

# An Experiment in Candidate Selection

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## Abstract

Are ordinary citizens or political party leaders better positioned to select candidates? While the direct vote primary system in the United States lets citizens choose, it is exceptional, as the vast majority of democracies rely instead on party officials to appoint or nominate candidates. Theoretically, the consequences of these distinct design choices on the selectivity of the overall electoral system are unclear: while party leaders may be 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. To make progress on this question, we partnered with both major political parties in Sierra Leone to experimentally vary how much say voters, as opposed to party officials, have in selecting Parliamentary candidates. We find evidence that more democratic selection procedures increase the likelihood that parties select the candidate most preferred by voters, favor candidates with stronger records of local public goods provision, and alter the allocation of payments from potential candidates to parties.

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## **I. Introduction**

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” (page 44).<sup>1</sup>

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.

At heart is a tradeoff between information and representation. Voter control straightforwardly delivers representation: i.e. citizens get their most preferred candidate. But what if voters do not have the information they need to identify the best performer? Party elites are typically better informed, and possess the relevant expertise to screen candidates on their technical merits. Yet elite choices may diverge from voter preferences. This happens, for instance, if their policy positions 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). And fundamentally, if no primary is held, party elites may have little idea what voter preferences are.

There is scant evidence about how these tradeoffs are made in practice, and what their implications are for the quality of selected candidates. Empirical progress on this front 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 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

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<sup>1</sup> We review the more recent literature on political selection below.

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 parties' 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 (which they did not), the intervention approximates a direct vote primary with mandatory turnout.<sup>2</sup>

The research team randomly assigned the intervention for each party independently, with 23 treated and 23 control races (for a total sample of 92 party-races nationwide); implemented the opinion polls; and collected rich data from voters, aspirants and party officials in both treated and control races. We use this data to characterize candidate selection in the status quo, parsing key tradeoffs between a poorly informed citizenry and a potentially misaligned political elite, and then estimate causal effects of the new selection method on key outcomes of interest, including representation, selection on quality, learning, and financial contributions by aspirants to parties. To the best of our knowledge, this is the first analysis in either economics or political science to exploit experimental variation in how parties select candidates.

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. In control races, party officials selected the voters' first choice aspirant only 37 percent of the time. This rate increases to 61 percent with treatment, a large and highly statistically significant effect. Back of the envelope calculations suggest that this positive representation effect 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 (e.g. those from the half of treated races located in regional strongholds where the party was likely to win the general election).

To explore whether the status quo distortion is driven by a conflict in preferences, we identify which aspirant characteristics predict their popularity among voters, and compare these to

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<sup>2</sup> 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.

the traits that make them popular among constituency-level party officials. We find little evidence of conflict: both voters and party officials prefer aspirants with a stronger record of having previously provided local public goods, and those who are more conscientious. The former captures the aspirant's involvement in development-oriented 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 a behavioral measure of how carefully the aspirant handled a financial reimbursement for transport expenses (described in detail in Section VI.A.).

Given the lack of strong 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. forthcoming). In Sierra Leone, constituency-level party officials presume local voters share their first choice over aspirants in 90 percent of races, when voters in fact only agree with them in 55 percent; 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.

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 likely aided these positive results, as the data show that voters in treatment races were substantially better informed about aspirant qualifications compared to voters in control races. Note that the results are unlikely driven by differential aspirant entry into treated races, as we find little evidence that advance announcement of the initiative, which was only partially implemented, induced entry.

Another factor that could distort choices away from voter preferences—in both control and treatment races—is financial contributions to secure the nomination.<sup>3</sup> Aspirants in Sierra Leone make contributions (in official application fees and unofficial payments) to the party to be considered for candidacy, data we elicited from them via survey. Contributions amount to an unadjusted mean of \$2,488, which is equivalent to 1.3 months of an MP’s salary and 34 times the monthly minimum wage. In control races, selected candidates report the highest contribution in their pool 37 percent of the time, which is not consistent with candidacy being sold to the highest bidder. In treated races, there is further no evidence that contributions are used to compensate for low popularity: e.g. selected candidates did not pay differentially more in races where party officials overrode the voter report. While fees and contributions constitute substantial barriers to entry, the (self-reported) data are not consistent with some of the more nefarious interpretations of these payments.

The pattern of contributions is more consistent with their being tied to the expected return to candidacy, which is a function of the value of office; the probability the party wins the seat, which is higher in regional strongholds; and the likelihood of being selected as the candidate, which may be affected by treatment. Aligned with this view, mean contributions are three times higher in safe versus weak seats. For the third component, if the conventions and polls reveal information about aspirant type (quality, popularity) to party officials, then high (low) type aspirants become more (less) likely to be selected, and should thus increase (decrease) their contributions. Consistent with this, estimates suggest that selected candidates pay differentially more than unsuccessful aspirants in treated races, with no net impact on mean payments in the pool.

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.<sup>4</sup> Much less is known about the influence of party leaders on selection, and the two most related studies provide contrasting results. Dal Bó et al (2017) point to the role of party

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<sup>3</sup> 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).

<sup>4</sup> Noting the caveat that higher illicit (as opposed to official) returns may have the opposite effect (Brollo et al 2013).

leaders in making merit-based promotions (among other factors) in contributing to Sweden’s “inclusive meritocracy,” one characterized by positive candidate selection on competence across the socioeconomic spectrum. By contrast, Besley et al (2017) use the same data and find that party officials have incentives to select competent candidates, but only to the extent that they do not pose an internal leadership threat, a tension that induces lower competence leaders to field lower competence candidates. Mattozzi and Merlo (2007) come to a similar conclusion, modeling party recruitment of candidates as a rent maximization opportunity that promotes “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” (pg. 15). They find evidence via difference-in-differences analysis 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, defining quality as campaign skill (Adams and Merrill 2008), but potentially at the cost of ideological extremity (Serra 2011). More broadly, other models suggest primaries constructively regulate internal competition to induce effort developing policy (Caillaud and Tirole 2002), and promote the provision of public goods over private transfers (Ting et al 2018). In developing countries, Carey and Polga-Hecimovich (2006) and Ichino and Nathan (2013) investigate the impact of primaries on general election vote shares, but do not look at candidate selection. We follow the pioneering approach of Wantchekon (2003) in working with political party leaders on a randomized controlled trial.

Our paper brings these two literatures on political selection and primaries together by directly estimating the effects of party leader versus voter control on candidate selection, and associated impacts on representation, learning, and contributions to the party. Treating primaries as a mechanism to alleviate information constraints distinguishes our approach from much of the literature. While Adams and Merrill (2008) and Folke et al (2016) share our view of primaries as a way for party leaders to learn about aspirant popularity, our results go one step further and show that they deliver additional information from voters to party officials that aids selection on quality. 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 II discusses variation in candidate

selection processes around the world and introduces a simple framework to structure the analysis. Section III details the experimental design and interventions. Sections IV through VIII analyze key tradeoffs in the status quo, and estimate how they are impacted by the new selection mechanism, focusing on representation, preference divergence, selection on quality, and learning. Section VIII explores financial contributions. Section IX concludes with policy considerations.

## **II. Candidate Selection in Perspective**

### ***II.A. Empirical Variation***

There is substantial variation across country and over time in how political parties select candidates. To provide a sense of the dispersion in the relative control of party officials versus voters, consider first the case of 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 approach, 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 meant that this group is 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). At the Presidential level, the outcome of state-level primaries in determining each party’s candidate only began to bind after the contentious 1968 Democratic convention in Chicago. More recently, the 2016 Presidential race divided the two major parties over whether there is now “too little” or “too much” democracy. On one side, members of the Democratic National Convention 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 (Briçon 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. The experimental treatment we evaluate 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.

As background, Parliament in Sierra Leone consists of 132 single-member jurisdictions, won by plurality. The general election of interest was held in March 2018 and declared largely free and fair by domestic and international observers.<sup>5</sup> In the status quo, candidate selection is guided by the country's Constitution,<sup>6</sup> 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 between three and 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 clear mechanism in place to capture the preferences of voters or rank-and-file party members.

## ***II.B. Conceptual Framework***

There is no model in the literature that speaks directly to how a move from party leader control

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<sup>5</sup> 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](https://eeas.europa.eu/sites/eeas/files/eu_eom_sl_2018_final_report_4.pdf)

<sup>6</sup> See the Constitution of Sierra Leone (1991) available at <http://www.sierra-leone.org/Laws/constitution1991.pdf>.



towards a more democratic process will affect candidate selection and associated outcomes of representation and contributions to the party. A simple framework is thus useful to define key concepts, illuminate tradeoffs between a poorly informed electorate and a potentially misaligned political elite, and frame the experiment we study 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 currently few schools and many clinics nearby, or if they prefer education over health. There is a third factor, party loyalty, which is orthogonal to performance but potentially correlated with quality. Aspirants make contributions to the party to be considered.

**Information:** 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 extend consideration to the intuitive case where the voter may be relatively better informed about local alignment, and the party official relatively better informed about competence.

**Outcomes:** We are interested in how allocating control to the voter versus the party official affects three 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; ii) selection on quality, which is the expected performance (value of public goods produced) of the candidate selected; and iii) the financial contributions aspirants make to the party.

**Preference divergence:** A standard concern is that only the party official values party loyalty and maximizes a combination of loyalty and quality that selects a loyal aspirant over a more competent one. If the voter and party official's information sets are similar, then transferring control to the voter straightforwardly enhances 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 sufficiently positive, it could be of little consequence.

**Screening:** A countervailing concern is that the voter is at an absolute screening disadvantage compared to the party official. This could be the case if her information set is strictly worse, or if the trait she can observe has a lower marginal product with respect to performance. If so, then reallocating control from the official to the voter 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).

**Financial contributions:** There are two main ways to model payments. The first is as a preference wedge, analogous to party loyalty above, where (only) the party official prefers a higher paying aspirant over a more competent one. An alternative view, which seems more consistent with our data, is that aspirant willingness to pay is increasing in the expected returns to candidacy, which is a function of the returns to holding office (e.g. MP salary), their likelihood of being selected as the candidate, and their party's likelihood of winning the seat in the general election.

**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 either to increase performance or for a more loyal aspirant; ii) enhance selection on quality, via both the competence and alignment channels, and hence increase expected performance; and iii) increase (decrease) contributions by higher (lower) quality aspirants, as these are the ones for whom the information treatments increase (decrease) their likelihood of being selected as the candidate.

**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. It is worth noting that the lack of strong ideological labeling is not unique to Sierra Leone: Cruz and Keefer (2015) aggregate data on parties in more than 100 countries and find that about half are “non-programmatic,” which means they cannot be classified on a left, center, right scale or other metric of economic policy.

### **III. Experimental Design**

The experimental intervention studied has two main components, which were implemented in tandem at the constituency-party level: i) a town hall-style convention, broadcast over local radio; and ii) representative opinion polling of registered voters, aggregated into a one page report and shared with party officials. These components were randomly assigned across constituencies (e.g. races) for each participating party independently. Figure 1 presents an overview of the design.

The offer to participate in the initiative and associated research was managed by the Political Parties Registration Commission of Sierra Leone, which has the constitutional mandate to register, supervise, and monitor the conduct of political parties. Its remit includes monitoring the accountability of parties to their members and the broader electorate.<sup>7</sup> The PPRC extended the offer to participate to all registered political parties, whose leadership decided whether or not to opt in. For the parties that expressed interest in participating, the PPRC asked national party leaders for a list of constituencies that they were willing to include in the initiative, with the requirement that more than one aspirant be under consideration for each race.<sup>8</sup>

Search for Common Ground, a non-profit civil society organization, contributed to the support provided to parties via the initiative. SFCG works in 35 countries and established a Sierra Leone office in 2000. SFCG produces programs to promote transparency, accountability and communication about the political process, providing neutral and reliable content through a network of 27 local radio and television broadcasters. It played a leading role in coordinating broader civil society efforts to support the 2018 (and previous) elections.<sup>9</sup> The parties, PPRC, SFCG and the research team worked together to design and implement the initiative.

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<sup>7</sup> For more information, see <https://www.pprcsierraleone.org/>.

<sup>8</sup> 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.

<sup>9</sup> For more information, see <https://www.sfcg.org/sierra-leone>.

### ***III.A. Party Conventions***

Constituency-level party conventions provide 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 trained moderator 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 how you would represent their interests in Parliament?<sup>10</sup> Additional questions followed, tailored to the local area, covering topics like how to deal with local power supply constraints and allocating mining royalties. Shortly after the convention finished, SFCG delivered audio recordings of the event to independent 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 the 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, 26 percent of voters in treatment areas reported having attended the town hall or listened to a broadcast. These rates are higher for those notified in advance (46 versus 21 percent).

### ***III.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 per constituency. As

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<sup>10</sup> SFCG trained moderators to allow each aspirant two minutes to respond to each question, alternating who spoke first across questions.

constituencies on average contain 25 centers, this means that field teams visited 40 percent of all centers in a given constituency. To facilitate rapid field work, we limited consideration to voters whose community of residence matched the community of the registration center, which excludes the 24 percent of voters who live in other nearby communities. We then randomly selected ten voters per registration center, stratifying on age and gender, for a target of 100 respondents per constituency. Each target respondent was accompanied by two potential replacements from the same demographic bin. The respondent hit 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. 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).

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 in the constituency received among poll respondents (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 party loyalty, 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.

### ***III.C. Treatment Assignment***

Random assignment proceeded in stages and was conducted independently for the two political parties. Each party first selected 46 constituencies from the universe of 132 where they were interested in piloting the initiative. 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. This generates an experimental sample of 92 party-races (see Figure 1, noting

that it masks locations<sup>11</sup>). As the two parties occasionally picked the same constituency for inclusion, these 92 party-race observations cover 80 unique constituencies.

Panel C of Figure 1 details the implementation timeline. 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.<sup>12</sup>

While the original implementation plan further included advance announcement of the list of constituencies assigned to the new selection method, this was only partially implemented (and is thus bracketed in Figure 1). Note first that the country's constitution stipulates that MP candidates in public employment (including teachers) must vacate their post a year before the election, so this initiative was launched too late to affect the entry decisions of those potential aspirants. 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 convention of delegates 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). 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. We thus consider the entry channel largely shut down in this context (see Section VII.C. for treatment effect estimates), however expect that it could be consequential in other settings.

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), aspirants (A1 and A2), and party officials (P1 and P2). Data collection rolled out sequentially across stratification bins, so the pre- and post-survey timing proceeded in lockstep for both treated and control constituencies in a given geographic area, which is important since the information

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<sup>11</sup> Panels A and B are illustrative only and show arbitrary assignments using the old 2007 constituency boundaries in order to protect the anonymity of all research participants. Boundaries were redrawn before the 2018 election.

<sup>12</sup> Available here: <http://necsl.org/PDF/Media/List-of%20Parliamentary-Candidates%20-%202018%20Elections.pdf>

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). See summary statistics in Table 1 (discussed further in Section IV).

The voter reports are 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 the same three constituency-level positions (constituency chair, secretary and treasurer) that were targeted for encouragement to attend the convention. These respondents were replaced as necessary with holders from similar constituency positions (e.g. deputy constituency chair) or higher level party officials (e.g. district chair). Overall, 81 percent of officials surveyed hold constituency-level positions, 6 percent hold district-level positions, and 13 percent hold other positions.

#### ***III.D. 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 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 ethnic-party allegiances are, regression analysis shows that these differences in ethnic

population shares alone explain 92 percent of the variation in the two party vote for the 2007 Parliamentary elections.<sup>13</sup>

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.<sup>14</sup> As a benchmark, the average constituency in Sierra Leone has the same partisan leaning as the 18<sup>th</sup> Congressional district in California, which contains Palo Alto.<sup>15</sup>

These stronghold races are the ones where party leaders were most interested in piloting the new selection initiative. To see this, 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, which reflects statistically distinct positive selection by party leaders.<sup>16</sup> Parties demonstrate neutral selection for swing seats: the proportion in the experimental sample is not statistically distinct from the national proportion (30 versus 28 percent). This leaves strong negative selection out of weak seats, which constitute only 17 percent of the research sample, and suggests that parties did not see much value in experimenting with selection where they were very 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.

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<sup>13</sup> 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 1). 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, noting that perfect positive correlation would generate a coefficient of 1.0), and precisely estimated (standard error of 0.02).

<sup>14</sup> 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.

<sup>15</sup> Based on 2018 House Elections in the U.S. and the 2007 Parliamentary Elections in Sierra Leone (pooling votes for the SLPP splinter party, the PMDC, with the SLPP vote).

<sup>16</sup> 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.



#### **IV. Key Tradeoffs in Sierra Leone**

The tradeoffs between a poorly informed electorate versus a potentially misaligned political elite emphasized in the conceptual framework seem highly relevant in Sierra Leone. To see this, Table 1 compares the characteristics of voters, party officials and aspirants, and shows that entry into politics is strongly associated with higher levels of education and wealth.

Voters (in the V2 survey) 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 with no schooling, and 34 percent with some university. Such pronounced selection on education suggests that party officials might be better positioned than voters to screen aspirants on their technical merits. As a concrete example, the first formal step for potential aspirants is to file an application with the party, which covers items like eligibility requirements and their standing in the party. Most voters will find it difficult to even read the aspirants' applications, or review their curriculum vitae, 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. Regarding the last point, 33 percent of voters (in the V1 survey) could not name a single MP job responsibility.

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. a mobile phone, generator, 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 (98 percent) have bank accounts. Party officials again fall in between: they on average own 6 assets and 77 percent have a bank account. Regarding demographics, politics is a male-dominated activity: 80 percent of party officials and 90 percent of aspirants are male, compared to 47 percent of registered voters. Politicians are roughly ten years older (at 46 for party officials and 48 for aspirants) than voters

(at 37 years). These summary statistics make it unclear *ex ante* whether voters or party officials are better positioned to select candidates, and point to a potential tradeoff between representation and selection on quality.

## **V. Representation**

The first prediction from the conceptual framework is that the new selection mechanism facilitates representation, as defined as whether or not the selected candidate is the aspirant who is most preferred by a plurality of local voters. This section evaluates this hypothesis.

### ***V.A. Status Quo Distortion***

The data reveal a clear distortion away from voter preferences under the status quo model of delegating candidate selection to party officials. In the control group, the two political parties respectively selected the aspirant who ranked first among local voters in 34.8 and 43.5 percent of races, respectively. Pooled together, this suggests that in the status quo voters get their most preferred candidate to represent them in the general election only 39 percent of the time.

### ***V.B. Treatment Effects on Representation***

To capture how the new model of candidate selection affects representation, and in particular whether it reduces this distortion away from voter preferences, we estimate the following model:

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

where outcome  $Y$  is an indicator variable equal to one if candidate  $i$  that represented party  $p$  in the general election for constituency  $c$  ranked first among voters in the primary opinion polls; treatment indicator  $T$  signals assignment to the more democratic selection model, which recall was assigned at the party-constituency level;  $\tau$  are fixed effects for 26 party-region strata used in the random assignments; and  $\varepsilon$  is an idiosyncratic error. In the data, outcome  $Y$  is coded to one if the candidate listed in NEC official registration data is the same aspirant who ranked first with voters in the V2 polls. We estimate intention-to-treat effects, where the parties complied with treatment in 43 of 46 races (93.5 percent) and there was no non-compliance in controls (generating a scaling factor of 1.07 for treatment-on-the-treated estimates). In our view, this high rate of compliance is quite extraordinary and attests to the willingness of the political parties to experiment at the frontier of democratic practice.

The first panel of Table 3 presents results. The estimated coefficient of treatment on selecting the voters' first choice aspirant is 23.9 percentage points (standard error 10.6). On a base rate of 39.1 percent in control races, this treatment 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 (e.g.  $0.239 \times 46$  treatment group races). Recalling that 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 6 elected MPs. Column 2 finds little evidence for heterogeneous treatment effects by party: the coefficient on the interaction between treatment and ruling party is not statistically different from zero.<sup>17</sup> As we find little evidence for heterogeneous response by party for any outcome of interest, we focus on pooled estimates in all following tables.

### ***V.C. Heterogeneity in the Representation Effect***

Table 2 Panel B assesses heterogeneity in responsiveness to treatment by the likely level of competition in the general election. For safe, swing and weak seats separately, columns 1 and 2 report the baseline rate of selecting the voters' preferred aspirant for control and treatment races, respectively; column 3 reports the difference in these rates; and column 4 shows the associated  $p$ -values from  $t$ -tests of the equality of rates across treatment assignment. It is evident that the treatment effect on representation is driven by responsiveness in safe and weak seats, where representation increases by 29 and 50 percentage points, respectively. There is no apparent response to treatment for swing seats, where the likelihood of selecting the local voters' preferred aspirant is 50 percent in both treated and control races.

Regression analogues in Appendix Table A1 show that the treatment effect in non-competitive general election races (safe pooled with weak seats) is a highly significant 34.4 percentage points (standard error 11.7). The coefficient on the interaction between treatment and swing seat is an equally sized negative term (-34.4, standard error 24.5), however falls below the 90 percent confidence level ( $p$ -value = 0.17). In interpreting these results, note that the 50 percent

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<sup>17</sup> At the launch of the experiment (late 2017), the APC was the ruling party, however this changed when the SLPP won the Presidency in the election studied.

baseline rate (e.g. for control races) in swing seats is substantially higher than that in safe (33 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.

#### ***V.D. Downstream Effects on General Election Vote Shares***

One immediate follow-on question is whether the representation effect in the candidate selection stage has downstream effects on the party's general election vote share. Estimates in Panel B of Table 3 find little evidence that it does: the estimated coefficient of the candidate selection treatment on the general election vote share of the targeted party is small in magnitude and imprecisely estimated (-0.48 with standard error 2.96). 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 by 28 percentage points. Moving from a swing to weak seat decreases this expected share by 26 percentage points. None of the estimated coefficients on treatment status and 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 substantially more likely to pick the local favorite in the status quo and this does not vary with treatment.

This null result aligns with historical evidence from the U.S.: while Ware (2002) suggests that incumbent party elites expected an electoral benefit from introducing primaries in the U.S., Hirano and Snyder (2019, pg. 37) find no evidence that primaries affected the general election vote share of the advantaged party. It runs counter to more contemporary evidence from elsewhere, which suggests that primaries can boost general elections vote shares, at least for subgroups like "underdog" parties in Latin American Presidential races (Carey and Polga-Hecimovich 2006) and opposition parties in legislative elections in Ghana (Ichino and Nathan 2013).

## **VI. Preference Divergence**

Is the status quo distortion in representation due to a conflict in preferences between voters and party leaders? To explore this question, we evaluate which characteristics of aspirants appear to make them popular with voters, and compare them to the characteristics that make them popular with party officials.

### ***VI.A. Data and Econometric Specifications***

Analysis leverages rich data on aspirant characteristics collected during in-person interviews (via the A1 and A2 surveys). We organized survey questions into eight categories: i) professional qualifications, including traits like educational attainment, 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, which includes the history of membership and leadership positions; vi) public service motivation, using questions adapted from Perry (1996); vii) local networks, including membership in constituency-level social and occupational groups (e.g. saving clubs); and viii) campaign effort (e.g. community visits) 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 (approximately US\$20) 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 aspirants 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:

$$V_{ipc}^s = \alpha + \sum_{k=1}^K x_{ipc}^k \beta^{sk} + v_{ipc} \quad (2)$$

where  $V_{ipc}^s$  is the vote share aspirant  $i$  who is vying to represent party  $p$  in constituency  $c$  received in 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); and  $v$  is an idiosyncratic error term. To identify which traits predict preferences, we test null hypotheses of the form  $\hat{\beta}^k = 0$ , and to assess whether voters and party officials have common preferences over traits, we test  $\hat{\beta}^{vk} = \hat{\beta}^{ok}$ . Since the voter data was collected after the conventions and radio broadcasts (in V2), we estimate a second version of (2) that includes interaction terms between treatment assignment and the vector of traits to capture whether voter learning about aspirant characteristics affects their rankings. For completeness, we present the same interaction model for party officials, noting that this data is pre-convention (collected via P1) so estimates for these terms should be null.

As we collected data on a large number of characteristics relative to a modestly sized sample of aspirants ( $N = 370$ ), 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 (following Kling, Liebman and Katz 2007) and enter the indices, along with our single behavioral measure, into the unified regression of Equation (2). Second, we complement this with 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 (instead of eight indices) and retaining only those found to be relevant. This is useful as we expect that some of the measures collected are in fact irrelevant to voters and party officials, but we do not know *ex ante* which ones these are. Regularization is thus helpful to avoid overfitting the model and to draw meaningful conclusions about preferences (Belloni et al 2014). To stabilize our estimates, we run the regularization technique with  $k$ -fold validation 200 times for voters and party officials, respectively, keeping track of the total number and list of specific traits selected in each iteration. We pursue both approaches, and triangulate results across them, gaining confidence if different methods produce similar estimates.<sup>18</sup>

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<sup>18</sup> This combination of machine learning and traditional econometric methods is useful given that analysis here and in Section VII has elements of both prediction (what traits predict preferences?) and inference (does the new process affect selection on these traits?). See Athey and Imbens (2019) for discussion.

## *VI.B. Estimates of Preference Divergence*

Table 4 presents the index-level results on which aspirant traits predict voter and party leader preferences. For voters, the two strongest drivers 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 estimated coefficients are positive and statistically significant in both column 1, which pools all voters together, and column 2, which splits voters out by treatment assignment. In terms of magnitude, the coefficient on development record of 0.04 (standard error 0.01) implies that a one standard deviation unit increase in public goods provision is associated with a 4 percentage point increase in support among voters in the opinion polls. For conscientiousness, the estimate suggests that returning the extra money is associated with a six percentage point increase in popularity among voters. There is also somewhat weaker evidence that voters prefer aspirants with higher levels of wealth, public service motivation and connectivity to local networks, as the associated coefficients are positive and at least marginally statistically significant.

Similar characteristics also drive party leader preferences over aspirants. Coefficients in column 3 are again positive and at least marginally statistically significant for an aspirant's local economic development record and their conscientiousness with the transport allowance, as well as for wealth. The one area where there is 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. The associated  $p$ -value in column 5, which tests for equivalence of the coefficients estimated for voters and party officials in control races (columns 2 versus 4), rejects equality at the 98 percent confidence level. This is consistent with the human capital advantage party officials have compared to voters in screening on technical merits. It could further reflect differences in their respective information sets, a question we return to in Section VII.C. The lower half of the table, as expected, finds little evidence for differences in party officials' preferences in treated versus control races, as recall this is estimated on pre-treatment data (from the P1 survey).

Reassuringly, the regularization methods produce a similar pattern of results. Appendix Table A3 shows that the specific measure of how many development projects the aspirant provided in the constituency (an item in the economic development index) stands out as the most consistent predictor of both voter and party leader preferences. This trait was selected in 192 iterations for

party officials and all 200 iterations for voters. Incumbency (an item in the professional qualifications index) also registers frequently for both voters and party leaders, and is the only additional trait that consistently survives penalization for party officials. For voters, conscientiousness with respect to returning the extra transport allowance is one of four additional traits consistently identified as relevant across iterations (the other three are aspirant education and two measures of party loyalty). As such, allowing the data to choose which specific measures have predictive power identifies items in the same three broad areas (development record, qualifications and conscientiousness) that the index-level approach deemed important.

Table 5 presents the post-regularization prediction results for the union of these six traits. The number of development projects and incumbency are the strongest predictors of voter and party official preferences, entering positively at above 95 percent confidence. The other measures are less strongly predictive: education registers positively for officials but not voters, and two measures of party loyalty (willingness to spend money on the party's versus the aspirant's own campaign, and number of relatives in party leadership) register at least weakly positively for both.

### ***VI.C. Information Constraints***

Give the lack of evidence for strong preference divergence between voters and party officials, what else might explain why party officials frequently fail to select the most locally popular aspirants in the status quo? Our data point strongly to the importance of information constraints.

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

To gauge how important this constraint is in practice, 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 56 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 53 percent of the time. This disconnect is severe: in 31 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. 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). We instead ask the broader question of when party officials accommodate voter preferences, and switch to more popular candidates, does it impact selection on quality? 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 local information that contributes to performance (e.g. the alignment trait from the conceptual framework).

## **VII. Selection on Quality**

This section investigates whether the documented increase in representation associated with the new selection mechanism affects selection on quality. To do so, we estimate treatment effects on the characteristics of candidates selected to advance to the general election. We then explore potential mechanisms that might explain the observed results.

### ***VII.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:

$$x_{pc}^k = \gamma^k + \gamma_T^k T_{pc} + \tau_{pc} + \eta_{pc} \quad (3)$$

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  $\tau_{pc}$  are the treatment assignment and randomization strata as defined for Equation (1); and  $\eta_{pc}$  is an error.

We link this estimation directly to our empirical strategy in Section VI that explored preference divergence. Namely, we focus on the same sets of aspirant characteristics and continue the triangulation approach. This involves first carrying forward all eight indices 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 in 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. Second, we carry forward the union of six 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.

### ***VII.B. Treatment Effects on Selection***

Table 6 reports results of these tests about whether the more democratic process selects candidates that differ on observable characteristics compared to those chosen via the status quo method. Building on what Tables 4 and 5 reveal about preferences, it is noteworthy that the candidates selected by the more democratic process on average have stronger records of having previously provided public goods in the constituency. The estimated treatment effect for the economic development index is 0.29 standard deviation units (standard error 0.13), which is a materially large and highly significant effect on a naïve, or per comparison, basis ( $p$ -value = 0.03). There is also a positive treatment effect estimate for conscientiousness, of 0.15 standard deviation units, but it does not reach significance at conventional levels ( $p$ -value = 0.16). There is further a positive and significant effect on selecting aspirants with stronger local networks (including being born in the constituency and a member of local groups), which intuitively aligns with discussion in the conceptual framework but is empirically unexpected since it did not rank strongly as a predictor of voter preferences in Tables 4 and 5.

Implementing FDR adjustments over all nine regressions sends these estimates below standard significance levels: the corresponding  $q$ -values for the two most precise estimates fall 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: 88 percent of selected candidates are male, average age 46.5, and neither varies significantly with treatment assignment.

Encouragingly, the regularization approach again provides similar results. Panel B of Table 6 estimates treatment effects on the union of six specific traits that were identified as being predictive of voter or party official preference rankings over aspirants. The only estimate that is statistically distinct from zero is the large positive effect on the number of development projects (0.50 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 2.1 projects, this effect constitutes a 24 percent increase in such provision. As seen already, the estimate for conscientiousness is positive in sign but not quite significant at conventional levels ( $p$ -value = 0.16). In column 4, the FDR adjustments reduce the significance of the number of development projects result to the 86 percent confidence level.

As the estimated treatment effect on economic development record is a key result, it is worth providing additional context from the data. Overall, 81 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 data, 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 mean of 2.5 versus 1.9 projects, a statistically significant difference), incumbency does not account for these findings. Specifically, all estimates that show how an aspirant's economic development record (via the index or the specific number of projects variable) 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 methods increase 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 lower precision. To the extent that past public goods provision predicts future provision, which is a question that ongoing data collection seeks to address, these are cautiously optimistic results.

### ***VII.C. Mechanisms***

This section presents treatment effect estimates on voter learning and aspirant entry to provide additional insight into which channels are likely at work (and not) influencing selection in this experiment. It sheds some light on how representation was enhanced without negatively impacting selection on quality, and largely rules out differential aspirant entry into treated races as an alternative channel.

A central concern about primaries is that if voters are poorly informed about the professional qualifications of aspirants, then giving them control over candidate selection increases representation at the cost of screening on quality. Publicizing the town hall conventions over radio could mitigate this risk if it improves voter knowledge of aspirant qualifications. To test this, Appendix Table A4 presents treatment effect estimates on what voters know about aspirants, using the post-convention V2 data. It shows that voters in treated races are more likely to accurately identify which aspirant in the local pool has the most education (by fifteen percentage points), the one with most public office experience (by 16 percentage points), and the one with the strongest record of previously providing local public goods (by 10 percentage points). Given baseline rates for correct answers between 30 and 36 percent, these estimates suggest that voter knowledge of aspirant qualifications increased by 42 percent on average compared to control races.

Referring back to Table 4, there is suggestive evidence that this knowledge gain increased the weight voters place on qualifications in ranking aspirants. In the bottom half of column 2, the interaction between treatment and an aspirant's professional qualification index is positive and marginally statistically significant (0.10 with standard error 0.06). This indicates that more

qualified aspirants were somewhat more likely to be chosen by voters as their first preference for candidacy in treated versus control races. 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 2019), 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).

Regarding aspirant entry, recall that only one of the two parties, the SLPP, announced in advance which constituencies would participate in the new selection process, which could have altered the entry decision of potential aspirants. Appendix Table A5 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 (0.20 with standard error 0.59), as one would expect in the absence of advance notification. These data reflect the number of aspirants who were under official 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 nearly identical. 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. 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.<sup>19</sup> We leave this question for future research.

### **VIII. Financial Contributions**

Another factor that might distort candidate selection away from voter preferences is financial contributions to secure the nomination. This could distort choices in both the status quo and treated races, as recall (i) aspirants in control group races contribute more than two thousand dollars on average to be considered for candidacy, and (ii) in the treatment group, representation remains well below 100 percent, as party officials did not follow the voter reports in 37 percent of races. This sections explores this risk, finds little evidence consistent with it, and then offers an alternative interpretation of contributions with respect to the expected returns to candidacy. All analyses and interpretations are subject to the caveat that contributions are self-reported and not verifiable.

To measure these 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. Note that these are distinct from the aspirant’s own campaign expenses, which were recorded separately. 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.” Enumerators further asked unsuccessful aspirants how much they thought the selected candidate in their pool had contributed (see Appendix B for survey questions and prompts).

Self-reports from control group races suggest that nearly all aspirants made contributions: 89.7 percent of aspirants report non-zero contributions, with an unadjusted mean converted to US dollars of \$2,428. To put this amount in perspective, it is equivalent to 1.3 months 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

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<sup>19</sup> See for example Gulzar and Khan (2018) for experimental evidence from Pakistan on how ordinary citizens can be mobilized to run for local public office.

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 35 percent of control races. While this top payer rate increases to 54 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. Averaged across all control group races, selected candidates contribute somewhat less than unsuccessful aspirants. This can be seen in Panel C of Table 2, where the average contributions of selected candidates in control group races (column 4) is lower than the mean contribution of the aspirant pool (column 1) for all types of races.

Second, in treated races, the data is not consistent with contributions being used to compensate for low popularity levels, e.g. 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 (the mean difference is \$1,348) compared to races where party officials went with the voters' first choice (where the mean difference is \$1,696).

As an alternative, our conceptual framework models these contributions 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 remainder of this section explores how aspirant willingness to pay responds to each of these factors in the data, and to the experimental treatment.

Regarding the first component, returns to office include 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 also returns to candidacy even for those who lose the general election, particularly for members of the ruling party, as candidacy opens up avenues to public sector employment and positions within the party organization. In light of this, both major parties were able to recruit aspirants and collect financial contributions 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: Panel C of Table 2 shows that mean contributions increase from \$1,089 in weak seats,

to \$1,530 in swing seats, to \$2,983 in safe seats. Appendix C discusses how this increase in expected returns in turn affects aspirant entry in the status quo, and finds evidence that there are more aspirants in the pool, who are of higher average quality, in stronghold races, which is consistent with findings from Brazil (Ferraz and Finan 2011), Italy (Gagliarducci and Nannicini 2013), Sweden (Dal Bó et al 2017) and the U.S. (Hirano and Snyder 2019). While interesting, note that this does not affect our experimental estimates as treatment assignment is stratified with small geographic areas and we include fixed effects for these strata in all relevant specifications.

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.<sup>20</sup> 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.

As a start, summary statistics in Table 2 Panel C are broadly consistent with this idea: while average contributions across the whole aspirant pool are slightly higher in treated races (columns 1 versus 2), none of these differences are statistically significant. Narrowing consideration to selected candidates, however, reveals an increase in contributions associated with treatment, particularly in safe seats (columns 4 versus 5). The larger response in safe seats is what one would expect mechanically, as a given change in the probability of being selected will induce a larger nominal increase in contributions where the probability of winning the general election is higher. Table 7 presents regression analogues for the full sample, winsorizing contributions at the 95<sup>th</sup> percentile. Estimates similarly find a null result for a treatment effect on the aspirant pool, and a positive and marginally significant effect for selected candidates only.

Table 7 column 3 presents the more direct test of the hypothesis. Using data on all aspirants, it regresses 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

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<sup>20</sup> This is somewhat analogous to tournament-based pay, where a worker's investment in productivity is increasing in the likelihood that productivity increases her chance of winning the tournament (Lazear and Rosen 1981).



successful and unsuccessful aspirants contributed is wider in treatment races. This spread is more pronounced in column 4, which restricts attention to stronghold races. These estimates suggest that unsuccessful aspirants contributed less (by \$781 on average) and selected candidates contributed more (\$1,947) in treatment group stronghold races as compared to their counterparts in controls.

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—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. This is one interpretation of the data, and there may well be others that align with this constellation of results.

## **IX. 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). Sierra Leone was the ninth largest recipient of these funds, despite having a population of only three million registered voters. A key point of this paper is that 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 debates about foreign aid, for example as late as 2004 there was no explicit reference to political parties anywhere in the UNDP’s own multi-year funding framework (UNDP 2006). This neglect arises in part from concerns about impartiality that lead donors to shy away from direct engagement with political parties.

The two major political parties in Sierra Leone demonstrate that this need not remain the case. The experimental platform 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. In a revealed preference argument, the fact that both major parties participated and selected their stronghold races for inclusion suggests they saw value in the initiative. The fact that they (for the most part)

complied with the treatment assignment attests to their willingness to experiment at the frontier of democratic practice.

This experiment demonstrates that the primary selection stage plays an important role in reducing information asymmetries. Results show that voters learn about candidate qualifications and party officials learn about voter preferences. The fact 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.

Analysis in this paper has focused on the question of selection. Ongoing data collection turns to the question of accountability. Through a combination of Parliamentary administrative records and field audits of public spending by elected MPs, we will soon have evidence on whether these candidates who were selected via more democratic primary processes perform any better or worse once they get into public office.

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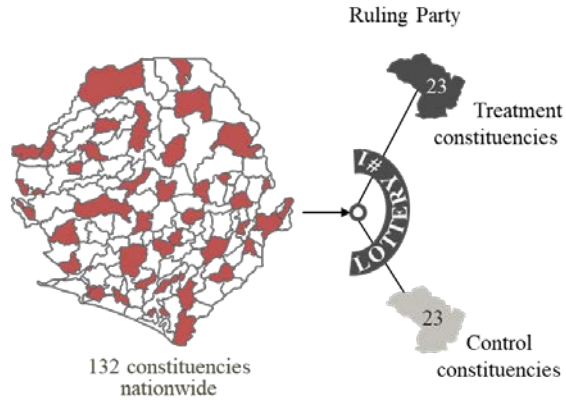
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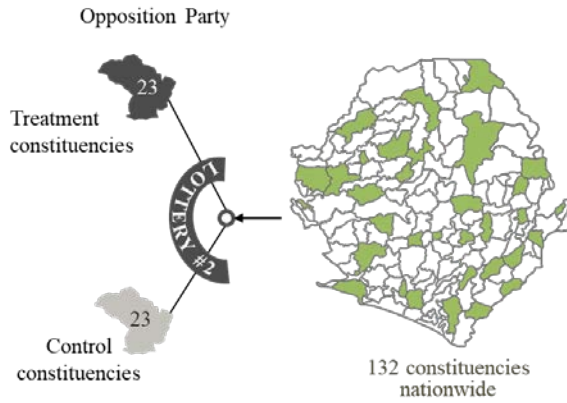
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**Figure 1: Experimental Design**

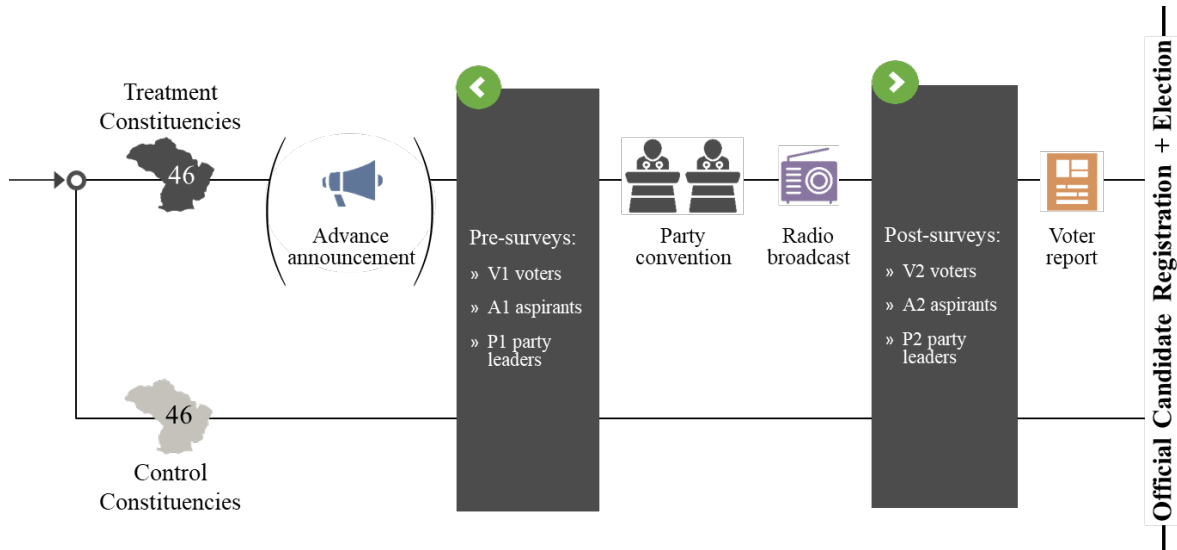
Panel A: Ruling party (APC) constituency selection and assignment (locations masked)



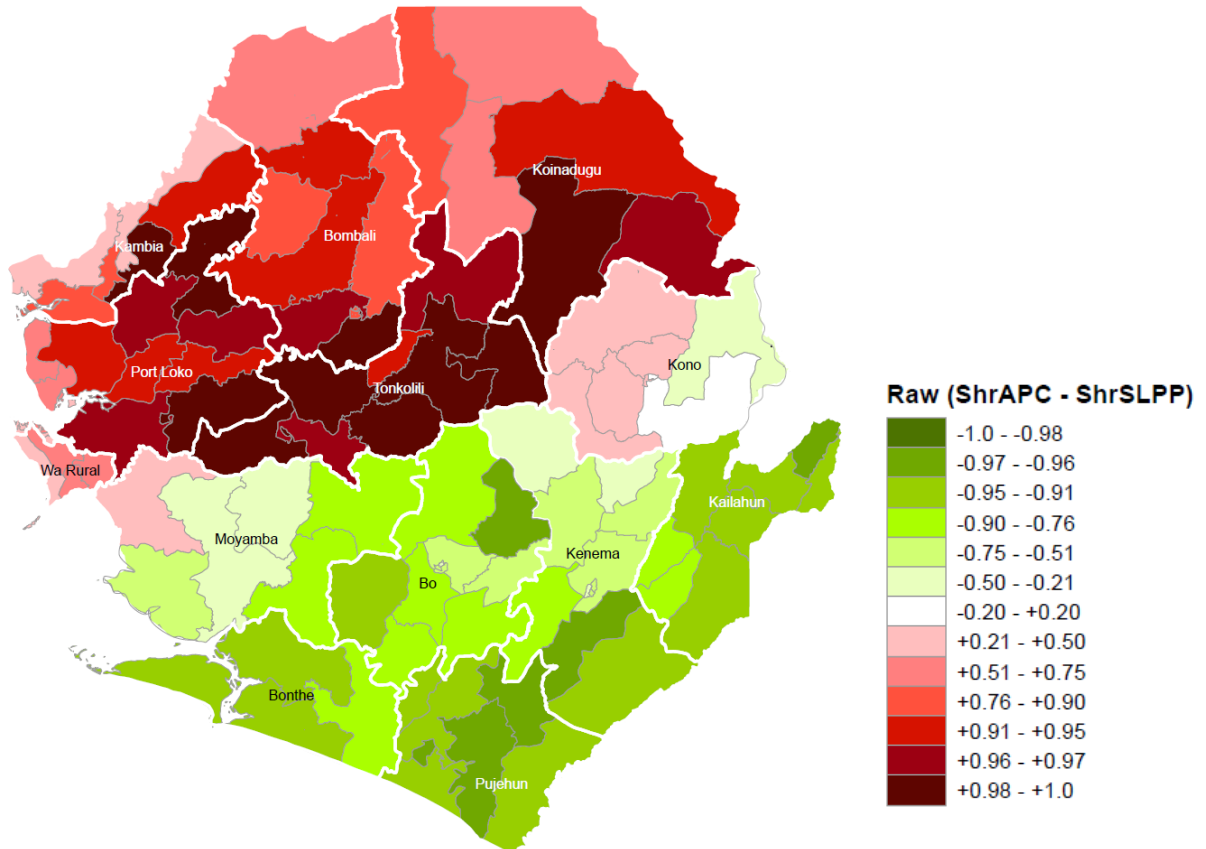
Panel B: Opposition party (SLPP) constituency selection and assignment (locations masked)



Panel C: Implementation timeline



**Figure 2: Ethnic-party Strongholds**



*Notes: this figure shows the 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 (e.g. where 1 indicates that the constituency is 100 percent populated by APC-affiliated ethnic groups) and darker green implies closer to -1 (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 (2005). Ethnicity data is from the 2004 census, mapped into constituency boundaries for the 2007 Parliamentary election (boundaries were redrawn before the 2018 election studied here).*



**Table 1: Self-Selection into Politics**

	Mean, voters	Mean, party officials	Mean, aspirants	<i>p</i> -value on (1) versus (2 and 3)
	(1)	(2)	(3)	(4)
Years of education	4.86	12.14	15.28	<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	6.44	9.49	<0.001
Proportion that have a bank account	0.11	0.77	0.98	<0.001
Proportion male	0.47	0.80	0.90	<0.001
Years of age	37.37	46.09	47.50	<0.001
Observations	7,544	245	433	

*Notes: i) this table compares characteristics of voters (from survey V2), party officials (from survey P1) and aspirants (from survey A1); 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: Heterogeneity with Respect to General Election Competitiveness**

**Panel A: Party Selection of Races to Include in the Experiment**

	Races nationwide		Races in experiment		Selection into experiment	
	<i>N</i>	Percent	<i>N</i>	Percent	Difference	<i>p</i> -value
	(1)	(2)	(3)	(4)	(5)	(6)
Safe seat constituencies	95	36%	48	52%	+14 ppts	0.00
Swing constituencies	74	28%	28	30%	+2 ppts	0.60
Weak seat constituencies	95	36%	16	17%	-20 ppts	0.00
Observations (party-races)	264		92			

**Panel B: Heterogeneous Treatment Effects on Representation**

	Selected candidate is the aspirant most preferred by voters				
	Mean controls	Mean treatment	Difference	<i>p</i> -value	<i>N</i>
	(1)	(2)	(3)	(4)	(5)
Safe seat constituencies	33.33	62.50	29.17	0.04	48
Swing constituencies	50.00	50.00	0.00	0.99	28
Weak seat constituencies	37.50	87.50	50.00	0.04	16

**Panel C: Heterogeneity in Mean Contributions from Aspirants to Party Officials**

	All aspirants			Candidates only		
	Control	Treatment	<i>p</i> -value	Control	Treatment	<i>p</i> -value
	(1)	(2)	(3)	(4)	(5)	(6)
Competitiveness						
Safe seat constituencies	\$2,983	\$3,076	0.92	\$1,390	\$5,771	0.07
Swing constituencies	\$1,530	\$1,917	0.49	\$994	\$2,016	0.29
Weak seat constituencies	\$1,089	\$1,355	0.76	\$839	\$604	0.68
Observations (aspirants)	185	202		46	46	

*Notes: i) this table shows heterogeneity for three outcomes--where party officials chose to experiment, how responsive they were to the voter reports, and mean contributions from aspirants to parties--by the level of likely competition in the general election; ii) *p*-values are from *t*-tests on the equality of means across samples, which compares the national universe of races to those included in the experimental sample for panel A, and across treatment and control party-races for panels B and C.*

**Table 3: Estimated Treatment Effects on Representation**

<b>Panel A: Direct Effect on Representation</b>		
	Selected candidate is voters' first choice	
	(1)	(2)
Treatment	23.91** (10.56)	26.09 (16.02)
Ruling party		27.17 (39.60)
Ruling party X Treatment		-4.35 (21.27)
Mean in controls	39.13	
Observations	92	92
<b>Panel B: Indirect Effect on General Election Vote Shares</b>		
	Party's vote share in the general election	
	(1)	(2)
Treatment	-0.48 (2.96)	-0.64 (3.40)
Safe seat		27.90*** (6.64)
Safe seat X Treatment		-2.01 (6.13)
Weak seat		-25.95*** (6.89)
Weak seat X Treatment		6.91 (5.54)
Mean in controls	44.98	
Observations	91	91

*Notes: i) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; ii) ordinary least squares regression with robust standard errors; iii) specifications include fixed effects for 26 party-region strata used in the random assignments; and iv) one race is missing in Panel B since the general election was disputed and is being 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 (2 vs 4)
	(1)	(2)	(3)	(4)	
Professional qualifications index	0.04 (0.03)	-0.01 (0.04)	0.11*** (0.04)	0.13*** (0.05)	0.02
Wealth index	0.03** (0.01)	0.04* (0.02)	0.05* (0.03)	0.06* (0.03)	0.60
Economic development record index	0.04*** (0.01)	0.04* (0.02)	0.04* (0.02)	0.05* (0.03)	0.75
Public service motivation (PSM) index	0.04* (0.02)	0.05* (0.03)	0.03 (0.03)	0.01 (0.04)	0.38
Party loyalty index	0.04 (0.03)	0.02 (0.06)	0.04 (0.06)	-0.04 (0.08)	0.44
Cognitive ability index	0.01 (0.02)	-0.00 (0.03)	0.02 (0.03)	-0.02 (0.04)	0.65
Local network index	0.03 (0.03)	0.10** (0.04)	0.05 (0.05)	0.13** (0.07)	0.69
Campaign effort and expenditure index	-0.03 (0.02)	-0.01 (0.03)	-0.02 (0.04)	0.03 (0.04)	0.48
Conscientiousness indicator	0.06** (0.02)	0.07** (0.03)	0.09*** (0.03)	0.09** (0.04)	0.53
Professional qualifications X Treatment		0.10* (0.06)		-0.04 (0.08)	
Wealth X Treatment		-0.02 (0.03)		-0.02 (0.05)	
Development record X Treatment		0.01 (0.03)		-0.00 (0.05)	
PSM X Treatment		-0.02 (0.04)		0.04 (0.06)	
Party loyalty X Treatment		0.05 (0.07)		0.15 (0.12)	
Cognitive ability X Treatment		0.01 (0.05)		0.07 (0.06)	
Local network X Treatment		-0.14** (0.06)		-0.15 (0.09)	
Campaign X Treatment		-0.03 (0.04)		-0.09 (0.07)	
Conscientiousness X Treatment		-0.02 (0.03)		0.00 (0.05)	
Observations	370	370	369	369	368

Notes: i) columns 1 and 2 (3 and 4) use aspirant characteristics to predict their popularity among voters (party officials) in the V2 opinion polls (P1 survey); ii) column 5 tests for differences in preferences between voters and party officials in control races, reporting the p-value from chi-squared tests of equality of coefficients across estimates in columns 2 and 4 from a seemingly unrelated regression framework; iii) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; iv) robust standard errors clustered by party-constituency; v) specifications include fixed effects for 26 party-region randomization strata; and vi) independent variables are eight indices of aspirant traits expressed in standard deviation units plus the binary behavioral measure of conscientiousness.

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

	Aspirant's share in voter polls	Aspirant's share in party official survey
	(1)	(2)
Number of development projects	0.04*** (0.01)	0.04*** (0.01)
Incumbent MP	0.16** (0.06)	0.21** (0.09)
Years of schooling	-0.01 (0.01)	0.03** (0.01)
Party versus own campaign expenditure	0.04* (0.02)	0.08** (0.03)
Number of relatives in party leadership	0.03** (0.02)	0.04* (0.02)
Conscientiousness indicator	-0.02* (0.01)	-0.03 (0.02)
Observations	370	369

*Notes: i) this table presents post-regularization estimates that retain only those aspirant traits with the greatest predictive power selected via 200 iterations of k-fold elastic net procedures; ii) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; iii) robust standard errors clustered by party-constituency; iv) specifications include 26 party-region randomization strata; v) all traits expressed in natural units; and 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?"*

**Table 6: Estimated Treatment Effects on Candidate Selection**

	Treatment effect	Standard error	Naïve $p$ -value	FDR $q$ -value
	(1)	(2)	(3)	(4)
<b>Panel A: Index-level Regression Estimates</b>				
Personal qualifications index	-0.03	(0.10)	0.75	0.75
Wealth index	-0.12	(0.13)	0.37	0.56
Economic development index	0.29**	(0.13)	0.03	0.22
Public service motivation index	-0.08	(0.15)	0.60	0.75
Party loyalty index	0.04	(0.09)	0.62	0.75
Cognitive ability index	-0.13	(0.12)	0.29	0.53
Local networks index	0.19**	(0.09)	0.04	0.22
Campaign expenditure index	-0.16	(0.12)	0.19	0.49
Conscientiousness indicator	0.15	(0.10)	0.16	0.35
<b>Panel B: Regularized Regression Estimates</b>				
Number of development projects	0.50**	(0.21)	0.02	0.14
Incumbent MP	-0.09	(0.07)	0.23	0.57
Years of schooling	-0.17	(0.23)	0.45	0.72
Party versus own campaign expenditure	-0.13	(0.19)	0.50	0.72
Number of relatives in party leadership	0.24	(0.22)	0.29	0.57
Conscientiousness indicator	0.15	(0.10)	0.16	0.57
Observations	92			

*Notes: i) this table reports treatment effect estimates on the characteristics of selected candidates for 9 indices of traits in Panel A and for the 6 individual traits selected via regularized regression in Panel B; ii) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$  on a per comparison basis ( $p$ -values in column 3); iii) each row reports results from a separate OLS regression with robust standard errors that includes fixed effects for 26 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) and conscientiousness is a binary indicator; 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 7: Estimated Treatment Effects on Contributions to Parties**

	All aspirants	Selected candidates	All aspirants	All aspirants, stronghold races
	(1)	(2)	(3)	(4)
Treatment	-66 (248)	816* (460)	-358 (311)	-781* (409)
Selected candidate			-611* (352)	-826 (503)
Selected X Treatment			1174** (557)	1947** (822)
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) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; iii) ordinary least square regression with robust standard errors clustered by party-race; iv) specifications include fixed effects for 26 party-region strata used in the random assignments; and v) contributions are winsorized at the 95th percentile.*

## **SUPPLEMENTAL ONLINE MATERIALS**

### **“An Experiment in Candidate Selection”**

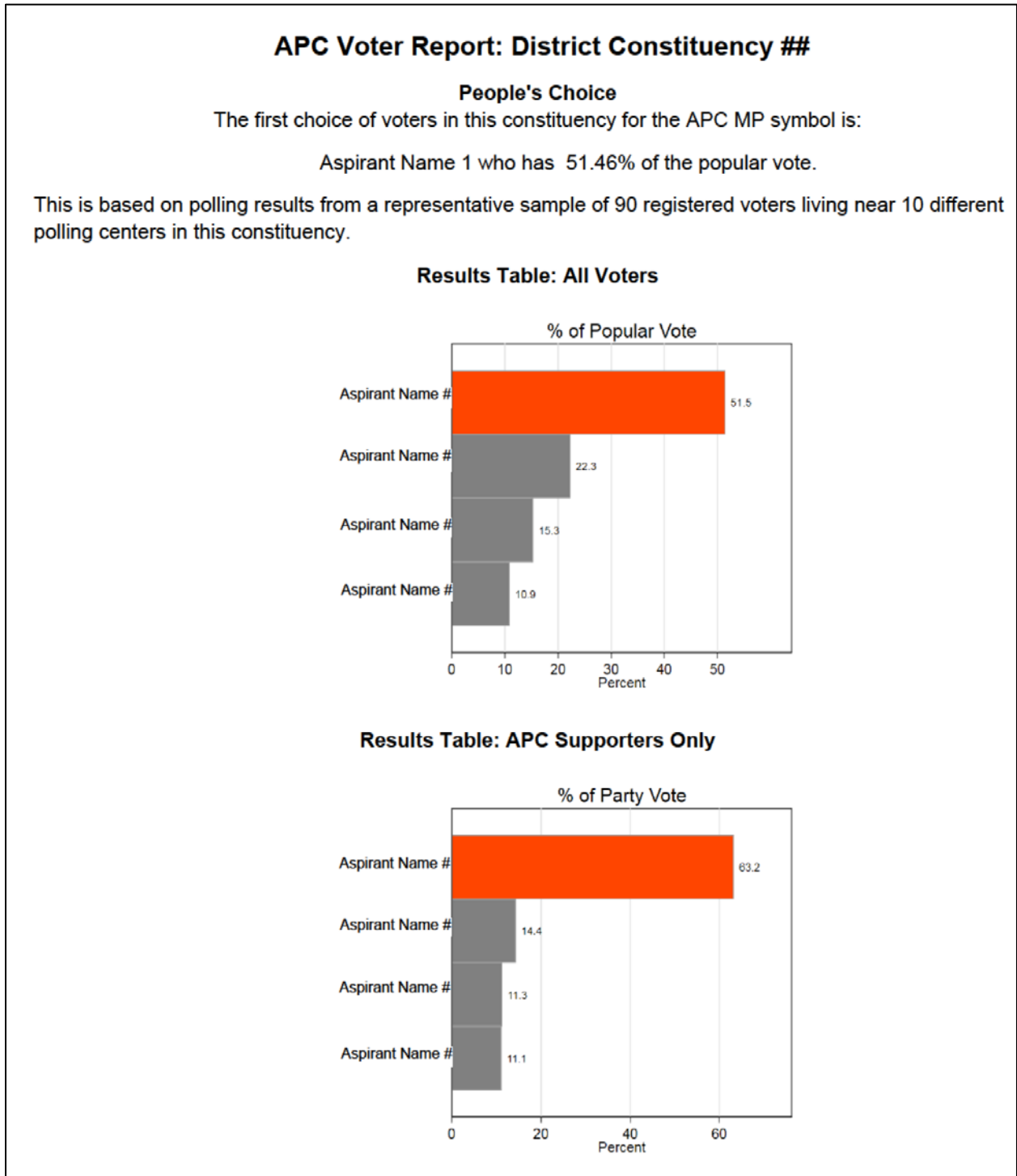
**By Casey, Kamara and Meriggi**

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**Figure A1: Example voter report (aspirant names redacted)**



**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).

**Appendix Table A1: Heterogeneous Representation Effect by General Election Competitiveness**

Dependent variable	Selected candidate is voters' first choice (1)
Swing seat	17.19 (35.10)
Treatment	34.38*** (11.74)
Swing seat X Treatment	-34.38 (24.47)
Observations (races)	92

*Notes: i) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; ii) ordinary least squares regression with robust standard errors; iii) specifications include fixed effects for 26 party-region strata used in the random assignments; and iv) the omitted category for the swing seat indicator is uncompetitive general election seats, e.g. safe and weak seats pooled together.*

Appendix Table A2: List of Aspirant Characteristics

	Mean	SD	N	Min	Max
<b>Professional qualifications</b>					
Years of education	15.32	1.56	385	4	16
Current or most recently held job is white collar	0.76	0.43	385	0	1
Years spent serving in elected office	2.07	4.64	382	0	39
Is an incumbent member of parliament	0.06	0.25	385	0	1
<b>Wealth</b>					
Monthly income from current or most recently held job (in USD)	848.32	922.44	385	35.71	2857.14
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)	10.71	1.75	385	0	13
<b>Economic development record</b>					
Has been involved with or managed any development projects in their own constituency in the past 5 years	0.82	0.38	385	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)	1.90	1.17	385	0	3
Total funding for listed development projects (log Leones + 1)	12.49	8.65	385	0	26.94
<b>Cognitive ability</b>					
Percentage of <b>correct</b> answers to the following questions: 1) "How many members of the Parliament of Sierra Leone were directly elected from single member constituencies in 2012?" 2) "How many other members of the Parliament of Sierra Leone were there in 2012?" 3) "How many members were there in total in the Parliament of Sierra Leone in 2012?"	0.40	0.49	300	0	1
Percentage of <b>correct</b> answers to the following questions: 1) "How many members of the Parliament of Sierra Leone were directly elected from single member constituencies in 2017?" 2) "How many other members of the Parliament of Sierra Leone were there in 2017?" 3) "How many members were there in total in the Parliament of Sierra Leone in 2017?"	0.35	0.48	283	0	1
Correctly estimated the number of women in their constituency	0.60	0.49	357	0	1

Aspirant's estimated percentage match their raw estimates for women and total population (mathematics)	0.49	0.50	268	0	1
Correctly estimated constituency population given 3% growth rate (mathematics)	0.52	0.50	357	0	1
Correctly estimated national population given 3% growth rate (mathematics)	0.48	0.50	383	0	1
Aspirant's estimated percentage match their raw estimates for youth and total population (mathematics)	0.40	0.49	354	0	1
<b>Party Loyalty</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Min</b>	<b>Max</b>
Preference for personal vs. campaign spending	3.18	0.89	385	1	5
Number of family relatives within the party leadership	0.67	0.96	385	0	7
Number of different party leaders the aspirant has met with	3.31	2.30	385	0	8
Number of Meetings held with party leaders	15.13	21.61	385	0	195
Time spent as a member of party (years)	18.19	11.76	385	0	60
Has previously run for elected office as a member of their party	0.28	0.45	385	0	1
Number of party roles or positions held since joining the party	1.24	1.43	385	0	9
Aspirant is from a chief/ruling family	0.47	0.50	385	0	1
Has provided any monetary or in kind support to their party this election cycle	0.37	0.48	385	0	1
Has you received any monetary or in kind support from their party this election cycle	0.05	0.22	385	0	1
<b>Local Networks</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Min</b>	<b>Max</b>
Born in this constituency	0.81	0.39	385	0	1
Has primary residence in constituency	0.84	0.36	334	0	1
Is registered to vote in constituency	0.96	0.19	385	0	1
Member of constituency Women's Group	0.37	0.48	385	0	1
Member of constituency Youth Group	0.65	0.48	385	0	1
Member of constituency Farmers' Group	0.55	0.50	385	0	1
Member of constituency Fishing Group	0.13	0.33	385	0	1
Member of constituency Savings Group	0.34	0.47	385	0	1
Member of constituency Elderly Group	0.68	0.47	385	0	1
Member of constituency Employers' Group	0.28	0.45	385	0	1
Member of constituency Workers' organizations and Trade Unions Group	0.37	0.48	385	0	1
Member of constituency Environmental Group	0.41	0.49	385	0	1

Member of constituency Journalist Group	0.08	0.28	385	0	1
<b>Campaign Expenditure</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Min</b>	<b>Max</b>
Numer of rallies aspirant has held in their constituency over the past six weeks	1.15	2.36	384	0	20
Number of communities or villages have visited in constituency over the past six weeks	31.17	41.77	385	0	300
Number of times aspirant has interviewed or put a jingle on the radio over the past six weeks	1.09	1.76	385	0	10
Aspirant has provided any in kind support to their campaign in the past six weeks	0.64	0.48	385	0	1
Amount of personal money aspirant has spent on their campaign in the past six weeks (log Leones + 1)	16.11	4.53	385	0	20.37
<b>Public Service Motivation*</b> (all coded from 1= disagree strongly to 5 = Agree strongly; ** indicates disagreement signals higher PSM)	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Min</b>	<b>Max</b>
a. I respect public officials who can turn a good idea into law	4.14	1.51	349	1	5
b. I would prefer seeing elected politicians do what is best for my constituency	4.15	1.48	349	1	5
c. Politicians can create a large impact to make society more equal and just	4.02	1.51	349	1	5
d. It is hard for me to get intensely interested in what is going on in my community**	3.97	1.42	349	1	5
e. I would prefer seeing public officials do what is best for the whole community	4.05	1.52	349	1	5
f. An official's obligation to the public should always come before loyalty to superiors	3.93	1.52	349	1	5
g. I do not believe that government can do much to make society fairer.	3.57	1.56	349	1	5
h. If any group does not share in the prosperity of our society, then we are all worse off.	3.56	1.60	349	1	5
i. I am not afraid to go to bat for the rights of others even if it means I will be ridiculed	4.05	1.45	349	1	5
j. When public officials take an oath of office, I believe they accept obligations not expected of other citizens	3.83	1.60	349	1	5
k. I believe everyone has a moral commitment to civic affairs no matter how busy they are	4.13	1.46	349	1	5
l. I have an obligation to look after those less well off.	4.00	1.50	349	1	5
m. Most social programs are too vital to do without.	3.56	1.49	349	1	5
n. I seldom think about the welfare of people whom I don't know personally.**	3.38	1.66	349	1	5
o. I have little compassion for people in need who are unwilling to take the first step to help themselves**	3.17	1.59	349	1	5
p. Making a difference in society means more to me than personal achievements.	4.11	1.49	349	1	5
i. Serving citizens would give me a good feeling even if no one paid me for it.	4.10	1.49	349	1	5
i. I feel people should give back to society more than they get from it.	4.09	1.50	349	1	5

**Conscientiousness Behavioral Measure**

**Mean      SD      N      Min      Max**

0.46      0.50      370      0      1

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Returned any of up to 3 extra 10,000 Leone notes given in reimbursement for transport expenses

**Table A3: Aspirant Traits Selected via Regularized Regression**

<b>Panel A: Aspirant vote share in leader survey</b>		<b>Panel B: Aspirant vote share in voter polls</b>	
Variable	Frequency	Variable	Frequency
Number of Development Projects	192	Number of Development Projects	200
Incumbent MP	103	Incumbent MP	200
<hr/>		<hr/>	
Number of Meetings with Party Leaders	80	Number of Relatives in Party Leadership	200
Number of Relatives in Party Leadership	31	Years of schooling	199
Years Spent Serving in Elected Office	17	Party Versus Own Campaign Expenditure	181
Conscientiousness	17	Conscientiousness	100
Party Versus Own Campaign Expenditure	3	Time Spent as Member of Party	37
Has Previously Run for Public Office within Party	3	Number of Rallies Hosted in Constituency	7
Lives in Home Constituency	2	<b>Number of Iterations</b>	<b>200</b>
From a Chiefly "Ruling" Family	2		
Years of Schooling	1		
Number of Visits to Constituency in Past 6 Weeks	1		
Has Received in-kind Support from Party	1		
Log of Development Project Spending	1		
Number of Different Party Leaders Candidate Met With	1		
Number of Rallies Hosted in Constituency	1		
Registered to Vote in This Constituency	1		
Has a White-Collar Job	1		
<b>Number of Iterations</b>	<b>200</b>		

*Notes: i) this table ranks aspirant traits by the number of times each was selected across 200 iterations of regularized regression; ii) the dashed line indicates the median number of traits selected over the 200 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; and iv) with an eye toward sparsity, we instruct the algorithm to search for optimal  $\alpha$  values in the range (0.5, 1), where  $\alpha=1$  corresponds to LASSO with zero traits retained and  $\alpha=0$  corresponds to ridge regression with all traits retained.*



**Table A4: Voter Learning from Conventions and Broadcasts**

	Mean in controls	Treatment effect	Std. error
Dependent variables:	(1)	(2)	(3)
Identify most educated aspirant	0.36	0.15***	(0.05)
Identify most public office experience	0.30	0.16***	(0.06)
Identify strongest development record	0.32	0.10**	(0.05)
Observations	4,097	8,961	

*Notes: i) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; ii) each row reports results from a separate ordinary least squares regression using V2 data with robust standard errors clustered by party-race; and iii) specifications include fixed effects for 26 party-region strata used in the random assignments.*

**Table A5: Treatment Effects on Aspirant Entry**

	Party administrative data		Research survey data	
	SLPP (1)	APC (2)	SLPP (3)	APC (4)
Treatment	1.00* (0.59)	0.20 (0.59)	0.30 (0.70)	0.52 (0.66)
Control mean	2.68	4.00	4.00	3.96
Observations (races)	45	38	46	46

*Notes: i) this table estimates treatment effects on the total number of aspirants considered per party-race; ii) significance levels indicated by \*  $p < 0.10$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ ; iii) ordinary least squares regression with robust standard errors; iv) specifications include fixed effects for each party's respective randomization strata; and v) 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.*

## **Appendix B: Aspirant contributions survey script and questions**

ENUMERATOR PROMPT: “Now I would like to ask you some questions about the campaign for the symbol. We know it's expensive to campaign and we know parties are short of funding.”  
[Enumerator: Remind everyone that their answers will be kept secret.]

EXPENSE QUESTION: “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 money and transportation reimbursement tips.”

[Enumerator: Please list the total amount in Leones. For example, if the amount is 100,000 Leones (one hundred thousand) enter 100000. If none, please enter ZERO.]

WINNER EXPENSE QUESTION: “To the best of your knowledge, how much contribution do you think the aspirant who received the symbol has given in total to the party leadership for receiving the party symbol?”

[Enumerator: Please list the total amount in Leones. For example, if the amount is 100,000 Leones (one hundred thousand) enter 100000. If none, please enter ZERO.]

### **Appendix C: Status Quo Self-Selection in Strong versus Weak Seats**

A key idea in the existing literature is that higher returns to office induce positive selection into the pool of aspirants, which has been documented empirically with data from Brazil (Ferraz and Finan 2011), Italy (Gagliarducci and Nannicini 2013), Sweden (Dal Bó et al 2017) and the U.S. (Hirano and Snyder 2019). We can leverage the fact that differences in ethnic composition in Sierra Leone directly affect how likely the party is to win the Parliamentary seat, which in turn determines the expected returns to candidacy. Under this view, in the status quo we would expect there to be more aspirants, and of higher average quality, in stronghold races.

To explore this idea, Appendix Table A6 presents characteristics of the aspirant pool by the expected level of general election competition. It shows that there are more aspirants under consideration for stronghold safe seats, 5 on average, which is statistically distinct from the 4 vying for the nomination in swing seats and the just over 2 in weak seats. Aspirants on average appear to be of higher quality in stronghold areas: they on average have completed an additional half year of education (15.6 years versus 15.0 in swing and 14.7 in weak) and are more likely to have some university training (86 percent versus 74 and 62). They also appear a bit wealthier, although the differences are only significant comparing safe to weak seat aspirants, where the mean number of assets owned is 9.6 versus 8.2 (of 11). No clear pattern emerges with respect to demographics.

As mentioned in the main text, it is clear from the last row of estimates that contributions to the party are also increasing in the likelihood that the aspirant's party will win the general election. Together these estimates are consistent with the probability of winning driving much of the expected return to office and thereby inducing positive selection into the aspirant pool.

**Table A6: Aspirant Characteristics by General Election Competitiveness**

	Mean, safe seats (1)	Mean, swing seats (2)	Mean, weak seats (3)	<i>p</i> -value (1) vs (2) (4)	<i>p</i> -value (2) vs (3) (5)	<i>p</i> -value (1) vs (3) (6)
Number of aspirants	4.94	4.04	2.31	0.09	<0.01	<0.01
Years of education	15.58	14.95	14.70	<0.01	0.51	<0.01
Percent with some university education	0.86	0.74	0.62	0.01	0.18	<0.01
Asset ownership (of 11 household items)	9.64	9.61	8.24	0.88	<0.01	<0.01
Proportion that have a bank account	0.97	0.96	0.92	0.91	0.27	0.17
Proportion male	0.90	0.86	0.95	0.20	0.15	0.40
Years of age	48.21	45.23	49.76	0.01	0.02	0.39
Average contribution to party (controls only)	\$2,983	\$1,530	\$1,089	0.14	0.61	0.25
Observations (party-races)	48	28	16			
Observations (all aspirants)	237	113	37			
Observations (aspirants, control races only)	118	51	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.*