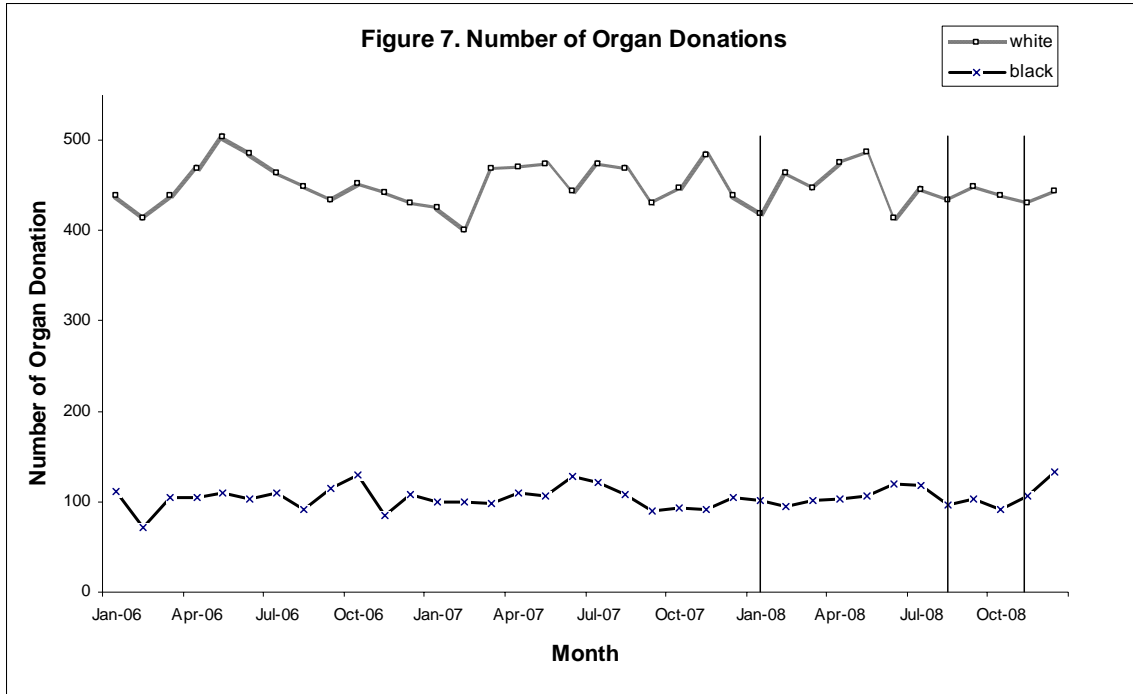
Figure 8. Mean Daily Time Spent on Net Investment Activities
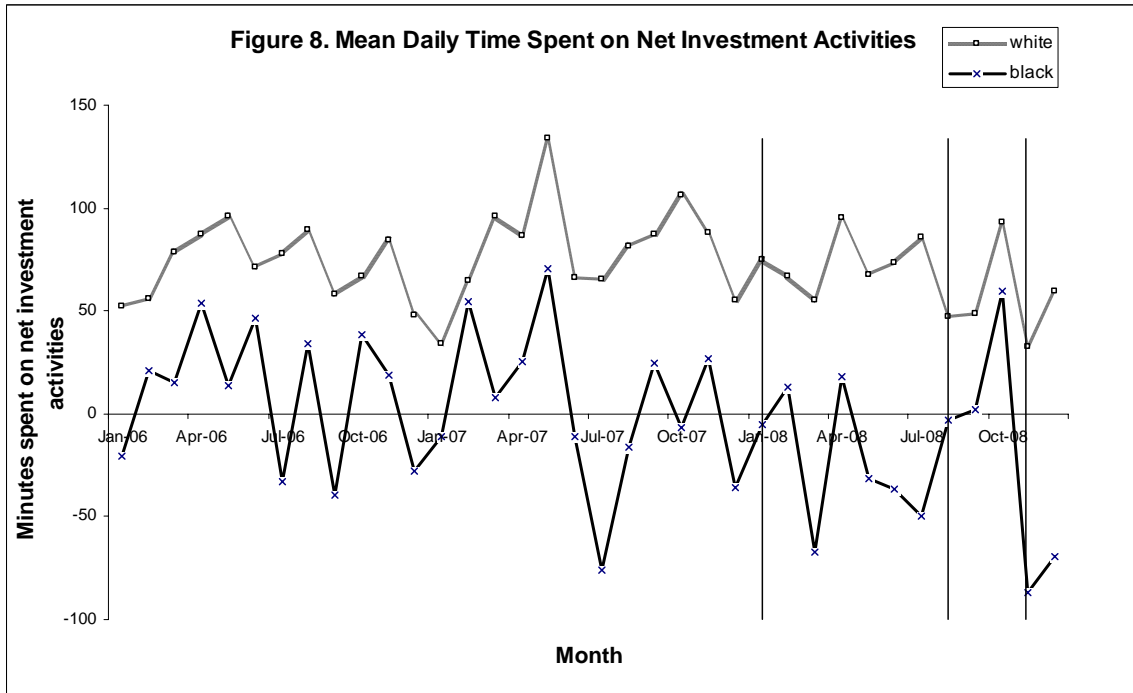
Note: Figure 8 reports a monthly series by race of the time spent on net investment activities. This variable is constructed as an average across respondents of a given race and over days in a month of the total daily minutes spent on investment activities *minus* the total daily minutes spent on leisure activities (Source: ATUS time diaries). The investment activities include work, education, sports, volunteering and help in household and outside household. The leisure activities include watching TV, eating and drinking outside the home, gambling, smoking, and partying. The three vertical bars indicate the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008) and the general election (Nov. 2008).

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TABLE 1
LIST OF EVENTS FOR OBAMA ELECTION

Panel A: Daily Event Study

Date	Valence	Description
1/3/2008	Positive	*IA Primary:* Barack Obama wins first primary election (Iowa), against expectations
1/8/2008	Negative	*NH Primary:* Barack Obama loses second primary (New Hampshire) to Hillary Clinton
2/5/2008	Positive	*Super Tuesday:* Barack Obama wins 847 delegates (to Clinton's 834) from the 23 States holding primaries on Super Tuesday
3/4/2008	Negative	*OH Primary:* After a string of 11 primary victories, Barack Obama loses the Ohio primary to Hillary Clinton
3/18/2008	Positive	*Speech on Race:* Barack Obama gives speech on race which earns very positive reviews
5/6/2008	Positive	*NC Primary:* Barack Obama wins the North Carolina primary
6/7/2008	Positive	*Clinton Concession Speech:* Hillary Clinton concedes and endorses Barack Obama
8/28/2008	Positive	*Democratic Convention:* Barack Obama gives the speech in Democratic National Convention
11/4/2008	Positive	*General Election:* Barack Obama is elected 44th President of the United States
1/20/2009	Positive	*Inauguration:* Barack Obama is inaugurated as president

Panel B: Monthly Event Study

Date	Valence	Description
January 2008	Positive	*First Primary:* Barack Obama wins election in Democratic primary in Iowa, against expectations
August 2008	Positive	*Democratic Convention:* Democratic Convention by acclamation chooses Barack Obama as Democratic nominee for President
November 2008	Positive	*General Election:* Barack Obama is elected 44th President of the United States
January 2009	Positive	*Inauguration:* Barack Obama is inaugurated as president

Notes: See text for additional information.

TABLE 2
SURVEY EVIDENCE ON RACIAL RELATIONS BETWEEN 2007 AND 2009

Poll Field Dates	Survey Organization(s)	Sample Size	Race relations - always a problem?*	How serious is racial discrimination against blacks?†	Who has better chance to succeed in today's society?‡	How good are race relations in the US?§	Race relations - generally good or bad?#	Are black-white relations getting better or worse?¶
			No	Not too serious / Not at all serious	'Blacks' or 'Equal'	Very good / Fairly good	Good	Better
			Percent of Survey Respondents Answering the Question as Above					
			(1)	(2)	(3)	(4)	(5)	(6)
6-25 Jun 2006	Gallup	*2031*	56%(W) 43%(B)	-	-	-	-	-
20-23 Apr 2007	NBC News/WSJ	*1004*	-	-	-	60%(W) 40%(B)	-	-
4-25 Jun 2007	Gallup	*2388*	54%(W) 41%(B)	-	-	-	-	-
14-17 Jan 2008	CNN/ORC**	*1393*	58%(W) 46%(B)	40%(W) 9%(B)	-	-	-	-
Mar 26-Apr 2 2008	CNN/Essence/ORC**	*2184*	58%(W) 49%(B)	42%(W) 10%(B)	-	-	-	-
Mar 28-Apr 2 2008	CBS/NYT	*1368*	-	-	-	-	57%(W) 42%(B)	-
4-6 Apr 2008	Rasmussen Reports	*1000*	-	-	-	-	-	61% (aggregate)
1-3 May 2008	Gallup/USA Today	*1019*	55%(W) 48%(B)	-	-	-	-	-
5-25 Jun 2008	Gallup	*1935*	60%(W) 51%(B)	-	-	-	-	-
29 Jun 2008	Rasmussen Reports	*1000*	-	-	-	-	-	61% (aggregate)
7-14 Jul 2008	CBS News/NYT	*1796*	-	-	60%(W) 31%(B)	-	55% (W) 29%(B)	-
26 Jul 2008	Rasmussen Reports	*1000*	-	-	-	-	-	62% (aggregate)
Oct 25-Nov 3 2008	CBS News/NYT	*3084*	-	-	71%(W) 56%(B)	-	-	-
5 Nov 2008	Gallup/USA Today	*1036*	66%(W) 70%(B)	-	-	-	-	-
6-9 Nov 2008	CNN/ORC**	*1246*	56%(W) 50%(B)	50%(W) 12%(B)	-	-	-	-
6-10 Nov 2008	QUPI††	*2210*	-	-	-	-	67%(W) 56%(B)	-
9-12 Jan 2009	NBC News/WSJ	*1007*	-	-	-	79%(W) 63%(B)	-	-
12-15 Jan 2009	CNN/ORC**	*1245*	57%(W) 46%(B)	-	-	-	-	-
16-17 Jan 2009	Rasmussen Reports	*1000*	-	-	-	-	-	70% (aggregate)
22-26 Apr 2009	CBS News/NYT	*973*	-	-	69%(W) 46%(B)	-	69%(W) 59%(B)	-
16-18 May 2009	CNN/Essence/ORC**	*1073*	56%(W) 47%(B)	43%(W) 23%(B)	-	-	-	-
28-29 Jul 2009	Rasmussen Reports	*1000*	-	-	-	-	-	62% (aggregate)
17-20 Sep 2009	NBC News/WSJ	*1005*	-	-	-	75%(W) 50%(B)	-	-
16-19 Oct 2009	Gallup/USA Today	*1521*	59%(W) 42%(B)	-	-	-	-	-

Note: Each cell contains the weighted share of Whites and Blacks who have given the corresponding answer, except column (6) which is aggregate. The full text of the questions is as follows: *: Do you think that the relations between blacks and whites will always be a problem for the United States, or that a solution will eventually be worked out? †: How serious a problem do you think racial discrimination against blacks in this country--a very serious problem, a somewhat serious problem, not too serious, or not at all serious? ‡: In general, who do you think has a better chance of getting ahead in today's society--white people, black people, or do white people and black people have about an equal chance of getting ahead? §: In general, do you think race relations in the United States are very good, fairly good, fairly bad, or very bad? #: Do you think race relations in the United States are generally good or generally bad? ¶: These days, are relations between white and black Americans getting better or worse? **: Opinion Research Corporation ††: Quinnipiac University Polling Institute

TABLE 3
DATA ON ECONOMIC OUTCOMES AND SUMMARY STATISTICS

Outcome	Discrimination in Traffic Stops (IL)	Discrimination in Traffic Stops (TX)	Crime Occurrences	Labor Force Participation	Law School Applications	Organ Donations	Net Time Use on Investment Goods
Data Description	All traffic stop in Illinois	All stops by Texas Highway Patrol and Commericial Vehicle	All reports or crime in California from MACR data base	Labor force participation	Applications to Boalt Law School at UC Berkeley	Organ explants due to fatal accident	Time use data from ATUS time diaries
Source	Illinois Department of Transportation	Texas Department of Public Safety	California Department of Justice	BLS	Administrative Law School Records	United Network for Organ Sharing	Bureau of Labor Statistics
Years Covered	2007-2008	2005-2008	2006-2008	2006-2009	Entering year 2006-2009	2006-2008	2006-2008
Months Covered	12 Months	12 Months	12 Months		October 1 - February 1(2)	12 Months	12 Months
Data Frequency	Daily	Daily	Daily	Monthly	Daily	Daily	Daily
Number of Records	4969811	5766088	5741812		14774	24091	37914
Information on Race	Yes (Race of driver stopped)	Yes (Race of driver stopped)	Yes (Race of offender)	Yes	Yes	Yes	Yes
Key Variable	Share of searches which result in findings of contraband, drugs, weapons, stolen property	Share of searches which result in findings of drugs violations or other crime violations	Number of occurrrences of crime	Labor force participation	Number of applications	Daily number of organ explants	Average time spent daily in investment activities, net of time spent in leisure activities
Mean of Variable	0.196	0.199	1329.889		13.251	9.250	86.858
Share Black	0.173	0.156	0.166		0.053	0.157	0.133

Notes: See text for additional information.

TABLE 4
EFFECT OF OBAMA EVENTS ON DISCRIMINATION: MONTHLY EVENT STUDY

Specification:	OLS Regression			
Dep. Var.:	Outcome in Month t for Race j (White/Black)			
Outcome:	Sucessful Search Ratio (IL)	Log (Number of Searches / Population) (IL)	Sucessful Search Ratio (TX)	Log (Number of Searches / Population) (TX)
	(1)	(2)	(3)	(4)
Dummy for positive	0.0003	-0.0173	-0.0079	0.0701
month for Obama	[0.0079]	[0.0303]	[0.0122]	[0.0665]
Positive Obama month*	-0.0042	0.0284	-0.0094	0.0289
Black Dummy	[0.0089]	[0.0321]	[0.0182]	[0.0363]
Dummy for Black	-0.0596***	1.1285***	0.0729***	0.5557***
	[0.0205]	[0.0085]	[0.0127]	[0.0352]
Years of Data	2007-2008		2005-2008	
Month-of-year Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
Month-of-year X Black F.E.	X	X	X	X
Year X Black Fixed Effects	X	X	X	X
R-squared	0.96	1	0.83	0.94
Number of Observations	48	48	96	96

Notes: Each observation is a monthly count of the dependent variable for either whites or blacks. The data refers to traffic stops in IL for the years 2007 and 2008 and traffic stops in Texas for the years 2005-2008. A lower value of the successful search ratio for a demographic group is evidence of discrimination against that group (Knowles et al., 2001). The events coded as positive month for Obama are the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008), and the general election (Nov. 2008). See Table 3 for the definition of the dependent variable. Standard errors clustered by month in parentheses.

TABLE 5
EFFECT OF OBAMA EVENTS ON DISCRIMINATION: DAILY EVENT STUDY

Specification:	OLS Regression			
Dep. Var.:	Outcome on Day t for Race j (White/Black)			
Outcome:	Sucessful Search Ratio (IL)	Log (Number of Searches / Population) (IL)	Sucessful Search Ratio (TX)	Log (Number of Searches / Population) (TX)
	(1)	(2)	(3)	(4)
Event for Obama Last Week (Days (0,6)) *(lag)*	0.0028	-0.0006	0.0003	-0.003
(1=positive,-1= negative,0=none)	[0.0055]	[0.0234]	[0.0061]	[0.0448]
Event for Obama Last Week (Days (0,6)) *(lag)*	-0.0034	0.0392	-0.0073	0.0114
* Black Dummy	[0.0099]	[0.0461]	[0.0129]	[0.0400]
Event for Obama Two Weeks Ago (Days (7,13))	-0.0012	0.0784	0.0062	0.0126
(1=positive,-1= negative,0=none)	[0.0072]	[0.0594]	[0.0074]	[0.0457]
Event for Obama Two Weeks Ago (Days (7,13))	0.0035	-0.0214	-0.0017	-0.0023
* Black Dummy	[0.0098]	[0.0235]	[0.0163]	[0.0400]
Event for Obama Next Week (Days (-7,-1)) *(lead)*	0.0077	-0.0182	-0.0002	0.0521
(1=positive,-1= negative,0=none)	[0.0070]	[0.0272]	[0.0098]	[0.0493]
Event for Obama Next Week (Days (-7,-1)) *(lead)*	0.0047	0.0512	0.0005	0.0288
* Black Dummy	[0.0108]	[0.0362]	[0.0088]	[0.0458]
Years of Data	2007-2008		2005-2008	
Day-of-week and 365 day-of-year Fixed Effects	X	X	X	X
Holiday Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
Day-of-week*Black and 365 day-of-year*Black f.e.	X	X	X	X
Holiday*Black Fixed Effects	X	X	X	X
Year*Black Fixed Effects	X	X	X	X
R-squared	0.740	0.97	0.32	0.79
Number of Observations	1460	1460	2920	2920

Notes: Each observation is a daily count of the dependent variable for either whites or blacks. The data refers to traffic stops in IL for the years 2007 and 2008 and traffic stops in Texas for the years 2005-2008. A lower value of the successful search ratio for a demographic group is evidence of discrimination against that group (Knowles et al., 2001). See Table 1 for a list of the positive and negative events and Table 3 for the definition of the dependent variable. Standard errors clustered by month (in parentheses).

TABLE 6
EFFECT OF OBAMA EVENTS ON DISCRIMINATION: HETEROGENEITY

Specification:	OLS Regression		
Dep. Var.:	Outcome in Month t for Whites - Outcomes in Month t for Blacks		
	Sucessful Search Ratio (White-Black)	Sucessful Search Ratio (Only Drugs)	Log (Number of Searches / Population)
Outcome:	(IL)	(White-Black) (IL)	(White-Black) (IL)
Dummy for positive	0.0041	-0.0004	-0.0024
month for Obama	[0.0188]	[0.0111]	[0.0329]
Positive Obama month*	-0.0033	-0.0122	-0.0289
Intermediate County	[0.0143]	[0.0093]	[0.0370]
Positive Obama month*	0.0133	0.0031	0.0381
Pro-Obama County	[0.0234]	[0.0171]	[0.0374]
Dummy for intermediate	0.0099	0.0334***	-0.6424***
County	[0.0087]	[0.0074]	[0.0301]
Dummy for pro-Obama	-0.0066	0.0312***	-0.4500***
county	[0.0085]	[0.0075]	[0.0257]
Month-of-year Dummies	X	X	X
Year Dummies	X	X	X
R-squared	0.26	0.5	0.96
Number of Observations	72	72	72

Notes: Each observation is a monthly count of the dependent variable for either whites or blacks. See Table 1 for the definition of the dependent variable. Standard errors clustered by month in parentheses.

TABLE 7

EFFECT OF OBAMA EVENTS ON OUTCOMES FOR BLACKS AND WHITES: MONTHLY EVENT STUDY

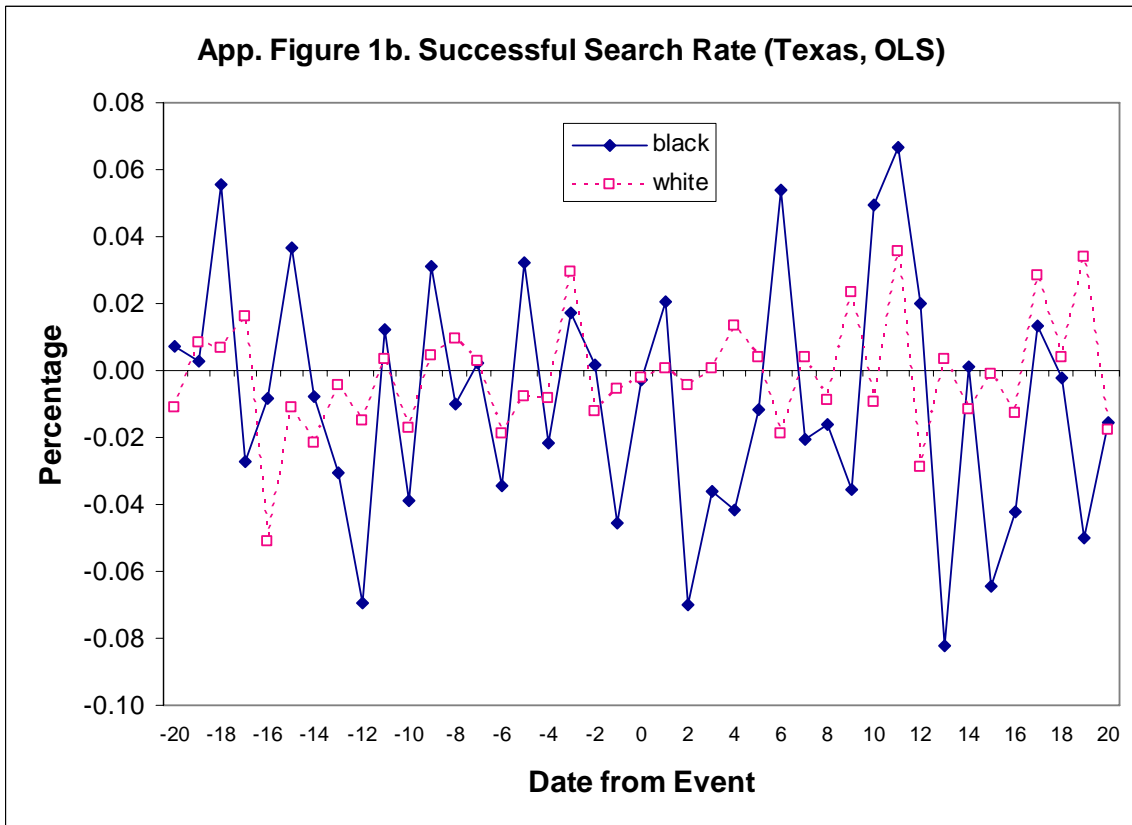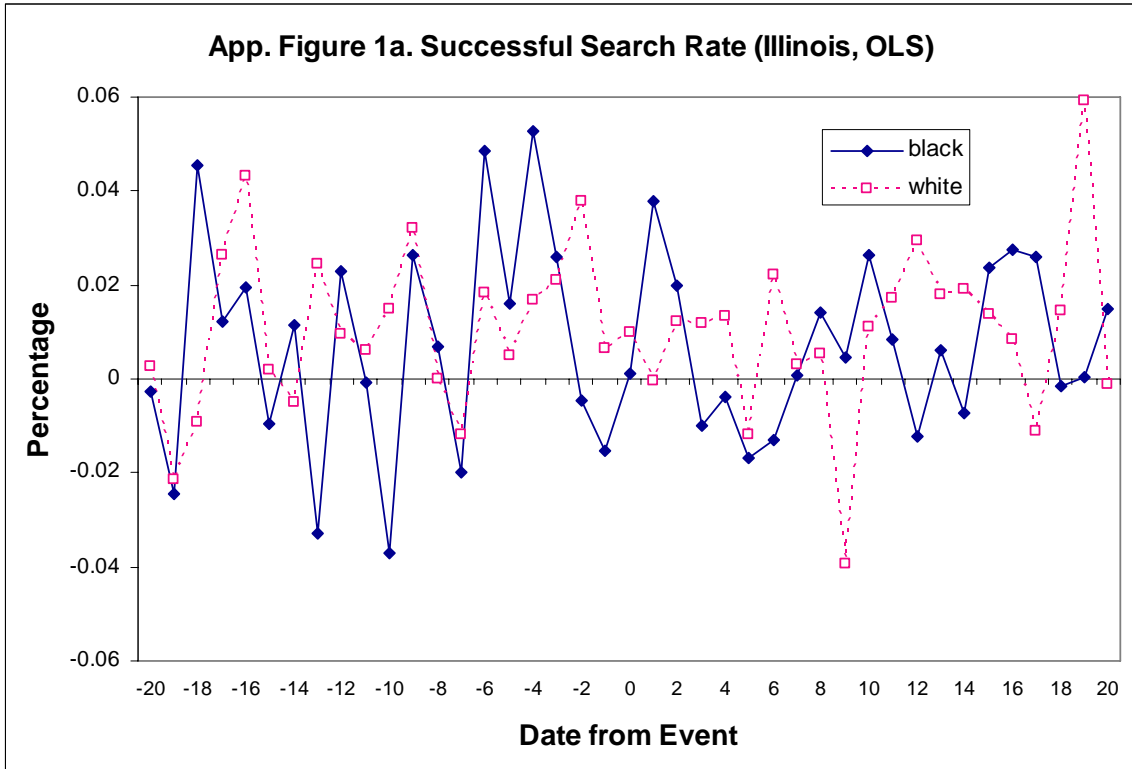| **Specification:**		OLS Regression			
Dep. Var.:		**Outcome in Month t for Race j (White/Black)**			
Outcome:	**Log of Crime Occurrences**	**Civilian Labor Force Participation (percentage)**	**Log of Law School Applications**	**Log of Organ Donations due to Fatal Accident**	**Daily Minutes Spent on Net Investment, Averaged in Month t for Race j**
	(1)	(2)	(3)	(4)	(5)
Dummy for positive	-0.008	0.0708	0.0397	-0.0523*	-13.8055
month for Obama	[0.0168]	[0.1090]	[0.0451]	[0.0281]	[21.6651]
Positive Obama month*	-0.0358	0.2583	0.1148*	0.0736	2.4021
Black	[0.0253]	[0.3476]	[0.0626]	[0.0844]	[22.9892]
Dummy for Black	-0.6515***	-3.1542***	-2.1514***	-1.4220***	-80.0642***
	[0.0228]	[0.0964]	[0.0423]	[0.0696]	[19.9296]
Years of Data	2006-2008	2006-2009	Oct-Jan 2005-09	2006-2008	2006-2008
Month-of-year Fixed Effects	X	X	X	X	X
Year Fixed Effects	X	X	X	X	X
Month-of-year X Black F.E.	X	X	X	X	X
Year X Black Fixed Effects	X	X	X	X	X
R-squared	1.00	0.97	1.00	0.99	0.82
Number of Observations	72	96	32	72	72

Notes: Each observation is a monthly count of the dependent variable for either whites or blacks. The events coded as positive month for Obama are the first primary in IA (Jan. 2008), the Democratic Convention (Aug. 2008), and the general election (Nov. 2008). See Table 3 for the definition of the dependent variable. The sample of Law school applications (Column (3)) incudes only the months of Oct., Nov., Dec., and Jan., with the applications received on February 1 (2), the deadline, coded as received in January. Standard errors clustered by month in parentheses.
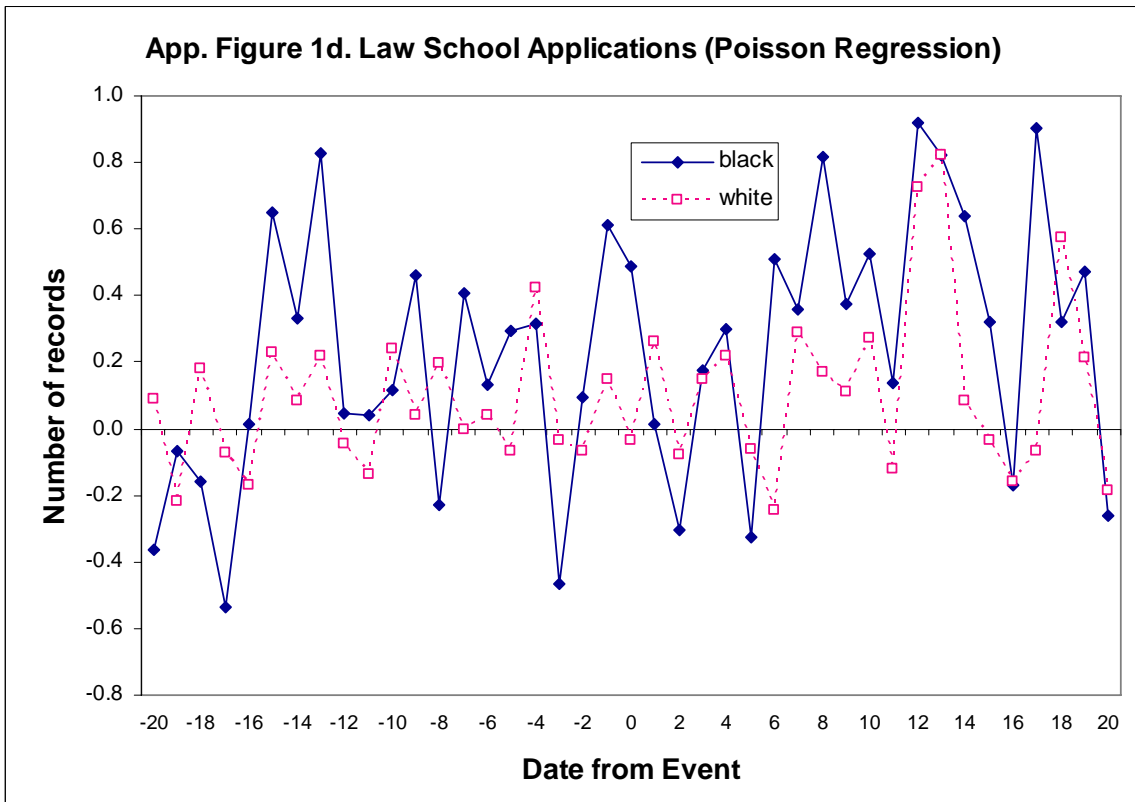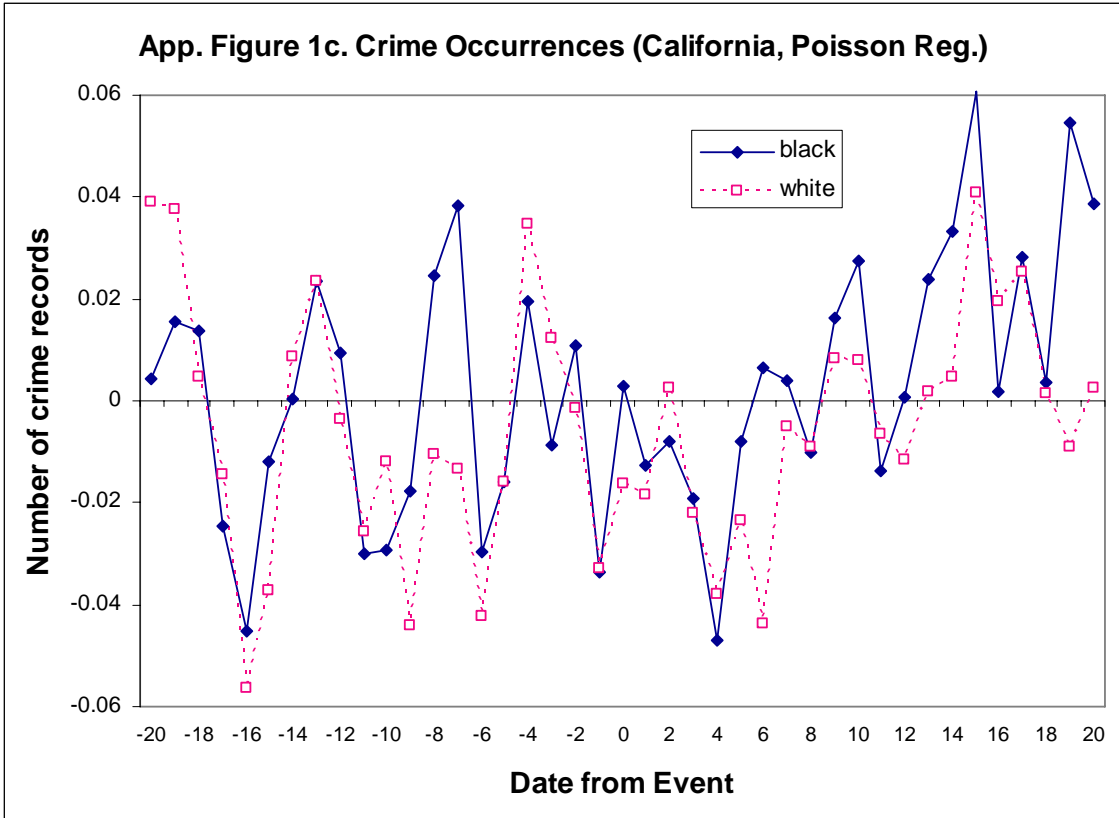
TABLE 8

EFFECT OF OBAMA EVENTS ON OUTCOMES FOR BLACKS AND WHITES: DAILY EVENT STUDY
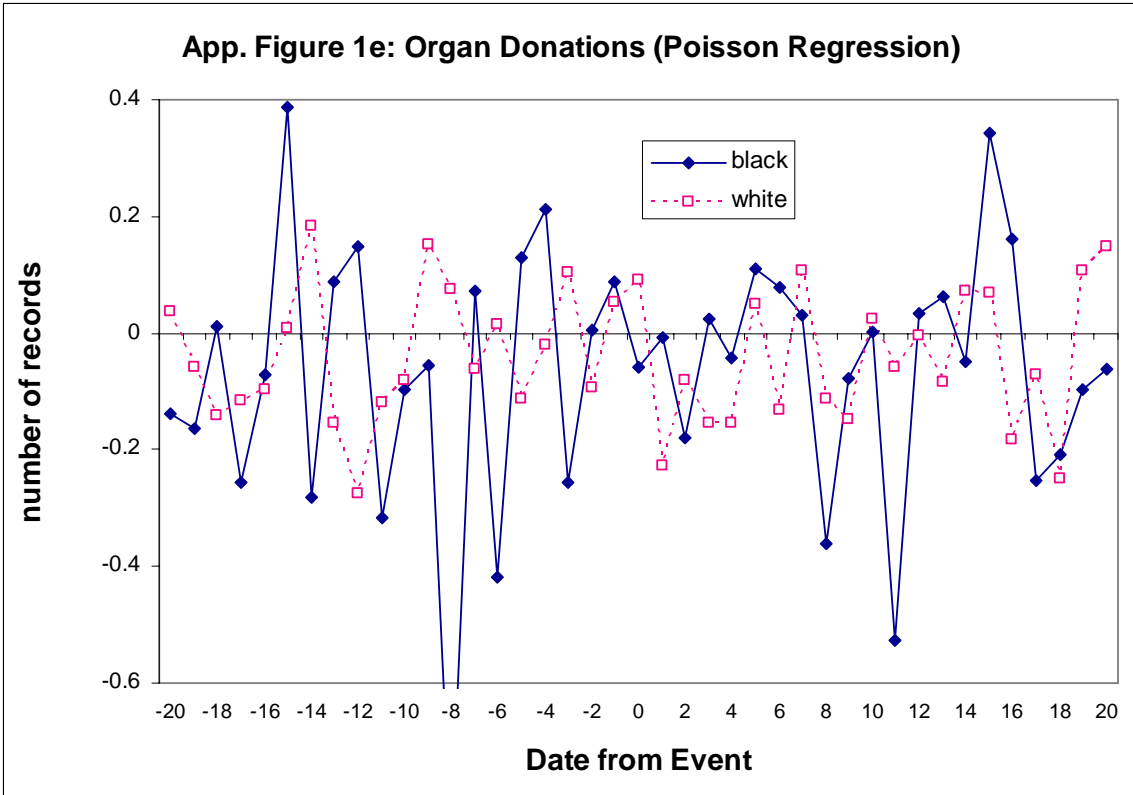
Specification:	Poisson Regression			OLS Regression
Dep. Var.:	Total Number of Occurrences of Outcome on Day t for Race j			Daily Minutes Spent on Net Investment, Averaged in Day t for Race j
Outcome:	Crime Occurrences	Law School Applications	Organ Donations	
	(1)	(2)	(3)	(4)
Event for Obama Last Week (Days (0,6)) *(lag)*	-0.0227**	0.032	-0.0725**	1.418
(1=positive,-1= negative,0=none)	[0.0103]	[0.0512]	[0.0316]	[7.6475]
Event for Obama Last Week (Days (0,6)) *(lag)*	0.0059	0.068	0.1204	-64.7546**
* Black Dummy	[0.0092]	[0.0765]	[0.0899]	[30.7564]
Event for Obama Two Weeks Ago (Days (7,13))	0.000	0.2358***	-0.010	3.256
(1=positive,-1= negative,0=none)	[0.0061]	[0.0845]	[0.0269]	[9.7874]
Event for Obama Two Weeks Ago (Days (7,13))	0.005	0.2448**	-0.053	-60.222
* Black Dummy	[0.0085]	[0.1039]	[0.0601]	[36.6624]
Event for Obama Next Week (Days (-7,-1)) *(lead)*	-0.006	0.0369	0.0063	-0.9631
(1=positive,-1= negative,0=none)	[0.0129]	[0.0496]	[0.0265]	[16.7336]
Event for Obama Next Week (Days (-7,-1)) *(lead)*	0.002	0.102	-0.007	-8.306
* Black Dummy	[0.0120]	[0.0717]	[0.0622]	[51.3970]
Years of Data	2006-2008	Oct-Jan 2005-09	2006-2008	2006-2008
Day-of-week and 365 day-of-year Fixed Effects	X	X	X	X
Holiday Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
Day-of-week*Black and 365 day-of-year*Black f.e	X	X	X	X
Holiday*Black Fixed Effects	X	X	X	X
Year*Black Fixed Effects	X	X	X	X
R-squared	.	.	.	0.560
Number of Observations	2190	1008	2190	2104

Notes: Each observation is a daily count of the dependent variable for either whites or blacks. The sample of Law school applications (Column (3)) incudes only the months of Oct., Nov., Dec., and Jan., with the addition of February 1 (2), the deadline. See Table 1 for a list of the positive and negative events and Table 3 for the definition of the dependent variable. Standard errors clustered by month allow for autocorrelation within a month and correlation between races within a month (in parentheses).

Appendix Figure 1a-1e. Effect of Obama Events, Daily Event Study

App. Figure 1a. Successful Search Rate (Illinois, OLS)

App. Figure 1b. Successful Search Rate (Texas, OLS)

App. Figure 1c. Crime Occurrences (California, Poisson Reg.)

App. Figure 1d. Law School Applications (Poisson Regression)

App. Figure 1e: Organ Donations (Poisson Regression)

Note: Appendix Figures 1a-1e report the estimates of daily event studies regressions with indicators for a date *s* days after or before the event interacted with the two races (White/Black), as specified in (3). The Figures plot the estimated coefficients.