SIERRA LEONE 2012 ELECTIONS PROJECT

PRE-ANALYSIS PLAN: POLLING CENTER LEVEL INTERVENTIONS

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This study examines the impact of providing citizens with information about Parliamentary candidates via structured inter-party debates in the lead up to the Sierra Leone November 2012 Elections. Randomization and treatments were conducted on multiple levels: constituency, polling center and individual (details on sampling and randomization are available in the project's AEA trial registry https://www.socialscienceregistry.org/trials/26). This pre-analysis plan governs the analysis of the polling-center level treatment only. The first version of this plan was written and registered with the Abdul Latif Jameel Poverty Action Lab on 20 November 2012, before fieldwork for the exit poll, which is the primary source of data for this analysis, was completed. This revised plan incorporates learning from the following steps that we have taken since registering the initial plan, namely we: (i) analyzed the expert panel scoring of debates and the before/after debate surveys; (ii) registered a separate plan for the individual-level treatments; (iii) analyzed treatment effects for the individual-level treatments; and (iv) examined the distribution of outcomes for the control group polling centers in the exit poll data. We are now registering an update to the initial document reflecting learning from steps 1 to 4; before we analyze treatment effects at the polling-center level in the exit poll. Planned future steps include: i) lodging an update governing the analysis of the electoral returns data before completing that portion of the analysis (which depends on two additional datasets that have not yet been cleaned); and ii) lodging an update governing the analysis of constituency-level effects (as this data collection effort remains ongoing).

1.   Background

Our NGO partner, Search for Common Ground, hosted and filmed debates between Parliamentary candidates in 14 constituencies. We randomly selected these constituencies from what we estimated would be the 28 most competitive constituencies, stratifying on the strength of the ethnic bias favoring one party over the other. Within constituencies, polling centers that were sufficiently small (fewer than ~900 registered voters) and far apart from their nearest neighbor (at least ~ one mile) were randomly assigned to treatment and control groups.

Treatment at the polling center level consisted of an evening showing of a video tape of the relevant debate projected at a convenient public place, usually the polling center itself, in the weeks leading up to the Election. Typical protocol for these screenings was as follows: host polling center and satellite communities were notified in advance and invited to attend the screening; 25 randomly selected residents (using data from an earlier listing exercise) were provided a small incentive (10 Maggi spice cubes for cooking) to attend the screenings; the video was played once in a pause and play format that inserted translation into the relevant local language after each question; the video was played a second time with or without translation; and a secondary screening was held in the largest accessible satellite village earlier in the day, in most cases without translation.

We hypothesize that this video screening intervention may have treatment effects on three different sets of actors: voters, candidates and centralized parties, which we will treat as distinct domains. For each set,

we lay out a series of hypotheses regarding the likely areas of impact with corresponding outcome measures below. We will provide treatment effects with unadjusted (or per comparison) p-values for all outcomes specified in this document for all domains. We will also compute mean effects indices by hypothesis (and sub-hypothesis for H3) and correct for multiple inference across outcomes within a hypothesis. Since we have multiple hypotheses regarding voters, we will further make adjustment at the hypothesis-level in domain A (as specified below) but will not make adjustments across domains.

2.   Domain A: Effects of PC-level Debates on Voters

This domain explores the effects of polling center debate screenings on voter knowledge, behavior and vote choice.

A.   *Econometric specifications*

Analysis of treatment effects will take the form of:

$$Y_{ipc} = \beta_0 + \delta T_{pc} + X'_{ipc}\Pi + Z'_{pc}\Gamma + W'_{ipc}\Psi + c_p + \varepsilon_{ipc} \tag{1}$$

where outcome Y (i.e. vote choice) is measured for individual i registered in polling center p within Parliamentary constituency c; T is an indicator variable equal to one if the polling center received the debate video screening treatment; X is a vector of indicator variables that denote the stratification bin from which exit poll respondents were drawn (where the bins were constructed by age and gender); Z is a vector of indicator variables that denote the stratification bin from which the polling center was drawn (where the bins were constructed by number of registered voters and distance to nearest neighboring center); W is a set of additional control variables determined from analysis of the control group data and will vary by hypothesis with an eye toward identifying individual characteristics that do not vary with treatment and that help explain variation in a particular outcome (see algorithm below); c is a set of constituency-specific fixed effects (the level of debate and candidates); and ε is an idiosyncratic error term clustered at the polling center level. Our main specification includes the full set of controls (X, Z and W); we will also show results for the sparser specification that includes only the stratification variables as controls (X and Z only) as a robustness check. We will determine W as any subset of {gender, age, frequency of discussing politics, education, marital status, occupation, radio ownership} that predicts outcomes for the control group with at least 95% confidence. The coefficient of interest is δ, the average treatment effect. Unless otherwise stated, all tests will be one-sided in the direction indicated below. The primary source of data is the individual-level exit polls.

We will test for heterogeneous treatment effects at the level of constituency, candidate and voter, adjusting for multiple inference within each level (i.e. grouping together the tests for all of the voter-level sub-groups when adjusting standard errors). Specifically we will test for differential effects along the following dimensions:

- **Competitiveness of constituency (primary)**: the impact of debates on voting choices is expected to be increasing in the competitiveness of the race, as measured by the (decreasing) margin between vote shares for first and second place MP candidates in the previous 2007 election. We will also test (two-sided) whether competitiveness differentially effects measures of policy alignment and likeability.

2

- **Candidate performance (primary):** better debate performance (as measured by the expert panel) is expected to enhance the effects of debates on the ability of voters to correctly locate candidate's policy positions, and divergence in performance is expected to enhance treatment effects on votes for the debate winner.
- **Lesser known candidates (secondary):** voter response to strong (weak) performance by less well known candidates (including PMDC, female and non-incumbents) may be stronger than that for other better known candidates, as voters may have greater scope for updating their beliefs
- **Subgroup analysis (primary):** the voting literature suggests that the impact of debates could vary by gender, age, and level of political informedness / naïvete. These tests will be two-sided. We further predict weaker effects for people who do not speak Krio well and may have had trouble understanding the debate.

We further plan to conduct descriptive analysis in the following areas:

- **Spillovers**: establish whether controls saw / heard about the debates in the exit polls; test whether the impact of debates is positive and decreasing in distance from nearest treated polling center.

- **Dissipation of effects**: test whether the impact of debates weakens as the time between the debate screening and Election Day increases
- **Treatment saturation**: test whether the treatment effect is increasing in treatment saturation at the level of polling center; verify that the TOT effect is greater than ITT at the individual level (if some residents of treated polling centers did not attend the screening)
- **Reaction to polling center results**: test whether responses to the exit poll survey systematically vary between those who were surveyed before versus after preliminary results were posted on polling centers
- **Impacts on competitiveness**: calibrate the expected impact of debates on the competitiveness of races if taken to scale, based on estimated TEs on vote shares. Also use voter ratings of Presidential candidates to link and order ratings of MP candidates across constituencies to estimate the impact of sending the best candidate of a given party to other constituencies
- **Priming**: test for survey priming effects by comparing (i) those who attended a screening and were surveyed during the screening (the before and after survey group, plus the after only survey group) to (ii) people who attended a screening but received only an incentive survey (i.e. basic demographics were the only items collected). This complements our analysis in the I-level treatments data that compares surveyed controls to "pure" controls.

B. Hypotheses and Outcomes

In what follows we organize hypotheses and outcomes into three families: (i) "Vote choice" concerns changes in actual votes cast, which is the ultimate objective yet will be difficult to influence if stronghold candidates that already have significant advantages perform better in the debates; (ii) "Voting knowledge and behavior" reflects the informedness of voting choices and political participation, which are important in their own right and may serve as a necessary but not sufficient step between the status quo and attaining the ultimate objective of changing votes cast; and (iii) "Secondary outcomes" regarding citizen perceptions of politics that are interesting yet less directly linked to the debate experience. Multiple inference corrections will be implemented across outcomes within hypothesis and across hypotheses within family.

- **Vote choice outcomes**
  - a. Hypothesis 1: Exposure to debates increases **vote shares** for the candidate that performed the best in the debates
    - i. TE measured by vote choice in exit poll data
    - ii. Debate winner measured by audience ratings and expert assessment (i.e. two outcomes)
  - b. Hypothesis 2: Exposure to debates increases the willingness to **vote across party lines**
    - i. TE measured by vote choice and ethnicity in exit polls. Two additional measures expand the concept to incorporate non-affiliated tribes: voting for a different party for MP in 2012 than in 2007; and splitting ticket for MP (i.e. party MP different than party Pres)

- **Voting knowledge and behavior outcomes**[1]
  - a. Hypothesis 3: Exposure to debates increases **political knowledge** and leads to more informed voting
    - i. TE measured for general political knowledge as mean index on ability to name MP roles, CFF amount, healthcare entitlement, gender equity percentage
    - ii. TE measured for individual candidate attributes as ability to name candidates, distinguish better educated, public office experience, incumbency and more likely to report personal characteristic as primary determinant of voting choice
    - iii. TE measured for candidate policy stances by ability to correctly place candidate view on Gender equity, first priority issue, free health care implementation
  - b. Hypothesis 4: Exposure to debates increases **policy alignment**
    - i. TE measured on the empirical match between voter's position expressed in survey and reported stance of his/her selected candidate expressed in the debate on gender equity, priority issues, and free health care implementation. This alignment can result from persuasion and/or voters choosing aligned candidates, and we aim to unpack the two mechanisms.
    - ii. We aim to portion out potential drivers of policy alignment along a few dimensions
      1. Persuasion vs choosing aligned candidates: MP vote choice in 2007 and Presidential vote choice provide an indication of party loyalty. Greater policy alignment for voters whose 2013 MP choice matches these indicators is more suggestive of persuasion, while those whose choice differs is more suggestive of choosing aligned candidates
      2. Learning policy information vs partisan loyalty: Alignment driven purely by an effort to reduce dissonance between party preference and policy stance is less likely for voters from unaffiliated tribes, for less partisan issues (i.e. FHC is much more partisan than GEB or priority issue), and in constituencies where candidates from different parties articulated the

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[1] Note that many of these questions are not relevant for certain candidates and issues in particular constituencies: i) PMDC candidates did not participate in the debates held in constituencies 32, 46 and 47, and did not run for office in 15 and 56; ii) the APC candidate did not participate in the debate in constituency 14; and iii) the free healthcare questions were omitted by the moderator in constituency 85.

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Comment [KC6]: As noted in the I-level PAP, we realized that the outcomes for policy alignment, be it from persuasion or choosing aligned candidates, were empirically equivalent, so have combined the two hypotheses into one and noted how we will attempt to distinguish the two mechanisms.

same position. By contrast, voters moving into greater alignment with their predicted party position (as predicted by ethnicity or 2007 MP vote or Presidential vote) and the candidates diverged in the debate, is more suggestive of partisan loyalty

   c. Hypothesis 5: Exposure to debates enhances **voter openness** to other parties
- i. TE measured by higher likeability ratings for all candidates (i.e. own party, rival party, and third party where applicable) in exit polls

- **Secondary outcomes**
  - a. Hypothesis 6: Exposure to debates mobilizes the public and leads to greater **turnout**
    - i. TE measured by turnout question in exit polls verified by enumerator ID card inspection (primary) and electoral returns (lower power, secondary)
  - b. Hypothesis 7: Exposure to debates increases the perceived **legitimacy** of elections
    - i. TE measured by increasing confidence that elections are free and fair in exit polls
  - c. Hypothesis 8: Exposure to debates increases **interest in politics**
    - i. TE measured by question on frequency of discussing politics in exit poll and ability to name national candidates who were not involved in the debates (presidential candidates, and MP candidates who did not participate in the debates).

3. Domains B and C: Effects of PC-level Debates on Candidate and Party Campaigning

These two domains capture potential effects of the polling center-level screenings on the campaign strategies of candidates and political parties. As candidates and party officials are two different sets of actors we treat them as different domains but combine the exposition of the approach here as it is the same for both.

A. *Econometric specification*

Analysis of treatment effects will take the form of:

$$Y_{impc} = \beta_0 + \delta T_{pc} + X'_{ipc}\Pi + Z'_{pc}\Gamma + W'_{ipc}\Psi + c_p + \varepsilon_{ipc} \tag{3}$$

where outcome Y (i.e. receiving a gift) is measured for individual i in relation to candidate m where the individual is registered in polling center p within Parliamentary constituency c; T is an indicator variable equal to one if the polling center received the debate video screening treatment; X is a vector of indicator variables that denote the stratification bin from which exit poll respondents were drawn (where the bins were constructed by age and gender); Z is a vector of indicator variables that denote the stratification bin from which the polling center was drawn (where the bins were constructed by number of registered voters and distance to nearest neighboring center); W is a set of additional control variables that will be determined from analysis of the control group data with an eye toward identifying individual characteristics of political gift receipt; c is a set of constituency-specific fixed effects (the level of debate and candidates); and ε is an idiosyncratic error term clustered at the polling center level. Data concerning candidate expenditure will come from the individual-level exit polls; while exit poll data (and analysis)

for party support will come from (and be conducted at) the community-level. Hypotheses here are two tailed, as candidates and parties could plausibly treat campaign effort/expenditure as a substitute for the screening publicity, or they could compensate for the greater competitiveness of the race by allocating more effort/resources to treatment areas. The main objective of these domains is to test whether campaign investment complements, substitutes or is unresponsive to treatment allocation.

We will further test for heterogeneous effects along three dimensions:

- **Debate performance:** As the response of candidates and parties could vary by how well their candidate performed in the debate, we will test for heterogeneous effects by relative debate performance and degree of performance divergence as measured by expert panel and audience rankings in the before/after debate survey.
- **Party:** budget and strategy may vary by party, so we will test for differential response from the incumbent (APC), opposition (SLPP) and third party (PMDC).
- **Competitiveness:** size of response is likely decreasing in the expected vote margin.

B.   *Hypotheses and Outcomes*

In what follows we organize hypotheses and outcomes by domain (candidate versus party).

- **MP Candidate outcomes**
    a. Hypothesis 1: Candidate allocation of **campaign effort and expenditure** is responsive to debate publicity
        i. TE measured by receipt of any campaign gift, type and value of the gift, number of candidate visits in the 6 weeks leading up to the Election
- **Party outcomes**
    a. Hypothesis 1: Party allocation of **campaign support** is responsive to debate publicity
        i. TE measured by allocation of number of visits by party officials and party candidates for all races, number of political rallies, number of posters and number of gifts distributed in the community in the 6 weeks leading up to the Election[2]

> **Comment [KC11]:** Note, this will not be analyzed until the community level data is cleaned, but we are leaving here for clarity of exposition. We will note any revisions coming from what we learn now with respect to candidate spending in the PAP revision referenced in comment 3.

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[2] Note regarding interpretation: there is some overlap between the information collected for the party and the MP above. The questions on the community survey for party cover gifts from party officials and candidates for any office, where the offices are President, MP, Local Councillor and Council Chair.