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## **Race, resources, and representation**

Evidence from Brazilian politicians

Natália S. Bueno<sup>1</sup> and Thad Dunning<sup>2</sup>

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**Abstract:** What explains the persistence of racial or ethnic inequalities in political representation, in the absence of strongly politicized racial or ethnic cleavages? This paper uses new data to demonstrate a substantial racial gap between voters and politicians in Brazil. We show that this disparity is not plausibly due to racial preferences in the electorate—for instance, deference towards white candidates, or discrimination against non-whites. Nor do barriers to candidate entry or discrimination by party leaders likely explain the gap. Instead, we document the importance of persistent resource disparities between whites and non-whites—especially, differences in personal assets and in campaign contributions. Our findings show how the power of numerical racial minorities may persist in democracies, even in the absence of racialized politics, and highlight the role of investments by economic elites in a setting in which race and class substantially overlap.

**Keywords:** descriptive representation, racial democracy, Brazil, experiments

**Tables and figures:** all authors own work.

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The online Appendix is available at the authors’ websites (<http://nataliabueno.github.io> and <http://www.thaddunning.com>). The expanded, and updated version of this working paper is forthcoming in *World Politics*, volume 69, no.1, April 2017.

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<sup>1</sup> Department of Political Science, Yale University, New Haven, CT, United States, [natalia.bueno@yale.edu](mailto:natalia.bueno@yale.edu); <sup>2</sup> Robson Professor of Political Science, University of California, Berkeley, United States, [thad.dunning@berkeley.edu](mailto:thad.dunning@berkeley.edu).

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Katajanokanlaituri 6 B, 00160 Helsinki, Finland

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# 1 Democracy and descriptive representation

When and why do democratic elections select politicians that mirror their electorates on ascriptive grounds? Political strength under democracy is at least in part “in the numbers.” Yet, ethnic or racial majorities do not always translate their numerical superiority into greater descriptive representation among elected politicians. The failure of ethnic groups to attain representation commensurate with their numerical strength constitutes an important general puzzle in the study of democratic politics.<sup>1</sup>

The racial disparity between citizens and representatives is especially striking in Latin America, where accounts of “racial democracy” celebrate ethnic harmony, integration, and miscegenation.<sup>2</sup> Even if there are good reasons to be skeptical of such narratives—for many authors, they ratify white minority power while masking systematic racism—scholars note the lack of strong social boundaries based on race.<sup>3</sup> Yet in Brazil, where a plurality of the population self-identifies as “black” or “brown,” politicians at many levels of government are disproportionately white. One study found only 11 non-white federal deputies (out of 513) and one non-white senator (out of 81) in a recent electoral term.<sup>4</sup> In Figure 1, we use newly available official data to compare the self-identified race of all state and federal deputies, senators, and governors elected in 2014 to the racial distribution of the population. The data suggest substantial racial discrepancies: browns and blacks comprise over 50% of the population but fewer than 25% of politicians. Elected politicians are over 30 percentage points more likely than the population to identify as white.

What explains the persistence of racial or ethnic disparities in political representation, even in the absence of strongly politicized racial or ethnic cleavages? We show how gaps in descriptive representation may persist in democracies such as Brazil’s, in which black and brown citizens comprise a majority. Our findings do not suggest the political irrelevance of race or ethnicity. However, we argue that ethnic elites may counteract their numerical disadvantages with resource investments. In this way, voters’ systematic bias against candidates from marginalized groups is not necessary to explain why politicians’ attributes fail to reflect racial and ethnic majorities.

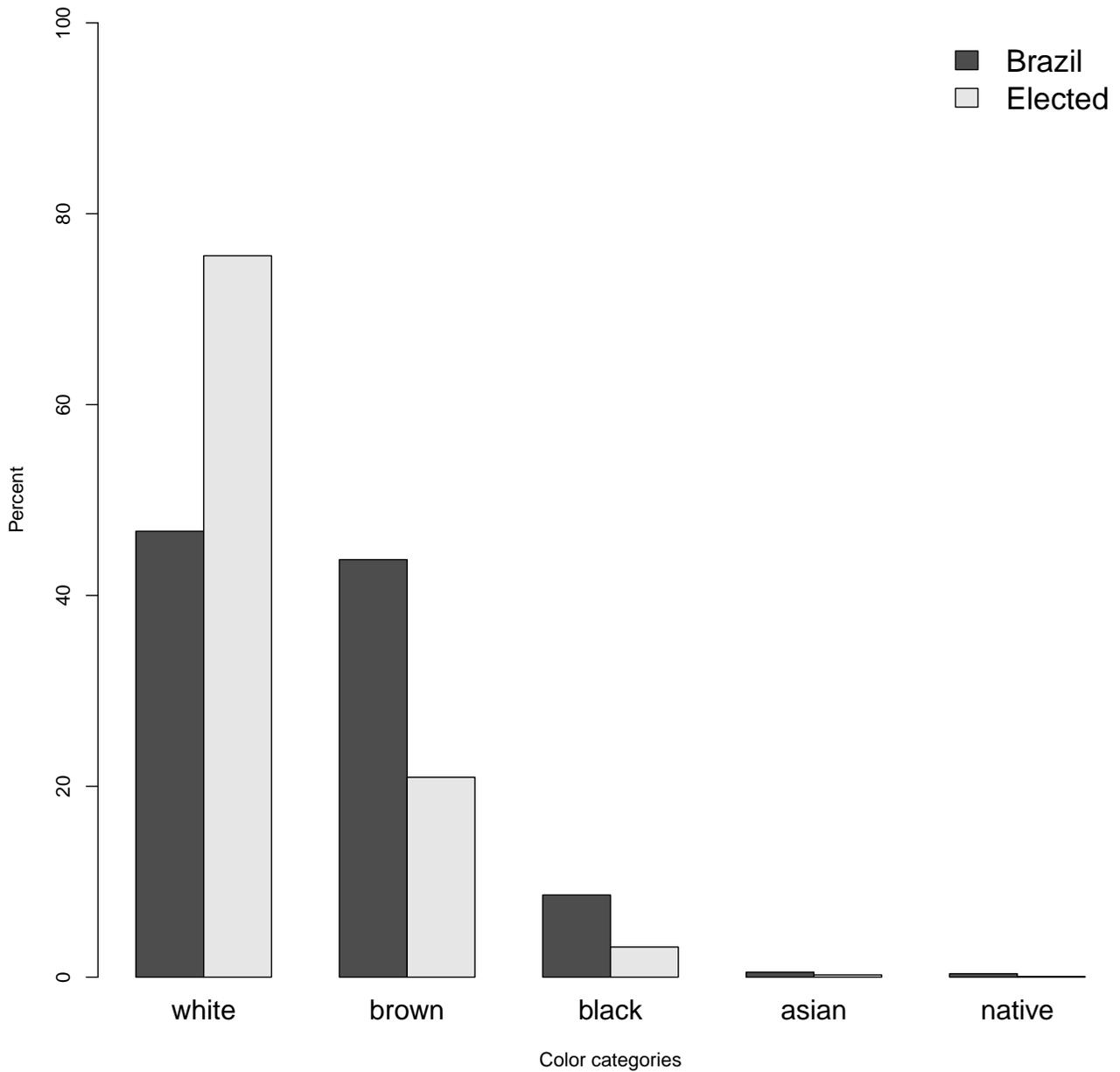
To reach this conclusion, we pursue several strategies. First, we assess whether racial prefer-

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<sup>1</sup>Yashar 2005. On descriptive representation, see Pitkin 1967.

<sup>2</sup>Peña et al. 2004; Freyre 1933/1980. The concept of “mestizaje” is an analogue in much of Hispanic Latin America.

<sup>3</sup>For skeptical accounts, see Hasenbalg 2005; Hanchard 1999; Twine 1998; or Telles and Sue 2009. On porous social bound-



**Figure 1 Racial distribution of politicians, compared to Brazil’s adult population.**

*Notes: We measure self-identified race of state and federal deputies, senators, and governors elected in 2014, using official data of the federal electoral court (TSE). We measure self-identified race of the population using census data.*

ences in the electorate—for instance, deference towards white candidates, or discrimination against non-whites—can explain the representational gap. In our experiment, we showed videotaped political speeches given by actors posing as candidates for city council to a probability sample of residents in the northeastern city of Salvador and the southeastern city of Rio de Janeiro. We assigned respondents at random to view speeches, sometimes with identical content, given by a white or black actor; the dress of each candidate was also experimentally varied to emphasize different social class backgrounds. By using multiple actors of each race, our design addresses some difficulties involved in experimental manipulation of race, while also overcoming the confounding and social desirability bias found in observational survey data. While we find some effects of candidates' social class, there are no discernible effects of candidates' race on respondents' evaluations. Our findings suggest that race-based preferences among voters are unlikely to explain the failures of descriptive representation we document.

We then assess several other plausible hypotheses. We find no evidence that barriers to candidate entry explain the underrepresentation of non-white politicians. The racial distribution of non-elected candidates is quite similar to the population's: racial disparities arise not among candidates who run but among those who win. Moreover, as we show using a regression-discontinuity design, relaxing barriers to candidate entry through the adoption of a run-off system for mayors does not increase the share of non-white candidates. To evaluate discrimination by party leaders, we explore whether the mnemonic quality of the numeric codes assigned to politicians—which voters use to choose specific candidates under Brazil's open-list proportional system, and which leaders may influence—differ across white and non-white candidates. While the quality of numbers is indeed associated with candidates' probability of victory, white candidates do not have systematically better numbers than do non-whites.

Finally, we turn to access to resources, for the first time linking data on candidates' personal assets and access to campaign finance to politicians' race. We show that white candidates are substantially richer, with very large advantages in both average personal assets and campaign donations. There are several possible interpretations of these findings, and pinning down the causal effects of resources on racial disparities

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aries, see Telles 2004; Lieberman 2003, 2009; or Marx 1998.

<sup>4</sup>Mitchell 2009.

is difficult: we would like to know whether altering resource allocations would diminish racial disparities, and exogenous variation in campaign financing is challenging to identify. Yet, the resource disparities we find are substantively very large and therefore highly suggestive: white candidates are over three times as rich in assets as non-white candidates and receive five times as much in campaign contributions. Moreover, in a sample of first-time candidates, personal assets and campaign contributions appear to explain electoral success to a substantially greater extent than does race, though race and contributions and therefore race and electoral success are strongly correlated. The link between between race and resources underscores how investments in political power by economic elites can lead to underrepresentation of disadvantaged groups, especially when race and class substantially overlap, and even in a context in which evidence of overt discrimination by party leaders and voters appears limited.

Our paper makes several contributions to our general understanding of the persistence of ethnic inequality in political representation.<sup>5</sup> Dancygier et al. compare immigrant and native candidates in Sweden who have comparable individual resources and face similar political opportunity structures; they attribute the greater electoral success among natives to discrimination by party elites in the design of party lists.<sup>6</sup> Yet, it is rare to look at behavioral, institutional, and resource-based explanations for political inequality in a single study, as we do here.<sup>7</sup> Our results underscore that we should not study these alternatives in isolation: in our study, the importance of resource differentials is magnified by the inability of behavioral or institutional arguments to explain the patterns we document. Our findings also highlight factors that may be overlooked in other settings, where preferences and institutions better predict underrepresentation of marginalized groups.

We also contribute to the specific study of racial representation in Brazil. Scholars such as Telles have importantly emphasized the contrast between “horizontal” and “vertical” relations, to show how inclusive racial relations and relatively weak social boundaries—expressed in high rates of interracial marriage and residential integration—can coexist with exclusive, hierarchical socioeconomic structures, revealed in labor market discrimination and educational disparities.<sup>8</sup> This distinction reconciles the claims

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<sup>5</sup>See inter alia Bloemraad and Schönwölder 2013; Norris and Lovenduski 1995; and Bird, Saalfeld, and Wüst 2011.

<sup>6</sup>Dancygier et al., forthcoming.

<sup>7</sup>See Gisselquist 2013 for a discussion on the links between ethnicity and class in different types of ethnic systems.

<sup>8</sup>Telles 2004 (e.g. pp. 12-13, 223-4); Silva 2015.

of an early generation of scholars that Brazil is a racial democracy with the critical work of later scholars who highlight substantial race-based inequities. However, it is not ex-ante clear if the forces of integration or exclusion shape political acts such as voting, running for office, or even giving campaign donations, since these actions could combine elements of horizontal sociability with vertical discrimination. Compared to the extensive literature on racial inequalities in socioeconomic status, prior research on descriptive representation in Brazilian politics is minimal.<sup>9</sup> In this paper, we therefore develop a major new dataset to measure for the first time the racial characteristics of a nationwide sample of Brazilian politicians (Section 2), provide some of the first experimental evidence on race-based electoral preferences in Brazil (Section 3), and use several new data sources and empirical approaches to assess whether electoral institutions or resource differentials can explain failures of descriptive representation (Section 4).

Overall, our findings suggest that minority power requires neither ethnic majorities' deference to high-status groups nor racial discrimination by voters from advantaged groups. Especially when race and class overlap, resource investments by economic elites can contribute substantially to the persistence of ethnic inequalities. Our research therefore highlights barriers to inclusion that remain even when other factors play a lesser role. By underscoring avenues through which representational gaps may persist under democratic institutions, even in settings lacking in strong politicized racial and ethnic cleavages, we contribute to recent research on elite power in democratic settings.<sup>10</sup>

## **2 Measuring descriptive representation**

The race of politicians in Brazil appears surprisingly understudied.<sup>11</sup> One reason may be the complexity of the topic. Even the appropriate conceptualization of race in Brazil is the subject of enduring debate, with some scholars arguing that the application of North American racial categories such as Black or White in Brazil is inappropriate.<sup>12</sup> In contrast to the United States, where the legacy of Jim Crow laws

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<sup>9</sup>See Campos 2015 and Campos & Machado 2015 for other recent work.

<sup>10</sup>Acemoglu and Robinson 2008 study the capacity of minority elites to retain political power under democracy.

<sup>11</sup>Exceptions include Johnson 1998, 2006; Mitchell 2009, 2010; Bailey 2009; Castro 1993; and Soares and Valle Silva 1987.

<sup>12</sup>See Telles 2004; Bailey and Telles 2006; also Bourdieu and Wacquant 1999. For a broader discussion of racial classification and nation-building in Latin America, see Loveman 2015.

produced such dichotomous categorizations, racial categories tend to be multiple and differentiated in Brazil; and race is sometimes said to be conceptualized more in terms of a color “continuum” than discrete racial categories. These are certainly crucial considerations. However, notions of race in Brazil are not so hopelessly complex as to inhibit systematic study of racial representation. The Brazilian statistics agency (IBGE) collects census data on race using the simple five-part categorization shown in Figure 1, allowing citizens to self-identify as black (*preto*), brown (*pardo*), white (*branco*), Asian (*amarelo*), and native (*indígena*). We find evidence of the relevance of this schema for contemporary Brazilian racial self-understandings; for example, even in response to open-ended questions about their color, participants in our surveys overwhelmingly used one of these five categories.<sup>13</sup>

Yet, another reason descriptive representation is understudied is the absence of systematic data: until very recently, the race of Brazilian politicians has not been recorded by electoral authorities. Our first step in studying descriptive representation in Brazil is therefore to fill this gap. Our goal is to provide comprehensive measurement of the race of politicians at all levels of the Brazilian political system, while respecting the nuances of conceptualizing and measuring race in this context.

## 2.1 Measuring politicians’ race

We measure politicians’ race using both self-classification and other-classification. However, we rely mainly on the data set of self-identified politician race in our analyses, as reported to the electoral court (the TSE) for the first time in 2014.<sup>14</sup> These data are arguably most appropriate for assessing gaps in descriptive representation (i.e., disparities in the racial distribution of politicians and the population), since the population distribution is also measured using census self-reports. We report later some tendency for “whitening” in politicians’ self-identification, relative to classification by others, and other scholars have found similar tendencies in the population as a whole.<sup>15</sup> Nevertheless, these data—which were not

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<sup>13</sup>In a 1976 survey, Brazilian respondents used more than one hundred labels to describe their race/color; however, 95% of respondents used the same six terms (Telles 2004: 82). As Telles (2004, Chapter 4) notes, the two major additions to the five IBGE categories are variants of “*moreno*”—an umbrella term somewhat interchangeable with brown (*pardo*)—and “*negro*”, a more politicized term of black self-identification that may often substitute for *preto*.

<sup>14</sup>The TSE started collecting these data after formal requests by black movement organizations. On the state’s measurement of race in Brazil, see Nobles 2000.

<sup>15</sup>E.g., Telles 2004, Chapter 4.

available to us at the time we began our study—only include candidates who ran for office in the federal and state elections in 2014 and therefore do not include mayors and city councilors and candidates from previous electoral cycles. They also measure race using only the five census categories depicted in Figure 1 and thus do not permit analysis of the sensitivity of results to different measures of race.

Our additional measures of race draw on codings of Brazilian survey participants of the race of candidates in the 2008 municipal and 2010 federal and state elections, using official photographs. In total, respondents coded the race of 5,080 federal, state, and local politicians (1,896 elected officials and 3,184 non-elected candidates) in our main sample, along with mayoral candidates in an additional 87 municipalities we use in a regression-discontinuity design in Section 4 (Table 1).<sup>16</sup> Following best practice from previous research, we included various measures of race to account for the complexities of racial classification in Brazil.<sup>17</sup> These measures include (1) the five census (IBGE) categories used in Figure 1; (2) a 0-1 variable for African descent; and (3) a 0-1 variable for Black (*Preto*) or White (*Branco*).<sup>18</sup> Our coders are not a probability sample of the Brazilian population; as described in Appendix B, they were recruited from data bases and lists maintained by the Brazilian survey firm IBOPE and its partners. However, we maintained quotas for region, race, age, gender, and income, and our sample closely matches the Brazilian population in these respects (Appendix Tables B.1-B.5). In total, 1,114 coders assessed the race of about 15 politicians each. On average, about three coders evaluated the race of each politician. We randomly assigned a set of candidate photographs to each respondent, and respondents' attributes are statistically unrelated to the particular photographs they evaluated.

We have three ways to assess the reliability and validity of the survey codings. First, to assess whether our coders' perceptions are consistent with the Brazilian population as a whole, we also asked our respondents to code eight photographs that were included in a previous national probability sample survey (the Pesquisa Social Brasileira—PESB, implemented in 2002). Using the IBGE categories, the

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<sup>16</sup>Previous, less comprehensive, attempts at measuring politicians' race in Brazil have also used photographs of candidates; see Paixão and Carvano 2008. Johnson 1998 consulted with federal deputies, political activists and congressional staff.

<sup>17</sup>E.g., Bailey, Loveman, and Muniz 2012.

<sup>18</sup>We also included in our survey: a categorical measure with 12 response categories, and a 0-10 color scale running from “very light” to “very dark” (coders viewed a scale with the cursor initially positioned over 0 and were asked to slide the cursor to their rating). We use the three measures mentioned in the text in our main analyses and we present a few additional descriptive analyses about the two remaining measures in the Appendix Figures B.1 and B.2.<sup>19</sup> Respondents also answered questions at the end of the survey about their own racial and other attributes.

**Table 1 Sample of racially coded politicians, by office and jurisdiction**

Office	Election Winners	Election Losers	Sampled jurisdictions
<b>Main sample:</b>			
Senators	54 (all)	160 (all)	all states
Federal Deputies	513 (all)	1,096 (sample)	all states
Governors	27 (all)	123(all)	all states
State deputies	157 (all)	314 (sample)	2 states
Mayors	100 (all)	210 (all)	102 municipalities
City Councilors	1,045 (all)	1,281 (sample)	102 municipalities
<b>Total</b>	1,896	3,184	–
<b>Regression discontinuity study group:</b>	87 (all)	304 (all)	87 municipalities

*Notes: The table shows the number of candidates whose race our coders evaluated using official photographs. State deputies, mayors, and city councilors are drawn from the states of Bahia and São Paulo, where we included mayors and councilors from the state capital and 50 randomly selected municipalities. Except where noted, losers are sampled according to a constant sampling fraction. The sample includes all Senate candidates who ran in 2010. As explained in our replication file, we are missing two mayors. For the main sample, N= 5,080 politicians.*

modal classifications match for six of the pictures (Appendix Table B.6); using a binary (Black or White) classification, seven of the eight modes match across our coders and the PESB respondents (Appendix Table B.7).<sup>20</sup> This suggests a fairly high degree of consistency between our coders and the racial perceptions of a representative sample of Brazilians. Second, we compare the assessments of different coders who coded the same photographs. The modal category was unique for around 80% of politicians, using the five-point census scale. In many of our analyses below, we use the modal categorization to characterize the politician’s race.<sup>21</sup> Unsurprisingly, the percentage of unique modes is much higher for dichotomous measures than for those with multiple response categories, such as the IBGE (census) scale or our broader categorical measure (which had 13 response categories). Nonetheless, for at least some politicians, there is non-trivial disagreement among coders on the IBGE categories into which politicians should be placed; indeed, *all* coders agreed about the census category to which a particular politician’s race should be assigned just 33.4% of the time. Generally, politicians tend to be coded either as white or brown, or as brown

<sup>20</sup>In both cases, a single picture has different modes in our data set and in the PESB data set.

<sup>21</sup>In some of our analyses, we must choose a mode, for politicians with non-unique modes. One approach we employ later is conduct analyses using alternately the “whitest” mode or the “blackest” mode (see Figures 5 and 6). Appendix Figure B.5 and Table B.8 show the distribution of politicians’ race using these alternate definitions.

or black. For dichotomous measures, the inter-coder agreement is higher: for the binary white/black classification, all coders agreed on 63.54% of photographs.<sup>22</sup>

Moreover, for the 1,154 politicians in our sample who re-ran for office in 2014 and are thus also included in the official TSE data, the data suggest much agreement between our coders' classifications and the self-identification of politicians—especially for candidates classified as white by our survey participants, about 84% of whom also self-identify as white (Appendix Tables B.10-B.15). However, 60% of candidates who were classified as non-white by our coders perceived themselves as non-whites (Appendix Tables B.10-B.13).<sup>23</sup> As mentioned previously, this “self-whitening” tendency suggests the importance of using a consistent measure across both politicians and the population when measuring descriptive representation, as we do in Figure 1.<sup>24</sup>

Overall, the validity of our measurements on politicians' race appears quite good. Nonetheless, the codings reveal some disagreement between individual coders about politicians' race, as well as some limited discord between coders' perceptions and politicians' self-identifications. This likely reflects the ambiguities of racial classifications in Brazil, which many scholars have discussed extensively. Indeed, this is part and parcel of the empirical phenomenon we study: the fact that racial boundaries are more ambiguous than in other contexts makes the political overrepresentation of whites all the more striking. In our analyses, we use the official TSE data to document the political overrepresentation of whites but use our original other-classified data for several hypotheses tests, since our data allow us to study local as well as national elections, to use a regression-discontinuity design to assess barriers to candidate entry, and to evaluate the sensitivity of results to different race measures. Wherever possible, we replicate all hypothesis tests using TSE data using our survey data in the Appendix, or vice versa. Together, our data provide the most systematic and comprehensive measurement of race of politicians in Brazil, and they suggest some striking racial discrepancies between politicians and citizens—generating the puzzle we explore in the third and fourth sections of this article.

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<sup>22</sup>Appendix Table B.9 depicts the percentage of non-unique modes for each of our measures.

<sup>23</sup>In particular, as Appendix Tables B.14 and B.15 show, many of those classified as brown (*pardo*) by our survey participants classify themselves as white. The agreement between self-classification and interviewer classification in our data is similar to that found in household surveys. See Bailey, Loveman, and Muniz 2012; Telles and Lim 1998.

<sup>24</sup>However, we nonetheless also see a substantial gap in descriptive representation using our other-classified data—see Appendix Figures B.1-B.3.

Together, our data sets provide the most systematic and comprehensive measurement of race of politicians in Brazil, and they suggest striking racial discrepancies between politicians and citizens. Over 75% of governors, senators, and federal deputies are white, as are a majority of mayors and state deputies and a plurality of city councilors. Evidence we present later demonstrates similar contrasts between the race of politicians and constituents at nearly every level of office across Brazil, though disparities are greatest for politically powerful federal offices.<sup>25</sup> The overrepresentation of whites is especially striking in the North and Northeast regions.<sup>26</sup> To explain the descriptive overrepresentation of whites, it is thus especially important to examine settings like Salvador, the capital of the Northeastern state of Bahia, where non-whites constitute a substantial majority of the population—but a substantial minority of politicians.

### **3 Assessing race-based preferences**

What explains the failure of democracy to engender greater descriptive representation along racial lines? Most scholars acknowledge enduring socioeconomic inequalities between lighter- and darker-skinned Brazilians, but the extent to which these inequalities are a function of persistent class hierarchies or racial discrimination still permeates the debate on racial inequities. We thus turn first to the relationship of race and class to electoral behavior and voter preferences—a critical first step in explaining patterns of representation along racial lines.<sup>27</sup>

Analyzing the relationship between race and class does not imply dualistic thinking, in which either class or race influences voters' preferences. Research has stressed instead that socioeconomic inequalities are based at least partially in racial prejudice and has highlighted the complex interplay of race and class in social, economic, and political realms.<sup>28</sup> Moreover, many contemporary scholars (and even Gilberto Freyre, in some contrast to his racial democracy thesis) have documented a deeply hierarchical society, where a culture of deference to authority and high status might well produce persistent prefer-

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<sup>25</sup>See Figure 3, also Appendix Figures B.5-B.6 and B.10.

<sup>26</sup>Appendix Figures B.5-B.9.

<sup>27</sup>See Carnes and Lupu 2015 on the connection between descriptive and substantive representation of social classes in Latin American legislatures.

<sup>28</sup>On social class and political behavior, see e.g. Hunter and Power 2007; Bueno and Fialho 2009; Bailey 2009.

ences for whiter candidates.<sup>29</sup> Along with any discrimination among white voters towards black or brown candidates, such deference to white candidates might tend to produce a political class that is whiter than the population. Such preferences could of course be rooted in race, in class, or in both—in that voters could prefer candidates of higher economic and social status, who tend to be white, and they might also infer economic status or other attributes from the race of candidates (a kind of “statistical discrimination”). It is also important to distinguish between class as an attribute of candidates that voters may value, and the possible other advantages that candidates’ objective class position (as measured for instance by personal wealth) could engender for electoral success. In this section, we assess the more specific hypothesis about whether voters prefer richer candidates; later, we consider whether resources may favor candidates in electoral competition for reasons other than voter preferences.

Inferring the causal relationships between race, class, and electoral behavior from observational data is hindered by several methodological challenges. Many attributes of candidates vary along with their race or class, and these confounding characteristics could be responsible for their differential support across various racial or class groups. To evaluate the power of the racial democracy hypothesis, it is critical to assess credibly whether the *race* of candidates influences voters’ preferences, rather than other attributes that may be linked to race. Another main difficulty in analyzing perceptions and opinions on race is the presence of a strong social desirability bias against public expressions of prejudice. When asked in an opinion survey in 1995 whether they personally favored “racial mixture and miscegenation,” 89% of respondents categorically said “yes,” as anticipated by the “racial democracy” thesis. However, when asked if they thought white people harbor prejudice against black people, 89% also answered a resounding “yes”.<sup>30</sup> Our experimental research overcomes some of these limitations, by using an design that allows us more reliably to estimate the causal effect of racial and class relationships between voters and politicians.

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<sup>29</sup>See Guimarães 2002; Telles 2004; Hanchard 1999; Twine 1998; also, Freyre 1933/1980.

<sup>30</sup>Telles 2004.

### 3.1 Experimental design

We implemented our experiment in metropolitan Salvador (the capital of the northeastern state of Bahia) and Rio de Janeiro (the capital of the southeastern state of the same name). These two cities were chosen in part because of the representational gap in local politics, which is particularly stark in Salvador; and because the class and racial composition of these cities is also quite varied, with the racial distribution of Salvador more similar to the country’s Northeast region and that of Rio more similar to the important Southeast region. The labor intensity of our experiment did not allow us to replicate it across a greater number of contexts, but any explanation of failures of descriptive representation in Brazil should be able to elucidate the particularly wide gap in the Northeast (including Salvador). Results from Rio de Janeiro may allow plausible conjectures about likely results in similar Southeastern capitals, including São Paulo.<sup>31</sup>

We recruited experimental subjects through a probability sample and door-to-door survey. To achieve adequate statistical efficiency, our experimental design required sufficient numbers of sub-groups with low frequencies in the population.<sup>32</sup> We therefore recruited subjects for the experiment via a stratified probability sample of the population of these two cities, with an oversample of rich blacks and poor whites.<sup>33</sup> After agreeing to participate in our survey, participants were administered a screening questionnaire in which they identified their monthly income and race using the census categories, among other variables; they then listened to a videotaped political speech by a male candidate for the local city council (actually, an actor). Due to variation in regional accents, actors from Salvador were used for the Salvador study group, and actors from Rio were used for the Rio study group.

Each respondent was assigned at random to view a speech by either a white or black candidate; and the actor either wore a business suit—indicating a higher socioeconomic status—or more working-class clothes such as t-shirts. The speech was designed to mimic those that politicians routinely deliver during the televised “Free Electoral Hour,” which entitles candidates for city council and other offices to

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<sup>31</sup>Campos 2015 and Campos and Machado 2015 find similar racial representation in Rio de Janeiro and São Paulo.

<sup>32</sup>See Appendix Table C.1.

<sup>33</sup>We excluded subjects who self-identified as Asian (*amarelo*) and native (*indígena*), who constitute only a small fraction of the two cities’ population. For the stratification, we classified neighborhoods into three types (predominantly income categories A and B, predominantly B and C, and predominantly C, D, and E) and allocated an equal proportion of interviews to each type of neighborhood. Within neighborhoods, houses were selected at random using interval sampling, and within households, individuals were selected using the method of birthdays.

media exposure free of charge. In some treatment conditions, the content of the speech was also altered to draw further attention to the candidate's race and class background—that is, rich white, poor white, rich black, and poor black.<sup>34</sup> The experimental manipulation based on dress alone quite successfully influenced perceptions of candidates' class, and subjects also substantially perceived candidates' race as we intended, with one exception that we discuss later. We used “black” and “white” candidates only (rather than also including “brown” candidates) due to resource constraints and on the theory that using candidates towards the extremes of the color continuum would help us detect any race-based preferences. After watching the video, respondents were asked a series of questions about their propensity to vote for the candidate, the extent to which they anticipated receiving jobs or benefits if the candidate were elected, and their impressions of the candidate's likeability, competence, and intelligence.

One way to look at this experimental design is that white and black subjects were exposed at random to one of four treatment conditions: (1) a candidate from the same race and social class; (2) a candidate from a different race but the same social class; (3) a candidate from a different social class but same race; and (4) a candidate from a different race and social class (Table 2). We recognize that this approach may seem to presume an “in-group” preference that is inappropriate in the Brazilian context, particularly if respondents of all races prefer white, high-status candidates. However, previous research suggests the possibility of in-group preferences among non-whites, perhaps due to the recent importance of black social movements in raising consciousness around blackness (reflected inter alia in the growing percentage of educated blacks who prefer the politicized identity term “*negro*” to “*pardo*” or “*preto*”).<sup>35</sup> Given previous evidence of discrimination among white elites in labor and marriage markets, it is also possible that whites (especially rich whites) prefer white candidates to a greater extent than do non-whites.<sup>36</sup> The extent of in-group preference is therefore an empirical question. In any case, our design allows us readily to assess whether respondents of all races do, in fact, prefer whiter, high-status candidates; it also usefully permits ready comparison of our findings from Brazil with results from our similar experiments in several other contexts, boosting the comparative relevance of our study.<sup>37</sup>

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<sup>34</sup>The text of the speeches is included in the online Appendix, subsection C.2.

<sup>35</sup>Aguilar et al. 2015. On social movements, see Hanchard 1994; Paschel and Sawyer 2008; on the use of “*negro*,” Telles 2004.

<sup>36</sup>Telles 2004.

<sup>37</sup>Dunning and Harrison 2010, Dunning and Nilekani 2013.

**Table 2 Experimental design**

	<b>Respondent and Politician from Same Class</b>	<b>Respondent and Politician from Different Class</b>
<b>Respondent and Politician Are Same Race</b>	Pooling speech: N=285 (no browns, 205) [Baseline speech: N=136 ] [With race/class prompts: N=149]	Pooling speech: N=298 (no browns, 205) [Baseline speech: N=155 ] [With race/class prompts: N=143]
<b>Respondent and Politician Are Different Race</b>	Pooling speech: N=315 (no browns, 214) [Baseline speech: N=166] [With race/class prompts: N=149]	Pooling speech: N=302 (no browns, 207) [Baseline speech: N=154] [With race/class prompts: N=148]

*Notes: The cells show the number of respondents assigned to each treatment condition. The first entry in each cell includes all respondents exposed to the class/race relationship, pooling across variation in the speech. Entries in parentheses exclude self-identified “browns” (pardos). Entries in brackets report the subset exposed to the common “baseline” speech, and the number exposed to variations in the speech that highlight the politician’s race and class background. Blacks and brown subjects are assigned to the “same race” condition if they view a speech by a non-white politician. Subjects from the A or B income categories are in the “same class” condition if assigned to view a speech by a “rich” politician, while those in the C, D, and E categories are so assigned if the politician is poor. N=1,200 with all respondents; N=831 when browns are excluded.*

### 3.1.1 Manipulation checks

Manipulating perceptions of race on the basis of the actor’s appearance is a delicate enterprise. Unlike perceptions of social class, it is impossible to use the same actor to expose subjects to either a white candidate or a black candidate, which raises non-trivial issues of interpretation.<sup>38</sup> Imagine an experiment in which subjects are exposed at random to a single white or black politician and asked to evaluate her likeability, competence, and so on. Evidence that subjects on average judge the white candidate to be more likable or competent is not *ipso facto* evidence of a preference for whites—after all, that particular white candidate might indeed have appeared more likeable or competent, for reasons independent of race.<sup>39</sup> What are these potentially race-independent attributes? Research in psychology suggests that inferences from physical appearances about personality traits often extend across cultural boundaries, and respondents in such studies often reveal a preference for facial symmetry...<sup>40</sup> Like several other studies of candidate appearance, Lawson et al. find cross-cultural consistency of judgements about politicians’

<sup>38</sup>Holland 1986.

<sup>39</sup>One could make this criticism of, e.g., the study of Almeida (2007).

<sup>40</sup>Albright et al. 1997.

appearance: Indian and U.S.-based coders predicted the winners of elections in Mexico and Brazil with surprising accuracy, after only brief exposure to candidates' photographs.<sup>41</sup> To be sure, these potentially race-independent features of attractiveness should be clearly distinguished from those attributes or perceptions that are dependent on race—which may be part and parcel of the social phenomenon we study. Our partial solution to this problem was to recruit a substantial number of white and black actors, thus boosting the likelihood that race-independent attributes would average out over the two racial groups. Clearly, confounding attributes that are correlated with race. Moreover, there is a tradeoff here, since increasing the number of actors for a fixed respondent pool decreases the precision of within-actor estimates—which are crucial, e.g. when we experimentally manipulate the dress of a single actor. We sought to balance these competing objectives with a pool of 24 actors, 12 of each race, across Salvador and Rio.

The experiment stimulated perceptions of class and race quite successfully. We asked respondents to rank the candidate's socioeconomic status, using the 5-point descending scale of the Brazilian statistics agency (IBGE). On average, politicians wearing a suit were rated at 2.5, while politicians without a suit were rated at 3.0, a highly statistically-significant difference (with a standard error of 0.06) that is about one-half of one standard deviation in size.<sup>42</sup> As for race, we asked subjects both open-ended and closed-ended questions (in that order) to tap their perceptions. For the closed-ended question (using the IBGE categories), 445 (74 percent) of respondents exposed to black candidates said the candidate black, while 139 (23 percent) said brown; among those exposed to white candidates, 322 (54 percent) said white, while 253 (42 percent) said brown.<sup>43</sup> Thus, very few subjects assigned to black candidates said the candidate was white, and very few subjects assigned to white candidates said the candidate was black. However, a substantial portion of subjects in both conditions said the candidate was brown; this occurred for a much bigger proportion of subjects assigned to white candidates than black (by a factor of nearly two). We discuss possible implications for our analysis later. Interestingly, we find little evidence that perceived social class “whitens” candidates, as some scholars have suggested.<sup>44</sup> In response to the closed-ended

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<sup>41</sup>Lawson et al. 2010

<sup>42</sup>The estimates move only slightly when we consider just politicians whose speech contained class-based messages: politicians who wore a suit and gave a “rich” speech were ranked at 2.4, while those who did not and gave a “poor” speech were again ranked at 3.0; again the difference of 0.6 is highly significant, with a t-statistic over 7.

<sup>43</sup>Results (available on request) were similar for the open-ended question.

<sup>44</sup>See e.g., Azevedo 1996 (1953), though such findings may be somewhat dated; but see also Almeida (2007). Silva and Reis

race question among subjects exposed to black candidates, 73 percent said the candidate was black when he wore a suit and 75 percent said so when he did not; the difference is not statistically significant. Black politicians were ranked at 2.9 (se=0.04) on the 5-point descending socioeconomic scale, while white politicians were ranked at 2.6 (se=0.04), for a statistically-significant difference of about one-third of one standard deviation. However, wearing a suit increases perceived class by about the same amount for black candidates as for whites (by around 0.5 points on the 5-point scale).

### **3.2 The weak effects of candidate race**

How does the race and social class of candidates shape voters' evaluations? Figure 2 presents mean evaluations for each of the treatment conditions, with point estimates and confidence intervals given separately for black and white subjects as well as for all respondents together (including self-identified whites, blacks, and browns). The cells report average answers to the question, "[On a scale from 1 to 7], would this speech make you vote for this candidate?" By focusing attention on the quality of the speech rather than the candidate, the question plausibly gives respondents greater implicit scope to express disapproval of different races, thereby limiting social desirability biases. Yet, our results are consistent using a large battery of post-treatment questions about candidate attributes such as competence, likeability, and intelligence—limiting any concern that results are an artifact of our primary outcome question's focus on the speech.

We find little evidence for a race effect in these data. As Figure 2 shows, among respondents who share the politician's class, candidates from the same race are evaluated at 3.35 on the 7-point scale, while candidates from a different race are evaluated at 3.12; the difference is not statistically significant. Among respondents shown a speech by a politician from a different class, candidates who share the subject's race are rated at 2.92, on average; those from a different race are actually evaluated more favorably, at 3.21, but again the difference is not significant. We find no average disapproval of black candidates or deference towards whites: across all respondents, differences in evaluations of black and white candidates are substantively small and statistically insignificant.<sup>45</sup> As for our questions about candidate attributes,

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2012, Marteleto 2012, and Telles 2014 (Kindle Location 3674-3676) find some evidence of "darkening" by social class in the contemporary period. See Htun 2004 and Lima 2010 for a discussion of affirmative action in Brazil.

<sup>45</sup>See Appendix Tables C.2-C.3 and C.7-C.9 for more details and estimates for different sample sub-groups.

for 12 out of 16 characteristics, there was no average difference in the evaluations of white or black politicians. Respondents judged blacks to be more competent, likeable, and trustworthy and to be more likely to defend others, but these differences are not significant when we use a standard correction for multiple statistical comparisons. Also, respondents did not evaluate attributes of candidates of their *own* race more or less favorably, on average.<sup>46</sup> Among blacks, candidates who share the subjects' race and class are weakly preferred to those from the same class but a different race, but the effect is not quite significant at standard levels (p-value 0.09), and the difference does not exist among subjects exposed to a candidate from a different class.<sup>47</sup> Our data do suggest some evidence of class effects: for example, among both whites and blacks, politicians from the same social class and race are preferred by a large and statistically-significant margin to politicians from a different class but the same race. Table C.6 in the Appendix disaggregates treatment effects for rich and poor subjects, showing that class effects appear to be most pronounced for poor subjects. In the main, the effects of race do not interact with class. Overall, we find little evidence for race-based preferences, and especially not preferences for white candidates that could explain the overrepresentation of white politicians.

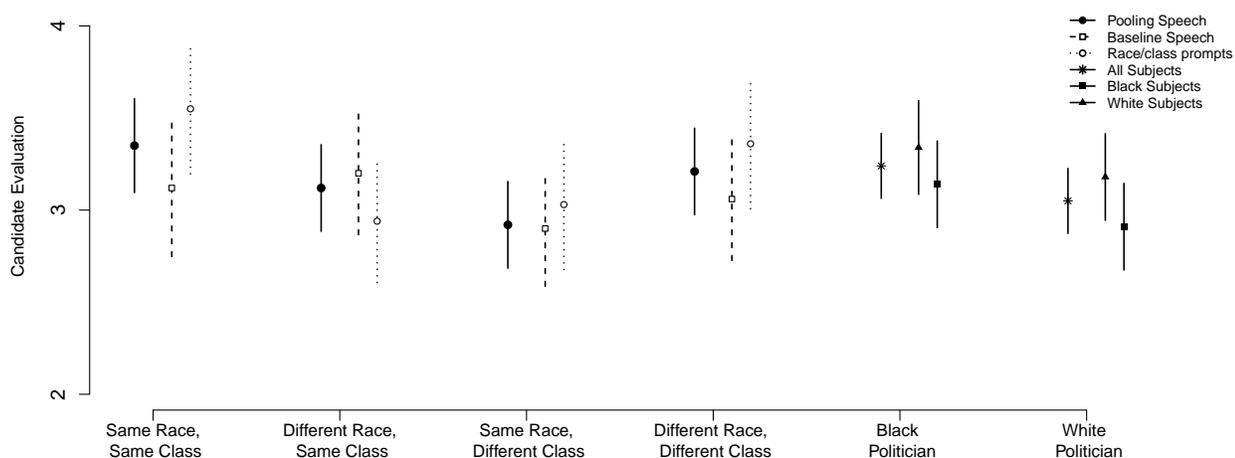
We focus on results in the text pooling across variation in the message, which we intended to do *ex-ante* as our primary analysis, mimicking similar, previous experiments on which our design was based.<sup>48</sup> Pooling across variation in the speech also gives the greatest statistical power and makes it less likely that null results are an artifact of imprecise estimates. However, in our Figure 2, we also present the marginal effects of variation in the speech.

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<sup>46</sup>Appendix Table C.3.

<sup>47</sup>Mitchell 2010 suggests that non-white voters who embrace “blackness” do vote for black candidates. When we look at the experimental effects in Table 2 only for black subjects who identify as Afro-Brazilians, we find little difference from the effects reported in the text.

<sup>48</sup>Dunning and Harrison 2010, Dunning and Nilekani 2013. We did not register a pre-analysis plan, which were not prevalent in political science at the time we conducted the household survey and experiment (in February-March 2009), yet our previous experiments use a primary analysis similar to Table 2. Our analysis closely follows—and was intended to replicate—those prior experiments, which therefore provide an informal pre-specification of our statistical procedures.



**Figure 2 Effects of candidates' race and class**

*Notes: The figure depicts average responses to the question, “[On a scale of 1 to 7], would this speech make you vote for this candidate?” The “all subjects” category (black line) includes self-identified whites, blacks, and browns. Vertical lines indicate 95% confidence intervals based on normal approximations. Differences between evaluations of candidates in the same race and different race conditions are not statistically significant. See Table 2 for further notes.*

We conduct our analysis in Figure 2 according to the treatment condition to which respondents were assigned (intent-to-treat analysis) rather than by the candidate race that respondents actually perceived. However, our experimental manipulation was more successful with black candidates than white candidates, who were sometimes perceived as brown. This ambiguity of racial perceptions could conceivably weaken treatment effects. When we conduct the analysis according to perceptions of candidate race, we still find similar weak effects (Appendix Table C.7). Yet, this analysis runs the risk that perceptions of race are endogenous (for example, racist white respondents who tend to perceive candidates as non-white might also be generally less prone to enthusiastic candidate evaluations). A better way to confront the problem is by stratifying the sample by potential compliance status, what Frangakis and Rubin or Imai and co-authors refer to as “principal stratification.”<sup>49</sup> Defining an indicator variable for compliers—those

<sup>49</sup>Frangakis and Rubin 2002; Imai et al. 2011.

who perceive candidate race as we intended—allows us to estimate the complier average causal effect (CACE) using treatment assignment as an instrumental variable. Whether we do so using all of our data or conducting the analysis politician-by-politician, however, we fail to reject the null hypothesis that the complier average effect is zero (Appendix Table C.16).<sup>50</sup> We also supplement this “moment-based IV” approach by (1) conducting intent-to-treat analysis within strata defined by pre-treatment covariates that may be linked to potential compliance; and (2) modeling the individual propensity to comply and then stratifying on the propensity score.<sup>51</sup> The pre-treatment covariates at our disposal exhibit weak relationships to compliance (in  $\chi^2$  tests, only subject race and marital status exhibit statistically significant, but substantively very small, relationships with misperception; see Appendix Tables C.11-15). Yet, the effect of treatment assignment is very similar within strata defined by these individual covariates, as well as the propensity score. We also find null effects among respondents who say they would be uncomfortable or very uncomfortable marrying someone of another race (such respondents are only 8.5% of our sample, however) and those who believe local councilors favor councilors’ own racial or ethnic group (Appendix Tables C.8-C.9). More broadly, the fact that respondents do not all agree on the racial classification of our candidates partly reflects the social construction of race in Brazil—and may be an indicator of the lack of strong race-based cleavages.

The findings of our experiment therefore heighten the puzzle of the overrepresentation of white politicians. We do not claim that race is never relevant for the choices of Brazilian voters; and while our experiment was conducted with probability samples of residents of two important Brazilian cities, our results cannot speak confidently to findings we would have obtained in other locales. Aguilar et al., in an experimental study related to ours, find weak race effects when Brazilian respondents face a short ballot but more significant same-race preferences when they are presented with a large ballot with many candidates; moreover, self-identified black subjects in their experiment consistently demonstrated a preference for black candidates.<sup>52</sup> Yet, this finding of an in-group preference among blacks further begs the question

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<sup>50</sup>The analysis is somewhat non-standard because we did not experimentally assign the condition to which most non-compliers “crossed over”—i.e., the “brown politician” condition.

<sup>51</sup>See Page, Feller, Grindal, Miratrix and Sommers (2015), who contrast “moment-based IV” and “model-based IV” approaches to principal stratification.

<sup>52</sup>Aguilar et al. 2015.

of why Brazilian politicians are disproportionately white. And despite important caveats, we believe that if race-based preferences were strongly prevalent in the Brazilian population, our design would detect them: in countries other than Brazil, including some thought to be characterized by weak racial or ethnic cleavages, one of us has found significant in-group preferences using a very similar experimental design.<sup>53</sup> We therefore conclude that race-based voter preferences are unlikely to explain the overrepresentation of white politicians in Brazil.

## 4 Assessing alternative hypotheses

What then explains the overrepresentation of whites, if not voter preferences? We turn in this section to three alternate hypotheses: (1) race-associated barriers to candidate entry; (2) discrimination by party elites; and (3) differential access to resources among white and non-white candidates. These factors are not mutually exclusive; and pinning down their causal effects is challenging. Yet, we find strong evidence that some of these factors are more likely than others to explain the overrepresentation of whites.

### 4.1 Candidate entry

First, does the racial gap reflect limitations in the candidate pool, whereby non-white candidates do not run for office at the same rates as white candidates? Or does it reflect not candidate entry but rather who wins office? Figure 3 compares the racial distribution of non-elected candidates, disaggregated by office, to the Brazilian population, and also includes elected politicians (already depicted in aggregate in Figure 1).<sup>54</sup> For federal and state deputies, governors, and senators, we use the 2014 self-identified race data from the TSE; for mayors and city councilors in Bahia, we use our coding of candidates in the 2008 elections (since municipal elections did not take place in 2014 and thus are not reflected in the TSE data).<sup>55</sup>

<sup>53</sup>Dunning and Harrison 2010, Dunning and Nilekani 2013.

<sup>54</sup>In Figure 1, we weight the racial distribution of each state by the percentage of office-holders that come from the state. This allows us to abstract from features of the legislature (such as malapportionment) that may otherwise mask failures of descriptive representation in each state's delegation to the legislature.

<sup>55</sup>Data from São Paulo are in the Appendix Figures B.2 and B.3; we do not include them here to economize on space, and because that state does not feature the same stark overrepresentation of whites in local elected office as does Bahia.

As Figure 3 shows, the proportion of whites among non-elected candidates (dark grey bars) is substantially closer to the population distribution (black bars) than among elected politicians (light grey bars). For example, while elected federal deputies are about 30 percentage points more likely to be white than the population, the disparity falls to about 10 percentage points among non-elected candidates for federal deputy. The figure shows a similar decline for state deputy candidates, and a smaller but still substantial closing of the gap among candidates for governor and senator. Similar patterns hold for city councilor and (to a lesser extent) mayors in Bahia. Overall, the reduction in the descriptive gap appears larger for offices elected through proportional representation (such as federal and state deputies, senators, and city councilors) than for executive offices (such as governor and mayor). In sum, the extent of overrepresentation among non-elected candidates is fairly minor; and it is much less marked than for elected officials.<sup>56</sup>

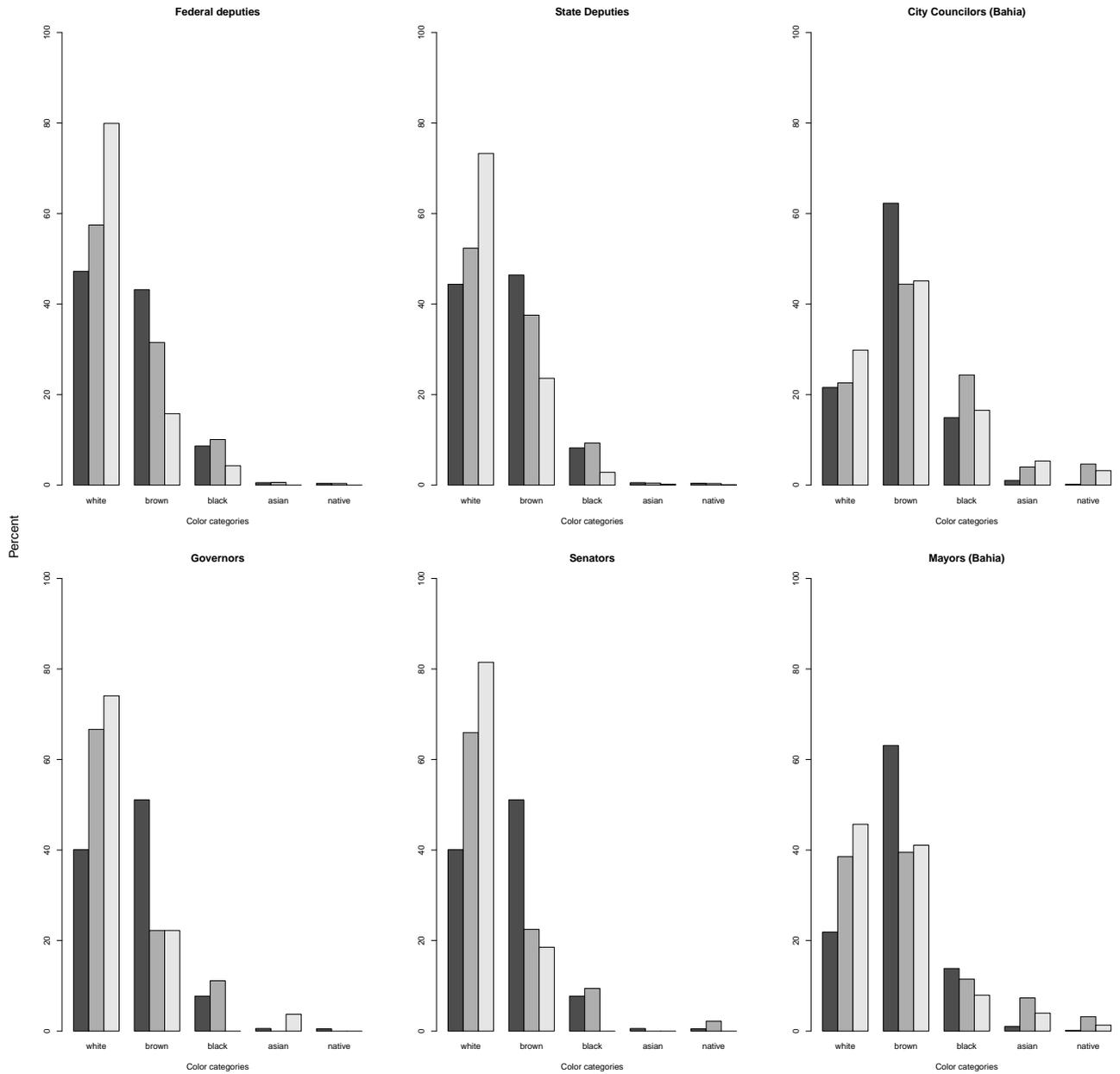
#### **4.1.1 A regression-discontinuity design**

Comparing the racial distribution of election winners and losers is instructive, yet it does not fully establish whether barriers to entry affect the racial composition of politicians. To explore this causal question, we take advantage of exogenous variation in institutions that influence the ease of candidate entry, in particular, the number of candidates. The Brazilian Constitution states that municipalities with fewer than 200,000 registered voters must use a single-ballot plurality rule (a first-past-the-post system where the candidate with the most votes is elected) to elect mayors, while municipalities with more than 200,000 voters use a second-round runoff (dual-ballot plurality rule). Fujiwara and Chamon, de Mello, and Firpo show that the change from single-ballot to a runoff system increases voting for third-place finishers and thus eases candidate entry.<sup>57</sup>

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<sup>56</sup>Campos 2015 and Campos & Machado 2015, examining candidates in the 2012 local elections in the cities of Rio de Janeiro and São Paulo, also find that while there is overrepresentation of whites among elected local councilors, there is minor overrepresentation of whites among candidates.

<sup>57</sup>Fujiwara 2011; Chamon, de Mello, and Firpo 2009.



**Figure 3 Color distribution of elected and non-elected candidates, compared to the population.**

*Notes: Black bars indicate the adult population; dark grey bars are for non-elected candidates, and light grey bars for elected officials. For elected and non-elected candidates for federal and state deputy, governor, and senator, we use self-identified race data from the TSE in 2014; for mayors and city councilors in Bahia, we use our codings of candidate photographs in the 2008 elections.*

We follow those authors in constructing a regression-discontinuity design, in which we compare municipalities just above the population threshold of 200,000 to those just below. On average, these two groups of municipalities should differ only in the system used to elect mayors, plausibly allowing us to identify the effects of the electoral rules. Our interest here is whether the presence of a second-round runoff system—which eases candidate entry—therefore also increases the number and share of non-white candidates in the first electoral round.

To estimate the causal effect of the electoral rule, we present difference-of-means tests for the share and number of nonwhite mayoral candidates in Figure 4. These tests validly estimate the effect under the assumption that assignment to electoral rule is as good as random near the population threshold. Appendix Figure D.2 shows balance tests consistent with this assumption. Appendix Tables D.1 and D.2 present alternative strategies, including local linear regressions, that estimate the effect under the assumption of continuity of potential outcomes.<sup>58</sup> Figure 4 shows estimates and confidence intervals for different windows around the key threshold, from a population range of 10,000 above and below the threshold to a range of 80,000 above and below.<sup>59</sup> None of the effect estimates for any window are statistically different from zero. Thus, there is little evidence that permissive electoral rules, by relaxing the number of candidates, also ease candidate entry by non-white politicians. Together with our evidence that the racial overrepresentation of whites is more extreme for elected than non-elected candidates, this evidence suggests that the key explanation rests not in who runs for office—but in who wins.

## 4.2 Discrimination by party elites

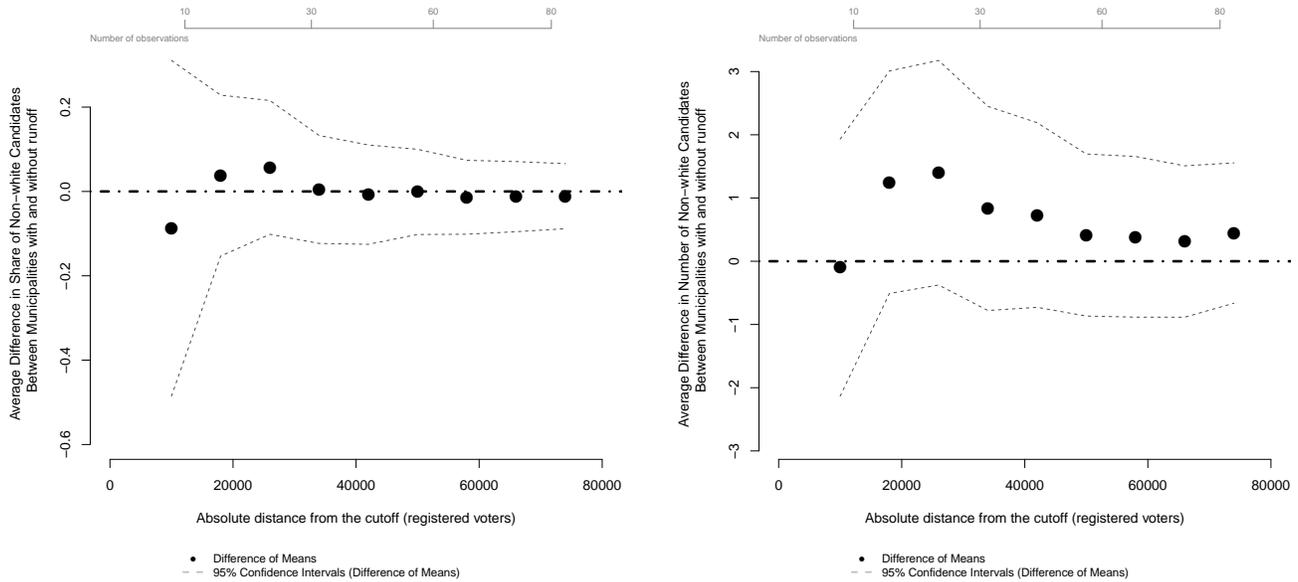
If voters don't discriminate strongly against candidates on racial grounds, another possibility is that *parties* do. We seek in this section to assess whether favoritism by party elites can explain the overrepresentation of whites in elected offices. Electoral rules in Brazil are often taken to imply weak control by party elites, mainly because the open-list system of proportional representation induces competition between members of the same party and, in particular, does not afford the same degree of nomination power to elites as would

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<sup>58</sup>However, we prefer the stronger, more useful assumption of as-if random to the alternative that potential outcomes are continuous at the threshold; see Dunning 2012.

<sup>59</sup>We adapt this graphical approach from Bueno and Tuñón 2015.

a ranked, closed-list PR system (or a single-member district system in which leaders give party tickets to candidates, as in India). Nonetheless, party leaders can influence the attractiveness of candidates to voters through various mechanisms.



(a) Share of nonwhite mayoral candidates

(b) Number of nonwhite mayoral candidates

**Figure 4 The effect of barriers to entry on the racial composition of candidates**

*Notes: The figure presents the average difference in the share and number of nonwhite mayoral candidates, comparing elections with runoffs (and thus lower barriers to candidate entry) to those without runoffs. The outcome is measured in first-round voting. Using a regression-discontinuity design, the local average treatment effect of a runoff system is estimated for windows of different sizes around the population threshold of 200,000, measured in numbers of registered voters (horizontal axis). Standard errors assume unequal variances in the treatment and control groups.*

One mechanism of elite control—which to our knowledge has not attracted systematic attention from previous scholars—is the assignment of favorable numeric codes to candidates.<sup>60</sup> These are 2- to 5-digit unique identifiers that voters use to vote for particular candidates. Remembering and recording

<sup>60</sup>Campos (2015) examines an alternative mechanism which may influence the electoral prospects of nonwhite candidates, arguing that larger, more important parties have, on average, fewer nonwhite candidates than smaller parties. Thus, regardless of the reason why these smaller parties recruit more nonwhite candidates, nonwhite candidates may tend to run for office with weaker political parties.

candidate codes is a non-trivial task, even with the recent introduction of electronic voting systems that have simplified the voting process in Brazil.<sup>61</sup> In our fieldwork, we noticed examples of prominent candidates who had suspiciously easy-to-remember codes, such as Leonel Brizola Neto—the grandson of the former Governor of Rio de Janeiro—who has the code “12345”; Clarissa Garotinho, the daughter of other former Governors of Rio de Janeiro, who took the code “15123”; and a prominent member of the city council of Rio de Janeiro who obtained the code “11111.” The professional entertainer Tíririca—who ran for the first time in 2010 with no previous electoral experience but is now among Brazil’s most prominent deputies—also ran with a very “good,” easy-to-memorize number (2222).<sup>62</sup> While candidates typically retain their numbers once assigned, our fieldwork suggests that party elites sometimes can influence the initial assignment of numbers. Thus, the assignment of easy-to-remember numbers to particular candidates appears somewhat akin to a system of “party tickets,” or to rankings on closed lists. Party leaders have incentives to facilitate voting for potentially popular candidates in open-list proportional representation elections, since votes for individual candidates add to the party’s overall seat share. Party elites might discriminate in favor of white candidates in assigning codes, perhaps because they anticipate (wrongly) that voters will do so as well.

To measure the quality of candidates’ electoral codes, we create a variable “good number” that is the sum of two components: the number of repeated digits and the maximum number of adjacent consecutive integers in a given candidate’s code. Thus, an identifier such as 11111 scores “five” on the first component, while 12345 scores “five” on the second.<sup>63</sup> This somewhat blunt measure will surely not capture all the ways that a number can be “good” but allows us to compare systematically the quality of codes among white and non-white candidates.<sup>64</sup> To link numeric codes to race, we use data from our codings (rather than the TSE data) in order to include local candidates such as city councilors. We analyze the association of the quality of numbers and the race of candidates using multiple measures, including

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<sup>61</sup>Hidalgo 2012.

<sup>62</sup>See <http://goo.gl/yTxOK>, accessed in June, 2012.

<sup>63</sup>We sum the components because a number like 11345 may be quite mnemonic and thus desirable; however, it would not rate especially well by either of the components alone.

<sup>64</sup>The subtleties are illustrated by one of our interviewees, a city councilor in a large Brazilian municipality. This politician was encouraged by fellow party members to change his apparently “bad” number during the party convention but stuck with it because it happened to be the telephone area code for his neighborhood—where he had garnered his largest share of votes.

dummy variables equal to 1 if (1) the candidate is coded as white on the five-part IBGE scale and 0 otherwise; (2) the candidate is judged to be of African descent; and (3) the candidate is coded as black on a dichotomous white-black measure. Where coders disagreed on race of candidate, we take the modal rating; where multiple modes exist, we use both the whitest mode and the blackest mode. We also compare the quality of electoral codes for elected and non-elected candidates. For each comparison, we construct 95% confidence intervals based on bootstrapped standard errors for the differences of means.<sup>65</sup>

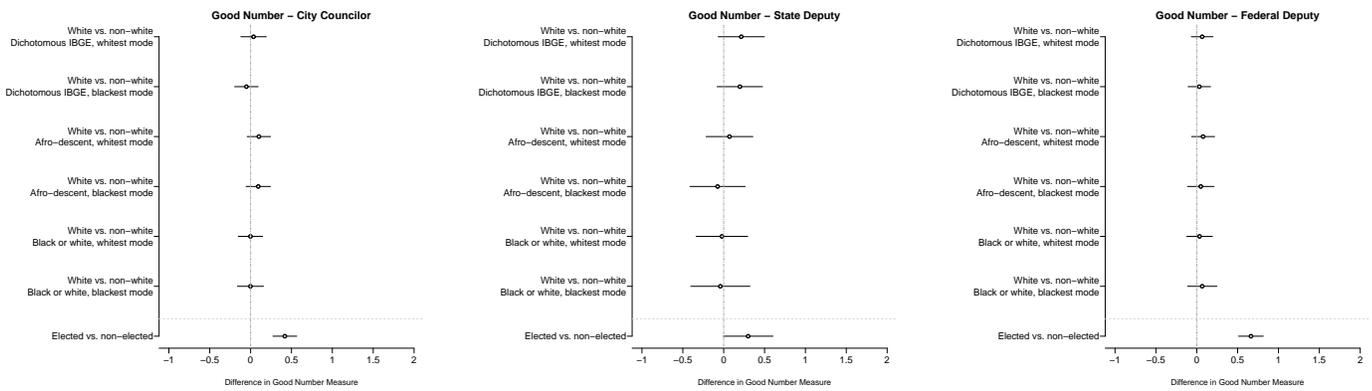
Figure 5 provides some striking evidence that good numbers are associated with electoral victory. Election winners have on average about one-half of one additional integer on the “good number” measure, as compared to election losers—a highly significant difference. These differences hold separately for both components of our measure (Appendix Figure D.1).<sup>66</sup> However, the quality of electoral codes does not differ by candidate race: for none of our measures is the difference between white and non-white candidates statistically significant, and point estimates are typically very close to zero for federal and state deputies as well as city councilors.<sup>67</sup> Thus, differences in the quality of numbers do not readily explain why white politicians are disproportionately prevalent. At least this particular form of potential discrimination by party leaders seems unlikely to explain gaps in descriptive representation. We explore one other potential channel for party discrimination below.

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<sup>65</sup>Candidates are not stochastically “assigned” to be white or black. Our interpretation of the confidence intervals is that they would bracket the true difference of means between all white and non-white politicians (or elected and non-elected politicians) 95% of the time, were we to draw repeated samples from the population of candidates in the 2008 and 2010 elections.

<sup>66</sup>This evidence does not necessarily indicate a causal effect of good numbers, as there may be confounding: party elites may assign better numbers to promising candidates, and both the quality of the numbers and the strength of the candidate influence electoral success. Yet, if elites assign good numbers to good candidates, this also underscores the perceived relevance of the numbers—making the lack of difference between white and non-white candidates even more striking.

<sup>67</sup>We see some small differences only for the “adjacent number” measure for city councilors (Appendix Figure D.1)—though here blacks and those of African descent have slightly *better* numbers, as suggested by nominal (unadjusted) *p*-values.



**Figure 5 Differences in the quality of candidates’ numeric codes, for white/non-white and elected/non-elected politicians**

*Notes: The plots show differences of means on the “good number” measure for candidates for city council (left plot), state deputy (middle plot), and federal deputy (right plot). “Good number” is the sum of two components: the number of adjacent digits and the number of adjacent repeated integers in a candidate’s numeric code. See Supplementary Appendix Figure D.1 for differences of means for each component. We present results for a measure dichotomizing the IBGE categories (including both black and brown as non-white); a measure of African descent; and a dichotomous black-white measure, all using data from our coding of politicians’ photographs. For each measure, we present results using both the whitest and blackest mode, for those candidate race classifications with non-unique modes. The vertical line is drawn at the point of zero difference. Horizontal lines are 95% confidence intervals based on normal approximations.*

### 4.3 Candidate resources

What other factors might influence whether candidates win office—and also be linked to race? One prominent possibility is resources. Across a wide variety of empirical settings, scholars have used resource differentials to explain patterns of political participation generally and candidate success specifically.<sup>68</sup> Candidate resources may be especially important in the candidate-centered Brazilian electoral system. For example, recent research by Novaes and others has emphasized the importance of “broker buying,” e.g., the use of resources to facilitate movement of local blocks of voters in support of state or federal deputies.<sup>69</sup> Resources may also allow candidates greater access to the media, which is useful in local

<sup>68</sup>E.g. Verba, Schlozman, and Brady 1995. On individual resources of candidates, see Dancygier et al. forthcoming.

<sup>69</sup>Novaes 2015; see also Stokes, Dunning, Nazareno and Brusco 2013.

and national elections alike.<sup>70</sup> However, evaluating the connection of resources to racial-representational disparities has previously been hindered by the lack of systematic national data.<sup>71</sup>

To assess race-associated resource differentials, we take advantage of Brazilian laws that require candidates to report their personal assets as well as campaign contributions, and link these records to our new data on politician race. The asset and contributions data are not perfect: for instance, out of 5,080 pictures coded in our main sample of candidates (excluding data from our regression-discontinuity design study group), we have 1,484 missing cases for asset data.<sup>72</sup> Nonetheless, these data give us a fairly good ability to assess whether resource differentials are linked to race. Figure 6 depicts the difference of mean assets (left plot) and campaign contributions (right plot) between white and non-white candidates, and also between elected and non-elected candidates. The horizontal lines are 95% confidence intervals that reflect our random sampling of candidates.

As Figure 6 shows, white candidates are richer than non-white candidates by very substantial margins. Across our measures of race, the difference of mean assets between whites and non-whites averages around 690,000 thousand Brazilian *reais* (somewhere between US\$200,000 and \$300,000 depending on exchange rates). These are averages across federal, state, and local offices, and the differences are even larger for higher-level politicians.<sup>73</sup> The bottom row of the left plot of Figure 6 suggests why personal resource differentials may matter: election winners are also richer than losers by about 650,000 *reais*.<sup>74</sup> Moreover, white candidates also receive much more in campaign contributions, as the right plot in Figure 6 shows. Though the absolute value of the difference is smaller for campaign contributions than for assets, the relative difference for white and non-white candidates is very substantial.<sup>75</sup> Overall, white can-

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<sup>70</sup>Boas and Hidalgo 2011.

<sup>71</sup>Campos 2015 and Campos & Machado 2015 look at the resource distribution by race of candidates in the 2012 local elections in the cities of Rio de Janeiro and São Paulo.

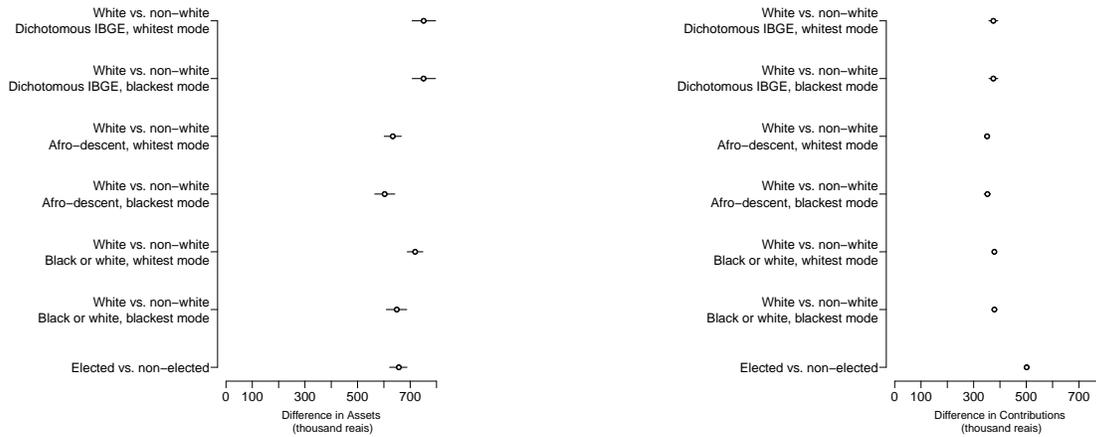
<sup>72</sup>Unfortunately, the missingness is related both to candidates' race and to whether they are elected officials. Depending on the measure of race, data are missing for around 36% of non-whites and 26% of whites, a difference that is highly significant ( $t$ -stat  $\doteq -8$ ); they are also missing for around 14% of elected officials and 38% of non-elected candidates ( $t$ -stat  $\doteq 20$ ).

<sup>73</sup>In Appendix Tables D. 3 and D.4, we present analogous results using TSE race data from 2014.

<sup>74</sup>In Appendix Figure D.3, we include a test based on rank-sums because of the presence of large outlying values. There, too, we see significant differences between white and black candidates as well as election winners and losers.

<sup>75</sup>These data on campaign contributions are also far from perfect: candidates systematically misreport contributions and spending. There is missingness in the data but to a lesser degree than in the personal assets data: out of our sample of 2,444 candidates in 2010 elections, 477 did not report receiving any contributions, and out of our 2636 sample of politicians in 2008 elections, 1,697 did not report any campaign contribution.

didates are over three times as rich as non-whites in assets and receive five times as much in campaign contributions.



(a) Personal assets

(b) Campaign contributions

**Figure 6 Resource differences, white vs. non-white politicians**

*Notes: The figure presents mean differences in declared personal assets and campaign contributions between white and non-white candidates, using different color measurements, and between elected and non-elected candidates. Solid lines are 95% confidence intervals for the average difference in the population of politicians from which sample was drawn (based on bootstrapped standard errors). Data are for the 2008 and 2010 elections.*

This evidence admits various interpretations, and pinning down the causal effect of resources is difficult because we lack good exogenous sources of variation: if personal assets or campaign contributions were randomly assigned, would the racial representational gap disappear? It is difficult to know for sure. Resource differences may be linked to confounders such as human capital, or social and political connections. For example, the resilience of the racial gap might operate through exclusive social connections established by kinship or elite institutions; if ties to elite families or clans partly determines access to office, non-white candidates would be at a disadvantage. In the Appendix, we evaluate this possibility using data on “political clans,” operationalized as the number of politicians in each candidate’s extended family. We find that non-white federal deputies are about as likely as white deputies to be members of political clans; among senators, however, whites are more likely to have other politicians in their fami-

lies (Appendix Tables D.6 and D.7). Another possibility is racial differences in education—which may broadly be thought of as another kind of resource that candidates bring to the political arena. In Appendix Table D.5, we show differences between whites and non-whites in tertiary education (having some college or complete college) of 16 percentage points, yet this is smaller than the 29 percentage point difference between elected and non-elected candidates. In contrast, the resource differences between whites and non-whites are approximately the same as between elected and non-elected candidates (Figure 6a and Appendix Figures D.3 and D.4).

What our data do suggest is that asset differentials and especially campaign contributions are important predictors of electoral success—and may help produce the association between race and office-holding. To reach this conclusion, we first conduct an analysis in which we fit a series of linear probability models with electoral success as the dependent variable (Table D.10).<sup>76</sup> For this analysis, we restrict the study group to first-time candidates in 2014, in order to minimize the possibility that electoral success influences right-hand side variables such as campaign contributions. Consistent with our evidence that racial disparities emerge among elected politicians rather than all candidates, race is a significant predictor of success in a bivariate regression (column 1). Yet, once we control for campaign contributions (column 2), or both contributions and personal assets (column 3), the coefficient on race is no longer significant. Interestingly, a dollar of campaign contributions “produces” a substantially greater change in the probability of electoral success than does an additional dollar of assets, though both significantly predict success. Results are similar with dummies for education level (Column 4) and gender (Column 5).<sup>77</sup>

The regressions in Table D.12 then take (log) campaign contributions as the dependent variable, using the full sample of 2014 candidates. In a bivariate regression, race is a significant predictor of contributions (column 1). The magnitude of the coefficient is substantially reduced by the addition of variables measuring whether a candidate has been previously elected (column 2), and especially by the measure of (log) personal assets (column 3). However, race is still a positive and significant predictor of contributions, even in models with the additional controls (columns 4 and 5). Thus, donors may give to

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<sup>76</sup>Table D.11 conducts analogous analyses with logistic regression models, with similar results.

<sup>77</sup>We do not include a measure for being member of a political clan in these regressions because of substantial missing data for first-time runners in 2014. Also, we use a single variable for campaign contributions (not breaking down by types of contributions) because of missing data for this year.

white candidates disproportionately in part because whites are experienced and wealthy; yet, race may have an independent role in shaping contributions. To be sure, the regressions in Tables D.10 and D.12 should be interpreted with significant caution. There may be further omitted variables correlated with our outcomes and included covariates. Moreover, in a regression of electoral success on the race “treatment,” campaign contributions and even assets could be post-treatment variables; coefficient estimators on all variables could therefore be biased.<sup>78</sup> In sum, these regressions may not capture the impact of intervening to manipulate the resource distribution exogenously.

Our results do suggest, however, that campaign contributions play an especially important role in producing racial-representational disparities. How should we interpret this finding? Some scholars have emphasized the role of “elite closure” in producing racial inequalities in the socioeconomic realm.<sup>79</sup> Our findings could be consistent with elites producing representational inequalities in the political realm as well. Note however that the data support both (1) an ethnic/racial closure argument based on white elite cohesion—since race is a significant predictor of contributions, even controlling for assets and experience; and (2) an economic elite closure thesis, since contributions flow to richer candidates (those with more personal assets) per Table D.12. Some portion of the explanation may therefore lie in the simple fact that race and class overlap in Brazil (as per an economic elite closure argument). The available data limits the extent to which we can test these alternatives directly, however. For example, we do not have data on donors’ racial identification (or their economic background). In addition, there could clearly be elements other than elite closure at work: while we did not find discrimination by party elites in our analysis of the quality of electoral codes (Section 4.2), political parties do give more resources to whites, as well as to election winners.<sup>80</sup> It is difficult to know the extent to which this is due to racial animus on the part of elites, or simply because white candidates possess other attributes such as experience that make them attractive for parties to support. What our evidence suggests is that if political leaders discriminate in anticipation of racial preferences in the electorate, they are misguided in doing so. Donations and political investments by elites appear to play a critical role in sustaining racial disparities in representation, even in

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<sup>78</sup>See e.g. Gerber and Green 2012: 322-25.

<sup>79</sup>Telles (2004). The idea of white ethnic cohesion is in some tension with the arguments found in Lieberman (2003) or Marx (1998).

<sup>80</sup>See Figure D.4 in the Appendix.

the absence of strong racial cleavages and race-based preferences in the Brazilian electorate.

## 5 Conclusion

In many democracies, disadvantaged groups—even those who comprise majorities of the voting population—fail to attain political representation commensurate with their numbers. Such failures of descriptive representation often seem overdetermined, however. For example, voters from both high- and low-status groups may prefer to vote for high-status candidates; institutional barriers and elite discrimination may discourage members of marginalized groups from running for office; and socioeconomic barriers may inhibit the electoral success of underrepresented groups. When all of these barriers to descriptive representation operate at once, it can be challenging to identify their separate effects.

As we show in this paper, many of these obstacles do not seem to operate powerfully in the Brazilian context. Voters do not appear to defer to high-status candidates, at least along racial lines. Nor do institutional barriers greatly discourage non-whites from running for office. Party elites may not overtly discriminate against non-white candidates, at least as measured by some metrics. Settings with weak race-based social cleavages, such as in Brazil, might thus appear to offer comparatively “easy” cases for reducing racial representational gaps—while also allowing better identification of remaining obstacles to descriptive representation, given that the gaps are not as overdetermined in this context.

What then explains the persistence of political overrepresentation of whites, which we document comprehensively for the first time in this article? We document very large resource disparities between white and non-white politicians, linking official data on assets and campaign contributions to race of politicians for a large national sample of candidates. We stress that we are not able to manipulate resource distributions and observe counterfactual patterns of racial representation; nor can we readily identify all the specific mechanisms that may link resources and electoral success in the Brazilian context. Resources may be correlated with human and social capital, social networks, and other potentially confounding variables, though our data on political connections and education suggest that such variables are not likely to produce the large racial disparities we register. Our evidence on resources should be considered strongly

suggestive, yet motivating of further research. For example, political contributions appear to be a key correlate of electoral success, even for first-time runners. Yet, to what extent is contributions driven by political closure along racial lines? Or by discrimination on the part of donors?

Our findings underscore that even where racial or ethnic social cleavages are weak, socioeconomic inequities can influence persistence of racial disparities in politics. As scholars of race in Brazil have emphasized, interethnic sociability, mass racial intermarriage, and residential integration can coexist with deep socioeconomic inequality along racial lines, as well as discrimination in elite labor and marriage markets. Thus, Telles' contrast between "horizontal" and "vertical" relations helpfully reconciles the claim of earlier scholars that Brazil is a "racial democracy" with more recent scholarship that seeks to debunk this supposition.<sup>81</sup> Yet, in the political realm, it is not ex-ante obvious what counts as a horizontal or vertical relationship, since acts such as voting or campaign donations may mix elements of sociability with elements of hierarchy. We find that when it comes to voting behavior, candidate entry, and even the behavior of party elites, horizontal sociability may dominate. Yet, winning office may depend on access to resources, and here hierarchical vertical relations (for example, in the donation of campaign funds) as well as longstanding race-associated asset inequalities appear important.

It is critical to be clear that our findings do not suggest the political irrelevance of race itself. That whites possess greater socioeconomic resources than non-whites may partly be due to the legacy of race-based slavery, yet persistent preferences for whites in areas other than voter preferences—e.g., labor markets, or marriage choices among elites—may also perpetuate racialized class stratification.<sup>82</sup> Thus, active discrimination as well as historical legacies may produce racial inequality in socioeconomic status, which—given the link between candidate resources and winning office—can then generate gaps in descriptive representation. Our finding of resource disparities between white and non-white candidates, while novel, makes sense given that scholars have shown whites to have more socioeconomic power than non-whites more generally. It is nonetheless important to know, from our experiment, that voters do not appear to prefer white candidates per se. Our evidence suggests that the advantage of such candidates reflects not perceptions of their attributes but rather the political power that stems from greater resources.

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<sup>81</sup>Telles 2004; see Hasenbalg 2005.

<sup>82</sup>Telles 2004.

More generally, our findings shed light on how racial or ethnic inequalities in political representation may persist, even in the absence of strongly politicized racial or ethnic cleavages. Acemoglu and Robinson study the capacity of minority elites to retain political power under democracy.<sup>83</sup> In their argument, democracy limits the *de jure* power of elites—by extending the vote to the masses—yet elites may counteract their numerical disadvantage under democracy through resource investments. Our data do not yet clearly allow us to assess the extent of resource investment—or all the reasons behind the race-associated resource differentials we uncover—yet they do suggest the potential importance of such channels for creating enduring disparities in descriptive representation. Our results therefore underscore the difficulties of erasing historical inequalities under democratic regimes. The absence of strong racial boundaries or ethnic cleavages might seem favorable for erasing failures of descriptive representation—especially when historically disadvantaged groups possess the numerical majority and vote in democratic elections—yet such cleavages are not necessary to generate failures of descriptive representation. The racial gaps in representation in settings such as the one we study thus underscore the deep challenges in many other contexts, where institutional barriers to political participation by disadvantaged groups are more entrenched.

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<sup>83</sup>Acemoglu and Robinson 2008.

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