Pre-analysis Plan

Electoral Effects of Development Aid: Experimental Evidence from Sierra Leone

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Overview

This study evaluates the electoral effects of a recent public health development intervention in Sierra Leone on 2018 election result. In early 2017, 300 villages in Kono Districts— Sierra Leone's most electorally competitive district— were randomly selected to receive a One Health intervention. The project was financed by international donors, implemented by the government of Sierra Leone, and supported by local authorities. Importantly, villages were randomly chosen to receive the intervention and politicians played no role in directing which villages received the intervention.

There is strong evidence that voters reward politicians for receiving resources that are distributed through clientelistic networks (Golden and Min 2013), a common concern during development projects (Jablonski 2014). However, it is not well understood how voters react to receiving randomly assigned development aid that politicians had no say in directing, especially when voter attribution is uncertain. Voters may reward incumbent politicians even though they had no part in directing resources to eventual beneficiaries (Hartmann 2017). Likely development aid opens up channels for political credit claiming (Healy and Malhotra 2013; Guiteras and Mobarak 2016)

We test if voters reward politicians for development aid by comparing incumbent vote share in villages that received the aid intervention to incumbent vote share in villages that did not receive the aid intervention. We use election day exit polls to obtain village-level electoral data.

Elections were held simultaneously for the following positions:

- President
- District Councilor
- District Council Chairman
- Member of Parliament (MP)

Treatment Assignment

Our study population consists of communities that have a Community Health Worker within the seven most important animal agricultural chiefdoms in the district. We limit communities to those that have Community Health Workers because the One Health Intervention requires the interaction of human and

animal health workers.[1] In addition, 11 communities that were part of a pilot study were also removed from sample. This leaves us with a population of 370 villages.

We randomly select 300 communities to take part in the One Health Intervention using a two-step randomization procedure. Due to frequent inaccuracies in administrative data, the existence of communities needs to be verified before communities are officially assigned to participate in the One Health intervention. For example, administrative records may contain communities that have since relocated or merged with a nearby village or contain multiple names for the same communities.

Therefore, the first step of the randomization procedure selects 325 of the 370 villages to make a village visit. Seven communities were found not to exist. This limited the overall population to 363 and the "visited" sample to 318.

The second step of the randomization process randomly selects villages to receive the One Health intervention, blocking on chiefdom. Specifically, each chiefdom is assigned a quota of treatment villages based on the number of the number of visited villages. We then randomly assign treatment within each chiefdom to achieve quotas. The table below presents the logic. There were 49 villages listed in Fiama Chiefdom, but only 43 were found to exist. Fiama is then assigned a quota of 40 villages, as 300/363*43 rounds to 40.

Chiefdom	**Visited**	**Exist (Eligible)**	**Target**
Fiama	49	43	40
Gbane Kandor	24	24	23
Gbense	43	37	36
Lei	77	63	63
Mafindor	41	35	34
Soa	110	102	91
Toli	16	14	13
Total	**363**	**318**	**300**

Theoretical Framework

- Politicians can have high or low competence[2]
- Voters want to select politicians with high competence
- Voters do not observe politician competence but observe public signals and for expectations about the competence of the incumbent politician.
- Citizens will vote for the incumbent if they expect the incumbent to be more competent than the challenger

[1] One community is removed from sample because it has two CHWs.

[2] "Competence" here includes a politicians ability to secure benefits for their constituents

Citizens in study communities can receive two types of public signals:

1. The presence of the One Health Intervention
2. Politician credit claiming for the One Health Intervention

Treatment condition provides a positive shock to these two parameters, improving the incumbent's probability of being reelected.

This logic relies on several assumptions:

1. All other competence signals are equal across treatment and control communities
2. Politicians cannot credit claim for the Intervention in communities that did not receive it
3. Communities believe that the is intervention in part due to the competence of a political actor, but will not necessarily assign credit to politicians
4. Community members perceive the intervention as valuable

Below, I defend assumptions 3 and 4

Attribution and program benefits

Political Attribution

In this section I defend Assumption 3 with two arguments. First, communities likely (rightly) perceived that politicians were involved in bringing the interventions to their chiefdoms. Second, the multitude of actors involved in organizing and implementing the Intervention means that politicians do not automatically get the credit.

As described in detail below ("Treatment Assignment") the 300 beneficiary communities were randomly selected from a larger subset of 370. However, there is still good reason to think that community members perceive the project implementation as a signal for political competence. While communities were randomly selected, the choice of Kono District and seven study chiefdoms was made with heavy political involvement. Kono District was selected as a joint agreement between national level Ministry of Agriculture and the Royal Dutch Embassy in Ghana (project donor). The seven study chiefdoms were selected by the District Ministry of Agriculture, based on a logic of livestock density. Moreover, it was not protocol to tell beneficiary communities that they had been randomly selected.[3]

Next, I describe the main actors involved in implementing the Intervention and how knowledge of implementing actors was transferred to communities.

Royal Dutch Embassy in Ghana: Funded the project. Representatives from the Dutch Embassy visited Kono District in DATE to meet district level officials and hold a workshop in Kombayendeh, a large trading town in Lei Chiefdom, Kono. At this workshop Dutch donors met the Paramount Chief of Lei, key community and chiefdom authorities and Community Animal Health Workers from Lei and Toli Chiefdom that had been trained during a pilot training in November 2016.

[3] Paramount Chiefs and District authorities new the randomized selection process. So it is possible word spread to the communities.

Njala University (Sierra Leone), Wageningen University (The Netherlands), & Ministry of Agriculture: These three institutions were given credit during numerous Intervention contact events. Contact events are occasions where project facilitators met with project beneficiaries to carry out a component of the project. Contact events include:

- Letters sent to communities to inform of upcoming village visit
- Community level Survey to collect blocking information
- CAHW Test
- CAHW Survey
- Household Survey
- Community Midline Survey

Paramount Chiefs: Chiefs are always involved in government development projects that occur in their Chiefdom.[4] The One Health Intervention engaged paramount chiefs and obtained their buy-in and cooperation for the project. Importantly, Paramount Chiefs selected a potential CAHW for every village. Moreover, Paramount Chiefs often play the role of identifying which communities should benefit from governmental development projects.[5]

Intervention is valuable

In this section I defend Assumption 4, that community members value the intervention. At the core of the intervention is the training of a Community Animal Health Worker (CAHW). The Community Animal Health Worker was selected by the Community / Paramount Chief and underwent an intensive 22-day training session in the District capital (Koidu).[6] Training focused on animal husbandry best practices, disease surveillance (monitoring and reporting community diseases), and treatment of basic ailments including dehydration and worms. The training manual was specifically designed for Sierra Leone and disease surveillance modules were updated and improved after the Ebola outbreak.[7] Training was conducted by a team led by a senior veterinarian and Kono District Livestock Officer. After graduating the training program CAHWs received a "started kit" of medicine to treat basic illnesses and tools for community services (burdizzo for bloodless castration and hoof clippers). Additional medicines can be purchased at cost from the District Livestock Officer. The CAHW is entitled to charge a fee for his services to cover his work and recover his costs so that he can buy more medicine.

The One health Intervention also provides many community level benefits, which can be divided into two groups: benefits from treatment and benefits from surveillance. XXX percent of households in Kono District have livestock.[8] The CAHW has the training, medicine, and tools to provide important services to animal owners.

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[4] I am uncertain if this a formal policy or a norm. As Paramount Chiefs like to point out, it is "custom" for any person not from that chiefdom ("stranger") to report to the P Chief upon entering the chiefdom, government officials included.

[5] This is anecdotal. Need to conduct Interviews with NGOS and MAFFS officials to see how beneficiary communities are usually assigned in development projects

[6] The community members and the paramount chief nominated a candidate for every community, one of which was randomly selected.

[7] Training Manual available upon request

[8] Recent FAO survey. This number is likely higher in our study communities as we focus on the chiefdom where livestock is most important

Second, CAHWs provide disease surveillance. They are responsible for identifying, recording and reporting disease that arise in the community. CAHWs are incentivized to provide accurate reports through quality-based pay or community monitoring. While no systematic data exists on animal disease (this study is the first attempt to systematically capture animal diseases at a community level), the devastation brought by preventable animal diseases is common knowledge. New Castle Disease frequently wipes out community poultry stocks and PPR ("Goat Plague") kills large numbers of goats.[9] A disease surveillance system that provides information about community disease in a timely manner to District Office gives the opportunity for District MAFFS to respond to curb the outbreak.

Hypotheses

Hypothesis 1: Voters in villages that received the One Health intervention are more likely to vote for the incumbent candidate.

Hypothesis 2: Voters are more likely to vote for incumbent politicians when they attribute the development project to incumbent government

Data

The exit poll survey provides information on 1) voting behavior for the four contested positions, 2) respondent's perception of credit claiming behavior of politicians up for election, 3) social position of voter in community, 4) demographics and village of residence.

The Paramount Chief Survey elicits the electoral preferences of Paramount Chiefs by asking 1) which party they feel is most capable of doing what is best for the people of Sierra Leone at a national level, 2) which Local Councilor/District Council Chairman/MP is most capable of brining development.

Analysis

To test the first hypothesis we estimate:

$$Y_c = \beta_0 + \beta_1 OH_c + \varepsilon_c \quad (1)$$

where Y_c is the voting percentage for the incumbent in community c; OH_c is a dummy, 1 if the community received the One Health Intervention and 0 if the community did not receive the intervention; ε_c is the usual idiosyncratic error term. The parameter of interest is β_1.

To test Hypothesis 2 we add an interaction term to Equation 1:

$$Y_c = \beta_0 + \beta_1 OH_c + \beta_2 Attribution + \beta_3 (OH_c * Attribution) + \varepsilon_c \quad (2)$$

Where β_3 is the interaction between One Health Intervention and respondent's attribution of the project to the incumbent politician.

[9] Per numerous conversations with MAFFS personal at national and district level, leading veterinarians, FAO staff, Paramount Chiefs, community members etc.

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