An Experiment in Candidate Selection

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Abstract

Are ordinary citizens or political party leaders better positioned to select candidates? While the American primary system lets citizens choose, most democracies rely instead on party officials to appoint or nominate candidates. The consequences of these distinct design choices are unclear: while officials are often better informed about candidate qualifications, they may value traits—like party loyalty or willingness to pay for the nomination—at odds with identifying the best performer. We partnered with both major political parties in Sierra Leone to experimentally vary how much say voters have in selecting Parliamentary candidates. Estimates suggest that more democratic procedures increase the likelihood that parties select voters' most preferred candidates and favor candidates with stronger records of public goods provision.

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The competence and integrity of political leaders is a key determinant of government performance. James Madison went so far as to argue that the primary objective of any political constitution ought to be leadership selection, specifically to yield rulers with the wisdom and virtue to best pursue the common good (1788). And yet despite the importance of selection becoming ever more apparent, Besley (2005) writes that much of the modern political economy literature "has not only neglected the problem of political selection, it has been positively hostile to the topic" (p. 44).[1]

One critical component of selection is how political parties choose candidates. In most countries, this is by appointment or nomination by party elites. This contrasts sharply with the direct vote primary system in the United States, which devolves control to ordinary citizens. The divergence raises questions about which selection method works better, and what the consequences of voter versus party leader control might be for the overall electoral system.

It is hard to predict what would happen if the locus of control were to shift from party elites towards voters. To start, we do not know exactly which traits voters and party elites value in candidates, and whether their preferences are shared or in conflict with one another. We also do not know how relatively well informed they are about which candidates possess the traits they value, or how much they know or care about each other's preferences. Both sets of agents may further act very strategically when selecting candidates, weighing a broad array of factors that may be difficult to fully anticipate.

While generating precise predictions may thus be infeasible, there are some commonly held views about what a shift towards primaries might do. The first comes from primary skeptics, who are concerned that voters are poorly informed about politics. If so, then giving voters control straightforwardly delivers representation—i.e. citizens get their most preferred candidate—but it may come at the cost of selection on quality. And if severe enough, voters would be better off delegating the choice to party elites, who use their superior information and expertise to screen candidates' on their technical merits and identify the best performers.

A countervailing concern is that elite choices may diverge from voter preferences. This happens, for instance, if elites' political preferences are shaped by their privileged status, or they value candidate traits unrelated to performance in office (like party loyalty or willingness to pay for the nomination). They may also deploy more complicated strategies than voters, taking into

[1] We review the more recent literature on political selection below.

account how selections in one race affect voting in other races, or how today's selections affect the party's options in future. And fundamentally, if no primary is held, party elites may have little idea what voter preferences are, leading the choices of even the best intentioned party delegates away from what voters are looking for in candidates.

There is scant evidence about how these tradeoffs between a poorly informed citizenry and a potentially misaligned political elite are resolved in practice, and what their implications are for representation and the quality of selected candidates. Empirical progress has been constrained by the fact that political parties are generally loathe to vary how they choose candidates for anything but purely strategic (and thus endogenous) reasons.

This paper overcomes this identification challenge by partnering with both major political parties in Sierra Leone on a novel experiment that varied how much say registered voters, as compared to party officials, have in selecting candidates for the 2018 Parliamentary elections. In the status quo, parties chose among potential candidates, referred to as "aspirants," in a given constituency via recommendations from party officials at various levels, with no direct participation by voters. For a randomly selected subset of races, the parties implemented a new selection method with two components: i) a party convention where aspirants presented their qualifications to party officials and local residents, and engaged in informative policy-oriented debate that was broadcast over radio; followed by ii) opinion polling, representative of all registered voters in the constituency, that elicited and aggregated voter preferences over aspirants, which was shared with party officials via a one page report. Neither component is binding on the party's ultimate choice of candidate, and both are best characterized as alleviating information constraints. Yet note that if party officials followed the voter reports in all cases, the intervention approximates a direct vote primary with mandatory turnout.[2] In practice, they increased the rate at which they nominated the voters' first choice candidate from 38 to 61 percent.

To join this initiative, interested parties were first asked to select 46 races from the population of 132 Parliamentary constituencies nationwide where they would be willing to experiment with the new selection mechanism. More than half of the races they chose were located in their respective regional strongholds, where they were very likely to win the general election. The research team then randomly assigned the intervention for each party independently, with 23

[2] The leap from voluntary to mandatory turnout is not unreasonable in this setting, as voluntary turnout reached 87% in the general election studied. Turnout could, of course, be lower or more selective in the primary stage.

treated and 23 control races (for a total sample of 92 party-races); implemented the opinion polls; and collected rich data from voters, aspirants and party officials in both treated and control races. A well-known media group worked with the parties to moderate the party conventions and put them on the radio. We use the data to first characterize candidate selection in the status quo, and then estimate causal effects of the new selection method on key outcomes of interest, focused on representation and its relationship to selection on quality.

We find evidence that the status quo method of delegating candidate selection to party officials distorts choices away from voter preferences. This impedes representation, as defined as the candidate chosen to run in the general election being the aspirant who ranks first among voters. The baseline rate of selecting voters' first choice of 38 percent is low, given that there were on average only four aspirants under consideration per race. This rate increases by 23 percentage points with treatment, a large and highly statistically significant effect, which is driven by party responsiveness in safe and weak seats. Back of the envelope calculations suggest that this positive effect on representation corresponds to party officials choosing a different candidate than they would have otherwise in 11 races, and thereby changing the identity of 6 elected Members of Parliament (i.e. those from treated stronghold races).

In designing this research, we thought that distortions away from voter preferences would likely be due to the fact that party officials and voters have very different ideas about what makes for a good candidate. This proved not to be the case empirically. To test this, we identify which aspirant characteristics predict their popularity among voters, and compare these to the traits that make them popular among constituency-level party officials. The data suggest that voters and party officials broadly agree: they both prefer aspirants with a stronger record of having provided local public goods, and those who are more conscientious. The former is measured by the aspirant's involvement in development projects, like small scale public infrastructure (constructing a bridge or community center), support to education (rehabilitating classrooms) and agriculture (procuring farm tools and tractors) over the past three years. The latter is measured by a behavioral indicator of how carefully the aspirant handled a financial reimbursement for transport expenses (described in detail in Section V.A).

Given the apparent lack of preference divergence, what else might explain why party officials often fail to select the most popular candidate in the status quo? The data point strongly to information constraints, which are pervasive in poor countries where transport and

communication costs are high. They are arguably important in rich countries as well, where local party leaders and representatives in the U.S. have been shown to hold inaccurate views of public opinion (Butler and Nickerson 2011, Broockman et al. 2019). In Sierra Leone, 90 percent of constituency-level party officials presume local voters share their first choice over aspirants, when voters in fact only agree with them about half the time; and in a third of races, not a single party official (among multiple surveyed per race) accurately guessed which aspirant ranked first among voters. Their responsiveness to the voter reports reveals the usefulness of the primary stage in informing party officials about voter preferences. And since their own preferences were not in direct conflict with those of voters, there was substantial scope to accommodate voter opinion in choosing candidates.

Did the documented increase in representation come at the expense of selection on quality? To answer this, we compare the characteristics of candidates ultimately sent to the general election across treatment and control races. Experimental estimates suggest that the more democratic method led to the selection of candidates with stronger public goods records, meaning that aspirants who had provided more development projects in the past were more likely to be chosen to advance to the general election. To the extent that past provision predicts future provision, this is a cautiously optimistic result. Estimates for conscientiousness are directionally similar but imprecise. Voter learning from the conventions and radio broadcasts may have aided these positive results, as the data show that voters in treatment races knew more about aspirants than voters in control races. Our headline results thus demonstrate scope for party officials to incorporate the preferences of voters—even those who are very poor and lack formal education—in a way that facilitates representation without compromising the quality of selected candidates.

In thinking about generalizability, it is important to recall a few distinctive features of the research design. Our estimates are representative of races where the parties were willing to experiment, where the modal race is a safe seat where the party was near guaranteed to win the general election. Unlike in a binding direct vote primary, party leaders retained authority and discretion, as they were free to disregard the voter reports. Compiling these reports from a representative sample of voters further sidesteps some contentious issues in American primaries, like the relationship between selective turn out and the choice of ideologically extreme candidates.

We can largely rule out two alternative channels—aspirant entry and financial contributions—as drivers of the observed empirical patterns. Differential aspirant entry into

treated races is unlikely to explain our experimental results, as we find little evidence that advance announcement of the initiative, which was only partially implemented, induced entry. Average aspirant contributions (in official application fees and unofficial payments) amount to an unadjusted mean of $2,477, which is equivalent to 1.3 months of an MP's salary and 34 times the monthly minimum wage (data we elicited via survey). While this presents a substantial barrier to entry, the data are not consistent with some of the more nefarious interpretations of these payments, like seats being sold to the highest bidder.[3]

Our analysis contributes to the relatively new literature on political selection (see Dal Bó and Finan 2018 for review). There is emerging consensus that higher returns to holding office (Ferraz and Finan 2011, Gagliarducci and Nannicini 2013, Fisman et al. 2015) and greater political competition (Galasso and Nannicini 2011, De Paola and Scoppa 2011, Dal Bó et al 2017) facilitate positive selection.[4] Much less is known about the influence of party leaders on selection, and the two most related studies provide contrasting results. While Dal Bó et al (2017) point to party leaders' use of merit-based promotions in helping make Sweden an "inclusive meritocracy," Besley et al (2017) argue that their incentives to do so are tempered by a desire to avoid internal leadership threats. In a similar vein, Mattozzi and Merlo (2007) model party recruitment of candidates as a rent maximization opportunity that leads to "mediocracy."

Historically, skepticism about the role party elites play in candidate selection was a key driver of the Progressive movement to adopt direct vote primaries in the U.S. Hirano and Snyder (2019) describe the appeal of primaries as "a straightforward reform that would limit the ability of political and economic elites to manipulate and profit from the nomination process" (p. 15). They find evidence that primaries promote the selection of competent candidates in safe, open seats (Hirano and Snyder 2014, 2019). This idea is supported by theoretical work arguing that primaries produce higher quality candidates (Adams and Merrill 2008), but potentially at the cost of ideological extremity (Serra 2011). More broadly, other models suggest that primaries regulate internal competition to induce greater effort developing policy (Caillaud and Tirole 2002) and promote the provision of public goods over private transfers (Ting et al 2018).

Our paper brings these two literatures on political selection and primaries together by

[3] This concern is not limited to new or weak democracies, as the (now former) Illinois Governor's attempt to sell President Obama's vacated Senate seat attests (see Davey and Healy 2008).
[4] Noting the caveat that higher illicit (as opposed to official) returns may have the opposite effect (Brollo et al 2013).

measuring what happens to representation and candidate quality when voters, as compared to party leaders, are afforded more say in selecting candidates. Treating primaries as a mechanism to alleviate information constraints distinguishes our approach from much of the literature: party officials and voters learn about aspirants from the conventions; party officials learn about voter valuations of aspirants from the reports; and pooling all this information together helps identify candidates who are strong on dimensions that both voters and party officials agree are important. Overall, our results suggest that the more democratic selection method creates value for voters, in that they are more likely to get their preferred candidates, who have stronger public goods records.

The rest of this paper is organized as follows. Section I discusses variation in candidate selection processes and introduces a simple framework to structure the analysis. Section II details the experimental design and interventions. Sections III through VI analyze key tradeoffs in the status quo, and estimate how they are impacted by the new selection mechanism, focusing on representation, preference divergence, and selection on quality. Section VII explores alternative mechanisms related to aspirant entry and contributions. Section VIII concludes.

I. Candidate Selection in Perspective

I.A. Empirical Variation

There is substantial variation across country and over time in how political parties select candidates. Consider first the centralized approach practiced in France: central party leaders historically chose all candidates and allocated them across space to populate sub-national races (Valen et al 1988). Parties in the United Kingdom have traditionally used a more decentralized method, where the Labour party for instance delegates candidate selection to constituency-level party members. Historically, relatively high barriers to membership—via financial dues and time requirements—have made this group quite narrow: data from the 1980's suggests that on average 40 Labour Party members chose the candidate on behalf of some 70,000 constituents (Bochel and Denver 1983).

The U.S. anchors the other end of the spectrum, where all states now use some form of direct primary. Yet the direct vote phenomenon is relatively new: most states adopted mandatory primary laws between 1900 and 1920, with additional uptake staggered over subsequent decades (Hirano and Snyder 2019, p. 23). More recently, the 2016 Presidential race divided the two major parties over whether there is now "too little" or "too much" democracy. The Democrats increased

voter control by circumscribing the role of so-called "superdelegates," or party elites not beholden to vote the way the primaries went in their respective states (Levy 2018). Across the aisle, some troubled by the prospect of Donald Trump's candidacy called for a return to the historically stronger role for party elites as gatekeepers of the nominating process, and as a check on the excesses of "hyperdemocracy" (Sullivan 2016). Globally, the demand for direct vote primaries is on the rise: primaries are becoming popular in Latin America (Carey and Polga-Hecimovich 2006); and for the first time in French history, both major political parties held direct vote primaries to select their Presidential candidates in 2016 (Briançon 2016).

The consequences of these disparate design choices on the performance of the electoral system in delivering high quality, representative candidates and elected politicians are poorly researched. This study is designed to address this gap. We explore selection of Parliamentary candidates in Sierra Leone, which in the status quo shares features of the traditional British and French approaches and is similar to many selection processes across Sub-Saharan Africa. Both major parties rely on the recommendations of party officials at various levels, beginning with constituency-level officials, and neither party has a clear mechanism in place to capture the preferences of voters or rank-and-file party members. The experimental treatment we evaluate—conventions combined with polling—moves candidate selection in the direction of an American-style process, by increasing the amount of say that ordinary voters have in selecting candidates, without getting all the way to a binding direct vote primary that currently reigns in the U.S.

I.B. Conceptual Framework

There is no model in the literature that speaks directly to how a shift from party leader control to a process that gives more voice to voters affects candidate selection. A simple framework is thus useful to define key concepts, illuminate tradeoffs between poorly informed voters and potentially misaligned elites, and frame the experiment studied with respect to information constraints.

Set up: Suppose each jurisdiction has a single representative voter and a party official, either of whom could select one candidate from a finite pool of aspirants. Aspirants are heterogeneous in quality, which is a vector of universally valued traits (like ability, integrity) and match-specific traits associated with the jurisdiction (fluency in local languages, knowledge of local priorities). Quality traits contribute positively to a single dimension of performance in office. To fix ideas, define performance as the local population's valuation of the bundle of public goods

the candidate will produce if elected, which is a function of two traits: competence, or the volume of goods produced from a fixed public budget; and alignment, where local voters value a school more than a clinic if there are few schools and many clinics nearby, or if they prefer education over health. There is a third factor (such as party loyalty or willingness to pay for the nomination) that does not directly contribute to performance but is potentially correlated with quality.

As is standard in principal agent models (see for example Banks and Sundaram 1993, Fearon 1999), aspirants have private information about their type, meaning that both the voter and party official select under information constraints. We focus on the intuitive case where the voter is relatively better informed about local alignment, and the party official relatively better informed about competence.

We are interested in how allocating more say to the voter as compared to the party official affects two outcomes: i) representation, defined as the likelihood that the selected candidate is the voter's first choice, where her choice is conditioned on her information set; and ii) selection on quality, which is the expected performance (value of public goods produced) of the candidate selected. We seek to understand when improvements in representation come with consequences (positive or negative) for selection on quality, and the role of a non-binding information treatment in this process.

Sources of divergent choices: There are three main channels that would lead the voter and party official to select different candidates. The first is divergent preferences: a common concern about the status quo policy of delegating the choice to the party official is that only the official values the third factor (call it party loyalty). He thus maximizes a combination of loyalty and quality that at times selects a loyal aspirant over a more competent one. If the voter and party official's information sets are similar, then giving the voter more say straightforwardly enhances both representation and selection on quality. This was a key argument made by Progressive reformers in the U.S. All else equal, however, the extent to which preference divergence compromises selection depends on the correlation between loyalty and quality: if sufficiently negative, the effects could be pernicious; however if positive, it could be of little consequence.

Disparate strategic objectives could similarly drive a wedge between the choices of the voter versus the party official. While the voter cares about getting the best MP for her jurisdiction, the party official may be playing a broader game that accounts for how the selection of that MP affects other races. He might, for example, select a poorly aligned MP who appeals to voters in

nearby jurisdictions, in order to attract their votes for a higher level office. This could be relevant in our context as the Parliamentary races studied ran concurrently with a closely contested Presidential race. As above, giving more say to the voter in this case enhances representation and selection on quality so long as her information set is not too inferior.

A third source of divergence arises when the voter is at an absolute screening disadvantage compared to the party official, which in contrast to the above cases, negatively affects selection when she has control. This happens when her information set is strictly worse, or if the trait she can observe relatively well (alignment) has a lower marginal product with respect to performance. If so, then giving the voter more voice could increase representation (she gets her most preferred aspirant), but at the cost of selection on quality (if she had the party official's information on competence, she would have chosen a different aspirant to maximize performance).

Experimental treatment: Under this framework, the intervention studied can be interpreted as alleviating information constraints: i) the conventions reveal information about competence to the party official and the voter (via radio), enhancing both of their ability to select on it; and ii) the opinion polling delivers the voter's information about alignment to the party official, enhancing his ability to select on it. As the polling data is delivered with free disposal, the party official retains control. While we do not have sharp predictions to take to the data, it seems plausible that under a reasonable set of parameters this treatment would: i) increase representation, but not to 100 percent, as the party official will deviate from the voter's first choice to reward a more loyal aspirant, appeal to voters in nearby races, or choose a more competent aspirant; and ii) enhance selection on quality, by pooling the information that the voter and party official respectively possess about competence and alignment, and hence increase expected performance.

Other considerations: This simple framework abstracts away from aspirant entry, which is a key driver in the models of Dal Bó and Finan (2018) and Hirano and Snyder (2019). As entry is largely shut down in our context, we focus on how information and preferences affect the choice of the voter versus the party official, conditional on the aspirant pool. There is also a vast literature in political science about the interaction between primaries and ideology. As the political parties in Sierra Leone are not strongly differentiated by ideology, it allows us to better isolate factors that contribute to selection on quality. This lack of strong ideological labeling is fairly common: Cruz et al (2016) find that roughly half of parties across 179 countries are "non-programmatic," which

means they cannot be classified on a left, center, right scale or other metric of economic policy.[5]

II. Experimental Design

This study explores how political parties in Sierra Leone chose candidates to compete in the 2018 Parliamentary elections. These are single-member jurisdictions, won by plurality, and the general election of interest was declared largely free and fair by domestic and international observers.[6]

Status quo selection in Sierra Leone is guided by the country's Constitution,[7] which specifies eligibility requirements for becoming a Member of Parliament (MP), and the parties' own constitutions and regulations, which outline their internal procedures. In principle, both major parties begin the process with constituency-level executives screening candidates. These officials make recommendations to district- or regional-level executives, who in turn make recommendations to national executives, who have the final say. For the Sierra Leone People's Party (SLPP), the first, most local, step in this chain involves selection by three to ten constituency-level officials, compared to an average of 24,000 registered voters per constituency. When multiple aspirants are under consideration, this group is meant to vote among themselves to determine which aspirant to recommend upward. The All People's Congress (APC) party takes a more centralized approach. Its constitution enshrines the right to "elect or select" all candidates, for all levels of office, and mandates that the party's National Advisory Committee approve all candidates. Neither party has a mechanism to systematically elicit or aggregate voter preferences.

For a randomly selected subset of races, the parties experimented with a new selection mechanism that had two components, implemented in tandem at the constituency-party level: i) a town hall-style party convention, broadcast over local radio; and ii) representative opinion polling of registered voters, aggregated into one page reports and shared with party officials. The offer to participate in the initiative and associated research was managed by the Political Parties Registration Commission (PPRC) of Sierra Leone, which has the constitutional mandate to register, supervise, and monitor the conduct of parties. Its remit includes monitoring the accountability of parties to their members and the broader electorate.[8] The PPRC extended the

[5] In 2015 data, 54% of parties are non-programmatic (authors' calculation). See also Cruz and Keefer 2015 (p. 1949).
[6] See, for example, the report of the European Union Election Observation Mission, available at: https://eeas.europa.eu/sites/eeas/files/eu_eom_sl_2018_final_report_4.pdf
[7] See the Constitution of Sierra Leone (1991) available at http://www.sierra-leone.org/Laws/constitution1991.pdf.
[8] For more information, see https://www.pprcsierraleone.org/.

offer to participate to all registered parties, whose leadership decided whether or not to opt in.

The parties, the PPRC, the research team, and a civil society group called Search for Common Ground (SFCG) worked together to design and implement the two-pronged initiative. SFCG produces programs to promote transparency and accountability around the political process, providing neutral and reliable content through a network of local radio and television broadcasters. It played a leading role in coordinating broader civil society efforts to support the 2018 (and previous) elections.[9]

II.A. Party Conventions

The first component of treatment, a constituency-level party convention, provides an opportunity for aspirants to present their qualifications and debate each other on policy issues in front of an audience of party officials, rank-and-file party members, and local residents. These town-hall style gatherings typically began with a moderator, trained by SFCG, introducing the aspirants to the audience, and then posing a series of policy questions. Standard questions included: i) explain who you are and what qualifies you to be a good MP; ii) how would you spend the constituency facilitation fund, a pot of public money given annually to each elected MP; and iii) what makes you a good representative of local people, including how you would know what local people want and represent their interests in Parliament?[10] Additional questions followed, tailored to the local area, covering topics such as how to deal with local power supply constraints and allocating mining royalties. Shortly after each convention finished, SFCG delivered audio recordings of the event to local radio stations that re-broadcast the convention multiple times over subsequent days.

While the conventions were open to all interested party officials, a core set of three standard constituency-level positions—the party's constituency chair, secretary and treasurer—were explicitly encouraged to attend their respective convention. SFCG also publicized these events to local residents via radio jingles and community visits, encouraging them to attend the town hall or listen to the broadcasts. The data collection team further provided 25 voters per constituency with advance notice of the events via survey (see V1 survey described below). In post-convention surveys, 18 percent of voters in treatment areas reported having attended the town hall or listened to a broadcast. This rate is higher for those notified in advance (at 24 percent).

[9] For more information, see https://www.sfcg.org/sierra-leone.
[10] Moderators gave each aspirant 2 minutes to respond to each question, alternating who spoke first across questions.

II.B. Voter Reports

A few days after the conventions and associated radio broadcasts, the research team fielded an opinion poll of registered voters in the constituency, visiting voters in-person at their residence. We sampled individuals from the official registry of voters maintained by the National Electoral Commission (NEC), which includes names, demographics and home address. To ensure representation, we first randomly selected 10 voter registration centers (or 40 percent) per constituency, and then randomly selected ten voters per center, stratifying on age and gender. The respondent contact rate was high: on average, 94 voters were surveyed per constituency, where 67 percent of those polled were the target respondent, 20 percent were the first replacement, and 13 percent were the second replacement.[11] These surveys are thus substantially more representative than the telephone polls commonly conducted in the U.S. where, for example, the Gallup poll currently has a survey response rate of 7 percent (Marken 2018).

Voters were asked the question, "If you could give the symbol[12] directly, who would be your first choice?" and had the option to say "don't know" if they had never heard of any of the aspirants. The research team aggregated this opinion poll data, weighted by demographics, into one page voter reports that displayed the share of votes each of the party's aspirants received among poll respondents in the constituency (see example in Appendix Figure A1). The top of the report read as follows: "The first choice of voters in this constituency for the [*party*] MP symbol is: [*name of top ranked aspirant*] who has [*X*]% of the popular vote. This is based on polling results from a representative sample of [*N*] registered voters living near 10 different polling centers in this constituency." The report includes two bar charts showing the vote shares each aspirant received, first among all voters surveyed, and second for self-reported party supporters only. Due to strong geographic sorting by partisan affiliation, these two tabulations rarely identified a different frontrunner. For analysis, we focus on the former. The two parties diverged in how many copies of these reports they requested printed: the research team delivered over two hundred copies to the SLPP for distribution to all affected constituency-, district- and national-level executives; and delivered 25 reports to national executives of the APC.

[11] Each target respondent was accompanied by two potential replacements from the same demographic bin.
[12] In local parlance, "give the party symbol" means select the candidate to proceed to the general election.

II.C. Treatment Assignment

For each party that responded positively to the initial invitation to participate, the PPRC asked its national leaders for a list of 46 constituencies from the universe of 132 nationwide where they were willing to experiment with the new candidate selection mechanism. The research team then randomly assigned, via computer program, half of each party's constituency list to treatment and half to control, stratifying by small geographic bins.[13] This generates an experimental sample of 92 party-races. As the two major parties occasionally picked the same constituency for inclusion, these 92 party-race observations cover 80 unique constituencies.

Figure 1 presents an overview of the random assignment and implementation timeline.[14] The conventions launched in mid-November 2017 and all were completed and voter reports delivered before the parties submitted their official list of candidates to NEC in early January 2018. Final outcomes of interest relate to which aspirants were registered with NEC to represent their party as candidates in the March 2018 Parliamentary elections.

While the original implementation plan further included advance announcement of which races would use the new selection method, this was only partially implemented (and is thus bracketed in Figure 1). This is for two reasons: i) the country's constitution stipulates that MP candidates in public employment must vacate their post a year before the election, and this initiative launched too late to affect the entry decisions of those potential aspirants; and ii) only one of the two participating parties did any advance announcement (the SLPP publicized the list of treated races and what treatment entailed two months before the conventions). We thus consider the entry channel largely shut down in this context (see Section VII.A. for discussion), however expect that it could be consequential in other settings. Limited advance announcement further implies that party leaders were unlikely to know the list of races their rival party selected when choosing which of their own races to include in the experiment, which could be a strategic consideration in other contexts.

Data collection was implemented in parallel for both treatment and control constituencies, and included pre- and post-convention surveys of voters (labeled V1 and V2, respectively),

[13] In addition to the two major political parties, three minor, or "emerging," parties expressed interest in participating, however did not have any races with more than one aspirant under consideration, so did not proceed to the implementation stage. One more expressed interest after the implementation window had closed.

[14] To protect the anonymity of research participations, Panels A and B mask locations and show arbitrary assignments using the old 2007 constituency boundaries (the boundaries were redrawn before the 2018 election).

aspirants (A1 and A2), and party officials (P1 and P2). Data collection rolled out sequentially across stratification bins and treatment assignment, which is important since the information environment was evolving over time in all races. On average there were 11 days between the pre- and post-convention voter surveys. The only exception to the symmetry of data collection is that P2 was not collected in controls, as it was socially awkward for enumerators to ask party officials an identical set of questions a few days apart, when no observable event had occurred in the interim (P2 is for descriptive purposes only and no outcomes depend on P2 data). Anonymized data for the analysis in this article are available (see Casey et al. 2020). See summary statistics in Table 1 (discussed further in Section III.A).

Voter reports were compiled based on post-convention (V2) polling data, the sampling of which is described above. Respondents in the pre-convention (V1) survey are a subset of the voters targeted for V2: specifically, V1 covered 25 voters registered to 3 of the 10 sampled registration centers in V2. For party official surveys (P1 and P2), enumerators surveyed those holding the same standard constituency-level positions (constituency chair, secretary and treasurer) who were encouraged to attend the conventions. These respondents were replaced as necessary with holders of similar constituency positions (e.g. deputy constituency chair) or higher level party officials (e.g. district chair). Overall, 73 percent of officials surveyed hold constituency-level positions, 5 percent hold district-level positions, and 22 percent hold other positions.

III. Characterizing Selection in the Status Quo

This section uses the data to explore three aspects of candidate selection in the status quo: i) who self-selects into politics; ii) which types of races party leaders chose to include in the experimental sample; and iii) how frequently voters get their most preferred candidates in control races where selection is fully delegated to party officials.

III.A. Self-selection into Politics

Comparing the characteristics of voters, party officials and aspirants reveals strong positive self-selection into politics on education and wealth. It further suggests that tradeoffs emphasized in the conceptual framework between a poorly informed electorate and a potentially misaligned political elite could be relevant in Sierra Leone.

Table 1 shows that registered voters have on average completed 5 years of education, 43

percent of them have no formal schooling, and only 4 percent have been to university. Aspirants, by contrast, have completed over 15 years of education, none lack formal schooling, and 80 percent have been to university. Party officials sit in between the two, with 12 years of education, 5 percent without schooling, and 34 percent with some university. Such pronounced selection on education suggests that party officials might be better able than voters to screen aspirants on their technical merits. As a concrete example, the first formal step for aspirants is to file an application with the party, which covers items like eligibility requirements and their standing in the party. Most voters would find it difficult to read the aspirants' applications, or review their curriculum vitae (even if they were publicly available), while party officials will both be able to read the documents and use their knowledge of government to assess which qualifications are important for carrying out the duties of Parliament.[15]

The countervailing concern is that the socioeconomic divide between voters and party officials will lead the latter to select candidates who are not aligned with voter interests. This would obtain under a citizen candidate model (Osborne and Slivinski 1996, Besley and Coate 1997), for example, if the elite status of party officials and candidates shapes their policy preferences away from those of voters. Inequities apparent in proxies for wealth lend some credence to this concern: voters on average own fewer than 3 assets from a list of 11 household items (e.g. mobile phone, radio) and only 11 percent have a formal bank account. Aspirants, by contrast, on average own 9.5 of these assets and nearly all of them (97 percent) have an account. Party officials again fall in between: they on average own 6 assets and 77 percent have an account. As to demographics, politics is a male-dominated activity—81 (89) percent of party officials (aspirants) are male—and politicians are roughly ten years older than the average voter. These summary statistics make it unclear *ex ante* whether voters or party officials are better positioned to select candidates, and point to potential tensions between representation and selection on quality.

III.B. Where Parties Chose to Experiment

Recall that participating parties selected 46 races from 132 Parliamentary constituencies nationwide for inclusion in the research sample and thus the lottery that assigned the initiative. It is instructive to classify their choices with respect to how competitive the general election is likely

[15] As a point of reference, 33 percent of voters (in the V1 survey) could not name a single MP job responsibility.

to be, which can be done using census data on constituency-level ethnic composition.

As background, the APC is historically associated with ethnic groups in the north of the country, including the Temne, and the SLPP is historically tied to groups in the south, including the Mende (Kandeh 1992). While national politics is quite competitive—as these two respective groupings are comparable in overall population size—geographic sorting means that most sub-national jurisdictions are not, as they are located inside one of the two party's regional strongholds. Figure 2 maps these allegiances. For each constituency, we compute the difference in population shares of ethnic groups historically associated with the APC versus the SLPP. The darkest red shading indicates a constituency populated almost entirely by APC-affiliated groups, and the darkest green indicates one populated wholly by SLPP-affiliated groups. To demonstrate how strong these allegiances are, regression analysis shows that differences in ethnic population shares explain 92 percent of the variation in the two party vote for the 2007 Parliamentary elections.[16]

Thus for the majority of subnational races, the locally dominant party's candidate is delivered on the strength of ethnicity-based ties by a large margin. This underscores the importance of internal party selection, as the process the party uses to choose a candidate effectively determines the identity of the elected MP. Note that strongholds are not unique to Sierra Leone, nor a curiosity of the developing world: Hirano and Snyder (2014) calculate that a minority (44 percent) of U.S. House of Representatives races from 1952 to 2010 were decided by fewer than 15 percentage points, which is a fairly lax standard for competitiveness.[17,18]

These stronghold races are the ones where party leaders were most interested in piloting the new selection initiative. Table 2 Panel A shows that while 36 percent of races nationwide are expected to be safe for a given party, safe seats compose 52 percent of the experimental sample, reflecting statistically distinct positive selection by party leaders.[19] Parties demonstrate neutral

[16] Specifically, we regress the constituency-level difference in vote shares for the APC minus the SLPP Parliamentary candidate on the population share of APC-affiliated ethnic groups minus the population share of SLPP-affiliated groups (as displayed in Figure 2). This yields an R^2 of 0.92. The estimated coefficient on the ethnicity-based measure is, as expected, positive, large in magnitude (0.76), and precisely estimated (standard error 0.02). Note that in the regression we include any votes for the candidate from SLPP's splinter party (the PMDC) in the SLPP vote share.

[17] Caste loyalties create strongholds in India, where the literature is mixed as to whether this facilitates (Munshi and Rosenzweig 2016) or hinders (Banerjee and Pande 2009) selection on quality for the locally dominant caste.

[18] As another benchmark, the average constituency in Sierra Leone has the same partisan leaning as the 18th Congressional district in California, which contains Palo Alto. This is based on 2018 U.S. House Elections and 2007 Parliamentary Elections in Sierra Leone (pooling votes for the SLPP splinter party, the PMDC, with the SLPP vote).

[19] We double over the map to accommodate both parties simultaneously, and classify competitiveness at the district level (the next higher administrative unit) since constituency boundaries were redrawn for this election.

selection for swing seats: the proportion in the experimental sample is not statistically distinct from that nationwide (30 versus 28 percent). This leaves strong negative selection out of weak seats, which constitute only 17 percent of the sample, and suggests that parties did not see much value in experimenting with selection where they were likely to lose the general election. This first stage of selective inclusion is important for interpreting our experimental results: they are representative of races where party leaders were willing to experiment, where the modal race is in the party's respective stronghold. It further suggests that parties did not view the initiative primarily as a way to garner general election votes, as they were near guaranteed to win these races.

III.C. Status Quo Distortion

We can use the polling data from control group races to assess how frequently the status quo model of delegating candidate selection to party officials gives voters their most preferred candidates.

The data reveal that this baseline rate is low: in the control group, the two political parties on average selected the aspirant who ranked first among local voters 38 percent of the time, which constitutes a clear and sizeable distortion away from voter preferences. In about half of these deviations, the party selected the aspirant who ranked second among voters, while in a third, the party selected someone ranked fourth or lower. This distortion is particularly important in party strongholds, as it means that party officials are not only picking candidates—but effectively future Members of Parliament—who diverge from voter preferences.

IV. Treatment Effects on Representation

The first prediction from the conceptual framework is that the new selection mechanism will reduce the status quo distortion away from voter preferences and thereby enhance representation, as defined as the selected candidate being the aspirant who ranks first among local voters. This section evaluates this hypothesis.

IV.A. Econometric Specification

To capture how the new candidate selection mechanism affects representation, we estimate:

$$Y_{ipc} = \beta + \beta_T T_{pc} + \boldsymbol{\tau}_{pc} + \varepsilon_{icp} \quad (1)$$

where outcome Y is a variable equal to 100 (so that coefficients are expressed in percentage points) if candidate i that represented party p in the general election for constituency c ranked first among

a plurality of voters in the V2 opinion polls (and zero otherwise); treatment indicator T signals assignment to the more democratic selection model, which recall was assigned at the party-constituency level; $\boldsymbol{\tau}$ are fixed effects for 23 party-region strata used in the random assignments; and ε is an idiosyncratic error.[20] The parties held conventions and accepted voter reports in 43 of 46 treatment races.

IV.B. Treatment Effect Estimates

The new selection mechanism has a large positive impact on representation: the estimated treatment effect on selecting the voters' first choice aspirant is 23 percentage points, standard error 10.6 (Table 3, panel A). On the base rate of 38 percent in control races, this effect corresponds to a 61 percent increase in representation (as we have defined it), which is materially substantive and statistically distinct from zero at the 95 percent confidence level. To put this in perspective, it suggests that parties responded to the information provided via the conventions and voter reports by picking a different candidate than they would have otherwise for 11 races (i.e. 0.23*46 treatment group races). As 52 percent of the experimental sample is located in ethnic strongholds where the target party is likely to win the general election, this further implies that party officials thereby likely changed the identity of 5 to 6 elected MPs.

Column 2 finds little evidence for heterogeneous treatment effects by party: the coefficient on the interaction between treatment and an indicator to distinguish one party from the other is not statistically different from zero. As we also find little evidence for heterogeneity by party for other outcomes, we focus on pooled estimates in all following tables. These results are robust to a variety of alternative specifications, including how ties are resolved, using pre-convention V1 data, and accounting for differing numbers of total primary "votes" cast (see discussion in Section VI.C and Table A8).

IV.C. Heterogeneity in the Representation Effect

The treatment effect on representation is wholly concentrated in safe and weak seats, where competition in the general election was expected to be low. To see this, Table 2 Panel B reports the baseline rate of selecting the voters' preferred aspirant in each type of race (safe, swing and weak seats), the difference in these rates across treatment assignment, and the associated *p*-value

[20] Selected candidates are those listed in the NEC official candidate registration data.

that the difference is equal to zero. In safe and weak seats, representation increases by 28 and 50 percentage points, respectively. There is no apparent response to treatment for swing seats, where the likelihood of selecting voters' preferred aspirant is 50 percent in both treated and control races.

Estimates from an analogous regression, which further includes the randomization strata, are comparable. Appendix Table A1 shows that the treatment effect in non-competitive general election races (safe pooled with weak seats) is a highly significant 33 percentage points (standard error 12). The coefficient on the interaction between treatment and swing seat is an equally sized negative term (-33, standard error 25), however falls below the 90 percent confidence level (*p*-value = 0.18). In interpreting these results, note that the 50 percent baseline rate (i.e. for control races) in swing seats is substantially higher than that in safe (30 percent) and weak seat (38 percent) races. This pattern is consistent with the parties already investing more resources in determining who is locally popular for more competitive general election races.

IV.D. Downstream Effects on General Election Vote Shares

Did this representation effect in the candidate selection stage lead to a downstream increase in the party's general election vote share? We find little evidence that it did: the estimated effect of the new selection method on the general election vote share of the targeted party is small in magnitude and imprecisely estimated (-0.48 percentage points, standard error 2.96 in Table 3 Panel B). Column 2 breaks this out by the level of competition, where we see that moving from a swing to safe seat increases a party's general election vote share on average by 28 percentage points. Moving from a swing to weak seat decreases this expected shared by 26 points. Both estimates are significant at 99 percent confidence. None of the estimated coefficients on treatment or its interactions with competitiveness are statistically distinct from zero.

This null result makes sense in light of the accumulated estimates thus far: Figure 2 reveals that the general election is strongly determined by ethnicity-party ties, limiting the scope for the candidate selection treatment to affect cross-party vote choices in the general election, at least for partisan strongholds. While there may be more scope for a downstream effect in swing areas, recall from Table 2 that there is no "first stage" of the experiment in swing races, as parties were already more likely to pick the local favorite in the status quo and this does not vary with treatment.

The null result further aligns with historical evidence regarding the introduction of direct vote primaries in the U.S.: while Ware (2002) suggests that incumbent party elites expected an

electoral benefit, Hirano and Snyder (2019, p. 37) find no evidence that primaries affected the general election vote share of the advantaged party. This contrasts with contemporary evidence from other regions, where adopting primaries has been shown to boost general election prospects, at least for subgroups like "underdog" parties in Latin American Presidential races (Carey and Polga-Hecimovich 2006) and opposition parties in Ghanaian legislative elections (Ichino and Nathan 2013). Similarly, Gulzar et al (2019) show that party leaders in Nepal respond to polling data by changing which candidates they put forward onto a party ticket, which in turn increases their general election vote share. None of these latter papers investigate selection on quality.

V. Preference Divergence

What causes the status quo distortion in representation: is it due to a conflict in preferences between voters and party leaders, or something else? While we dedicated a substantial amount of data collection to measuring potential preference divergence, analysis in this section shows instead that voters and party officials broadly agree on the characteristics that make for a good candidate.

V.A. Data and Econometric Specifications

To gauge preferences, we gathered rich data on aspirants and analyze which specific characteristics predict their popularity among voters and party officials, respectively. We organize aspirant traits (collected in the A1 and A2 surveys) into eight categories: i) professional qualifications, including education, incumbency and previous elected office experience; ii) wealth, including assets and reported income; iii) economic development record, including the number and value of local public goods the aspirant was involved in providing in the constituency over the previous three years; iv) cognitive ability, based on a series of election-oriented questions that involve numeric computations; v) party loyalty, including history of membership and leadership positions; vi) public service motivation (PSM), using questions adapted from Perry (1996); vii) local networks, including membership in constituency-level social and occupational groups; and viii) campaign effort and expenditure during the primary stage. See Appendix Table A2 for complete variable list and summary statistics.

We complement this survey data with one measure of directly observed behavior designed to capture conscientiousness and attention to detail. Since field enumerators requested that aspirants meet them in the constituency headquarter town to conduct the interviews, they followed

local practice and reimbursed aspirants a set fee to cover their travel expenses. After the survey, enumerators handed aspirants an envelope explaining that they were giving them 150,000 Leones (roughly US$20 at the time) to cover their travel costs and asked them to verify that the money was correct. Inside each envelope were eighteen, not fifteen, 10,000 Leone notes. The measure of conscientiousness is whether the aspirant detected and returned any of the extra three bills. As nearly all who gave back any money returned all three notes, we focus on the binary measure of whether any money was returned. Overall, 46 percent of aspirants returned some money.

Analysis identifies which of the many aspirant characteristics collected appear to be valued by voters, and whether these are the same traits that party officials value. To do so, we estimate variants of the linear model:

$$V_{ipc}^{s} = \alpha + \sum_{k=1}^{K} x_{ipc}^{k} \beta^{sk} + \boldsymbol{\tau}_{pc} + \nu_{ipc} \quad (2)$$

where V_{ipc}^{s} is the vote share aspirant i who is vying to represent party p in constituency c received among selectors s, where $s \in \{v, o\}$ denotes voters and party officials, respectively; x^{k} is one of K aspirant traits collected in the data (like education or wealth); $\boldsymbol{\tau}$ contains the 23 party-region strata from Equation (1); and ν is an idiosyncratic error term. To identify which traits predict preferences, we test null hypotheses of the form $\hat{\beta}^{sk} = 0$, and to assess whether voters and party officials have common preferences over traits, we test $\hat{\beta}^{vk} = \hat{\beta}^{ok}$.

As we collected data on a large number of characteristics relative to a modestly sized sample of aspirants (N = 390), candidate selection is a high dimensional problem. We respond to this challenge in two ways. First, we implement traditional approaches to reducing the number of statistical tests without culling any traits. We roll up the K characteristics into standardized indices for each of the eight survey areas outlined above (as in Kling, Liebman and Katz 2007) and enter the indices, along with our single behavioral measure, into the unified regression of Equation (2). Second, we use regularized regression methods to select a subset of individual traits with the greatest predictive power (Zou and Hastie 2005). This affords flexibility in searching over all K traits and retaining only those found to be relevant, which is useful since some of the measures collected are likely extraneous in practice, but *ex ante* we do not know which ones these are (see discussion in Belloni et al 2014). To stabilize estimates, we run the regularization technique with k-fold validation 400 times each for voters and party officials, keeping track of which specific traits are selected in each iteration, and carry forward those selected above median frequency. We triangulate results across these two complementary approaches, gaining confidence if the distinct

methods produce similar estimates.[21]

V.B. Preference Estimates

Voters and party officials appear to value similar traits in aspirants. Starting with the index approach, the two strongest drivers of preferences are the aspirant's record of having provided local public goods and other economic development projects in the constituency, and their conscientiousness with respect to returning the extra transport allowance. The coefficient on development record in Table 4 is a precisely estimated 0.04 for both voters and party leaders (standard error 0.01 and 0.02, respectively), which implies that a one standard deviation unit increase in public goods provision is associated with a 4 percentage point gain in an aspirant's vote share in the V2 and P1 surveys. Estimates for the conscientiousness indicator suggest that returning the money is associated with a precisely estimated increase of 5 (9) percentage points in vote share among voters (party officials). Wealth and public service motivation also at least marginally predict voter preferences, and while not precise predictors for party officials, the estimated coefficients are positive and comparable in magnitude for both groups. Table A3 presents alternative specifications that limit consideration to control races, stronghold races, or pre-convention V1 data for voters. Development record stands out as the one index that registers positively and significantly for both voters and party officials across all of these specifications.

The one area where there is some evidence of a potential divergence in preferences regards professional qualifications: aspirant qualifications positively and significantly predict party official appraisals (with a coefficient of 0.11 and standard error 0.04), but do not register among voters at conventional levels (0.05, standard error 0.03). The associated *p*-value in column 3, which tests for equivalence of coefficients estimated for voters and party officials, rejects equality at the 90 percent confidence level. This is consistent with the human capital advantage party officials have compared to voters in screening on technical merits, and could further reflect differences in their respective information sets, a question we return to in Section VI.C.

Reassuringly, the regularization methods produce a similar pattern of results. Appendix Table A4 shows that the specific measure of how many development projects the aspirant provided

[21] This combination of machine learning and traditional econometric methods is useful given that analysis here and in Section VI has elements of both prediction (which traits predict preferences?) and inference (does the new process affect selection on these traits?). See Athey and Imbens (2019) for discussion.

in the constituency (an item in the economic development index) ranks first as the most consistent predictor of both voter and party leader preferences. This trait was selected in 395 iterations for voters and 287 iterations for party officials. Incumbency (an item in the professional qualifications index) is the next most frequently selected trait for voters and ranks highly for party officials as well. While conscientiousness with respect to returning the extra transport allowance registers frequently, it just misses the cut off of being above median frequency to be carried forward. Five additional traits are retained for party officials, including years of elected office experience, three measures of party loyalty, and one PSM measure.

Table 5 presents the post-regularization prediction results for the union of the seven traits selected for voters or officials. The number of development projects and incumbency are the strongest predictors, with comparably sized positive coefficients for voters and party officials. No other measure strongly predicts preferences for both groups. As such, allowing the data to speak to which specific measures have predictive power identifies items in the same broad areas (development record, professional qualifications) that the index-level approach deemed important, and again shows fairly aligned preferences between voters and party officials.

In light of this alignment, why is it that, in the status quo, party leaders and voters so often disagree on the specific person to select, even though they broadly agree on the traits that make a good candidate? The conceptual framework emphasizes information constraints: both groups have imperfect information on aspirants, so both make errors. For voters, this could reflect challenges in screening on technical merits that leads them away from the most professionally qualified, not because they do not value qualifications, but because they lack the party official's information on competence. And for party officials, while they agree with voters that local alignment is important, they may not be well informed about all the community-level development projects that each aspirant has been involved in. Another explanation is residual conflict in preferences that we are not picking up in the data. The R-squared indicates that these regressions explain between 17 and 24 percent of the total variation in vote shares, suggesting that much of what is driving selections remains unobservable to the econometrician. So it could be the case that idiosyncratic factors break the tie between equally competent and aligned aspirants, and that voters and party officials diverge in how they assess these factors. This seems plausible in the case of education, for example: since 80 percent of aspirants have been to university, in many races all aspirants will be equally competent along this dimension and other factors will break the tie.

V.C. Information Constraints

A key part of the information story is what party officials know about voter preferences. If they know very little, then even well-aligned, well-intentioned party officials will frequently fail to select the most locally popular aspirants. The primary intervention was designed to alleviate this constraint, and the data suggest that it is indeed important in the status quo.

Sierra Leone is a poor country with high transport and communication costs, which create pervasive information asymmetries throughout the electoral process. There is no large-scale, cost-effective polling technology accessible in this market, implying that party officials are constrained in attempting to elicit and aggregate voter preferences over 132 local pools of aspirants. Quite simply, if there is no primary, party officials may have little idea which aspirant local voters prefer.

To gauge the empirical relevance of this constraint, before the conventions the research team asked party officials (via the P1 survey in both treated and control races) two questions about the local pool of aspirants under consideration by their party: i) "if the choice to award the symbol was up to you today, who would be your first choice?" and ii) "if the registered voters in this constituency voted directly today for the symbol, who do you think would get the most votes?" Answers to these questions reveal that party officials are imperfectly informed about voter preferences over aspirants.

Specifically, 90 percent of party officials indicated that local voters shared their first preference, e.g. that the aspirant the leader himself preferred would win a local primary in that constituency. This is incorrect: only 52 percent of presumed shared preferences were in fact a match with the polling data on voter preferences (from the V2 polling data). Overall, party officials correctly guessed who would win a local primary only 50 percent of the time. This disconnect is severe: in 33 percent of races, no party leader (among multiple surveyed per race) correctly guessed which aspirant was the most popular with local voters.

This information asymmetry is not limited to poor countries. Folke et al. (2016) study open-list proportional representation systems in Sweden and Brazil. Drawing an analogy to primaries, they argue that preference vote tallies reveal information about popularity to party leaders, who are then more likely to promote a first versus second place finisher of equal ability.[22]

[22] By honing in on the discontinuity between close winners and runners up, their empirical strategy by design identifies a preference for popularity holding candidate quality fixed (in expectation).

A natural next question is what this implies for selection: namely, when party officials accommodate voter preferences, and switch to more popular candidates, does it affect the quality of those chosen? The impact could be negative, if voters are poorly informed and less able to identify high performers. Or it could be positive, if voters possess complementary information on traits that contribute to performance (e.g. about local alignment from the conceptual framework).

VI. Impacts for Selection on Quality

Assessing whether the documented increase in representation affects selection on quality requires comparing the characteristics of candidates chosen via the new versus status quo mechanisms.

VI.A. Econometric Specifications

To test whether varying how the primary process is run has a causal impact on the types of candidates thereby selected, we estimate a series of regressions of the form:

$$x_{pc}^{k} = \gamma^{k} + \gamma_{T}^{k} T_{pc} + \boldsymbol{\tau}_{pc} + \eta_{pc} \quad (3)$$

where x^k is a characteristic (e.g. education or wealth, as in Equation (2)) of the candidate selected to compete in the general election on behalf of party p in constituency c; T_{pc} and $\boldsymbol{\tau}_{pc}$ are the treatment assignment and randomization strata as defined for Equation (1); and η_{pc} is an error term.

We link this estimation directly to the two-pronged approach used to explore preferences in Section V. First, we carry forward all eight indices of aspirant traits and the behavioral measure used previously. For each one, we estimate whether candidates selected under the new mechanism are more or less likely to be strong along that dimension. As this requires nine distinct iterations of Equation (3), we adjust standard errors on these estimates to control the false discovery rate (FDR) across the nine regressions (following Benjamini et al 2006 and Anderson 2008). Second, we carry forward the union of seven specific traits identified as important under the regularization approach. We again estimate treatment effects for each one, and implement FDR adjustments. A caveat for both approaches is that statistical power to support such multiple inference adjustments is strained, as at this stage, estimation operates over the pool of selected candidates, where there are only 92 observations.

VI.B. Treatment Effects on Selection

Estimates suggest that candidates selected under the more democratic mechanism look somewhat stronger on their observable characteristics as compared to those chosen via the status quo method. Candidates selected by the new process on average have stronger records of having previously provided public goods in the constituency (in Table 6 Panel A). The estimated treatment effect for the economic development index is 0.29 standard deviation units (standard error 0.14), which is a materially large and highly significant effect on a naïve, or per comparison, basis (p-value = 0.04). There is also a positive treatment effect estimate for conscientiousness, of 15 percentage points, but it does not quite reach significance at conventional levels (p-value = 0.13). Positive effects for these particular traits are noteworthy in light of the fact that they are strong drivers of voter preferences (in Table 4). There is further a positive and significant effect on selecting aspirants with stronger local networks (e.g. membership in local groups), which intuitively aligns with discussion in the conceptual framework, but is empirically unexpected since it did not rank as consistently as a predictor of voter preferences.

Implementing FDR adjustments over all nine index-level regressions sends these estimates below standard significance levels: the corresponding q-values for the two most precise estimates inflate to 0.22. This is perhaps not surprising given the strains on statistical power. While not a main focus, note further that we do not find treatment effects on demographics: 85 percent of selected candidates are male, average age 46, neither of which varies significantly with treatment assignment (Appendix Table A5).

Encouragingly, the regularization approach again provides similar results. Panel B of Table 6 estimates treatment effects on the union of traits that were identified as being predictive of voter or party official preference rankings over aspirants. The most striking estimate is the large positive effect on the number of development projects (0.46 with standard error 0.21). In terms of magnitude, it implies that candidates selected via the more democratic primary process on average had been involved in providing half an additional local public good or other development project in the past three years. Given the control group mean of 2.07 projects, this effect constitutes a 22 percent increase in such provision. There is a marginally significant negative impact on the number of meetings with party officials, which perhaps suggests a move away from the most loyal members. In column 4, the FDR adjustments again reduce significance levels, with an adjusted q-value for the number of development projects equal to 0.27.

As the estimated treatment effect on economic development record is a key result, it is

worth providing additional context from the data. Overall, 82 percent of aspirants have been involved in at least one project. Enumerators collected detailed data (project location, timeframe, expenditure, sources of funds, status of completion etc.) for up to three most relevant projects. In this project dataset, the modal project is construction of small scale public infrastructure (roads, bridges, community centers), followed by support to education (classroom construction and rehabilitation), agriculture (provision of farming inputs, like seeds, tools and tractors), and healthcare (clinic construction and rehabilitation).

Does incumbency drive these public goods results? While incumbents have provided more projects than others (a statistically significant difference of 2.5 versus 1.9 projects on average), incumbency does not account for these findings. Specifically, all estimates that show how an aspirant's economic development record predicts voter preferences in Tables 4 and 5, do so while controlling for incumbency (which voters also value). Moreover, there is evidence for a positive treatment effect on selecting high development record candidates, accompanied by a null result for (re-)selecting incumbents, in Table 6. Note further that incumbency is much less entrenched in Sierra Leone than in the U.S. There were 25 incumbents seeking re-nomination in our sample, which covers 27 percent of the races (reassuringly incumbency is balanced across party and treatment assignment). Roughly half of them secured re-nomination from their party. Compare this to the 2018 U.S. House elections, where 88 percent of incumbents sought re-nomination and only 1 percent lost their primary.

Overall, the headline results that come through this triangulation approach are first, that both voters and party officials value aspirants who have a demonstrated record of providing public goods in the constituency. And second, the more democratic selection method increases the likelihood that aspirants who are strong in this regard are selected to then compete in the general election. Results for conscientiousness are directionally similar, yet estimated with less precision. To the extent that past public goods provision predicts future provision, a question we being to explore in Section VI.D, these are guardedly optimistic results. Figures 3 and 4 summarize.

VI.C. Voter Learning about Aspirants

The results of this experiment do not bear out concerns of primary skeptics that giving more say to poorly informed voters increases representation at the cost of worse screening on quality. This downside risk appears to have in part been mitigated by voter learning about aspirants from the

town hall conventions and associated radio broadcasts.

To substantiate this channel, Appendix Table A6 shows that voters in treated races are more likely to be able to name aspirants unprompted by 12 percentage points in the V2 survey, constituting a 26 percent increase on the base rate of 47 percent in control races, which is statistically significant at the 99 percent confidence level. We further find a precisely estimated null effect of treatment on naming aspirants in the V1 data, which was collected prior to the conventions and broadcasts, supporting the hypothesis that the observed difference in knowledge is a result of the primary intervention. The positive learning effect is estimated with comparable magnitude across more and less competitive races (in panel B), however constitutes a larger percentage increase in weak and swing seats where baseline voter knowledge was lower.

We have more speculative evidence that this general learning effect enhanced voter ability to identify the most qualified aspirants on specific metrics (in Table A7). Due to an inconsistently applied skip pattern that created systematically more missing values for control races, these estimates are limited to strata where this skip pattern was not imposed and nearly all respondents were asked questions about which aspirant in the local pool was most qualified. In this subset, voters in treatment races are more likely to accurately identify the aspirant with the most professional experience by 18.9 percentage points (standard error 8.3) and the strongest record of development spending by 13.5 points (standard error 9.4). The effect on identifying the most educated is null. A joint test that all three estimates equal zero rejects at 99 percent confidence.

One consequence of this increase in knowledge and party activity around the conventions is that voters become more likely to form and express a preference over aspirants, which means that there are more primary "votes" cast in the treatment group (Table A6, panel C). These increases in knowledge and voting are themselves expressions of enhanced representation. Yet this imbalance does raise a question about interpretation for our main measure of representation, namely whether the selected candidate is the one who ranked first among voters, as econometrically we may be more likely to make mistakes about who ranked first in control races. To ensure this imbalance is not driving our results, we show that our estimates for primary impacts on representation are robust to: i) limiting the sample to strongholds, where voter knowledge and engagement with the selection process was high in all races (Table A8, panel A); ii) setting a minimum total vote threshold, where we drop all races in a randomization strata where any single race had fewer votes than the threshold, and vary the threshold in increments of ten from at least

25 to more than 75 votes (Table A8, panel B); and iii) taking an adversarial approach (in the spirit of Manski bounds)[23] by recoding the representation outcome to voters getting their first choice in all control races with fewer votes than the smallest total in treated races (which is 32 votes), which generates a treatment effect estimate of 14.2 (standard error 10.5).

We can further rule out that treated voters are simply acting as party stooges who learn from the conventions which aspirant party leaders endorse and adopt their point of view. To assess this, we estimate the treatment effect on representation using pre-convention V1 polling data, which effectively shuts down the voter learning channel and fixes their preferences at baseline. We again find a positive and highly significant effect of the primary initiative on the likelihood that voters get their most preferred candidates, equal to 31 percentage points (Table A8, panel A).

More broadly, the learning results are consistent with earlier work showing that publicizing policy-oriented debates between candidates in the general election is an effective way to build voter knowledge in this context (Bidwell et al 2020), and resonates with evidence from Uganda that debates build voter knowledge in both the primary and general election stages (Platas and Raffler forthcoming). It also aligns with survey evidence from the U.S. showing that voters learn about candidate policy positions and move into stronger ideological congruence as the primary campaign progresses (Hirano et al 2014).

VI.D. Treatment Effects on the Performance of Elected MPs in Strongholds

This section narrows consideration to stronghold races, where selected candidates were very likely to become elected MPs, and traces the effects of the primary intervention on their subsequent performance in office. We first discuss how strongholds differ from the other races in the sample, show that our headline results hold for this subset of races, and then present treatment effect estimates for performance in office. Unfortunately, limited statistical power renders these latter tests inconclusive.

All actors—party officials, aspirants and voters—engaged more intensively with the candidate selection process in stronghold races. As we have seen, these were the races where party leaders were most interested in experimenting with the new mechanism and where the stakes were highest, as selecting the candidate *de facto* means selecting the winner. These races also attracted more aspirants, who were of higher quality on average, than those in other areas. Specifically,

[23] See Horowitz and Manski (2000).

Table A9 shows that the mean number of aspirants increases from 2 in weak seats, to 4 in swing seats, to 5 in stronghold races. Aspirants in strongholds had completed an additional year of education (15.6 versus 14.7 in weak seats), were more likely to have been to university (86 versus 62 percent), and owned more assets (9.7 versus 8.2). Voters in turn were more likely to know who the aspirants were and have an opinion about which one should be selected: focusing on control races, voters were more than twice as likely to be able to name aspirants unprompted (59 percent in strong versus 23 in weak seats) and to report which one they would select (71 versus 34 "votes" cast per control race in strong versus weak seats) in Table A6.

In light of these differences, it is informative to show that our headline results hold for this subsample of high engagement races. First, the treatment effect of the primary intervention on voters getting their most preferred candidate is 27.4 percentage points (standard error 14.7, in Table A8). This is reassuring, as increased representation in choosing candidates has less impact in weak seats where few voters know or care about who wins the primary.[24] Second, voters in stronghold races value the same traits as voters elsewhere. Table A3 shows that stronghold voters prefer aspirants with better economic development records, and interestingly, further share party officials' preference for those with more professional qualifications. And third, the primary intervention similarly facilitated the selection of candidates with stronger local networks, conscientiousness and economic development records, although the latter estimates are less precise: the treatment effect for the development index is 0.24 standard deviation units (standard error 0.18) and for the number of projects is 0.38 (standard error 0.28) in Table A10.

To test whether the primary intervention had effects on subsequent performance in office, we contacted elected MPs from sampled stronghold races 18 months after the general election. We are interested in their utilization of the constituency facilitation fund, which is public money given to MPs to support development projects in their home constituency, establishment of a local office, and constituent outreach activities. We focus on three measures: i) their total expenditure on development projects, as verified by field audits; ii) the existence of a functional office accessible to citizens, verified by audit; and iii) how many public meetings they held with citizens

[24] This is equally true of primaries in high income countries. To provide a U.S. analogue, in the conservative 11th district of the House of Representatives in Texas, which has open primaries meaning that voters from any party can participate, there were nearly nine times as many votes cast in the Republican as compared to the Democratic primary. The Republican candidate went on to win the 2018 general election with 80 percent of the vote. Source: https://apps.texastribune.org/elections/2018/primary-election-results/

in their constituency, as reported by four key informants. Statistical power is constrained by two factors: this subsample, by design, is limited to the 48 winners from stronghold races; and disruption caused by the COVID19 pandemic shut down data collection before it was complete, reducing the effective sample by 13 percent.

Treatment effect estimates for all three performance outcomes are noisy and not statistically distinguishable from zero (in Table A11). It is nonetheless worth noting that the estimated effect on development spending is positive in sign and large in magnitude (at 32 M Leones), which corresponds to a 23 percent increase over the verified spending of MPs from control races. As low power renders this analysis inconclusive, we see robustly measuring potential effects of the primary selection stage on performance as an important area for future research.

VII. Alternative Explanations

This section investigates two alternative channels—aspirant entry and financial contributions—and finds little evidence that either explain much of the observed variation in the data.

VII.A. Aspirant Entry

Differential aspirant entry into treated races is unlikely to explain these results, largely because the advance announcement needed to induce entry was only partially implemented. Recall that only one of the two parties announced in advance which constituencies would participate in the new selection process. Two months before the conventions began, the SLPP publicized the list of its 23 treatment constituencies—via public announcement and paper leaflets—during their national delegates' convention to nominate their Presidential candidate. Their promotional materials, which dub the initiative "Aspirant Voice and People's Choice," describe the two components and characterize them as a "pilot" designed to "strengthen the internal democracy of our party" (see flyer in Appendix Figure A2). This could have altered the entry decision of potential SLPP aspirants. The APC, on the other hand, joined the initiative later and therefore did not announce the program or targeted constituencies at its own national convention. While the party did inform all national executives and a cross-section of district executives about the initiative at a subsequent meeting, this came too late in the process to affect entry decisions.

To nonetheless test whether the aspirant entry channel is operational in this experiment,

Appendix Table A12 presents treatment effect estimates for the total number of aspirants considered by each party per constituency. The first two columns use administrative data from the Secretaries General of the parties. Estimates in column 1 show that just under three aspirants on average competed for the SLPP's symbol in control races. The estimated treatment effect is 1.00 (standard error 0.59), which is a marginally significant increase in entry to just under four aspirants per race. Column 2 shows that the APC on average considered 4 aspirants per constituency, and the estimated treatment effect is small in magnitude and not statistically distinct from zero (0.27, standard error 0.62), as one would expect in the absence of advance notification. These data reflect the number of aspirants who were under consideration at the end of the process when candidate selections were made.

We can compare this to the number of aspirants who were surveyed earlier in the process as part of the research, which captures those who were under consideration by the party at the time of the conventions. This could be a larger number if some aspirants dropped out or were disqualified in the interim. Estimates for the APC are comparable. For the SLPP, the mean number of aspirants increases to 4 per race and there is no evidence of a treatment effect. Putting the survey and administrative estimates together suggests that the initiative may have helped some SLPP aspirants stay under consideration longer. In light of this, our results are best considered as partial equilibrium effects holding the pool of aspirants largely fixed. Table A13 reinforces this interpretation by showing that average characteristics of the aspirant pool are largely balanced across treatment assignment. Notice, for example, that the one index that is not balanced—mean scores on the cognitive ability questions were somewhat lower for aspirants in treated races—is not an index where we see positive treatment effects of the primary intervention on selected candidates. If the new selection process were to become internalized by parties and scaled up, we anticipate that the entry channel could become important in general equilibrium. We leave this question for future research.

VII.B. Financial Contributions

Another factor that could influence candidate selection—both in the status quo and in response to treatment—is financial contributions to secure the nomination. To measure contributions, enumerators asked aspirants shortly after candidate selections were formally announced (in

January 2018) how much they had paid to the party in official fees and other payments.[25] Note that these are distinct from the aspirant's own campaign expenses, which were recorded separately. Enumerators further asked unsuccessful aspirants how much they thought the selected candidate in their pool had contributed.

Self-reports from control group races suggest that nearly all (89.7 percent) aspirants made non-zero contributions, with an unadjusted mean converted to US dollars of $2,392, which is equivalent to more than one month's official salary of an elected MP. This looks modest compared to the 17 months of salary that public healthcare workers paid to secure a promotion in another low income country (Weaver 2018), but lies well out of reach for ordinary Sierra Leoneans, where for instance the monthly minimum wage is $71. These official fees and other contributions thus constitute a substantial barrier to entry into politics.

Two of the more nefarious interpretations of these contributions are not consistent with the empirical patterns we find. First, the data do not suggest that candidacy is being sold to the highest bidder in the status quo. Selected candidates self-reported the highest contribution in their pool in only 36 percent of control races. While this top payer rate increases to 51 percent when substituting out low candidate self-reports with the average report of unsuccessful aspirants (about how much they think the selected candidate contributed), it remains well below 100 percent. Second, in treated races, the data are not consistent with contributions being used to compensate for low popularity levels, i.e. to buy off party officials so that they deviate from the voter reports. Specifically, selected candidates do not contribute differentially more than unsuccessful aspirants in treatment races where the party ultimately chose someone other than the voters' first choice compared to races where party officials went with the voters' choice (results not shown).

An alternative way to conceptualize these payments is with respect to the expected return to candidacy, which is increasing in three multiplicative components: the returns to office, the probability the party wins the seat in the general election, and the likelihood of being selected as candidate. The first component includes the salary of an MP, scope for promotion (e.g. to a ministerial post), and other remunerative opportunities that positions in government afford access to. It is likely that there are returns even for those who lose the general election, particularly for

[25] The specific question asked, "How much contribution in total have you given to the party leaders for acquiring the party symbol from the start of your campaign? This includes registration/application fees, tips, small or big token to all the party leaders, kola [gratitude] money and transportation reimbursement tips."

members of the ruling party, as candidacy opens up avenues to public sector employment and positions within the party organization (see Colonnelli et al 2019 for estimates in Brazil). In light of this, both major parties were able to recruit aspirants in all 132 Parliamentary races nationwide.

As to the second term, the likelihood that the party wins the seat in the general election is increasing in the ethnic-party allegiance of voters in the constituency. This implies that willingness to contribute should be higher in stronghold races, which is exactly what we see in the control group data: mean contributions increase from $1,151 in weak seats, to $1,527 in swing seats, to $2,930 in safe seats (Table A9). We can link this increase in expected returns back to status quo entry decisions, where Section VI.D. shows that there are more aspirants, who are of higher average quality, in stronghold races, which is consistent with findings from elsewhere (Ferraz and Finan 2011, Gagliarducci and Nannicini 2013, Dal Bó et al 2017, Hirano and Snyder 2019).[26]

Regarding the third factor, willingness to contribute should be higher for aspirants with a better chance of being selected as the candidate, which is an object that the experimental treatment might affect. To see this, recall the assumption in the conceptual framework that aspirants have private information about their type, which the conventions and opinion polling deliver (at least in part) to party officials. For high types, this implies that their probability of being selected increases, and thus their willingness to pay should as well. For low types, the opposite should hold. A simple way to capture this in the data is to test whether selected candidates contribute differentially more than unsuccessful aspirants in treated versus control races.

Appendix Table A14 tests this hypothesis by regressing contributions on whether the aspirant was selected to be the candidate, treatment assignment, and the interaction of the two terms. The positive and significant coefficient on the interaction between being selected and treatment implies that the spread between how much successful and unsuccessful aspirants contributed is indeed wider in treatment races. This spread is more pronounced in column 4, which restricts attention to stronghold races. These estimates suggest that unsuccessful aspirants in treated races contributed less (by $819 on average), and selected candidates contributed more (by $2,256), than their counterparts in control races.

Overall, these results are consistent with aspirant willingness to pay being tied to the expected returns to candidacy, and thus for those whose expected returns increase with treatment—

[26] While interesting, note that this does not affect our experimental estimates as treatment assignment is stratified within small geographic areas and we include fixed effects for these strata in all relevant specifications.

because they are more likely to be selected under the new process—their contributions increase as well. The offsetting reduction by aspirants who become less likely to be selected generates no net effect of treatment on mean contributions for the aspirant pool overall (Table A14, column 1). This is one speculative interpretation of the data, and there may well be others that align with this constellation of results.

VIII. Conclusion

Elections are large public investments: the United Nations Development Programme, the largest international donor in the electoral space, expended more than three billion dollars to support elections in poor countries over the past fifteen years (UNDP 2019). The efficacy of such investments in delivering representative and competent elected politicians depends critically on how candidates are selected. If party officials select candidates with little input from voters, citizens may well be perfectly enfranchised on paper—entitled to participate in free and fair general elections—but wholly irrelevant in practice, at least for partisan strongholds. This problem is largely absent from discussions about the design of donor support for elections: to illustrate, as late as 2004 there was no explicit reference to political parties anywhere in the UNDP's own multi-year funding framework (UNDP 2006 p. 11). This neglect arises in part from concerns about impartiality that lead donors to shy away from direct engagement with parties.

The two major political parties in Sierra Leone demonstrate that there are practical ways to improve candidate selection. An alternative approach to selection was offered in a party-neutral, equitable fashion, and relied on party leadership to determine whether it was in their party's interest to opt in. By revealed preference, the fact that both parties participated and put forward their stronghold races for inclusion suggests that they saw value in the initiative. Their openness and responsiveness to the new mechanism further attests to their willingness to experiment at the frontier of democratic practice.

The experiment demonstrates that the primary selection stage plays an important role in reducing information asymmetries. Primary conventions provide information about potential candidates to both voters and party officials, and opinion polling informs party officials about voter preferences. The finding that party officials responded to the information relayed by selecting different types of candidates, and that these candidates have stronger records of local public goods provision, is a cautiously optimistic result.

In thinking about external validity, a few factors about the context and intervention are worth emphasizing. A concern about the U.S. primary system is that it leads to the selection of candidates who are more ideologically extreme than the general population. This is less of an issue in our context as parties in Sierra Leone are largely non-ideological, as are about half of all parties worldwide (Cruz et al 2016). Moreover, in this study, preferences over candidates were gathered from a representative sample of voters via home visits. This again reduces the risk that those with more extreme views, or particular socioeconomic groups, wield disproportionate influence. In addition, weak advance announcement, combined with the nonbinding nature of the treatment, dampened incentives for new or different types of candidates to come forward. This effectively closes an entry channel that is likely to be consequential in other settings. While these factors help us isolate the role of information revelation in the candidate selection stage, they limit our ability to extrapolate from these results to what might happen when a well-publicized, binding, direct vote primary is introduced. In these differences lies a broad and rich agenda for future research.

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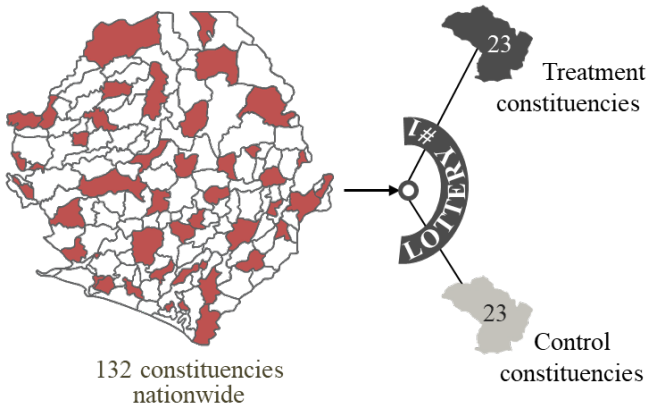
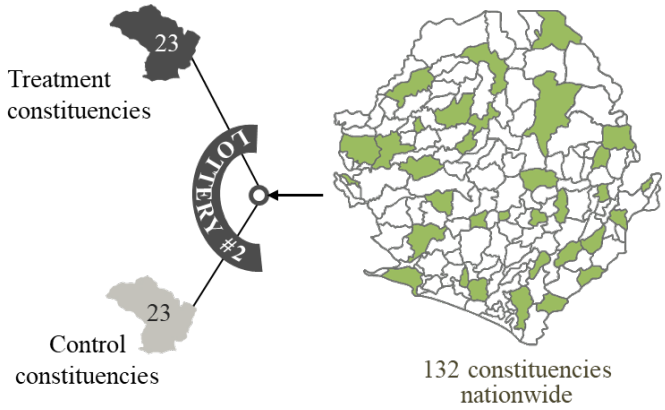
Figure 1: Experimental Design

Panel A: All People's Congress (APC) constituency selection and assignment (locations masked)



Panel B: Sierra Leone People's Party (SLPP) constituency selection and assignment (locations masked)



Panel C: Implementation timeline

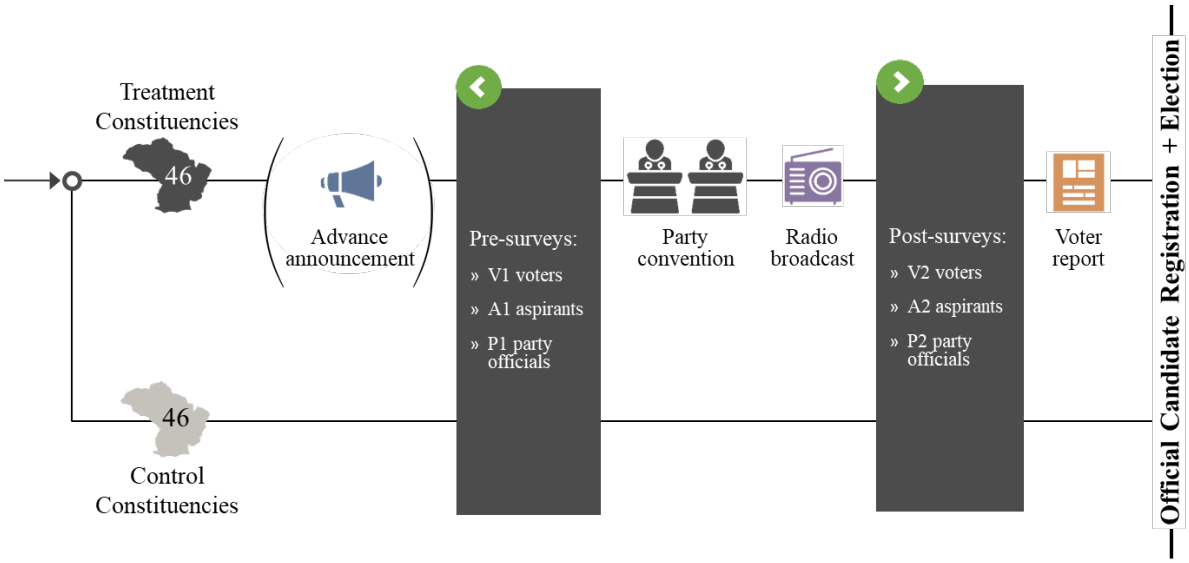
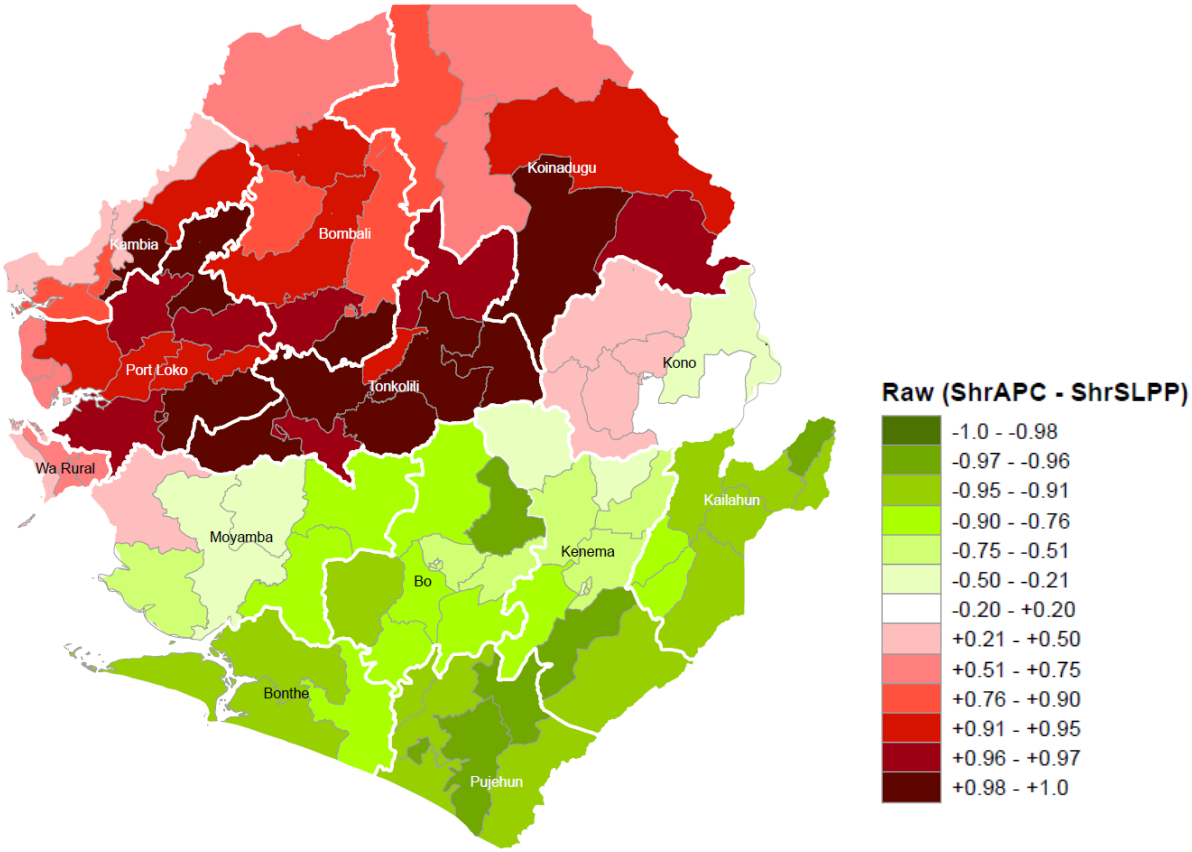
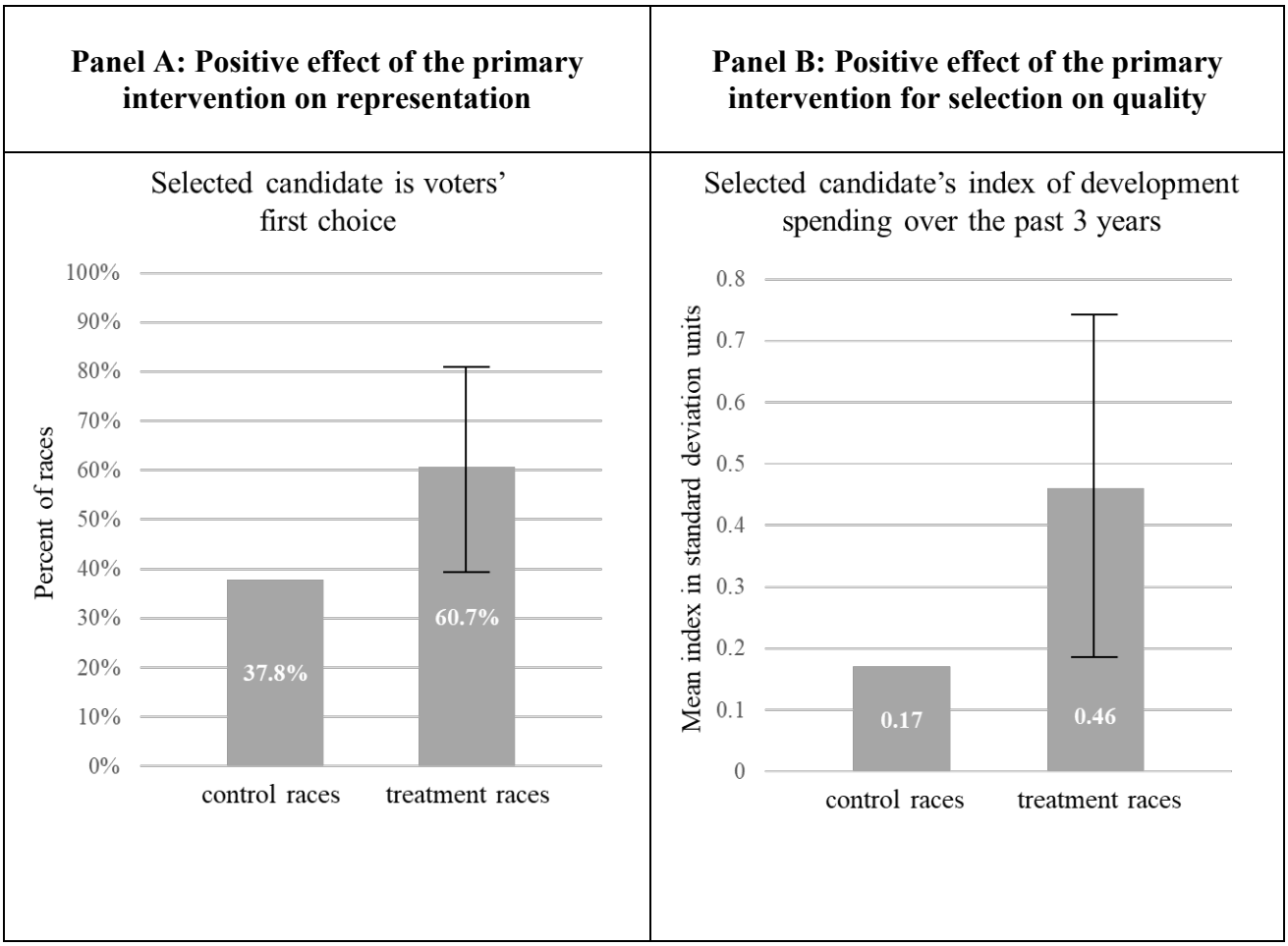


Figure 2: Ethnic-party Strongholds



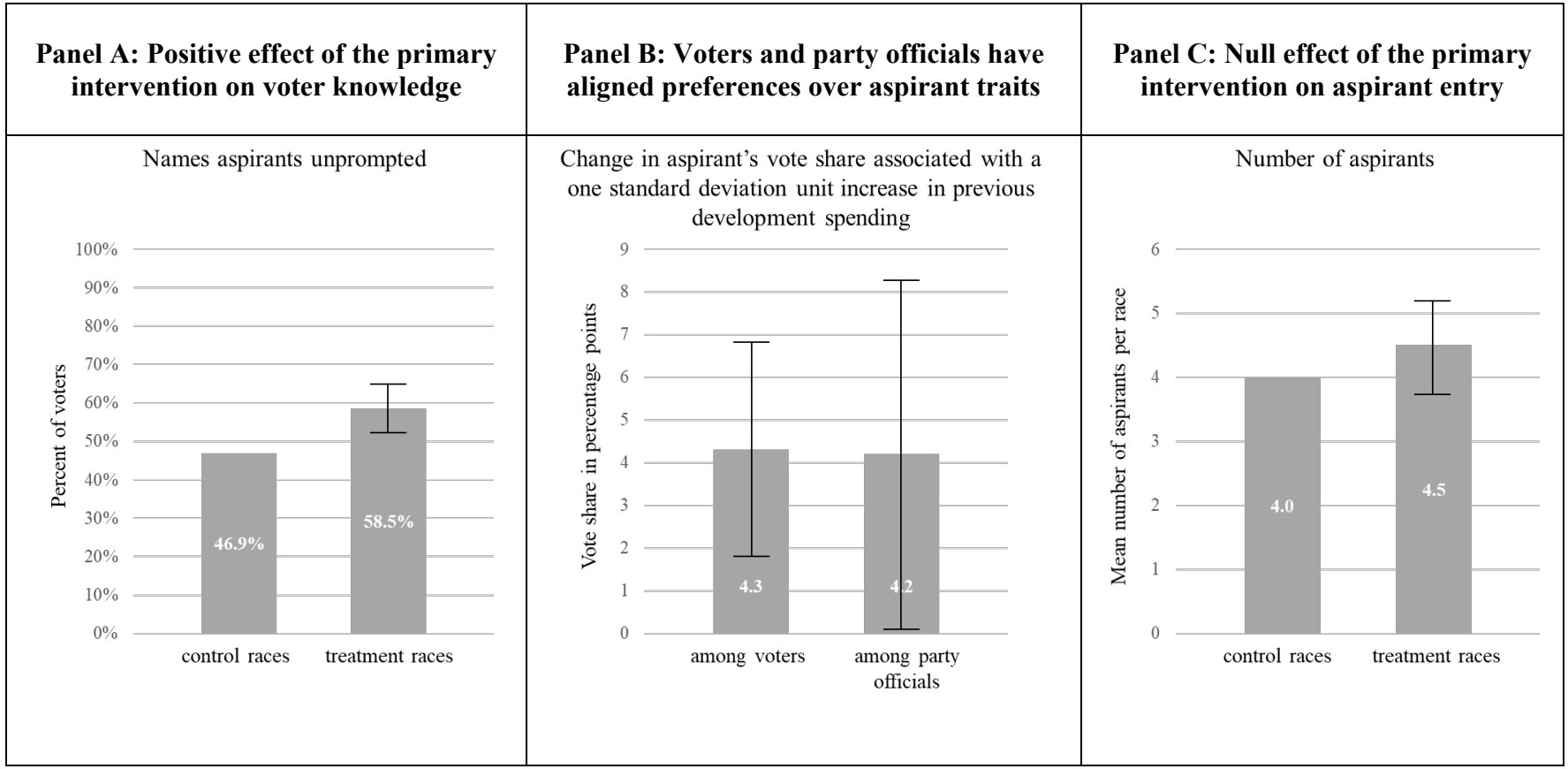
Notes: this map shows the geographic distribution and intensity of ethnicity-based ties to the two major political parties for Parliamentary constituencies in Sierra Leone. For each constituency, we compute the difference in population shares of ethnic groups historically associated with the All People's Congress (APC) minus those of ethnic groups associated with the Sierra Leone People's Party (SLPP). Darker red shading indicates a constituency-level ethnic-party bias closer to 1.0 (e.g. where 1.0 indicates that the constituency is 100 percent populated by APC-affiliated ethnic groups) and darker green implies closer to -1.0 (e.g. a 100 percent SLPP-affiliated population). Color choices reflect party symbols: the APC's logo is a red rising sun and the SLPP's is a green palm tree. Mappings between ethnic groups and parties are from Kandeh (1992) and Casey (2015). Ethnicity data is from the 2004 census (Statistics Sierra Leone 2004), mapped into constituency administrative boundaries for the 2007 Parliamentary elections. Note that constituency and district boundaries were redrawn before the 2018 elections studied here.

Figure 3: Overview of Main Results



Notes: this figure presents treatment effect estimates of the primary intervention on key outcomes of interest, where the error bars correspond to the 95% confidence interval as estimated via ordinary least squares regression that includes the 23 party-region randomization strata and robust standard errors. In Panel B, the development spending index compiles multiple measures of a candidate's provision of local public goods over the previous three years, which is normalized with respect to all aspirants in control group races and expressed in standard deviation units.

Figure 4: Mechanisms Tested



Notes: this figure explores mechanisms, where the error bars correspond to the 95% confidence interval as estimated via ordinary least squares regression that includes the 23 party-region randomization strata and robust standard errors (clustered by race for Panels A and B). In Panel B, the development spending index compiles multiple measures of a candidate's provision of local public goods over the previous three years, which is normalized with respect to all aspirants in control group races and expressed in standard deviation units. The specification in Panel B further includes the eight other indices of related aspirant traits and the binary measure of conscientiousness (analogous to the specification in Table 4).

Table 1: Self-Selection into Politics

	Mean, voters	Mean, party officials	Mean, aspirants	*p*-value on (1) vs (2 and 3)
	(1)	(2)	(3)	(4)
Years of education	4.86	12.15	15.32	<0.001
Percent with no formal schooling	43%	5%	0%	<0.001
Percent with some university education	4%	34%	80%	<0.001
Asset ownership (of 11 household items)	2.66	6.45	9.52	<0.001
Proportion that have a bank account	0.11	0.77	0.97	<0.001
Proportion male	0.47	0.81	0.89	<0.001
Years of age	37.37	46.15	47.56	<0.001
Observations	7,544	239	390	

Notes: i) this table explores self-selection into politics by comparing the characteristics of voters (from the V2 survey), party officials (from the P1 survey) and aspirants (from the A1 survey); ii) p-values in column 4 refer to t-tests rejecting equality of means for voters as compared to party officials and aspirants pooled together; iii) the list of assets includes radio, personal computer, mobile phone, DVD player, refrigerator, bicycle, motor vehicle, generator, television, electric fan, and flashlight; and iv) bank account includes either domestic or foreign accounts.

Table 2: Party Choice of Races and Responsiveness to the Primary Intervention by Level of General Election Competition

	Panel A: Selection of Races for the Initiative				Panel B: Selected Candidate is Voters' 1st Choice			
	Proportion nationwide	Proportion in sample	Difference (2) vs (1)	*p*-value for (3)	Mean control	Mean treatment	Difference (6) vs (5)	*p*-value for (7)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Safe seat races	36.0	52.2	16.2	<0.01	30.4	58.3	27.9	0.06
Swing races	28.0	30.4	2.4	0.66	50.0	50.0	0.0	0.99
Weak seat races	36.0	17.4	-18.6	<0.01	37.5	87.5	50.0	0.04
Observations (party-races)		264	92					

Notes: i) this table shows how the expected degree of general election competition affected party response to the primary stage intervention along two dimensions, namely which type of race party officials chose to include in the experimental sample (in Panel A) and how responsive party officials were to the voter reports (in Panel B); ii) p-values are from t-tests on the equality of means across samples, which compares the national population of races to those included in the experimental sample for Panel A, and across treatment and control group races for Panel B.

Table 3: Effects of the Primary Intervention on Representation

Panel A: Direct Effect on Representation		
	Selected candidate is voters' first choice	
	(1)	(2)
Primary intervention	22.96	28.66
	(10.61)	(16.17)
Party 1		22.30
		(39.50)
Party 1 X Primary intervention		-11.27
		(21.37)
Mean in controls	37.78	
Observations	91	91
Panel B: Indirect Effect on General Election Vote Shares		
	Party's vote share in the general election	
	(1)	(2)
Primary Intervention	-0.48	-0.64
	(2.96)	(3.40)
Safe seat		27.90
		(6.64)
Safe seat X Primary intervention		-2.01
		(6.13)
Weak seat		-25.95
		(6.89)
Weak seat X Primary intervention		6.91
		(5.54)
Mean in controls	44.98	
Observations	91	91

Notes: i) this table reports the effects of the primary intervention on representation in the candidate selection stage and downstream effects on the party's vote share in the general election for Parliament; ii) ordinary least squares regression with robust standard errors; iii) specifications include fixed effects for 23 party-region strata used in the random assignments; and iv) one race is missing in Panel A because voters were surveyed about aspirants from the wrong party and one race is missing in Panel B because the general election was disputed and resolved by the courts.

Table 4: Voter and Party Official Preferences over Aspirant Characteristics

	Aspirant's share in voter polls	Aspirant's share in party official survey	*p*-value on (1) vs (2)
	(1)	(2)	(3)
Professional qualifications index	0.05	0.11	0.09
	(0.03)	(0.04)	
Wealth index	0.03	0.03	0.84
	(0.02)	(0.03)	
Economic development record index	0.04	0.04	0.95
	(0.01)	(0.02)	
Public service motivation (PSM) index	0.04	0.03	0.84
	(0.02)	(0.03)	
Party loyalty index	0.01	0.02	0.76
	(0.03)	(0.06)	
Cognitive ability index	0.01	0.06	0.12
	(0.03)	(0.04)	
Local network index	0.02	0.04	0.55
	(0.03)	(0.05)	
Campaign effort and expenditure index	-0.00	-0.01	0.98
	(0.02)	(0.04)	
Conscientiousness indicator	0.05	0.09	0.17
	(0.02)	(0.04)	
R^2	0.24	0.17	
Observations	385	367	

Notes: i) this table uses indices of aspirant characteristics to predict which categories of traits make them popular among voters in the V2 opinion polls (in column 1) and among party officials in the P1 survey (in column 2); ii) column 3 tests whether voters and party officials have similar preferences over aspirants, by reporting p-values that correspond to chi-squared tests rejecting the equality of coefficients in columns 1 and 2 estimated in a seemingly unrelated regression framework; iii) robust standard errors clustered by party-constituency; iv) specifications include fixed effects for 23 party-region randomization strata; and v) the 8 indices are equally weighted sums of underlying traits expressed in standard deviation units (following Kling, Liebman and Katz 2007) and conscientiousness is a binary indicator.

Table 5: Voter and Party Official Preferences in Post-Regularization Regressions

	Aspirant's share in voter polls	Aspirant's share in party official survey	*p*-value on (1) vs (2)
	(1)	(2)	(3)
Number of development projects	0.03	0.04	0.51
	(0.01)	(0.01)	
Incumbent MP	0.14	0.13	0.87
	(0.06)	(0.10)	
Years of public office experience	0.00	0.01	0.34
	(0.00)	(0.01)	
Party versus own campaign expenditure	-0.02	-0.04	0.43
	(0.01)	(0.02)	
Number of relatives in party leadership	0.01	0.03	0.41
	(0.01)	(0.02)	
Number of meetings with party officials	0.00	0.00	0.42
	(0.00)	(0.00)	
PSM welfare of strangers question	0.00	0.02	0.02
	(0.01)	(0.01)	
R^2	0.24	0.18	
Observations	385	367	

Notes: i) this table uses specific aspirant characteristics that were selected via regularization methods to predict which traits make them popular among voters in the V2 opinion polls (in column 1) and among party officials in the P1 survey (in column 2); ii) these post-regularization estimates retain only those aspirant traits with the greatest predictive power selected via 400 iterations of k-fold elastic net procedures (see Table A4 for details); iii) column 3 tests whether voters and party officials have similar preferences over aspirants, by reporting p-values that correspond to chi-squared tests rejecting the equality of coefficients in columns 1 and 2 estimated in a seemingly unrelated regression framework; iv) robust standard errors clustered by party-constituency; v) specifications include 23 party-region randomization strata; vi) all traits expressed in natural units; vii) party versus own expenditure indicates an affirmative response to the question "Are you willing to spend more money on your party's campaign versus your own?;" and viii) the PSM welfare of strangers question indicates strength of disagreement with the statement "I seldom think about the welfare of people whom I don't know personally" with missing values imputed at the control group mean.

Table 6: Effects of the Primary Intervention on Candidate Selection

	Primary intervention effect	Standard error	Naïve *p*-value	FDR *q*-value
	(1)	(2)	(3)	(4)
Panel A: Primary Effects on Indices of Candidate Traits				
Personal qualifications index	-0.01	(0.10)	0.92	0.99
Wealth index	-0.13	(0.13)	0.32	0.51
Economic development index	0.29	(0.14)	0.04	0.22
Public service motivation index	-0.02	(0.15)	0.89	0.99
Party loyalty index	0.03	(0.09)	0.74	0.99
Cognitive ability index	-0.17	(0.12)	0.15	0.36
Local networks index	0.19	(0.09)	0.04	0.22
Campaign expenditure index	-0.08	(0.12)	0.52	0.77
Conscientiousness indicator	0.15	(0.10)	0.13	0.36
Panel B: Primary Effects on Candidate Traits Identified by Regularization Methods				
Number of development projects	0.46	(0.21)	0.03	0.27
Incumbent MP	-0.09	(0.07)	0.23	0.62
Years of public office experience	0.76	(1.34)	0.57	0.99
Party versus own campaign expenditure	-0.09	(0.19)	0.66	0.99
Number of relatives in party leadership	0.15	(0.30)	0.61	0.99
Number of meetings with party officials	-11.33	(5.92)	0.06	0.27
PSM welfare of strangers question	-0.02	(0.33)	0.95	0.99
Observations	92			

Notes: i) this table explores whether the primary intervention selected candidates with different characteristics to proceed to the general election; ii) Panel A reports treatment effect estimates for indices of traits and Panel B reports effects for the 7 specific traits selected via regularized regression methods; iii) each row reports results from a separate OLS regression with robust standard errors that includes fixed effects for 23 party-region randomization strata; iv) the eight indices in Panel A are equally weighted sums of underlying traits expressed in standard deviation units (following Kling, Liebman and Katz 2007), conscientiousness is a binary indicator, and all traits in Panel B are in natural units; v) party versus own expenditure indicates an affirmative response to the question "Are you willing to spend more money on your party's campaign versus your own?" vi) the PSM welfare of strangers question indicates strength of disagreement with the statement "I seldom think about the welfare of people whom I don't know personally," with missing values imputed at the control group mean; and vii) column 4 presents false discovery rate (FDR)-sharpened q-values that adjust for multiple inference over all estimates by panel, following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008).

ONLINE APPENDIX

"An Experiment in Candidate Selection"

Katherine Casey, Abou Bakarr Kamara and Niccoló F. Meriggi

List of supplemental figures and tables:

Figure A1: Example Voter Report (aspirant names redacted)

APC Voter Report: District Constituency

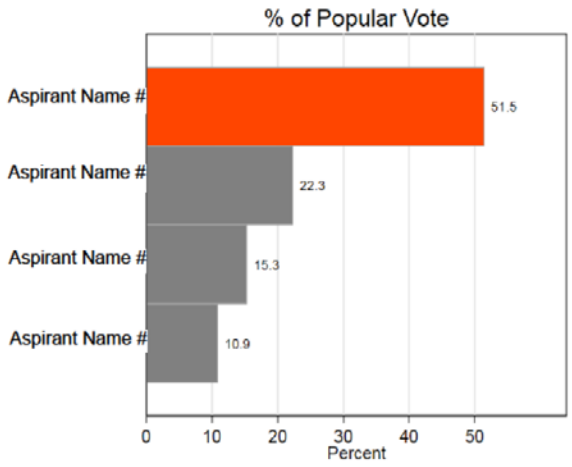
People's Choice

The first choice of voters in this constituency for the APC MP symbol is:

Aspirant Name 1 who has 51.46% of the popular vote.

This is based on polling results from a representative sample of 90 registered voters living near 10 different polling centers in this constituency.

Results Table: All Voters



Results Table: APC Supporters Only

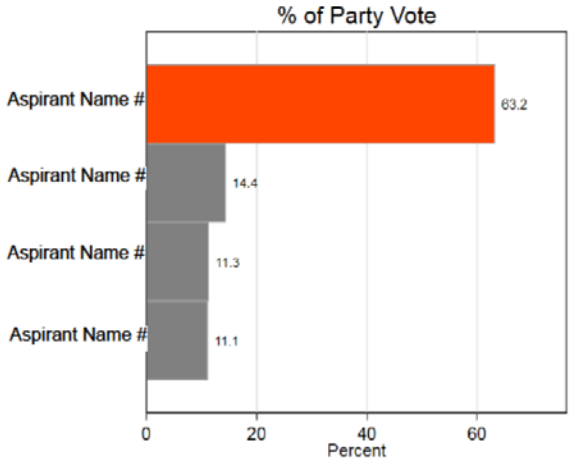
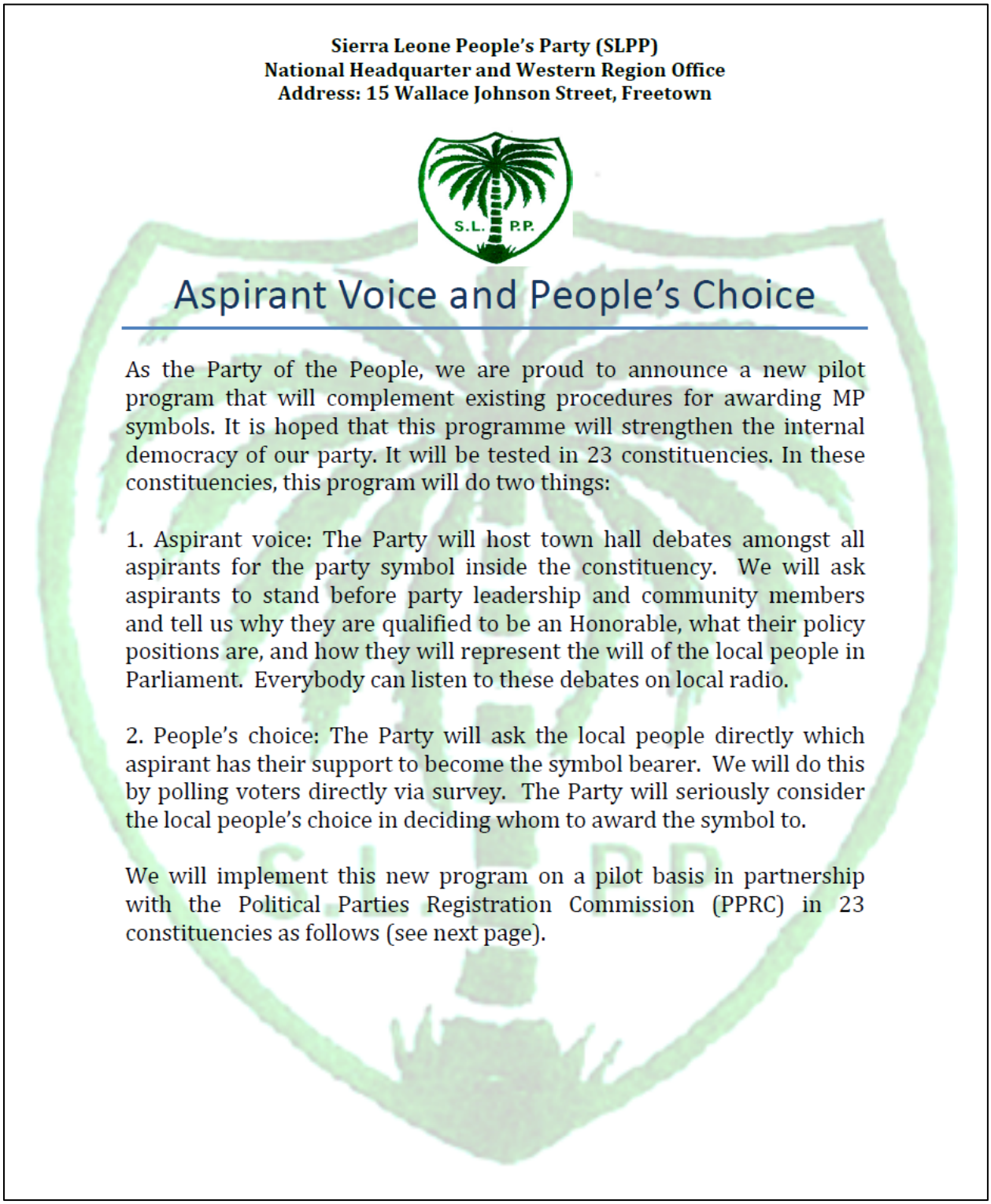


Figure A2: SLPP Advance Announcement Flyer (constituency list redacted)



Sierra Leone People's Party (SLPP)
National Headquarter and Western Region Office
Address: 15 Wallace Johnson Street, Freetown

Aspirant Voice and People's Choice

As the Party of the People, we are proud to announce a new pilot program that will complement existing procedures for awarding MP symbols. It is hoped that this programme will strengthen the internal democracy of our party. It will be tested in 23 constituencies. In these constituencies, this program will do two things:

1. Aspirant voice: The Party will host town hall debates amongst all aspirants for the party symbol inside the constituency. We will ask aspirants to stand before party leadership and community members and tell us why they are qualified to be an Honorable, what their policy positions are, and how they will represent the will of the local people in Parliament. Everybody can listen to these debates on local radio.

2. People's choice: The Party will ask the local people directly which aspirant has their support to become the symbol bearer. We will do this by polling voters directly via survey. The Party will seriously consider the local people's choice in deciding whom to award the symbol to.

We will implement this new program on a pilot basis in partnership with the Political Parties Registration Commission (PPRC) in 23 constituencies as follows (see next page).

Table A1: Heterogeneous Effects on Representation in Swing Races

Dependent variable	Selected candidate is voters' first choice
	(1)
Primary intervention	33.18
	(11.81)
Swing seat	8.26
	(30.74)
Swing seat X Primary intervention	-33.18
	(24.55)
Observations (races)	91

Notes: i) this paper reports heterogeneous treatment effects on the likelihood that the party selected the aspirant who ranks first among voters by the expected level of competition in the general election; ii) ordinary least squares regression with robust standard errors; iii) specifications include fixed effects for 23 party-region strata used in the random assignments; and iv) the omitted category for the swing seat indicator is uncompetitive general election seats (i.e. safe and weak seats pooled together).

Table A2: Aspirant Characteristics Summary Statistics

Professional qualifications	**Mean**	**SD**	**N**	**Min**	**Max**
Years of education	15.32	1.56	390	4	16
Current or most recently held job is white collar	0.76	0.43	390	0	1
Years spent serving in elected office	2.31	4.89	390	0	39
Is an incumbent member of parliament	0.06	0.25	390	0	1
Wealth	**Mean**	**SD**	**N**	**Min**	**Max**
Monthly income from current or most recently held job (in USD)	$849.8	$919.9	390	$35.7	$2,857.1
Assets and accounts (1 point for each that aspirant owns of: bicycle, DVD player, fan, generator, mobile phone, personal computer, radio, refrigerator, flashlight, television set, motor vehicle, national bank account, foreign bank account)	10.73	1.75	390	0	13
Economic development record					
Has been involved with or managed any development projects in their own constituency in the past 5 years	0.83	0.38	390	0	1
Number of development projects involved with or managed in the past 3 years (list up to 3 with detailed accounting of location, type, budget, source of funds)	1.89	1.17	390	0	3
Total funding for listed development projects (in log(Leones + 1))	12.51	8.64	390	0	26.94
Cognitive ability	**Mean**	**SD**	**N**	**Min**	**Max**
Addition and numeracy: indicator equals one if the sum of aspirant's answers to the question, 1) "How many members of the Parliament of Sierra Leone were directly elected from single member constituencies in 2012?" plus their answer to 2) "How many other members of the Parliament of Sierra Leone were there in 2012?" correctly sum to their answer to 3) "How many members were there in total in the Parliament of Sierra Leone in 2012?." Indicator equals zero if internally inconsistent or responds "Don't know."	0.31	0.46	390	0	1

Addition and numeracy: indicator equals one if the sum of aspirant's answers to the question, 1) "How many members of the Parliament of Sierra Leone were directly elected from single member constituencies in 2017?" plus their answer to 2) "How many other members of the Parliament of Sierra Leone were there in 2017?" correctly sum to their answer to 3) "How many members were there in total in the Parliament of Sierra Leone in 2017?." Indicator equals zero if internally inconsistent or responds "Don't know."	0.25	0.43	390	0	1
Division: indicator equals one if aspirant's answers to how many women are in their constituency divided by how many total people are in their constituency is within the range 0.40 to 0.60.	0.42	0.49	390	0	1
Percentages: indicator equals one if aspirant's estimated percentage of women in their constituency matches their raw estimates for women and total population (within +/- 5 percentage points)	0.34	0.47	390	0	1
Percentages: indicator equals one if aspirant's estimated percentage of youth in their constituency matches their raw estimates for youth and total population (within +/- 5 percentage points)	0.36	0.48	390	0	1
Growth rates: indicator equals one if aspirant correctly estimated national population in 5 years given 3% growth rate and own raw population answer (within a wide margin of error)	0.48	0.5	390	0	1
Growth rates: indicator equals one if aspirant correctly estimated constituency population in 5 years given 3% growth rate and own raw population answer (within a wide margin of error)	0.47	0.5	390	0	1

Party Loyalty	**Mean**	**SD**	**N**	**Min**	**Max**
Preference for personal vs. campaign spending	3.17	0.90	390	1	5
Number of family relatives within the party leadership	0.93	1.27	390	0	7
Number of different party leaders the aspirant has met with	3.27	2.31	390	0	8
Number of meetings held with party leaders	14.92	21.53	390	0	195
Time spent as a member of party (years)	18.23	11.81	390	0	60
Has previously run for elected office as a member of their party	0.57	0.50	390	0	1
Number of party roles or positions held since joining the party	1.24	1.43	390	0	9

Aspirant is from a chiefly/ruling family	0.47	0.50	390	0	1
Has provided any monetary or in kind support to their party this election cycle	0.38	0.49	390	0	1
Has you received any monetary or in kind support from their party this election cycle	0.05	0.22	390	0	1

Local Networks	**Mean**	**SD**	**N**	**Min**	**Max**
Born in this constituency	0.81	0.39	390	0	1
Has primary residence in constituency	0.73	0.44	390	0	1
Is registered to vote in constituency	0.96	0.20	390	0	1
Member of constituency elderly group	0.67	0.47	390	0	1
Member of constituency employers group	0.28	0.45	390	0	1
Member of constituency environmental group	0.41	0.49	390	0	1
Member of constituency farmers group	0.54	0.50	390	0	1
Member of constituency fishing group	0.12	0.33	390	0	1
Member of constituency journalist group	0.08	0.28	390	0	1
Member of constituency savings group	0.33	0.47	390	0	1
Member of constituency workers' organizations and trade unions group	0.36	0.48	390	0	1
Member of constituency women's group	0.37	0.48	390	0	1
Member of constituency youth group	0.65	0.48	390	0	1

Campaign Expenditure	**Mean**	**SD**	**N**	**Min**	**Max**
Numer of rallies aspirant has held in their constituency over the past six weeks	1.14	2.35	389	0	20
Number of communities or villages have visited in constituency over the past six weeks	30.83	41.57	390	0	300
Number of times aspirant has interviewed or put a jingle on the radio over the past six weeks	1.08	1.77	390	0	10
Aspirant has provided any in kind support to their campaign in the past six weeks	0.64	0.48	390	0	1
Amount of personal money aspirant has spent on their campaign in the past six weeks (in log(Leones + 1))	16.08	4.58	390	0	20.37

Public Service Motivation *(all coded from 1= disagree strongly to 5 = Agree strongly; ** recoded so that disagreement signals higher PSM)*	**Mean**	**SD**	**N**	**Min**	**Max**
a. I respect public officials who can turn a good idea into law	4.15	1.50	355	1	5

b. I would prefer seeing elected politicians do what is best for my constituency	4.15	1.47	355	1	5
c. Politicians can create a large impact to make society more equal and just	4.03	1.51	355	1	5
d. It is hard for me to get intensely interested in what is going on in my community**	3.97	1.42	355	1	5
e. I would prefer seeing public officials do what is best for the whole community	4.06	1.51	355	1	5
f. An official's obligation to the public should always come before loyalty to superiors	3.93	1.52	355	1	5
g. I do not believe that government can do much to make society fairer**	3.59	1.56	355	1	5
h. If any group does not share in the prosperity of our society, then we are all worse off	3.58	1.60	355	1	5
i. I am not afraid to go to bat for the rights of others even if it means I will be ridiculed	4.06	1.44	355	1	5
j. When public officials take an oath of office, I believe they accept obligations not expected of other citizens	3.85	1.59	355	1	5
k. I believe everyone has a moral commitment to civic affairs no matter how busy they are	4.15	1.44	355	1	5
l. I have an obligation to look after those less well off	4.01	1.49	355	1	5
m. Most social programs are too vital to do without	3.57	1.49	355	1	5
n. I seldom think about the welfare of people whom I don't know personally**	3.35	1.66	355	1	5
o. I have little compassion for people in need who are unwilling to take the first step to help themselves**	3.14	1.59	355	1	5
p. Making a difference in society means more to me than personal achievements	4.12	1.48	355	1	5
q. Serving citizens would give me a good feeling even if no one paid me for it	4.11	1.48	355	1	5
r. I feel people should give back to society more than they get from it	4.10	1.49	355	1	5
Conscientiousness Behavioral Measure	**Mean**	**SD**	**N**	**Min**	**Max**
Returned any of up to 3 extra 10,000 Leone notes given in reimbursement for transport expenses	0.46	0.50	369	0	1

Table A3: Alternative Specifications for Preferences over Aspirant Characteristics

	Control Races Only			Stronghold Races Only			All Races V1 versus P1		
	Aspirant's share in V2	Aspirant's share in P1	*p* -value (1 vs 2)	Aspirant's share in V2	Aspirant's share in P1	*p* -value (4 vs 5)	Aspirant's share in V1	Aspirant's share in P1	*p* -value (7 vs 8)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Professional qual.	0.01	0.10	0.21	0.08	0.10	0.75	0.03	0.11	0.03
	(0.05)	(0.06)		(0.03)	(0.06)		(0.03)	(0.04)	
Wealth	0.04	0.05	0.91	0.02	0.03	0.70	0.03	0.03	0.92
	(0.02)	(0.04)		(0.02)	(0.03)		(0.02)	(0.03)	
Development	0.04	0.06	0.48	0.06	0.06	0.78	0.06	0.04	0.47
	(0.02)	(0.03)		(0.02)	(0.03)		(0.01)	(0.02)	
PSM	0.05	0.00	0.29	0.01	0.02	0.85	0.03	0.03	0.94
	(0.04)	(0.04)		(0.02)	(0.04)		(0.02)	(0.03)	
Party loyalty	-0.03	-0.02	0.87	-0.05	-0.06	0.92	0.03	0.02	0.84
	(0.05)	(0.09)		(0.03)	(0.06)		(0.03)	(0.06)	
Cognitive ability	-0.00	0.04	0.44	0.04	0.08	0.27	-0.02	0.06	0.03
	(0.04)	(0.05)		(0.03)	(0.04)		(0.03)	(0.04)	
Local network	0.09	0.11	0.77	-0.02	0.02	0.35	0.01	0.04	0.42
	(0.05)	(0.08)		(0.03)	(0.06)		(0.04)	(0.05)	
Campaign	-0.00	0.02	0.68	0.01	0.01	0.94	0.01	-0.01	0.54
	(0.03)	(0.05)		(0.02)	(0.04)		(0.02)	(0.04)	
Conscientiousness	0.07	0.13	0.07	0.02	0.08	0.13	0.02	0.09	0.02
	(0.03)	(0.04)		(0.03)	(0.04)		(0.03)	(0.04)	
Observations	179	166		235	226		380	367	

Notes: i) this table uses aspirant characteristics to predict their popularity among voters in the V2 opinion polls (columns 1 and 4) or V1 opinion poll (column 7) and among party officials in the P1 survey (columns 2, 5 and 8); ii) columns 1 to 3 use control group races only, columns 4 to 6 use stronghold races only, columns 7 to 9 use all races; iii) columns 3, 6 and 9 test for differences in preferences between voters and party officials, reporting the p-value from chi-squared tests of equality of coefficients across specifications from a seemingly unrelated regression framework; iv) robust standard errors clustered by party-constituency; v) specifications include fixed effects for 23 party-region randomization strata; and vi) the 8 indices are equally weighted sums of underlying traits expressed in standard deviation units (following Kling, Liebman and Katz 2007) and conscientiousness is a binary indicator.

Table A4: Aspirant Traits Selected via Regularized Regression

Panel A: Aspirant Vote Share in Voter Polls		**Panel B: Aspirant Vote Share in Party Official Survey**	
Variable	Frequency	Variable	Frequency
Number of development projects	395	Number of development projects	287
Incumbent MP	196	Number of meetings with party leaders	266
Binary measure of any development projects	155	Number of relatives in party leadership	266
Years of schooling	149	Incumbent MP	250
Number of Relatives in Party Leadership	149	Years spent serving in elected office	250
PSM politicians can make society more just	133	PSM cares about welfare of strangers	224
Party versus own campaign expenditure	133	Party versus own campaign expenditure	205
Number of meetings with party leaders	66	Conscientiousness	193
Conscientiousness	49	Received campaign support from party	193
Time spent as member of party	42	PSM compassion for passive citizens	193
Total (out of 10) local groups membership	42	From a chiefly "ruling" family	161
PSM supports obligation in oath of office	31	PSM government can make a difference	161
Years spent serving in elected office	13	PSM officials act in best community interests	134
Registered to vote in this constituency	2	Mean score of 7 cognitive ability questions	101
PSM believes government can make society fairer	2	Has primary residence in constituency	3
Number of Iterations	**400**	Provided in-kind support to own campaign	1
		Number of Iterations	**400**

Notes: i) this table ranks aspirant traits by the number of times each was selected across 400 iterations of regularized regression; ii) the dashed line indicates the median number of traits selected over the 400 iterations, where traits above this frequency are carried forward into the post-regularization regressions of main text Table 5; iii) to tune the penalization parameters, each iteration uses k-fold cross validation, making ten random subsets of the data, using nine to train the model and the tenth as the validation sample; iv) with an eye toward sparsity, we instruct the algorithm to search for optimal α values in the range (0.5, 1), where α=1 corresponds to LASSO with zero traits retained and α=0 corresponds to ridge regression with all traits retained; and v) to reduce dimensionality slightly, the 10 local group membership indicators are entered together as a total and the 7 cognitive ability questions are entered together as a mean.

Table A5: Null Effects of the Primary Intervention on Candidate Demographics

	Mean in controls	Treatment effect	Standard error
Dependent variables:	(1)	(2)	(3)
Proportion male	0.85	0.07	(0.07)
Age	46.35	-0.02	(1.95)
Observations	92		

Notes: i) this table reports estimated treatment effects on the demographic characteristics of selected candidates; ii) each row reports results from a separate ordinary least squares regression; and iii) specifications include fixed effects for 23 party-region strata used in the random assignments.

Table A6: Voter Learning and Casting Primary "Votes"

	Mean in controls	Mean in treated	Primary intervention effect	Standard error	*N*
	(1)	(2)	(3)	(4)	(5)
Panel A: Proportion of Voters Who Can Name Aspirants Unprompted					
All voters in post-convention V2 data	0.47	0.57	0.12	0.03	8824
All voters in pre-convention V1 data	0.40	0.41	0.01	0.03	2123
Panel B: Proportion of Voters Who Can Name Aspirants by General Election Competition					
Proportion of voters in safe seat races	0.59	0.70	0.10	0.04	4600
Proportion of voters in swing seat races	0.38	0.51	0.12	0.06	2587
Proportion of voters in weak seat races	0.23	0.35	0.13	0.09	1637
Panel C: Total Primary "Votes" Cast per Race by General Election Competition					
Total "votes" cast per safe seat race	71.39	90.29	18.96	6.19	47
Total "votes" cast per swing seat race	54.00	81.93	27.93	8.18	28
Total "votes" cast per weak seat race	34.13	76.75	42.63	12.58	16

Notes: i) this table shows that voter knowledge and engagement with the candidate selection process increase with the primary intervention treatment and for races where the party is more likely to win the general election; ii) Panel A reports estimates for the proportion of voters who could state the names of aspirants unprompted as a measure of knowledge in post-convention V2 data and pre-convention V1 data, the latter as a robustness check; iv) Panel B breaks these V2 knowledge estimates out by level of general election competition; v) Panel C reports estimates for the number of voters who expressed a preference about which aspirant should be given the symbol in the V2 opinion polls; v) columns 3 and 4 report the estimated treatment effect and robust standard error from OLS regressions that include the party-region strata from the random assignment; and vi) standard errors are clustered by party-constituency in Panels A and B.

Table A7: Voter Learning about Aspirant Qualifications

Dependent variable:	Correctly identify most educated	Correctly identify most experienced	Correctly identify most development spending
	(1)	(2)	(3)
Primary intervention	-0.067	0.189	0.135
(standard error)	(0.076)	(0.083)	(0.094)
Control mean	0.675	0.326	0.423
p-value on joint significance	>0.001		
Observations	1611	1608	1600

Notes: i) this table reports estimates for the effects of the primary intervention on voter knowledge of aspirant qualifications; ii) dependent variables capture voter ability to correctly identify which aspirant in the pool is the most qualified in terms of years of education, public office experience and local development spending; iii) due to an inconsistently applied skip pattern that linked the response to naming aspirants unprompted to whether these qualification questions were posed, which created more missing values for control races, consideration is limited to strata where in all races at least 75% of respondents were asked this question, regardless of whether or not the respondent could name aspirants unprompted (overall only 7% of observations are missing in this subsample); and iv) all specifications include fixed effects for the party-region strata used in the random assignments and report robust standard errors clustered by party-constituency.

Table A8: Alternative Specifications for the Effects of Primaries on Representation

Panel A: Estimates using pre- versus post-convention data

	V2 data			V1 data		
Selected candidate is voters' first choice	Ties set to zero	Ties set to one	Stronghold races only	Ties set to zero	Ties set to one	Stronghold races only
	(1)	(2)	(3)	(4)	(5)	(6)
Primary Intervention	22.96	20.75	27.44	31.49	23.87	29.30
	(10.61)	(10.75)	(14.70)	(10.36)	(10.74)	(13.27)
Mean in controls	37.78	40.00	30.43	21.43	33.33	13.64
Observations (races)	91	91	47	88	88	46

Panel B: Estimates imposing a minimum total vote threshold for inclusion by strata

	All races in included strata have at least this many primary votes cast:					
Selected candidate is voters' first choice	Twenty-five	Thirty-five	Forty-five	Fifty-five	Sixty-five	Seventy-five
	(1)	(2)	(3)	(4)	(5)	(6)
Primary Intervention	20.97	23.33	38.10	36.84	42.86	100.00
	(12.41)	(13.47)	(14.91)	(15.92)	(27.43)	(0.00)
Mean in controls	34.29	33.33	23.81	26.32	14.29	0.00
Observations (races)	71	60	42	38	14	6

Notes: i) this table presents alternative specifications for measuring the effect of the primary intervention on representation; ii) in panel A, columns 1 to 3 use post-convention V2 data while columns 4 to 6 use pre-convention V1 data; iii) in Panel B, the columns exclude strata where any race within the strata has fewer total primary votes cast in the V2 survey than the number indicated; iv) in Panel A, as there were a small number of races where the selected candidate was tied for first place with another aspirant in the opinion polls, columns 1 and 4 resolve these ties to zero, indicating the selected candidate was not the voters' first choice, while columns 2 and 5 resolve the same ties to 100, indicating that the selected candidate was the voters' first choice; iv) columns 3 and 6 limit the sample to stronghold races only where voter knowledge and engagement with the candidate selection process was highest; and v) all specifications are OLS with robust standard errors and include fixed effects for the party-region strata used in the random assignments.

Table A9: Aspirant Characteristics by Type of Race

	Mean, safe seats (1)	Mean, swing seats (2)	Mean, weak seats (3)	*p*-value (1) vs (2) (4)	*p*-value (2) vs (3) (5)	*p*-value (1) vs (3) (6)
Number of aspirants	5.00	4.04	2.31	0.08	<0.01	<0.01
Years of education	15.58	14.96	14.70	<0.01	0.50	<0.01
Percent with some university education	0.86	0.74	0.62	<0.01	0.16	<0.01
Asset ownership (of 11 household items)	9.66	9.63	8.24	0.85	<0.01	<0.01
Proportion that have a bank account	0.99	0.96	0.92	0.15	0.26	<0.01
Proportion male	0.90	0.86	0.95	0.20	0.16	0.41
Years of age	48.24	45.39	49.76	0.01	0.03	0.40
Average contribution to party (controls only)	$2,930	$1,527	$1,151	0.15	0.65	0.26
Observations (party-races)	48	28	16			
Observations (all aspirants)	240	113	37			
Observations (aspirants, control races only)	119	49	16			

Notes: i) this table compares characteristics of aspirants across races where the general election is expected to be a safe, swing or weak seat for the aspirant's party; ii) p-values refer to t-tests rejecting equality of means across columns; iii) the list of assets includes radio, personal computer, mobile phone, DVD player, refrigerator, bicycle, motor vehicle, generator, television, electric fan, and flashlight; iv) bank account includes either domestic or foreign accounts; and v) payment refers to self-reported official and unofficial fees paid by aspirants to party leaders in control group races only.

Table A10: Effects of the Primary Intervention on Candidate Selection in Strongholds

	Treatment effect	Standard error	Naïve *p*-value	FDR *q*-value
	(1)	(2)	(3)	(4)
Panel A: Primary Effects on Indices of Candidate Traits				
Personal qualifications index	0.05	(0.17)	0.76	0.99
Wealth index	-0.10	(0.16)	0.52	0.99
Economic development index	0.24	(0.18)	0.20	0.88
Public service motivation index	0.01	(0.21)	0.97	0.99
Party loyalty index	0.00	(0.12)	0.99	0.99
Cognitive ability index	-0.07	(0.18)	0.69	0.99
Local networks index	0.33	(0.13)	0.02	0.22
Campaign expenditure index	-0.14	(0.17)	0.42	0.99
Conscientiousness indicator	0.25	(0.14)	0.07	0.39
Panel B: Primary Effects on Candidate Traits Identified by Regularization Methods				
Number of development projects	0.38	(0.28)	0.19	0.99
Incumbent MP	-0.13	(0.13)	0.35	0.99
Years of public office experience	-0.17	(1.97)	0.93	0.99
Party versus own campaign expenditure	0.17	(0.27)	0.54	0.99
Number of relatives in party leadership	-0.38	(0.46)	0.42	0.99
Number of meetings with party officials	-12.08	(7.47)	0.11	0.99
PSM welfare of strangers question	0.41	(0.46)	0.38	0.99
Observations	48			

Notes: i) this table limits the sample to stronghold races only and reports treatment effect estimates on the characteristics of selected candidates for 9 indices of traits in Panel A and for the 7 individual traits selected via regularized regression in Panel B; ii) each row reports results from a separate OLS regression with robust standard errors that includes fixed effects for 12 party-region randomization strata; iii) in Panel A, all indices are equally weighted sums of underlying traits expressed in standard deviation units (following Kling, Liebman and Katz 2007), while in Panel B, all traits are in natural units; iv) party versus own expenditure indicates an affirmative response to the question "Are you willing to spend more money on your party's campaign versus your own?;" v) the PSM welfare of strangers question indicates strength of disagreement with the statement "I seldom think about the welfare of people whom I don't know personally," with missing values imputed at the control group mean; and vi) column 4 presents false discovery rate (FDR)-sharpened q-values that adjust for multiple inference over all estimates by panel, following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008).

Table A11: Effects of the Primary Intervention on Elected MP Performance in Strongholds

Dependent variable:	Total development expenditure, verified by field audit	MP has a constituency office, verified by field audit	Total community meetings, average of key informant reports
	(1)	(2)	(3)
Primary intervention	32.15	-0.15	0.05
(standard error)	(45.30)	(0.12)	(0.33)
Mean in controls	110.99	0.30	1.59
Observations	42		
Observations lost to COVID tracking	13%		

Notes: i) this table explores the impacts of the primary intervention on the longer run performance in office of elected MPs from stronghold races; ii) specifications include party-region randomization strata with robust standard errors; iii) column one reports the total amount of expenditure on development projects in the MPs home constituency over the first 18 months in office, as verified by field audits; iv) column 2 is an indicator variable for whether the MP has an office in his/her home constituency that is accessible to the public, as verified by field audit; v) column 3 reports the total number of public meetings the MP has held with constituents as reported by a standard set of four key informants in the constituency (the relevant Paramount chief, the Local Councillor who represents the headquarter town, a staff member at the most centrally located health clinic in the headquarter town, and the head teacher of the primary school that is most centrally located in the headquarter town); and vi) due to disruptions of the COVID19 pandemic, data collection halted before 13 percent of the sample could be interviewed.

Table A12: Null Effects of the Primary Intervention on Aspirant Entry

	Party administrative data		Research survey data	
	SLPP	APC	SLPP	APC
	(1)	(2)	(3)	(4)
Primary intervention	1.00	0.27	0.30	0.65
	(0.59)	(0.62)	(0.56)	(0.51)
Control mean	2.68	4.12	4.04	3.96
Observations (races)	45	37	46	46

Notes: i) this table estimates treatment effects on the total number of aspirants considered per party-race; ii) ordinary least squares regression with robust standard errors; iii) specifications include fixed effects for each party's respective randomization strata; and iv) columns 1 and 2 use administrative data from each party's Secretary General, columns 3 and 4 use the number of aspirants surveyed by the research team.

Table A13: Balance Check on Characteristics of the Aspirant Pool

	Treatment effect	Standard error	Naïve *p*-value	FDR *q*-value
	(1)	(2)	(3)	(4)
Panel A: Primary Effects on Indices of Aspirant Traits				
Personal qualifications index	-0.00	(0.04)	0.92	0.99
Wealth index	0.00	(0.07)	0.96	0.99
Economic development index	0.08	(0.08)	0.31	0.73
Public service motivation index	-0.07	(0.06)	0.26	0.73
Party loyalty index	-0.02	(0.04)	0.58	0.99
Cognitive ability index	-0.08	(0.04)	0.05	0.73
Local networks index	0.06	(0.04)	0.12	0.73
Campaign expenditure index	0.01	(0.06)	0.83	0.99
Conscientiousness indicator	0.09	(0.06)	0.14	0.73
Panel B: Primary Effects on Aspirant Traits Identified by Regularization Methods				
Number of development projects	0.09	(0.11)	0.40	0.99
Incumbent MP	-0.02	(0.02)	0.23	0.99
Years of public office experience	-0.21	(0.41)	0.62	0.99
Party versus own campaign expenditure	-0.02	(0.07)	0.75	0.99
Number of relatives in party leadership	-0.06	(0.11)	0.61	0.99
Number of meetings with party officials	-5.07	(2.65)	0.06	0.73
PSM welfare of strangers question	-0.06	(0.18)	0.72	0.99
Observations	390			

Notes: i) this balance table suggests that the effects of the primary intervention were not driven by aspirant entry since the average characteristics of all aspirants in the pool do not vary systematically by treatment assignment; ii) the table reports treatment effect estimates on the characteristics of all aspirants in the pool for 9 indices of traits in Panel A and for the 7 individual traits selected via regularized regression in Panel B; iii) each row reports results from a separate OLS regression with robust standard errors that includes fixed effects for 23 party-region randomization strata; iv) in Panel A, all indices are equally weighted sums of underlying traits expressed in standard deviation units (following Kling, Liebman and Katz 2007); v) in Panel B, all traits are in natural units; vi) party versus own expenditure indicates an affirmative response to the question "Are you willing to spend more money on your party's campaign versus your own?;" and vii) column 4 presents false discovery rate (FDR)-sharpened q-values that adjust for multiple inference over all estimates by panel, following Benjamini, Krieger and Yekutieli (2006) and Anderson (2008).

Table A14: Effects of the Primary Intervention on Aspirant Contributions to Parties

	All aspirants	Selected candidates	All aspirants	All aspirants in stronghold races
	(1)	(2)	(3)	(4)
Primary intervention	-35.0	934.7	-352.6	-819.3
	(254.3)	(475.7)	(308.4)	(403.2)
Selected candidate			-758.8	-1146.3
			(316.9)	(423.8)
Selected X Primary intervention			1267.2	2256.4
			(542.2)	(775.9)
Observations	385	92	385	237

Notes: i) this table estimates how contributions (demarcated in US$) from aspirants to parties are affected by the experimental treatment; ii) ordinary least square regression with robust standard errors clustered by party-race; iii) specifications include fixed effects for 23 party-region strata used in the random assignments; and iv) contributions are winsorized at the 95th percentile.