

# Aid Flows and Incumbency Advantage: Evidence from NGO Projects in Uganda

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## Abstract

Most studies of electoral returns to foreign aid focus on projects implemented by aid-receiving governments and subject to political control. Recently, donors have sought to bypass political capture by channeling aid through NGOs. Combining fine-grained spatial data on aid and elections in Uganda, I show that although NGO-implementation reduces political influence, voters still reward incumbents for NGO projects. To isolate a causal effect, I use difference-in-differences designs, matching on covariates selected using machine learning, and a placebo test based on spatial lags. Using original survey data, I show that credit results from citizens seeing powerful politicians as controlling the allocation of NGO projects. Drawing on health, election, and campaign data and an extensive battery of tests, I provide additional evidence for the mechanism and rule-out alternative explanations. Even when designed to prevent political windfalls, development assistance may entail a trade-off between improving the welfare of citizens and strengthening autocrats.

# 1 Introduction

Scholars and practitioners have long argued that foreign aid contributes to an incumbency advantage for unresponsive and often undemocratic central governments.<sup>1</sup> These arguments have assumed that aid benefits incumbents because it provides new resources or frees up existing resources that incumbents can use to buy political support (Bermeo, 2016; Jablonski, 2014; Ahmed, 2012; De Mesquita and Smith, 2009; Kono and Montinola, 2009). Concerns that aid undermines accountability for aid-receiving governments has prompted donors to adopt new forms of aid delivery that limit recipient control (Bader and Faust, 2014; Dietrich, 2016, 2013). This included a shift away from budget support and to the financing of specific donor-conceived projects (project-aid), and more recently, to the use of non-governmental organizations (NGOs) rather than receiving-government ministries to implement aid projects (bypass aid).

Explanations for how project-aid yields credit for executives have focused on their ability determine project locations (Jablonski, 2014, p. 302). However, bypass aid represents an especially restrictive form of project-aid that outsources these decisions to NGOs rather than aid-receiving governments, thereby limiting opportunities for credit. However, this explanation assumes that voters have accurate information about how aid projects are allocated. In reality, voters have limited information and receive mixed messages about this process. First, it is unlikely that typical voters can observe whether aid goes disproportionately to the incumbent's political supporters. Furthermore, aid projects are typically branded by donors, implementers, and government ministries (Dietrich et al., 2018; Moore, 2018), and local politicians sometimes claim credit for specific projects in their communities (Cruz and Schneider, 2016; Guiteras and Mobarak, 2015). However, voters often *do* have information about how similar government services are allocated, and may assume that development projects, whether implemented by a government ministry or an NGO, are controlled by similar forces.

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<sup>1</sup>Easterly, William. "Stop Sending Aid to Dictators," [Time](#), March 13, 2014.

In many developing countries, access to basic services is conditioned by the strategic interests of powerful politicians. When information about the true role of government in NGO project allocation is unavailable, rational voters may interpret the presence of external resources in their community as targeted transfers from powerful politicians. Indeed, when political actors credibly portray government service provision as a reward for historical support or an inducement to increase future support, this distributive logic may also be ascribed to services from external sources. If these transfers are seen as valuable, voters are likely to reciprocate at the ballot box. In fact, if national incumbents can receive credit without active interference, they may even face little incentive to expend effort on influencing project allocation.

This possibility is supported by a story told by the executive director of a small health NGO operating in about 40 villages in Central Uganda. In July 2019, the director was presenting in front of a district government about expanding the NGO’s activities into several remote villages in their district. As the meeting concluded, the various officials present at the meeting took turns expressing their support for or reservations about the proposed activities. Among these officials was the Resident District Commissioner (RDC), a presidential appointee charged with “doing what the president thinks is important in that district to secure his re-election” (Manyak and Katono, 2010). When it was their turn to speak, the RDC expressed in blunt terms the criteria by which they judge NGO projects, saying “Okay, well this program will come in, and people will become healthier because of it, and then they will vote for the president. So yeah, I’m in favor of this...”.

My argument departs from earlier investigations of political windfalls from foreign aid in two important ways. First, I propose an explanation for political windfalls from aid that does not require politicians to be in control of project allocation. Second, while recent work suggests that active undeserved credit claiming for aid projects at the community level generates political credit for *local* incumbents (Cruz and Schneider, 2016; Guiteras and Mobarak, 2015), national politicians are typically unable to claim responsibility for individual

projects in the same manner. I argue that active credit claiming may be unnecessary for powerful national incumbents, suggesting that political windfalls require less effort from politicians, are likely to occur in more institutional contexts, and will be more resilient to changes in donors' aid-disbursement strategies than previously assumed.

I test this theory of political credit for bypass aid in Uganda, where the incumbent president exerts political control over the allocation of government resources for overtly political ends. To measure NGO service delivery, I code 2,426 aid project locations for whether they were implemented by a recipient-government or an NGO. I match these project locations with returns for 4,562 parishes from three successive elections and use spatial difference-in-differences (DD) designs to demonstrate that increases in NGO service delivery caused increases in electoral support for the president. Spatial lags show that the effect of aid projects on political support was isolated to recipient parishes and decayed rapidly across neighboring parishes. To increase confidence in causal claims, I match project locations with more than 50 variables from the 2002 census, administrative, satellite, and election data, and use Least Absolute Shrinkage and Selection Operator (LASSO) regression with cross validation to identify predictors of project locations. I then use entropy balance matching to weight untreated parishes according to their similarity to treated parishes on variables that are predictive of NGO project activity at the parish level. The fine-grained spatial resolution of my data disaffirms several alternative explanations, including the reallocation of government spending.

To demonstrate that NGOs provide valuable services, I match the location of NGO-implemented health projects with geotagged panel data from the Uganda National Panel Survey (UNPS) and use DD models to show that projects improve health outcomes for respondents within a project's catchment area but have no detectable effect on health outcomes outside it. I then present evidence that political influence over the allocation of NGO projects is minimal. Drawing on qualitative data from interviews and donor project documentation, I describe the allocation process in Uganda to show that bypass aid circumvents political

influence over the geographic distribution of NGO projects. Using LASSO regression, I show that political characteristics are not predictive of NGO project locations. Finally, I use new data on presidential campaign promises to show that politically valuable districts are not targeted for more NGO activity.

To provide evidence that citizens assume powerful incumbents control NGO project allocation, I draw on an original survey to show that citizens are able to identify services as provided by NGOs but see the president as controlling allocation. To evidence that the president does not actively claim undeserved credit, I combine district-level data on NGO projects and presidential campaign visits to show that the president is not more likely to visit districts with more projects. I then show that Members of Parliament (MPs) are *not* seen as controlling project allocation and hence do not receive electoral credit for NGO projects. I also show that aid projects do not affect voter turnout and that the effects of NGO projects on presidential support are not conditional on historical partisan alignment. Surprisingly, I find that government-implemented aid projects—which typically provide less visible and politically salient public goods—do *not* increase electoral support for the president.

This paper contributes to several important literatures. First, I identify a new mechanism shaping the political economy of foreign aid by focusing on specific types of aid with unique properties (Qian, 2015). I also connect the literatures on foreign aid and non-state service delivery with recent work on credit attribution to show that while citizens know when services are provided by NGOs, non-state provision can bolster support for incumbents rather than undermining government legitimacy (Dolan, 2020; Dietrich et al., 2018; Baldwin and Winters, 2018; Brass, 2016). Finally, I contribute new evidence to a broad literature on retrospective voting in African countries and whether voters reward incumbents for service delivery (Blattman et al., 2018; De Kadt and Lieberman, 2017; Briggs, 2019).

Empirically, I utilize data with greater spatial granularity than previous studies investigating the electoral impact of foreign aid. This allows me to utilize a more precise measure of regime support than cross-national work and existing spatial analyses, which have typi-

cally relied on regime-change, social unrest, or survey based measures of incumbent support. The results demonstrate that even under conditions explicitly designed by donors to prevent political windfalls, development assistance often entails a trade-off between increasing citizen welfare and strengthening incumbents in aid-receiving countries. In the final section, I discuss the political conditions under which political windfalls are most likely and speculate about how these results may vary in other contexts.

## **2 The Argument**

Theoretical and empirical work linking aid to an incumbency advantage has argued that only fungible types of aid benefit incumbents (Ahmed, 2012; De Mesquita and Smith, 2009; Kono and Montinola, 2009). Fungible aid can take the form of direct budget support, influence over subnational allocation of aid projects, or funding for activities the receiving-government would have undertaken in the absence of aid, thereby “free[ing] up government finances for other purposes” (Bermeo, 2016). Bermeo argues that donors vary the composition of aid packages to minimize fungible aid, which can buy policy concessions but which receiving-governments will use to fund support-buying activities. As an example of donors’ deployment of non-fungible aid, Bermeo cites increased channeling of aid through NGOs. Similarly, Jablonski (2014) argues that project-aid in Kenya resulted in political credit for the executive because donors delegated decisions about the subnational allocation of these projects to the central government. The president then targeted aid to his supporters, inciting reciprocity from recipient communities.

Despite the prevalence of these arguments, empirical evidence for political bias in aid project locations is mixed. Briggs (2012) shows that a World Bank electrification project in Ghana went to areas that supported the ruling party. Briggs (2014) shows that roads (but not hospitals) flowed disproportionately to areas that supported the ruling party in Kenya. Jablonski (2014) shows that constituencies with more co-ethnics of and higher win margins for Kenyan presidents received more World Bank and African Development Bank projects.

Alternatively, Masaki (2018) find that World Bank, African Development Bank, and Japan International Cooperation Agency (JICA) projects in Zambia went disproportionately to opposition districts. Finally, Knutsen and Kotsadam (2020) draw on data for more than 30 African countries and find no relationship between the location of World Bank projects and prior incumbent support. Importantly, if bypass aid works, project locations should not be correlated with political characteristics of receiving communities. This is supported by evidence from Brass (2012), who finds no relationship between political characteristics and the distribution of NGO resources in Kenya. I provide similar evidence for Uganda in Section 7.3.

However, alternative explanations of political windfalls exist. Politicians may receive credit for oversight of aid. National politicians often have a hand in negotiating aid packages, building the state capacity necessary to successfully administer government-implemented aid projects, and regulating the NGO sector (Swedlund, 2017). In areas where aid projects are visible and perceived as high-quality, voters may update their beliefs about the valence of incumbents seen as attracting foreign aid to the country, maintaining effective government agencies, or exercising oversight over implementing NGOs. Regardless of whether political credit for negotiation or oversight is justified, this mechanism predicts that executives would receive credit even without controlling project allocation.<sup>2</sup> At the very least, perceptions that aid provides valuable services seems necessary, if not sufficient, for political credit.

Alternatively, incumbents may actively claim credit for the presence of aid projects. While evidence suggests that branding of aid-funded and NGO-implemented programming can be effective at communicating to beneficiaries the source of funding or the role of NGOs in delivery, this does not preclude political credit. Empirical work has consistently found

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<sup>2</sup>While credit for the successful implementation of government-implemented aid projects or the negotiation of generous aid packages is clearly justified, credit for regulating the NGO sector is less clear-cut. High-profile cases of NGO impropriety indicate that government can play a productive role in policing the NGO sector. However, governments' regulatory efforts are often focused on finding ways to curtail advocacy work by civil society groups rather than actively promoting NGO effectiveness (Brechenmacher, 2017; Carothers and Brechenmacher, 2014). While allowing NGOs to operate reflects a preference for expanding service provision over closing civic space, donor reliance on bypass aid often signals a lack of faith in the receiving government's intentions or capacity (Swedlund and Lierl, 2020).

positive effects of branded NGO and aid activities on perceptions of receiving-government legitimacy and capacity (Tsai et al., 2020; DiLorenzo, 2018; Dietrich et al., 2018; Brass, 2016; Dietrich and Winters, 2015). Evidence suggests that local politician can successfully claim undeserved credit for specific NGO or government-implemented aid projects at the community-level (Cruz and Schneider, 2016; Guiteras and Mobarak, 2015). While national politicians may visit or hold rallies in areas with high levels of aid activity, these efforts are likely to be costly and reserved for high-value projects.

Finally, credit may be the result of an ‘impression of [incumbent] influence’ over project allocation (Grimmer et al., 2014). Incumbents may make general statements in the press about their role in targeting aid projects or enlist local appointees to claim credit on their behalf. Alternatively, it may be that citizens are aware that political incumbents control the allocation of similar government resources (such as health and education services) and assume that these incumbents have a similar influence over the allocation of government and NGO-implemented aid projects. In many developing (and developed) countries, the strategic interests of powerful politicians drive the allocation of state resources (Hicken, 2011). Rational voters attempting to assign credit for the presence of an NGO project in their community are likely to draw on their knowledge of how similar government resources are allocated in their country. Attribution is also complicated by the tendency for NGOs to focus on services like health and education where responsibility for quality and availability often lies with multiple actors operating at different levels (Niedzwiecki, 2018; Mani and Mukand, 2007). This tendency is likely exacerbated by the prevalence of co-branding between donors, implementing NGOs, and relevant government ministries, which is standard even when there is little or no role played by government.

If credit does not rely on voters observing the partisan distribution of aid projects to infer targeting, but instead voters hold prior beliefs that the executive controls the distribution of resources, increases in support may be independent of historical patterns of support. In such cases, citizens that benefit from these resources will be most likely to reciprocate with



electoral support for the incumbent. Voters in opposition communities that receive benefits may take the presence of aid projects as a sign of good faith or programmatic intentions on the part of the executive. If incumbent executives receive credit for aid projects due to an impression of influence, they may face few incentives to exert political control over the allocation of aid projects or resist donor efforts to channel aid through NGOs.

Which political actors get credit is likely to depend on the political system. For example, in many African countries, “levels of access to a system of spoils define the political game” and “presidents control that access” (Morse, 2018). In such countries, I would expect that presidents receive credit for aid-funded NGO projects. However, in contexts where Members of Parliament are seen as controlling distributive politics, these actors may be more likely to enjoy increased support. While opposition figures may try to undermine this impression, discrediting powerful politicians that could plausibly control allocation is likely difficult. Similarly, while donors or implementing NGOs may wish to dispel the impression of executive influence, attempts to inform communities that services are distributed independently of government control may add to project costs and create conflict with receiving governments.

The mechanisms described above represent cases where incumbents receive direct credit for aid projects, rather than receiving credit for new government activities provided using reallocated funds (when aid funds activities government was previously funding) or the misattribution of general improvements in welfare to changes in government behavior or policy. In the following section, I describe how my research design casts doubt on spending reallocation as an alternative explanation for my findings. In the final sections, I present evidence that citizens credit the president with directly influencing NGO project allocation, making this a more likely explanation than a diffuse credit for improved community or household welfare caused by NGO projects.

### 3 The Context

I test whether national politicians receive electoral credit from NGO-implemented foreign aid projects in Uganda, a low-income country in East Africa ruled by an electoral authoritarian regime. Uganda resembles other countries in Sub-Saharan Africa in important ways. First and foremost, Uganda is characterized by a powerful chief executive. This is typical of African countries, where presidents “wield disproportionate formal powers vis-à-vis other political institutions”, including “the ability to channel state resources” (Morse, 2018). According to the presidential Power Index which ranks countries according to levels of formal presidential power, Uganda (0.436) scores near the average for African countries (mean=0.44, min=0.04, max=0.79).

Uganda’s President Yoweri Museveni came to power in 1986 following a protracted civil war that decimated much of the nation’s service delivery infrastructure. Museveni’s National Resistance Movement (NRM) party firmly controls the national legislature, with 69% of MPs currently NRM affiliates. National elections are held every five years, and the 2006 elections were Uganda’s first multi-party elections in 25 years. While elections are not marred with massive fraud, they are also not fully free and fair, as harassment of opposition leaders and vote buying are common (Tripp, 2010). Museveni has been able to continue winning elections in part by exerting tight control over resource allocation. The allocation of public goods in Uganda is explicitly transactional and the president frequently makes public statements linking provision to votes. Not only does the president acknowledge in campaign speeches that receiving government resources can be a reward for supporting him and his party, but he also describes provision as an inducement to increase support. Regardless of political alignment, resources are seen as targeted attempts to reward supporters of or increase support for the president.

Service provision is extremely salient political issue in Uganda, as in Africa more broadly. Afrobarometer survey data on the policy priorities of 47,937 respondents from 31 countries in Sub-Saharan Africa and 2,400 respondents from Uganda in 2015 reports the share of respon-

dents that mentioned various policy areas as one of the three “most important problems facing [the] country that government should address”. For both Uganda and full sample, eight of the top ten problems cited relate to service delivery. When asked to report the top two priorities for increased government spending, healthcare was mentioned by 61.6% of Ugandan respondents and 54.1% of respondents across Africa. Uganda also resembles many African countries in that parties do not compete on ideology, making information about incumbent quality and service provision especially useful to voters (Butler and Powell, 2014; Stokes, 2007).

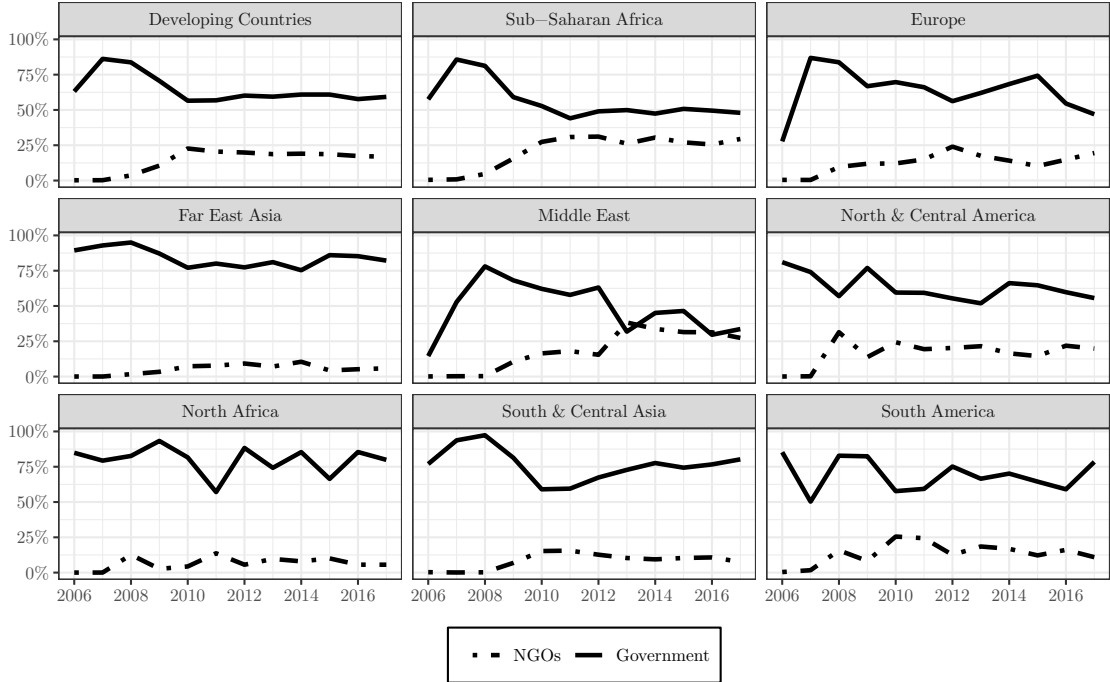


Figure 1: Share of project-aid channeled through NGOs and receiving-government ministries by region. Source: OECD

Despite a clear public desire for increased government service delivery, per capita government health expenditures in Uganda remained flat between 2004 and 2015 while foreign aid expenditures increased by 218%. These aid expenditures are increasingly channeled through NGOs; major incidents of misuse of government-implemented aid project funds have led to the temporary suspension of aid to several countries, including Uganda.<sup>3</sup> Between 2005 and

<sup>3</sup>“Aid robbed in Uganda: What can be done?,” [Transparency International](#), November 23, 2012

2017, the share of bilateral ODA received by NGOs in Sub-Saharan Africa increased from about 5% to more than 29%.

Evidence from African countries suggests that these massive international flows improve citizen welfare. While effects of foreign aid on economic development are hotly contested (Qian, 2015; Wright and Winters, 2010), a substantial body of work has found a positive relationship between foreign aid and health outcomes in Africa at both the national (Deaton and Tortora, 2015; Bendavid and Bhattacharya, 2014; Bendavid et al., 2012; Mishra and Newhouse, 2009) and subnational level (Odokonyero et al., 2018; Kotsadam et al., 2018). Evaluations of specific NGO interventions with positive effects are also common (Tsai et al., 2020; Bold et al., 2018; Björkman Nyqvist et al., 2019; Croke et al., 2016). In their systematic review of published research on NGOs between 1980 and 2014, Brass et al. (2018) find that scholarly publications on NGOs overwhelmingly report positive effects of NGO programs on health and governance outcomes. Citizens' attitudes also suggest NGOs are a positive force (de la Cuesta et al., 2018; Katusiimeh, 2015; Meessen et al., 2011). Across African countries, citizens report extremely high levels of trust in NGOs relative to government and other private institutions, low levels of perceived corruption among NGOs, perceive NGOs as effective and NGO services as higher quality than government services, and feel that NGOs have benefited their communities (Tsai et al., 2020; Springman, 2020; de la Cuesta et al., 2019; Blair et al., 2017; Brass, 2016; Jamali, 2014; Jivani, 2010). In Section 7.1, I discuss original causal evidence that NGO-implemented health projects in Uganda improved health outcomes within their catchment areas. In Section 7.3, I also provide qualitative and quantitative evidence that political influence over the allocation of NGO-implemented aid projects in Uganda is limited.

## **4 Data**

To show that NGO service delivery increases political support for the incumbent president, I turn to micro-data from Uganda. I measure support using parish-level data from the 2006,

2011, and 2016 general elections in Uganda provided by the Uganda Electoral Commission. Because there has been substantial proliferation of administrative units during the period under analysis (Grossman and Lewis, 2014), polling stations must be aggregated into an administrative unit that is stable over time. To accomplish this, I use polling station coordinates to identify the parish of each station using 2002 parish boundaries. See appendix D for additional information about how this dataset was constructed. Electoral support is measured as both the president’s vote share (votes for the president divided by the total votes cast) and win margin (president’s vote share minus the runner up’s vote share) at the parish level. Parishes are the second smallest administrative unit in Uganda (just above villages), containing an average population of about 5,000 residents and five to ten villages. Parishes also provide a relevant administrative unit for the study of service delivery: government policy aims for each parish to have one primary care health facility and one primary school, although this is not always the case in practice.

Subnational data on aid flows in Uganda was provided by AidData.org (Strandow et al., 2011). This data contains detailed information on all projects captured by Uganda’s Aid Management Platform between 1978 and 2014, maintained by Uganda’s Ministry of Finance. This dataset includes information on 565 projects financed by 56 donors across 2,426 locations and encompassing almost \$8 billion in disbursements. I worked with research assistants to code each project according to the implementing organization. Coding procedures were designed to identify whether projects were implemented by a government ministry or an NGO and whether the project provided services to citizens (rather than budget support or purely advocacy-focused programming). Research assistants consulted publicly available project materials to identify the implementing organization. Of the 317 codable projects, the implementing organization was successfully identified for 296.

To minimize ambiguity, projects were coded according to the organization that implemented project activities or directly received project funds. The coding of most projects was straightforward; for instance, the Japan International Cooperation Agency funding im-

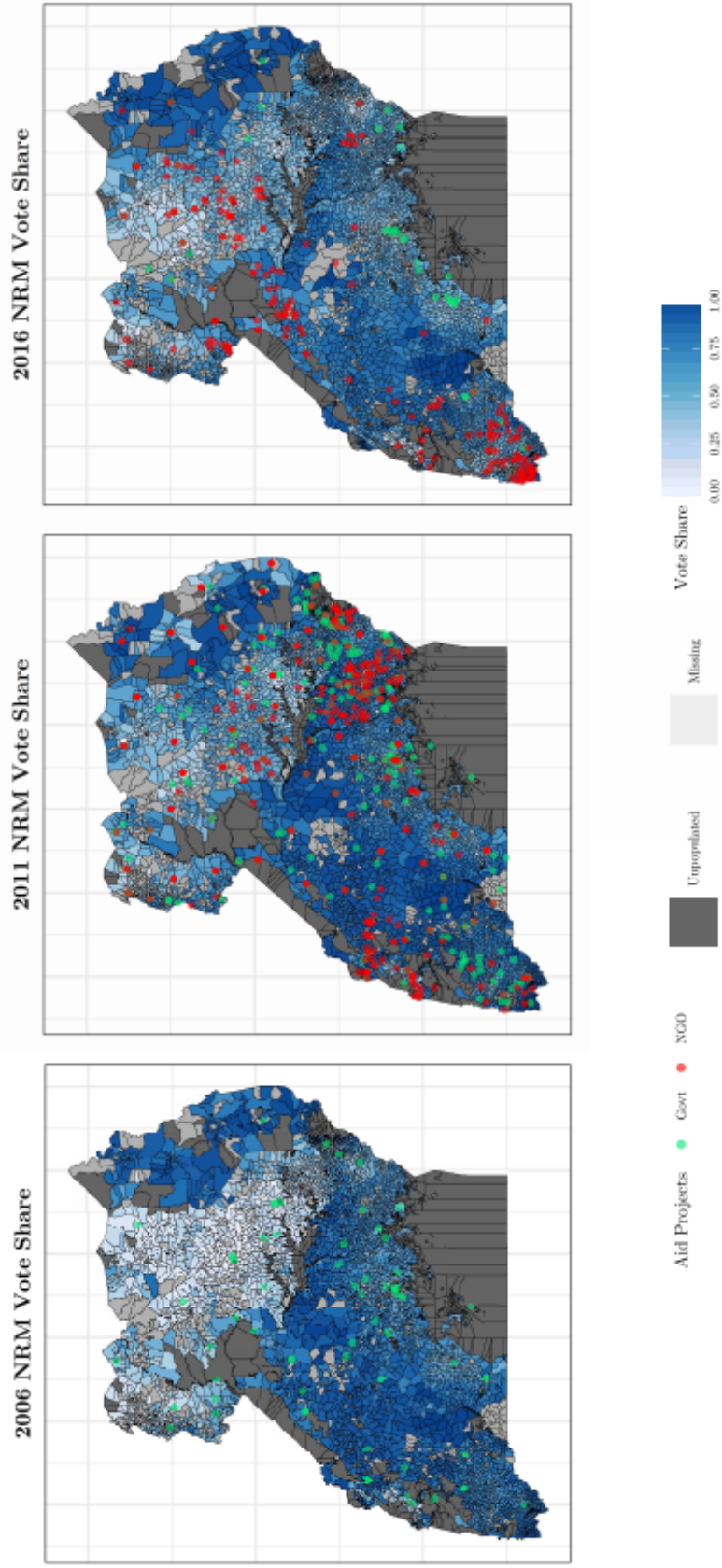


Figure 2: This map presents the geographic distribution of NGO (red points) and government-implemented (green points) aid projects active during each election year. Blue shading indicates the president's vote share. Light grey polygons show parishes missingness, which is evenly distributed across the country. See appendix D for a discussion of missing election data.

provements to the NGO-operated Bukonte Health Centre.<sup>4</sup> However, others were more complicated. For example, the Youth Empowerment in Karamoja Project was funded by the United Nations Development Program and implemented by an NGO called the Uganda Youth Network (UYONET). Although the Ministry of Finance was listed as an Executing Entity, all funds were disbursed to the Implementing Entity UYONET, which was also listed as the Responsible Party for all project activities.<sup>5</sup>

Table 1: Number of Parishes by with Projects by Implementer and Election

Projects	2006		2011		2016	
	NGO	Govt	NGO	Govt	NGO	Govt
0	4561	4546	4432	4436	4447	4555
1	0	16	123	115	104	6
2	0	0	7	10	11	1
3	0	0	0	1	0	0
<b>Total</b>	0	16	130	126	115	7

Parish-level NGO activity is measured in three ways: the number of active projects per 2,000 registered voters, the amount of project spending per registered voter, and a binary measure of whether or not the parish had an active project.<sup>6</sup> Because elections in Uganda take place in February, for a project to be coded as active during an election year, I require that disbursements were ongoing in the year immediately prior to the election *and* during the election year to ensure that projects did not begin during an election year but after the election was held. It is important to note that coverage of the AidData dataset ends one year prior to the final election in this dataset, meaning projects receiving their first disbursements in 2015 are not captured. This also means that all projects in the dataset were implemented prior to the 2015 NGO bill, which increased the government’s oversight authority of NGOs.

Table 1 reports the number of active aid projects per parish for each election year; I include

<sup>4</sup>“The Project for Improvement of Bukonte Health Centre in Namutumba District,” [Embassy of Japan in Uganda](#), January 20, 2012

<sup>5</sup>“United Nations Development Programme Project Document,” [United Nations Development Programme](#), February 22, 2011

<sup>6</sup>The number of registered voters in each parish is used to normalize variables because census data could not be matched with election data for a subset of parishes. The absence of census data for certain parishes is the result of failure to match administrative unit names between the census and election data caused by inconsistent naming across government ministries.

the number of parishes with active government-implement aid projects for comparison. See Table J.9 for the distribution of projects by sector.

Table 2: Share of Projects by Implementor and Sector for the Full and Election Year Samples

	Full Sample			Election Years		
	Govt	NGO	Count	Govt	NGO	Count
Health	7%	93%	248	9%	91%	143
Agriculture/Extension	13%	87%	109	0%	100%	75
Education	66%	34%	99	67%	33%	63
Government and Civil Society	61%	39%	88	63%	37%	86
Water and Sanitation	37%	63%	52	47%	53%	36
Transportation Infrastructure	100%	0%	34	100%	0%	29
Social Infrastructure	85%	15%	27	0%	100%	1
Energy	100%	0%	17	100%	0%	14
Business/Trade Development	83%	17%	6	80%	20%	5
Total	37%	63%	680	38%	62%	452

As is common with geo-tagged data, some coordinates in the data are centroids of higher-level administrative units (subcounty, county, and district). To leverage the geographic precision of election results, I restrict the primary analysis to projects that were coded at the parish or village-level. Even after correcting for several inaccuracies in the original data, data on project spending contains extreme values. I remove all parishes taking values above the 95<sup>th</sup> percentile of the independent variables' distribution. Removing these parishes from the data has the advantage of comparing a more homogeneous sample of NGO and aid activities. Figure 2 presents a visualization of the spatial distribution of aid projects and support for the incumbent president in each election year.

## 5 Research Design

To estimate the effect of NGO-implemented aid projects on presidential support, I estimate the following spatial lag of X (SLX)<sup>7</sup> model on three cuts of the data:

<sup>7</sup>Spatial lag of X (SLX) models are appropriate when the value of the independent variable in one unit  $i$  is likely to impact the outcome in neighboring unit  $j$  through treatment spillovers, but there is no reason to expect that a change in the outcome variable for unit  $i$  will directly cause a change in the outcome variable in its neighbor unit  $j$  independent of an exposure to the treatment (Halleck Vega and Elhorst, 2015; Gibbons and Overman, 2012).



$$\begin{aligned}
Y_{it} = & \delta_i + \alpha_t + \beta_1 \text{NGO}_{it} + \beta_2 \text{NGO}_{i-1,t} + \beta_3 \text{NGO}_{i-2,t} + \\
& \beta_4 \text{Govt}_{it} + \beta_5 \text{Govt}_{i-1,t} + \beta_6 \text{Govt}_{i-2,t} + \gamma_t (\alpha_t \times \text{Share}_i) + \omega_i \beta + \epsilon_{it}
\end{aligned} \tag{1}$$

$Y_{it}$  is the president's vote share or win margin in parish  $i$  in year  $t$ ,  $\delta_i$  and  $\alpha_t$  are parish and year fixed effects,  $\text{NGO}_{it}$  is the variables of interest measuring NGO activity, while  $\text{NGO}_{i-1,t}$  and  $\text{NGO}_{i-2,t}$  are one and two spatial lags.  $\text{Govt}_{it}$ ,  $\text{Govt}_{i-1,t}$ , and  $\text{Govt}_{i-2,t}$  control for the presence of government-implemented aid projects. In both the 2011 and 2016 election, the president gained disproportionately in opposition parishes relative to competitive and stronghold parishes and in competitive parishes relative to stronghold parishes. To account for these dynamics,  $\alpha_t \times \text{Share}_i$  are interactions between year fixed effects and the president's vote share in 2006, which allow year fixed effects to have a differential impact based on the partisanship of each parish at the beginning of the sample.  $\omega_i \beta$  are optional entropy balance weights for models using a binary measure of NGO activity. Standard errors are clustered at the parish. For spatial lags, I calculate a first-order rook's contiguity matrix for all parishes. The first lag identifies parishes that are contiguous to treated parishes (neighbors). The second lag identifies parishes that are contiguous with a neighboring parish but are not contiguous to the treated parish (neighbor's neighbors). These lagged terms receive the value of the treated parish. Figure 3 visualizes the spatial lag structure. In 2011 and 2016, there were 130 and 115 parishes with at least one active NGO project, 550 and 440 parishes that were neighbors of at least one parishes with at least one NGO project, and 867 and 633 parishes that were neighbors' of neighbors of at least one parishes with at least one NGO project.

I begin by estimating the equation above using all three election periods. This model fully exploits the variation in the dataset but relies on the assumption of no time-varying confounders that are correlated with both the outcome and the treatment. To relax this assumption, I also estimate DD models on two cuts of the data. First, I restrict the analysis

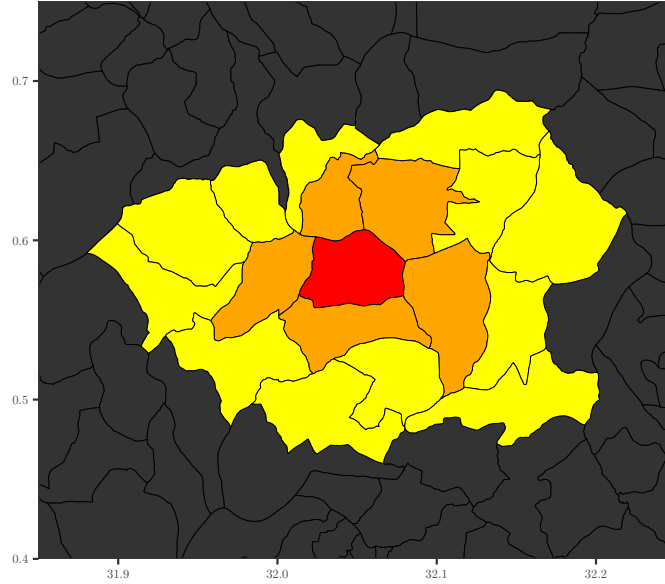


Figure 3: A visualization of the spatial lag of  $X$ ; A treated parish is depicted in red, neighbors in orange, and neighbors' neighbors in yellow. The distance between the first (31.9) and last (32.3) x-axis tick is 20.7 miles.

to the first two elections (2006 and 2011) and to parishes that did not have a project in 2006. Because values of the independent variable are zero for all observations in 2006 and non-zero for parishes that received a project in 2011, the independent variable is equivalent to the interaction between the treatment and “post” variable typically seen in DD models (“post” is absorbed by year fixed effects and the DD models simplify to equation 1). However, the identifying assumption of parallel trends remains unverified. To address this, I then re-estimate the model including all three years but include only the subset of parishes with two pre-treatment periods. In other words, I restrict the sample to parishes that did not have a project in either 2006 or 2011 and compare those that did and did not receive a project in 2016. With two pre-treatment periods, I am able to demonstrate parallel pre-treatment trends in electoral support for the president between units that did and did not have active NGO-implemented aid projects in 2016. Again, because values of the independent variable in this sample are zero for all observations in both 2006 and 2011, the independent variable is equivalent to the interaction between the treatment and “post” variable typically seen in DD models.

Because parish characteristics may drive the geographic distribution of aid projects and correlate with trends in political support, I use entropy balance matching (EBM) to reweight untreated units according to their similarity to treated units on characteristics that predict NGO activity at the parish level. To identify predictors of NGO activity, I draw on 54 variables covering a wide range of social, political, geographic, and economic characteristics from the 2002 Uganda census, the 2006 elections, 2006 nighttime luminosity, and administrative data from 2006 provided by the Uganda Bureau of Statistics. Due to the large number of variables, simply regressing parish characteristics on the outcome would risk overfitting. To account for this, I standardize all variables and use LASSO regression with 5-fold cross validation. LASSO is a shrinkage method that applies a constant shrinkage penalty  $\lambda$  to avoid overfitting and improve model performance by penalizing the sum of the absolute values of coefficients. By applying a constant shrinkage penalty to each coefficient, LASSO performs variable selection by eliminating variables that shrink to zero.

Because I include variables from the 2006 election, I only include aid projects initiated after the 2006 election but before the 2011 election to detect whether votes in 2006 affect subsequent allocation. After removing all observations with missing data on any of these variables, there are 120 parishes out of 4,106 that received some type of NGO project and 102 that received some type of government project. Due to the small number of parishes that received a project, I randomly select 80% of the treated units and 80% of the untreated units as training data. I use a LASSO model on these training data to select the optimal  $\lambda$  that minimizes Mean Squared Error (James et al., 2013; Friedman et al., 2009). At the optimal  $\lambda$ , the LASSO model retains 12 variables which I then use to calculate EBM weights. A list of variables with descriptive titles is available in appendix A. Although the President’s electoral performance is *not* retained as a predictive variable (measured as either a continuous measure of vote share or dummy variables indicating ‘swing’ or ‘core’ status), I include the President’s 2006 vote share when calculating EBM weights to guard against imbalances between treated and untreated parishes. As Table G.1 demonstrates, balance

on these pre-treatment variables improves dramatically after applying EBM weights. For additional information, see appendix G.

Table 3: Balance between variables selected by LASSO after applying entropy balance weights

	Treated Mean	Untreated Mean	EBM Untreated Mean
NRM Share	0.610	0.602	0.610
Distance: school	-2.301	-2.571	-2.303
Pres Co-ethnic	0.099	0.110	0.099
Road access	-1.246	-1.243	-1.245
RLF	0.581	0.546	0.580
ELF	0.307	0.276	0.307
Animal rearing	0.030	0.046	0.030
Trade: produce	0.047	0.025	0.047
Market: crops	0.116	0.088	0.116
Micro-finance	0.431	0.322	0.431
Animal extension	0.566	0.552	0.566
Distance: town	0.059	0.088	0.059
Nightlights	37.368	7.581	37.256

Although EBM only addresses bias from selection on observables, this is an especially compelling application. Since parishes cannot select into receiving aid projects, selection is driven by characteristics making parishes more attractive to donors and implementing NGOs. Interviews with representatives from several large NGOs that implement aid projects in Uganda suggest that these organizations frequently rely on observable information (such as census and administrative data) to make decisions about project allocation. For these reasons, it is highly likely that I am capturing many of the characteristics that drive projects allocation.

If the NGO projects in my sample act as substitutes for activities that government would have funded in the absence of aid, this may allow government to reallocate funding in a way that accounts for electoral windfalls. For example, if aid funds an upgrade to an NGO-run health facility, this may allow government to shift funding for increased health service delivery in that facility’s catchment area to an alternative new location. Because the lowest level health and education infrastructure operate at the parish-level, the vast majority of reallocation would occur across parishes and bias against my findings. While reallocation of within-parish spending between sectors (for example, from health to education) cannot

be ruled out conclusively, the small average size of projects in my data and the structure of central government transfers to district governments (which are typically earmarked for specific sectors in advance) make this very unlikely.

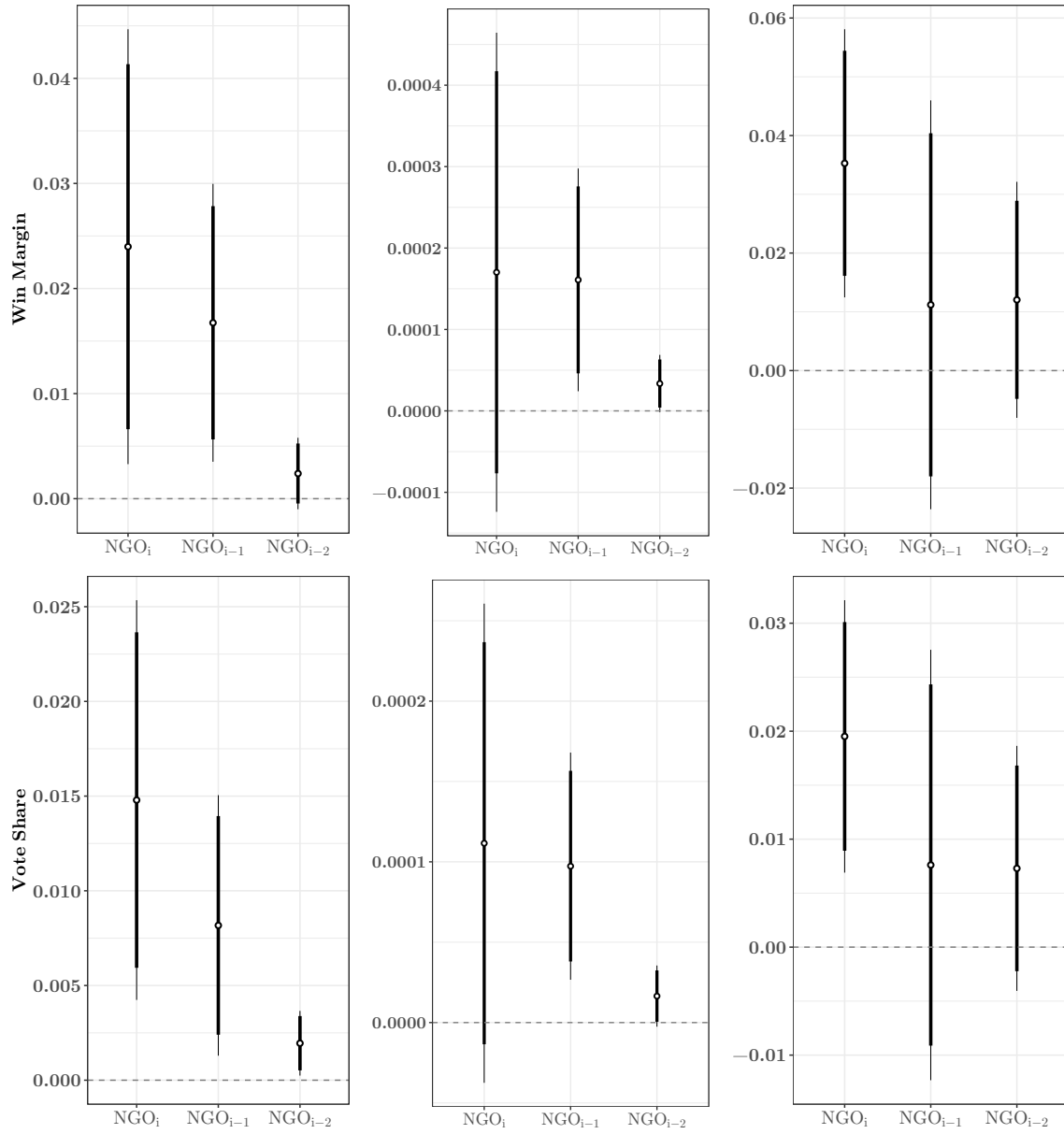
## 6 Results

Figure 4 plots coefficients from fixed effects models for three measures of the independent variable (the number of active projects per 2,000 registered voters, project spending per registered voters, and a binary treatment indicator with EBM weights), one and two spatial lags of each independent variable, and two measures of the dependent variable (the president’s win margin and vote share). The top three panels report results for the president’s win margin. The left panel indicates that an increase of one active project for every 2,000 registered voters (a value that lies just below the 70<sup>th</sup> percentile of the distribution) would predict a 2.4% increase in the win margin. The middle panel indicates that project spending of \$55 per registered voter (just below the 70<sup>th</sup> percentile of the distribution) would predict a 1% increase in support (though this result is not significant at conventional levels). The right panel indicates that having at least one project would predict a 4% increase in support. Results in the bottom three panels report results for the president’s vote share, and return very similar though slightly smaller estimates. According to the mechanisms described in Section 2, the effect of NGO activity should decrease with distance to the treated parish. For both neighbor parishes ( $NGO_{i-1}$ ) and neighbors’ neighbors, coefficients are noticeably smaller and typically less than half the size as the main term ( $NGO_i$ ).<sup>8</sup> These results provide strong evidence that NGO projects increased support for the president, and that the effect was concentrated in the precise locations where services were delivered.

DD models require that treated and untreated units exhibit parallel trends in the outcome variable prior to the treatment. To increase confidence in the causal interpretation of these results, I begin by inspecting pre-treatment trends. Figure 5 plots trends in the president’s

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<sup>8</sup>Standard errors for spatial lags are clustered by parish rather than neighborhood, and so are not valid test for neighborhood effects. These lags serve only to demonstrate that point estimates decrease with distance from the treated unit.



(a) Project Count

(b) Project Spending

(c) Binary EBM

Figure 4: SLX fixed effects models for years 2006, 2011 and 2016.  $NGO_{i-1}$  and  $NGO_{i-2}$  indicate one and two spatial lags of the independent variable. Measures of the independent variable include (a) the number of active projects per 2,000 registered voters, (b) project spending per registered voters, and (c) a binary treatment indicator with EBM weights. Measures of the dependent variable include the president's win margin and vote share. Standard errors are clustered at the parish level and error bars represent 90% and 95% confidence intervals. See appendix H for tables containing all terms in the regression.

vote share for the subset of parishes that did not have an NGO project in either 2006 or 2011, with the dotted and solid lines representing parishes that had and did not have a project in 2016. We see evidence for parallel pre-treatment trends in the outcome, suggesting that coefficient estimates can be interpreted as causal effects. Furthermore, I include two pre-treatment periods in the estimation, effectively controlling for divergent trends.

Turning to the DD models, the top three panels of figure 6 present results for models that include only the 2006 and 2011 elections, while the bottom three panels present results for models that include two pre-treatment waves and results from 2006, 2011, and 2016. The point estimates are consistently (slightly) larger than estimated by fixed effects models but less precisely estimated due to the exclusion of parishes with projects in 2006 and/or 2011.

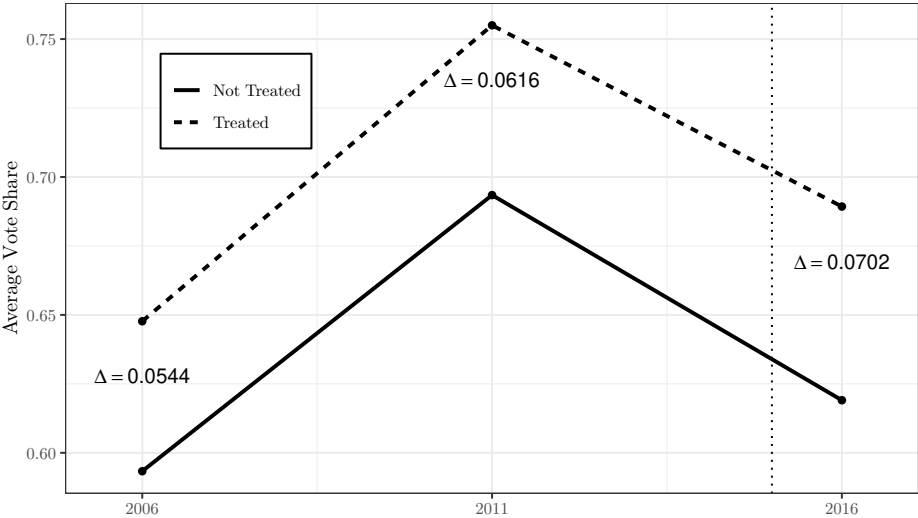
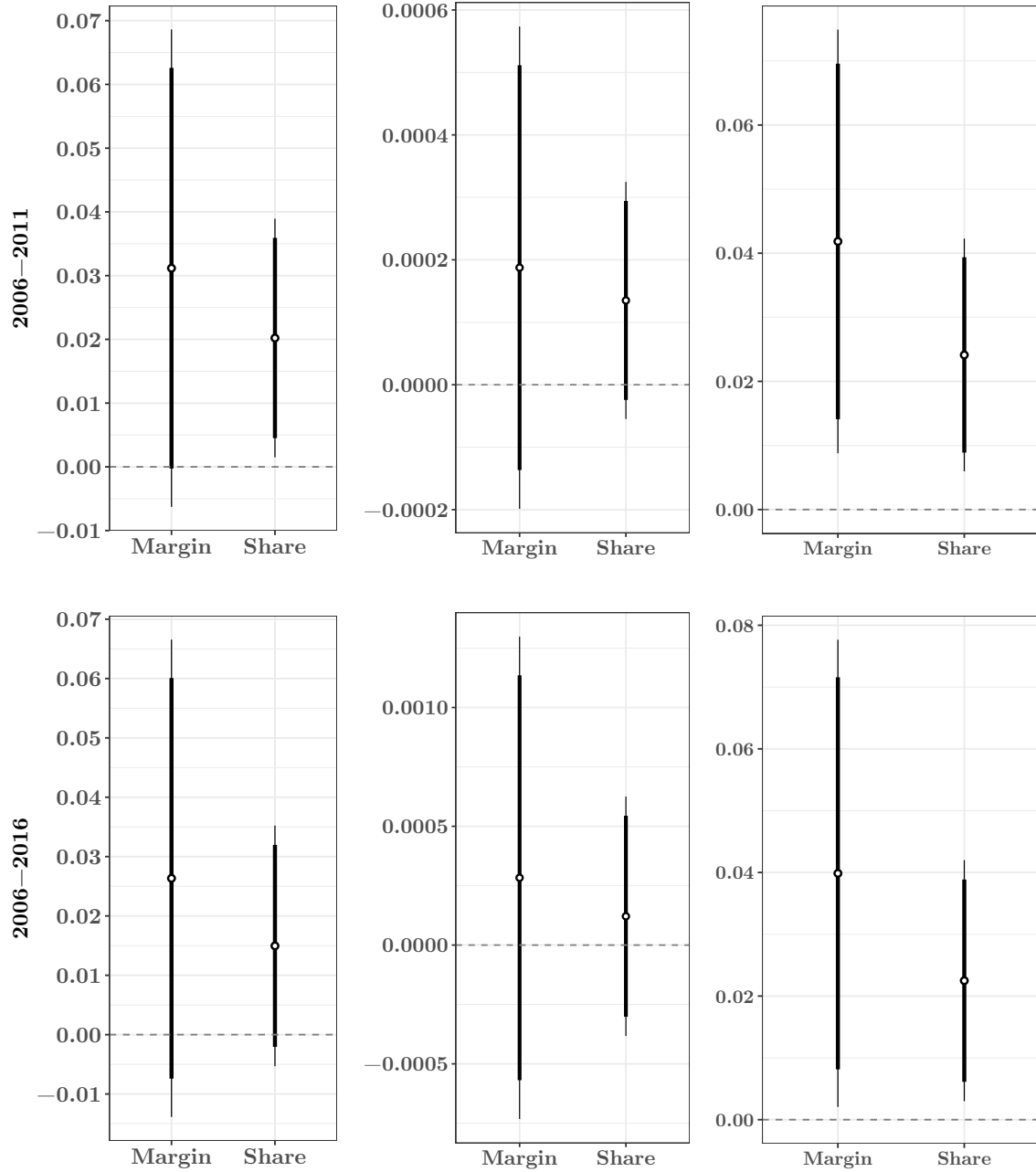


Figure 5: Trends in the president’s vote share for parishes that did not have an NGO project in either 2006 or 2011. Treated parishes had a project in 2016 while not treated parishes did not.  $\Delta$  indicates the absolute value of the difference between the average value of the outcome.

These results suggest that NGO service delivery has a nationally significant political effect. In 2011, only 3% of parishes had an active precisely-coded NGO project. However, when including imprecisely coded projects, almost 40% of parishes had some type of NGO activity. Taking the estimate from the EBM models of a  $\sim 4\%$  increase in vote share in parishes that had at least one NGO project, this would suggest an increase of almost 2% in the president’s national win margin. Considering that Museveni increased his win margin



(a) Project Count (b) Project Spending (c) Binary EBM

Figure 6: SLX Difference-in-differences models for 2006–2011 (one pre-treatment period) and 2006–2016 (two pre-treatment periods). Measures of the independent variable include (a) the number of active projects per 2,000 registered voters, (b) project spending per registered voters, and (c) a binary treatment indicator with EBM weights. Measures of the dependent variable include the president’s win margin and vote share. Standard errors are clustered at the parish level and error bars represent 90% and 95% confidence intervals. See appendix H for tables containing all terms in the regression.



from 21% in 2006 (when there were no active NGO projects in the dataset) to 42% in 2011, the proliferation of NGOs in the country could account for 10% of that increase. Because these data only capture aid-financed NGO projects and do not capture those financed by private philanthropy, the true effects of NGO service delivery on election results could be substantially larger.

These results are robust to changes in the data and model specification. First, rather than removing outliers, I re-estimate models using an inverse hyperbolic sine.<sup>9</sup> Second, I estimate models excluding spatial lags and removing the interaction between year fixed effects and pre-treatment incumbent support. I also estimate models using the binary measure of NGO activity without EBM weights, and also re-weight using an alternative set of theoretically specified variables including turnout in the 2006 election, the share of residents who are co-ethnics with the president, a consumption-based poverty index, logged population, employment rates, gender ratios, average age, literacy levels, average years of education, the share of workers in agriculture, manufacturing, and services, and ethno-linguistic fractionalization (for balance before and after applying alternate weights, see Appendix G). Finally, I repeat the analysis including both precisely and imprecisely coded projects with district rather than parish fixed effects. This measurement decision is far from trivial: including higher-level projects raises the share of parishes that receive at least one NGO project from just 3% to 39% and reduces the number of fixed effects intercepts from almost 5,000 to just 56. See Appendix B for a discussion and results.

## 7 Mechanisms & Alternative Explanations

Section 6 demonstrates that aid-funded NGO projects caused increased support for the incumbent president. In this section, I provide compelling evidence that bypass aid is effective at mitigating political influence over project allocation, present direct evidence that voters interpret the presence of NGO projects as targeted transfers from the president, and provide

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<sup>9</sup>Because most parishes have no NGO activity and take a value of zero on the independent variable, IHS is preferable to log (Bellemare and Wichman, 2020).

evidence against alternative explanations.

## 7.1 Oversight & Valence

The mechanisms presented in Section 2 assume that NGO projects provide valuable services. To provide direct evidence that the projects in my dataset improved citizen welfare, I match data on the precise location (village-level) of 17 NGO-implemented health projects with four waves of the nationally representative geotagged Uganda National Panel Survey (UNPS) covering more than 68,000 individuals. UNPS provides data on disease prevalence, measured as whether an individual fell ill or seriously ill in the 30 days prior to the survey, and for those that had fallen ill, whether the illness warranted medical attention and the number of days of missed work. I define the catchment area for these projects as 5km (80% of respondents reported traveling less than 5km to their most recent medical consultation) and use DD models to show that for three out of four outcomes, projects improved health for respondents in the catchment area but not for respondents outside of the catchment (measured by various distance bandwidths between 6 and 30km). This shows that NGO projects benefit targeted communities, reinforcing expectations that these projects will be seen as valuable by voters and increase perceptions of incumbent valence. See appendix E for a full discussion of the data, estimation, and results.

## 7.2 Misattribution

One alternative explanation for credit attribution is that citizens are unable to distinguish between NGO and government-implemented projects. To demonstrate that this is not a concern in the Ugandan context, I turn to an original survey of 1,505 respondents conducted in 2018 in 165 villages across all four regions of Uganda. Of the 165 villages in my sample, 47 had participated in a randomized NGO health intervention providing access to basic health care and medicines. In treatment villages, almost 25% of respondents were aware of and could name the NGO operating in their village. Respondents in treatment villages also reported an average of about 0.2 more active health NGOs than those in control vil-

lages, but they did not report having more non-health NGOs. Respondents in treatment villages also reported significantly more contact with health NGOs relative to respondents in control villages, but no more contact with non-health NGOs. Interviews with NGO staff suggested that respondents learned about the project and the NGO's role through standard practices including village announcements, household visits, and branding on staff uniforms and project materials. Together, these results provide evidence that citizens are aware of the identity of service providers. For a detailed description of these data and the results, see appendix I.

### 7.3 Allocation & Political Control

In previous sections, I assert that because bypass aid involves donors delegating allocation decisions to NGOs rather than recipient governments, NGO project allocation is unlikely to be correlated with political factors. This distinguishes bypass aid from project-aid channeled through receiving-government agencies. While channeling aid through NGOs is intended to limit political interference, this claim has been subject to limited empirical scrutiny. To rule out political control of NGO project allocation as an explanation for electoral credit, I take several approaches.

First, I draw on examples from online donor documentation for projects contained in the AidData dataset. For many projects, the precise geographic location of project activities are pre-specified by donors based on available data. For example, the USAID solicitation for one project<sup>10</sup> restricted the location of project activities to five specific neighborhoods in the capital city identified for their concentrated populations of sex workers and uniformed personnel. Similarly, many projects provided funds directly to specific NGO-operated schools and clinics located in communities that donors identified as lacking access to essential services.<sup>11</sup> While some projects are targeted for a specific district or subcounty with the implementing NGO

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<sup>10</sup>“Delivery of Integrated HIV Counseling and Testing Services in Target Populations,” [grants.gov](http://grants.gov), March 6, 2012.

<sup>11</sup>“The Project for Improvement of Bukonte Health Centre in Namutumba District,” [Embassy of Japan in Uganda](http://Embassy of Japan in Uganda), January 20, 2012.

determining the precise location(s), interviews with dozens of NGO directors in Uganda suggested that politics does not play a role. While convenience factors were frequently cited as determining the location of projects, political interference was occasionally attempted but never mentioned as a deciding factor.

This corresponds with evidence from Brass (2012), who finds no evidence that political factors influence the allocation of NGO resources in Kenya. Similarly, Swedlund (2017) recounts that recipient governments “undoubtedly prefer to have aid money transferred into its own budget, rather than have aid money transferred to an NGO” as these funds are not seen as “discretionary”. Looking at the composition of the AidData dataset, the distribution of projects across sectors is very similar in non-election and election years, further suggesting a lack of political influence (see appendix J). In Malawi, Seim et al. (2020) find that MPs and members of District Councils were frequently contacted by donors and NGOs about forthcoming projects, but these politicians felt left-out of the decision making process. In Uganda, the lack of government control over NGO projects is evidenced by repeated failed attempts by government to force NGO funding through the national budget to avoid duplication with government efforts.<sup>12</sup> Furthermore, all projects in my dataset were implemented before the passage of the 2015 NGO law, which arguably gave government more influence over NGO operations.

Rather than directly influencing location decisions, government officials could influence allocation by blocking NGOs from operating in certain areas. This seems unlikely for several reasons. In Uganda, it appears that there is little incentive for government to withhold NGO projects. Re-estimating the main results when interacting NGO projects with 2006 parish vote share suggests that the effect of NGO activity on presidential support does not vary by pre-treatment political alignment. Furthermore, a reluctance of governments to block NGOs from service delivery is evidenced by cross-national evidence showing governments that rely more on NGOs for service delivery are less likely to implement legal restrictions on

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<sup>12</sup>Kiwuuwa, Paul.“NPA wants NGOs to declare funds to Govt,” [New Vision](#), July 9, 2015.

civil society organizations that could negatively affect service delivery NGOs (Dupuy et al., 2016).

Despite qualitative evidence suggesting that governments do not control how NGO projects are allocated, other factors could account for a correlation between the political characteristics of communities and levels of aid activity. Specifically, more developed infrastructure in politically valuable communities could cause agglomeration by making it easier for NGOs to serve the president’s favored areas. While certain NGO projects are likely to benefit from existing infrastructure, the stated purpose of many NGO projects is to ‘fill gaps’ in government provision. In fact, several projects in the database involve projects to construct or upgrade NGO-run schools and health facilities in communities not served by the government or to provide solar power or clean water to communities not connected to the national grid. However, if gatekeeping or agglomeration influence the geographic distribution of projects, political characteristics should be predictive of NGO project locations.

To test this, I inspect the results from the LASSO variable selection model described in section 5. In addition to variables measuring need, convenience, and social characteristics, these models include several political variables, including whether the parish is swing or core (based on the president’s vote share in the last election), voter turnout, and the share of the population that are co-ethnics with the president. The LASSO model retains 12 variables, with the share of the population that are co-ethnics with the president being the only political variable selected through cross-validation. Furthermore, co-ethnicity is *negatively* associated with NGO activity, suggesting that NGOs may target communities under-served by the current government. Other variables retained by the model reflect social and economic characteristics (ethnic and religious fractionalization, the share of residents employed in animal rearing and agriculture), need (the availability of micro-finance and extension services, distance to the nearest school, nightlight density), and convenience (distance to the nearest town).<sup>13</sup> See appendix A for a full list of variables and a description of the data and results.

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<sup>13</sup>Interestingly, LASSO performs only slightly better than the empty model (MSE of 0.00514 vs 0.00515), suggesting that none of our observable parish characteristics are very helpful at predicting NGO project

Table 4: Standardized LASSO coefficients predicting NGO projects per capita

Variable	Source	Coefficient
Religious Fractionalization	Census	0.0191379
Market for crops	Census	0.0155642
Ethnic Fractionalization	Census	-0.0123751
Share co-ethnics w/President	Census	-0.0071615
Intercept		0.0065745
Distance: nearest town	Shapefile	-0.0061927
Animal extension services	Census	-0.0045144
Share employed in produce trade	Census	0.0031713
Share employed in animal rearing	Census	-0.0021359
Distance: nearest school	Census	-0.0020982
Road access	Census	-0.0020524
Micro-finance services	Census	-0.0018570
Nightlight density	NOAA	-0.0000453

Model	LASSO	Empty	OLS ( $\lambda = 0$ )
MSE	0.00514	0.00515	0.00521

While this rules out the political characteristics that typically drive distributive politics, I cannot rule out that other political considerations are at play. To address this concern, I consider an alternative indicator of distributive value: presidential campaign promises. Using new data from coding Ugandan newspaper articles that cover public promises made by the president to specific districts during the 2006 and 2011 election campaigns, I estimate the relationship between presidential campaign promises and aid activity. I find no evidence that districts where the president targeted campaign promises were more likely to receive NGO projects. A full description of the data, estimation, and results are available in appendix C.

Finally, I argue that the fine-grained geographic variation in the main analysis rules out the possibility that aid projects allowed government to reallocate spending to communities not targeted for an aid project, thereby increasing electoral support. When conducting analysis limited to large administrative units, it is difficult to rule-out the possibility that aid to parish A may encourage government to shift spending intended for parish A to nearby parish B (this is a form of spatial fungibility), thereby increasing support in the encompassing administrative unit but not in the location where the NGO was active. However, reallocation of spending within a parish is highly unlikely because even the lowest level schools and health facilities are intended to be one per parish. While I cannot rule-out the possibility of a

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locations.

‘flypaper’ effect where politicians target government money to the precise locations where NGO projects are implemented, this seems unlikely and is contrary to existing evidence of politician behavior (Seim et al., 2020).

#### 7.4 Credit & Credit Claiming

While evidence that NGOs improve citizen welfare demonstrates the potential for NGO projects to yield political credit, evidence from the survey described in section 7.2 confirms that the president is seen as controlling the allocation of NGO services. When asked how much power NGOs and various government actors have over where NGOs locate their projects on a 4-point scale ranging from “None” to “A lot”, 67% of respondents reported that the president has “A lot” of power. The second most powerful actor was NGOs themselves at 33%, followed by Members of Parliament (MPs) with 32%. The remaining actors, including national and district bureaucrats score even lower (see figure I.1 in appendix I). This suggests that the president is not merely seen as fostering hospitable conditions for NGO activities, but rather seen as actively controlling how their resources are allocated.

According to survey results, MPs are seen as having relatively little control over NGO project allocation. To demonstrate that politicians *not* seen as controlling NGO projects do *not* receive electoral credit for these projects, I repeat the main analysis using support for MPs as the outcome. I restrict the analysis to MPs that are running for re-election so that citizens may plausibly attribute service delivery projects active during the election to the efforts of the incumbent. Consistent with expectations, the size and direction of coefficients for models regressing MP vote share or win margin on NGO activity are highly unstable across specifications (see appendix K for results). While MPs may receive credit if they are members of the president’s party, data on partisan affiliation for MPs in 2006 is unavailable. I also rule out changes in voter turnout as a potential explanation for increased support for the president. If NGO provision disproportionately discouraged opposition voters, this could explain my results. Precisely estimated null results increase confidence in my explanation (see appendix M for results).

I also show that government-implemented aid projects—which typically provide less visible and less salient public goods—do *not* increase electoral support for the president. Appendix J shows that NGOs and government are clearly tasked with implementing different types of projects; government is the sole implementer of transportation and energy infrastructure while NGOs implement most projects in the health and agriculture sectors. While government implemented projects provide valuable public goods, these are often long-term investments rather than projects that focus on immediate needs (such as health care) and may be more prone to corruption and mismanagement. While some fixed effects model specifications return positive and significant estimates, the coefficients for DD models fall short of statistical significance and become unstable in size and direction for different measures of the dependent and independent variables.

Finally, I argue that active credit claiming by the president cannot account for increased support. The limited geographic reach and small median size of NGO projects (\$100,000) in the data make it unlikely that the president attempted to actively claim credit. To bolster this claim, I use data from Ugandan newspaper articles coding the frequency of presidential campaign visits before the 2006 and 2011 presidential elections. To estimate whether the president was more likely to visit districts with more aid activity in an attempt to claim credit or associate himself with aid projects, I estimate OLS and negative binomial models for the count of campaign visits made by the president to each district. The independent variables are measured as both the count of aid projects and the sum of aid spending using only precisely geotagged projects (parish or lower) and when including less precisely geotagged projects (district or lower). All models contain year fixed effects and standard errors are clustered at the district level. There is no evidence that the president was more likely to make campaign visits to districts with more NGO or aid activity (see appendix C.2 for results). While this does not rule-out local surrogates claiming credit on the president's behalf, interviews with NGO directors did not reveal evidence for this behavior.



## 8 Conclusion

Previous work on the relationship between foreign aid and incumbency advantage assumed that political windfalls were only possible when aid could be manipulated for political gain. I describe mechanisms through which powerful incumbents may receive credit for aid projects even when they cannot control allocation. I then show that NGO-implemented aid projects were successful at improving local welfare and were not allocated disproportionately to politically valuable communities. However, NGO projects still generated electoral credit for the incumbent president. I argue that this should be expected in contexts where access to information about the role of politicians in NGO provision is unavailable and government service delivery is conditioned by the strategic interests of the president. When political actors credibly portray government service provision as a reward for historical support or an inducement to increase future support, this distributive logic is likely to be ascribed to services obtained from external sources as well. I provide substantial evidence from multiple sources that bypass aid is aloof from strategic interference by incumbents and present direct evidence that voters in Uganda see NGO projects as targeted transfers from the President.

NGO service delivery is not typically designed to influence political outcomes, but the distribution of valuable services in resource scarce environments has political consequences. These findings suggest that the conditions under which political executives in aid-receiving countries can benefit from foreign aid are much broader than previously believed. Even under conditions explicitly designed by donors to prevent political windfalls for a receiving government, development assistance entails a trade-off between expanding citizens' access to critical services and contributing to incumbency advantage. While development assistance can improve welfare in the short-run, I demonstrate the importance of political economy factors for understanding the impact of specific aid projects and the rise of NGOs more generally (Brass et al., 2018; Clough, 2015).

Going forward, donors should think carefully about the ways in which development assistance increases support for autocrats, even when aid bypasses receiving-country govern-

ments. While unintended, these political windfalls may provide important incentive for receiving governments to tolerate bypass aid and grant donors and NGOs access to the citizenry. Furthermore, the political benefits from service delivery NGOs may also help to insulate governance and human rights non-profits from more aggressive regulatory action by autocratic incumbents. While providing information about the criteria that drive aid project allocation to recipients may be able to prevent political windfalls, such attempts may also disrupt incumbents' incentives to tolerate bypass aid and have unforeseen consequences for citizen welfare over the long-run.

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## Appendix A: LASSO Variable Selection

This section describes the LASSO variable selection model discussed in the Research Design and Mechanisms & Alternative Explanations sections of the main text. I match parish-level data on aid project with more than 50 variables from administrative and satellite data, election data, and the 2002 Uganda census and use Least Absolute Shrinkage and Selection Operator (LASSO) regression with cross validation to identify predictors of project locations. Because I include variables from the 2006 election, I restrict the sample of aid projects to those that were initiated after the 2006 election but before the 2011 election. After removing all observations with missing data on any of these variables, there are 120 parishes out of 4,106 that received some type of NGO project and 102 that received some type of government project.

The variables in this analysis measure need (ex. poverty index, literacy, the presence of government extension services), convenience (ex. distance to nearest town, road density), social characteristics (ethnic and religious fractionalization, conflict), and political characteristics. There is considerable disagreement in the literature over how socio-economic factors influence the allocation of aid. While aid is often intended to benefit the most needy, Briggs (2018b) and Briggs (2018a) use subnational data on aid projects and survey data in African countries to show that aid flows to relatively wealthy areas. By contrast, using the number of NGOs registered in Kenya's districts and data capturing economic, social, and political characteristics from a variety of sources, Brass (2012) finds evidence that NGOs locate their projects according to both convenience (population density, road density, urbanization, proximity to the capital) and need (HIV prevalence, lack of access to health care). In contrast, Odokonyero et al. (2018) use the location of health aid projects and panel survey data and find no evidence that aid is targeted to needier or wealthier communities in Uganda.

### Political

President Swing Parish (2006 Vote Share > .40 & < .60)  
President Core Parish (2006 Vote Share > .60)  
Incumbent MP Swing Parish (2006 Vote Share > .40 & < .60)  
Incumbent MP Core Parish (2006 Vote Share > .60)  
Population share co-ethnic with president  
2006 Voter Turnout

### Geographic

Distance to the nearest town  
Distance to district headquarters  
Population density  
Distance to nearest oil discovery  
Road density  
Average village road access

### Economic

Poverty index  
Nightlight density  
Literacy  
Average years of education  
Number of markets per village (crop, animal)  
Population share unemployed  
Population share in services  
Population share in animal rearing  
Population share in crop farming  
Population share in fishing  
Population share in produce trading  
Population share in goods trading

### Service Delivery

Distance to nearest health facility  
Distance to nearest school

Distance to nearest water source  
Share of villages with micro-finance services  
Extension programs per village (crop, animal, fish)

### Social Characteristics

Religious fractionalization  
Ethnic fractionalization  
Average age  
Population share male  
Prevalence of widow inheritance (scale)  
Prevalence of rape (scale)  
Prevalence of child abuse (scale)

### Conflict

Number of cattle rustling events  
Number of rebel activity events

### Natural Events

Number of natural disaster events  
Number of animal disease outbreaks  
Number of crop disease outbreaks  
Number of human disease epidemics

### Contents of Poverty Index

Average number of rooms per HH  
Average roof type (ordinal)  
Average wall type (ordinal)  
Average floor type (ordinal)  
Average cooking method (ordinal)  
Average lighting type (ordinal)  
Average water source (ordinal)  
Average toilet type (ordinal)  
Average bathing type (ordinal)

Population share owning motorcycle  
Population share owning TV  
Population share owning radio  
Population share owning cell-phone

Population share owning telephone

## A.1 LASSO Results

Out of sample performance suggests that unpenalized regression does lead to overfitting, with unpenalized OLS including all variables performing worse than an empty model including only the intercept (the full model returns an MSE of 0.00521 compared to 0.00515 for the empty model). However, LASSO performs only slightly better than the empty model (MSE of 0.00514 compared to 0.00515), suggesting that none of our observable parish characteristics are very helpful at predicting NGO project allocation. Despite the wealth of high-quality measures of political, economic, and social characteristics of parishes and the extremely disaggregated measure of aid project locations, these analyses do not find strong support for any of the factors that have previously been shown to drive the geographic distribution of foreign aid or NGO activity at the subnational level.

There is weak evidence that both NGO and government-implemented aid projects are targeted based on need and convenience. When repeating this analysis using logistic regression and a binary independent variable, the variables retained by the model at the optimal value of  $\lambda$  are similar, but the LASSO model underperforms the empty model containing only the intercept (0.030303 compared to 0.0293848), suggesting that the model is overfit. Similarly for models predicting the allocation of government-implemented projects, the LASSO model with the optimal  $\lambda$  also underperforms the empty regression model. Given the geographic precision, this is not surprising.

These results corresponds with findings from Fruttero and Gauri (2005), who use a household survey in Bangladesh and find no evidence that NGOs respond to need or avoid duplicating the efforts with other NGOs. Rather, NGOs only attempt to expand their own coverage into new areas. Similarly, Jayne et al. (2001) find that food aid from government and NGOs in Ethiopia is mostly determined by inertia (spatially continuous) rather than chronic need. Previous studies used higher administrative units such as districts in Kenya ( $n=70$ ) and Zambia ( $n=118$ ) or distances from 25–50 kilometers. Uganda contained almost 5,000 parishes during my sample period. Due to the difference in units being analyzed, my results do not invalidate previous findings. However, I do take this as a evidence that the geographic distribution of foreign aid is plausibly orthogonal to political characteristics at the parish level.

## Appendix B: Imprecisely Coded Projects

In this section, I estimate separate models using both precisely (parish and lower) and imprecisely coded aid projects (between parish and district). I count each parish within larger administrative units as having received the project. For measures of spending, I divide project spending equally among each parish contained in the larger unit. Because the district level is the highest level at which the treatment is assigned, I include district ( $n = 56$ ) fixed effects and cluster standard errors at the district level.

Table B.1 presents results for models using both the number of active projects per 2,000 registered voters and a binary treatment with entropy balance weighting. Looking at results for the two measures of support for the president (vote share and win margin), coefficients for

NGO projects are positive, substantively meaningful, and frequently significant while coefficients for government projects are negative, small and uniformly insignificant. Interpreting the NGO project coefficient in column 3, an increase of two active projects for every 2,000 registered voters in a parish (a value that lies near the 40<sup>th</sup> percentile of the distribution) would predict a 1.4% increase in the incumbent president’s win margin. Turning to the EBM estimates in column 6 (using an un-normalized binary treatment measure), receiving at least one project in a parish would predict a 3.5% increase in the president’s win margin. Looking at results for voter turnout, the coefficient are positive, large, and significant for the base model, while the coefficient turns negative and insignificant when matching is applied. Table B.2 presents results for models using the total spending per registered voter in each parish. Coefficients for NGO spending are unstable across specifications, imprecisely estimated, and uniformly insignificant across all outcome variables.

Table B.1: Effect of Aid Projects on Presidential Support (District)

	<i>Dependent variable:</i>					
	Share		Margin		Turnout	
NGO Projects	0.002*	0.016	0.007**	0.035*	0.003***	-0.008
	(0.001)	(0.011)	(0.003)	(0.021)	(0.001)	(0.009)
Govt Projects	-0.001	-0.002	-0.001	-0.005	0.002	-0.017*
	(0.002)	(0.009)	(0.004)	(0.018)	(0.001)	(0.010)
Matching	No	Yes	No	Yes	No	Yes
Observations	13,080	12,150	13,080	12,150	13,086	12,154

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Standard errors are clustered at the district level.

Table B.2: Effect of Aid Projects on Presidential Support (District)

	<i>Dependent variable:</i>		
	Share	Margin	Turnout
NGO Spending	0.00005	0.001	-0.0001
	(0.0003)	(0.001)	(0.0003)
Govt Spending	0.00000	0.00002	0.00000
	(0.00004)	(0.0001)	(0.00004)
Observations	13,010	13,010	13,016

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Standard errors are clustered at the district level.

## Appendix C: Foreign Aid and Presidential Campaigning

To further investigate the political geography of aid project allocation, I use new data from Ugandan newspaper articles that documents (a) all incidences in which the president

made an explicit promise to contribute to development of a specific district (rather than the country as a whole), and (b) all visits that the president made to specific districts during the campaign period. These data were collected for both 2005 (the campaign period for the February 2006 general elections) and for 2010 (the campaign period for the February 2011 general elections). A team of coders were employed to identify distinct events (visit or promise) from Ugandan newspaper reports in the years 2005 and 2010.<sup>14</sup> To keep the number of districts constant despite the creation of new districts during that period, we matched each 2010 rump district to its 2006 district. At the time of the 2006 general election, there were 72 districts plus Kampala.

### **C.1 Presidential Campaign Promises**

To estimate whether districts that receive campaign promises from the President during election campaign periods are more likely to have active aid projects during the subsequent election, I estimate OLS models regressing the count of aid projects and the sum of aid spending for projects that were active during the 2006 and 2011 elections on the count of campaign promises made by the President to each district during the campaign for each election. The dependent variables are measured as both the count of aid projects and the sum of aid spending using only precisely geotagged projects (parish or lower) and less precisely geotagged projects (district or lower). All models contain year fixed effects and standard errors are clustered at the district level. There is no evidence that districts where the President targetss campaign promises are more likely to receive more aid projects or spending for either NGO or government implemented projects. This reinforces evidence that the President has little control over the geographic allocation of foreign aid.

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<sup>14</sup>A detailed description of the coding scheme, data sources, and descriptive information on the data is available on request.

Table C.1: Effect of Presidential Campaign Promises on Aid Activity

	<i>Dependent variable:</i>							
	NGO Count		NGO Spending		Govt Count		Govt Spending	
Promises	-0.030 (0.030)	3.169 (3.193)	-1.784 (4.266)	-25.487 (17.176)	-0.032 (0.021)	2.571 (2.455)	-9.812 (18.651)	58.058 (80.643)
Voters	0.00001* (0.00000)	0.0002 (0.0002)	0.001* (0.0004)	0.004*** (0.001)	0.00001*** (0.00000)	0.001*** (0.0002)	0.005 (0.004)	0.013** (0.006)
Constant	-0.526 (0.388)	-15.984 (20.815)	-57.045 (42.449)	-235.097** (111.538)	-0.191 (0.224)	8.214 (18.502)	-195.900 (263.119)	-177.664 (649.513)
DV	Parish	District	Parish	District	Parish	District	Parish	District
Observations	146	146	146	146	146	146	146	146

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## C.2 Presidential Campaign Visits

To estimate whether the President was more likely to visit districts with more aid activity in attempt to claim credit or associate himself with aid projects, I estimate OLS and negative binomial models for the count of campaign visits made by the President to each district during the campaign for the 2006 election. The independent variables are measured as both the count of aid projects and the sum of aid spending using only precisely geotagged projects (parish or lower) and less precisely geotagged projects (district or lower). All models contain year fixed effects and standard errors are clustered at the district level. There is no evidence that the President is more likely to make campaign visits to districts that receive more projects or spending for either NGO or government implemented projects. This reinforces evidence that the President does not actively claim credit for foreign aid projects.

Table C.2: Effect of Aid Activity on Presidential Campaign Visits

		<i>Dependent variable:</i>					
		Presidential Campaign Visits					
NGO Count	0.029 (0.102)	-0.001 (0.102)	0.0005 (0.002)	0.0002 (0.002)			
NGO Spend					0.001 (0.001)	0.0001 (0.001)	-0.0003 (0.0003)
Govt Count	-0.359 (0.254)	-0.113 (0.254)	-0.002 (0.004)	-0.0003 (0.004)			
Govt Spend					-0.001 (0.0003)	-0.0001 (0.0003)	0.0000 (0.0001)
Voters	0.00003*** (0.00001)	0.00001 (0.00001)	0.00003*** (0.00001)	0.00001 (0.00001)	0.00003*** (0.00001)	0.00001 (0.00001)	0.00001 (0.00001)
Constant	1.672** (0.667)	0.654 (0.667)	1.768** (0.728)	0.718 (0.728)	1.673** (0.649)	0.715 (0.649)	1.511** (0.746)
IV	Parish	Parish	District	District	Parish	Parish	District
Model	OLS	N Binom	OLS	N Binom	OLS	N Binom	OLS
Observations	146	146	146	146	146	146	146

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01