STEG WORKING PAPER

HOLLOW STATE EXPANSION

Jamie Hintson

OCTOBER 2024
STEG WP102
PhD 2531

Hollow State Expansion*

Jamie Hintson†

October 2024

Abstract

Why do governments engage in the "hollow" expansion of public services, extending schools and clinics to the margins of the state but leaving them with meager staff and supplies? This expansion is puzzling: there are few incentives for states to allocate public goods projects to marginalized, peripheral communities, and building hollow facilities is wasteful and politically unpopular. This paper documents the equitable but hollow expansion of public facilities in Uganda under President Yoweri Museveni, arguing that rent-seeking reshapes state strategies of public goods provision. Elites proliferate public facilities in order to embezzle funds in collusion with contractors. They are not dissuaded from expanding state infrastructure into the periphery because they embezzle more egregiously from peripheral projects. And while hollow expansion enrages voters, the state can divert this anger onto local middlemen, using their petty larceny and negligence as political cover for centrally-planned corruption. Two original surveys and survey experiments, a variety of administrative data, and qualitative evidence from Uganda support these arguments.

*I am indebted to the King Center for Global Development, the Stanford Center for African Studies, and the Freeman Spogli Institute for International Studies for their financial support of this project. This work would not be possible without a phenomenal Ugandan survey firm and team of enumerators, whose names I withhold due to the sensitivity of the study. Jeremy Weinstein, David Laitin, Jim Fearon, Ken Schultz, Emily Russell, and Yang-Yang Zhou have offered valuable feedback on this draft. This research has been approved by Stanford University IRB (protocol 70757), Mildmay Research Ethics Committee (MUREC-2022-140), and the Uganda National Council for Science and Technology. All remaining errors are my own.

†Ph.D. Candidate, Stanford University.

> We have seen a number of white elephants of health centres... with no equipment, no medicines and huge staffing gaps; no healthcare workers. I saw in yesterday's health report that a lot of funds are being earmarked for the construction of more health centres. Why can't we equip the existing ones first?
>
> —John Baptist Nambeshe, Ugandan Chief Opposition Whip, July 7, 2022[1]

1 Introduction

In 2009, the Ugandan government commissioned Buyobo Health Centre, a lifeline for residents in the rugged foothills of Mount Elgon. But for the next ten years, the central government sent no medicine to the facility, forcing staff to send patients home empty-handed. Similarly, in 2019, the Ugandan Ministry of Education constructed Katikekire secondary school in the remote, pastoralist region of Karamoja, for the hefty price tag of two billion shillings ($500,000). But the Ministry failed to send funds for school operations, posting a temporary principal but no teachers.[2]

This paper demonstrates that the Ugandan government has long engaged in the equitable but 'hollow' expansion of public infrastructure. The state builds numerous public facilities and allocates them with relative fairness, extending services to the country's periphery and not simply funnelling them toward dominant ethnic groups. At the same time, the state dramatically under-invests in facility operations, leaving most schools and clinics with massive shortages of teachers, healthcare workers, medicine, and supplies. While the introductory examples of hollow public facilities are extreme, Ugandan health centers often lack medicine for eight or more months out of the year, and nearly half of all post-primary teaching positions remain vacant (The Independent, 2023; Matovu, 2023). These shortfalls deepen as the state builds more and more public facilities without increasing aggregate levels of staff or supplies (Ssekweyama, 2022).

[1] Nambeshe's speech is transcribed in the Ugandan parliamentary Hansards, available here: https://www.parliament.go.ug/documents/hansards.

[2] Journalistic accounts of these service delivery failures come from the Daily Monitor (2019) and Eyoku (2022), respectively.

Why would states engage in a strategy of equitable but hollow expansion? This behavior is puzzling for three reasons. First, the prevailing view holds that African states largely ignore their rural peripheries, which are costly to penetrate (Herbst, 2000). As Noah Nathan describes the conventional view of African hinterlands, "the formal trappings common to any state—its administrative offices and physical infrastructure—are often simply not there, with basic public services distant and hard to reach" (Nathan, 2023). This characterization of African peripheries contrasts with one marked by a flurry of construction activity, in which public services are easy to reach but hollow inside.

Second, a large literature emphasizes the salience of ethnic distributive politics in Africa. Many studies claim that leaders parochially target public goods and public infrastructure toward 'favored' ethnic groups (Burgess et al., 2015; Franck and Rainer, 2012; Hodler and Raschky, 2014). Other studies qualify this claim: Kramon and Posner (2013) find that evidence for favoritism depends heavily on the outcome studied. Nevertheless, Posner (2005) notes that leaders are often expected "to build schools, clinics and roads in their home areas" (p. 96, quoted in Hodler and Raschky (2014)). On the whole, this body of research does not expect states to expand services with an even hand.

Third, hollow expansion is wasteful and politically unpopular. As the epigraph suggests, opposition figures criticize hollow expansion as a poor and puzzling use of public funds. In surveys, Ugandan voters list healthcare and education as their top two policy problems, and they concentrate their complaints on hollowness (e.g. teacher and medicine shortages) rather than access to public services and infrastructure (Appendix A1). Existing research holds that states expand public services primarily to win public support, even in hybrid regimes like Uganda (Stasavage, 2005). Hollowness threatens to undermine this objective.

I argue that *unchecked rent-seeking* leads states to engage in equitable but hollow expansion. Holland (2024) argues that democratically-elected leaders initiate mega construction projects like highways, dams, and airports shortly before elections in order to finance their campaigns through kickbacks from contractors. The resulting infrastructure is often

of low quality and fails to serve the public interest. I generalize this argument: unchecked rent-seeking elites in any type of regime proliferate a wide range of public goods projects—including small, bread-and-butter facilities such as schools and clinics—in order to embezzle construction funds, which they use for personal consumption and not only for financing campaigns. Unlike highways and bridges, these basic public facilities require staff and supplies to operate, and operating costs quickly surpass construction costs. Rent-seeking elites do not build these facilities with recurrent operations in mind, so they construct infrastructure that is not only of poor construction quality but also 'hollow' inside, hobbled by deficits in equipment and personnel.

The novel insight of this paper is not that elites often seek rents from construction projects but that rent-seeking alters state strategies of public goods provision. Rent-seeking elites allocate public goods projects to places they would otherwise ignore. Officials concerned with embezzling funds are not solely focused on targeting projects toward co-ethnics or swing voters. Indeed, while these officials embezzle large sums from projects in all parts of the country, they may prefer to steal even more from marginalized, peripheral regions of the state. Their ability to discriminate in embezzlement reduces their incentives to discriminate in project allocation; elites are willing to site public goods projects on the margins of the state because they can disproportionately embezzle funds from those projects. As a result, citizens in these rural hinterlands often do not face a state that is too distant, but rather one that is spread too thin, with paltry supplies and staff stretched across an abundance of public infrastructure.

But this rent-driven, hollow state expansion fails to meet citizens' needs, and it is politically unpopular. How do elites sustain a strategy of hollow expansion in the face of political opposition? I argue that leaders of hollow states can successfully exploit subordinates' petty corruption and negligence to divert blame for the grand corruption and negligence of the hollow state. Leaders scapegoat service providers and local middlemen for stealing resources and dragging their feet, using these gaps and leakages in the service delivery pipeline as

political cover for under-provision. As a result, many voters who are strongly dissatisfied with the availability of resources in their public facilities nevertheless believe that the center adequately provides these resources.

I first establish that Uganda has engaged in a decades-long strategy of equitable, hollow expansion. There is also suggestive evidence that the Ugandan government is not alone in this behavior. Next, the paper develops the arguments that rent-seeking and blame diversion explain why states engage in this puzzling strategy. While the Ugandan case meaningfully informs many elements of this theory, the theory is general in nature and plausibly explains outcomes in the other cases of equitable, hollow expansion.

The following section describes the diverse sources of evidence used to support the rent-seeking argument and to rule out alternative explanations. This section draws upon qualitative interviews and secondary sources, newly-obtained project audits and progress reports, election returns, and an original face-to-face survey conducted in Uganda. This survey focuses on the latest major wave of public infrastructure construction: the creation of secondary schools and health center maternity wards under the Ugandan Intergovernmental Fiscal Transfers Program, or UgIFT, financed by loans from the World Bank. Responses from 390 key informants at UgIFT construction sites across the country provide powerful evidence of widespread and unequal corruption in infrastructure construction. State officials and contractors engage in far more egregious embezzlement from projects in the country's marginalized periphery than from identical projects elsewhere. They also selectively provide members of dominant ethnic groups with the project information needed to enforce accountability.

These findings support the argument that governing elites are willing to expand public infrastructure equitably precisely because they can extract rents inequitably. Elites use projects in marginalized, peripheral areas as their cash cows. The state's eagerness to discriminate in extraction is also inconsistent with more benign explanations for equitable expansion. Further, there is little evidence to support electoral explanations for hollow, eq-

uitable expansion: the ruling party does not win votes in places where it allocates public facilities, it does not allocate these facilities on the basis of prior voting behavior, and corruption undermines its ability to complete projects before elections or to drum up support at commissioning ceremonies.

I then describe and present evidence for the blame diversion argument. This evidence principally draws upon a second original face-to-face survey, which samples 1,224 voting-age citizens in rural Northern and Western Uganda and includes two embedded and preregistered survey experiments. This survey aims to demonstrate that leaders can successfully divert the blame for hollowness onto petty corruption and negligence by local middlemen. Results show that voters principally blame local officials and service providers for hollowness, attribute widespread shortages to petty corruption, and claim that the central government provides implausibly many resources to public facilities. Even subtle primes designed to increase the salience of petty corruption and local negligence further reduce the blame that citizens place on the central government for hollowness. For example, simply asking respondents to estimate the extent of medicine theft strongly reduces the blame they place on the central government for shortages. National leaders' blame diversion tactics are effective, even for problems with centrally-provided services.

The conclusion of the paper re-evaluates the literatures on public goods provision, political accountability and ethnic favoritism in light of these findings. I also consider the scope conditions under which leaders could plausibly engage in a strategy of unchecked, rent-driven hollow state expansion.

This paper offers four principal contributions. First, existing research often misdiagnoses the service delivery challenges facing rural African hinterlands. Citizens in many rural peripheries do not struggle to reach a distant state, as many studies portray (Herbst, 2000; Boone, 2003), but rather struggle to obtain quality services from state facilities that are easy to reach. Second, while existing research across disciplines heavily focuses on micro-level interventions to improve service delivery (Duflo et al., 2012; Kok et al., 2015), this focus

ignores the central, structural determinants of poor service provision. Even more, leaders who hollow out public services from the center actively seek to redirect attention toward micro-level obstacles to service provision. Third, states do not always follow the familiar strategies of rewarding co-ethnics or targeting electorally important constituencies when distributing public goods (Dixit and Londregan, 1996; Burgess et al., 2015). Rent-seeking leads states to allocate public facilities to oft-ignored communities, in large part *because* elites are not responsive to these communities' needs. Fourth, this study casts doubt on the claim that citizens punish the central government for poor service delivery when the center has clear formal responsibility over service provision (Harding, 2015). Local actors can thwart even the provision of centralized services through petty corruption and foot-dragging, and leaders exploit this fact to redirect blame for hollow service delivery.

2 Hollow, Equitable Expansion in Uganda

This section establishes the central puzzle of the paper, demonstrating that the Ugandan government has engaged in a decades-long strategy of relatively equitable but markedly hollow expansion—and that other states likely have as well. State expansion, as used here, refers to growth in the geographic coverage of basic public services and infrastructure. This is expansion is 'equitable' to the extent that the state builds infrastructure into marginalized, peripheral regions and not merely into leaders' co-ethnic areas. Expansion is 'hollow' to the extent that the government sub-optimally under-invests in facility operations, such as staffing and supplies, relative to its investments in expanding access to infrastructure. Hollow, equitable expansion is puzzling for the reasons described in the introduction: we expect states not to extend costly infrastructure into remote, peripheral regions (Herbst, 2000), we expect leaders to heavily prioritize co-ethnic areas in the distribution of public goods (Franck and Rainer, 2012; Burgess et al., 2015), and we expect hollow expansion to foment substantial political opposition.

2.1 Expansion Has Been Fairly Equitable

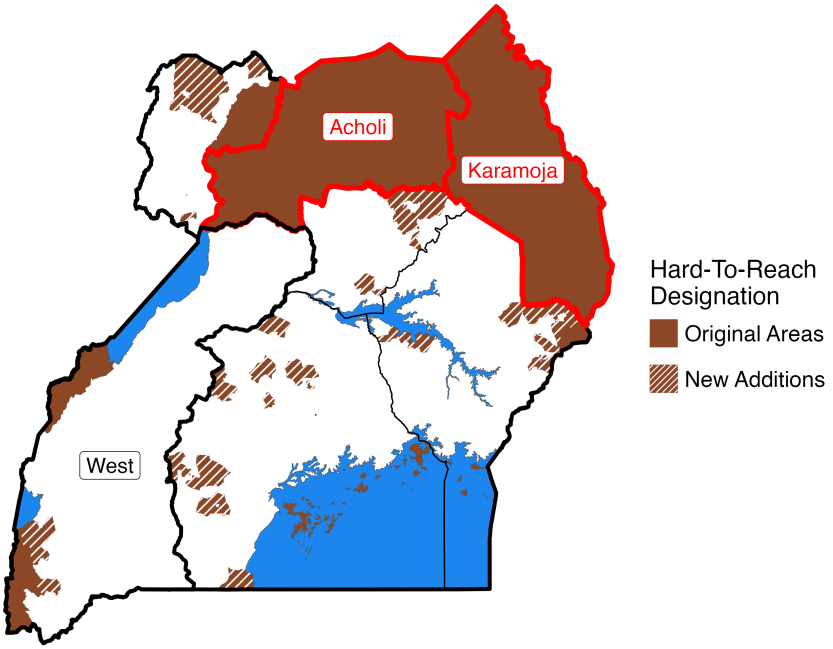
Uganda is an unlikely case of equitable state expansion, as there are pronounced regional and ethnic inequalities in the country. The National Resistance Movement (NRM) government led by President Yoweri Museveni is widely thought to favor the Western region, from which Museveni and a disproportionate share of senior Cabinet Ministers hail (Vogt et al., 2015; Raleigh and Wigmore-Shepherd, 2022). Additionally, in Uganda as in many African states, a multiply disadvantaged "periphery" sits at the bottom of the country's ethnic and regional hierarchy. Such peripheries are typically poor, remote, and politically marginalized; readily identifiable examples include the Somali and Turkana areas of Kenya, the Darfur region of Sudan, Northern Ghana, and the Afar and Ogaden regions of Ethiopia.

In Uganda, the Acholi and Karamoja ethnic sub-regions most clearly the country's periphery. The government even designates them as such, classifying the regions as "hard-to-reach / hard-to-stay" locations and paying civil servants additional hardship allowances to work there (Figure 1). Prior to 2017, these regions were the *only* places where civil servants received such hardship allowances apart from a few scattered islands and mountain ranges. Acholi and Karamoja have also been subjected to exceptional levels of state violence under the Museveni administration. During the LRA insurgency, the Ugandan government rounded up nearly the entire Acholi population into inhumane "protected camps" (Dunovant, 2016); the government has also engaged in brutal disarmament campaigns against the Karamojong people (Knighton, 2003).

As the top panel of Figure 2 shows, Acholi and Karamoja are the two poorest and most sparsely populated parts of the country. Karamoja also stands alone as the only sub-region in which few parents send their kids to school; residents of the region, which is home to a large nomadic, pastoralist population, cite cultural opposition to traditional public schooling (Datzberger, 2022).

Compared to these large regional disparities in poverty, population density, and school enrollment, disparities in access to public infrastructure are not nearly as stark (see bottom

Figure 1. *Government-Designated "Hard-To-Reach / Hard-to-Stay" Areas*

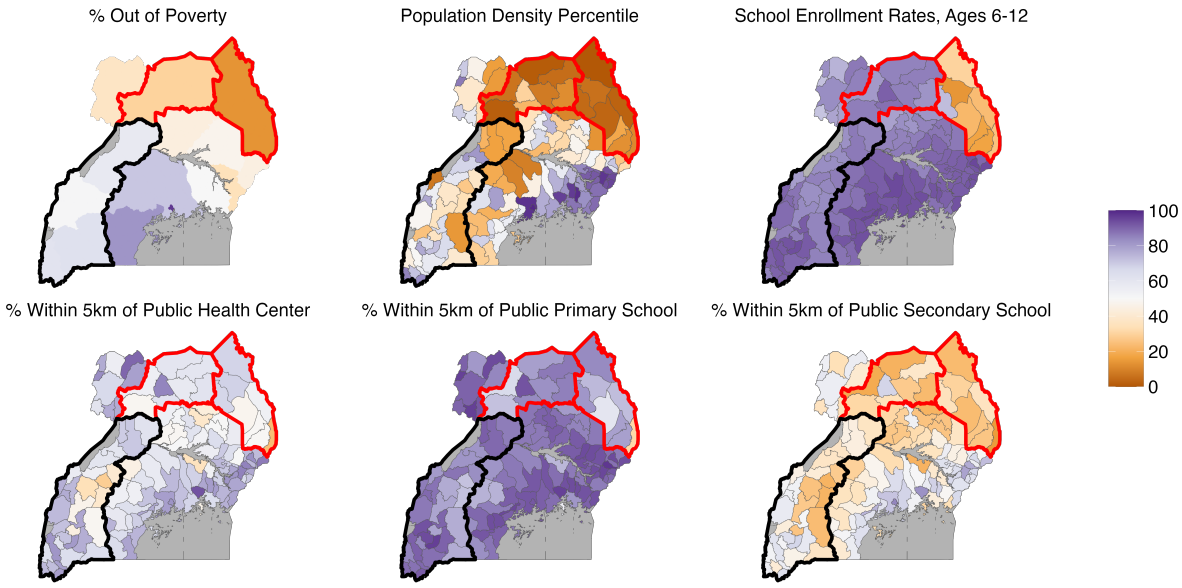


Note: Brown areas are those in which the government provides "hard-to-reach/hard-to-stay" allowances for civil servants; this list of areas was created in 2006 and expanded in 2017. Blue areas depict major bodies of water. Black lines demarcate regional boundaries, and red lines demarcate the Acholi and Karamoja sub-regions.

panel of Figure 2). Data from the 2014 census show that 82% of Acholi residents live within five kilometers of a primary school , only a few percentage points behind the national average of 87% (63% vs. 67% for health centers). Secondary school access is still poor in both Acholi and Karamoja, but it is poor in all but the most densely populated districts. Indeed, residents in some Karamoja districts are more likely to live within five kilometers of a secondary school than are residents of some Western districts, even though 72% of *primary* age children are not enrolled in school in Karamoja, compared to 13% in the West.

The NRM government has adopted policies which explicitly prioritize equity in the allocation of public infrastructure. The party's manifestos originally pledged to build one primary school and health center II (low-level health dispensary) in every parish, or village cluster (NRM, 2006). The government has not fully achieved this goal, but few parishes lack primary schools today (NRM, 2021). Now, the NRM is prioritizing a pledge to build

Figure 2. *Regional Disparities in Uganda*



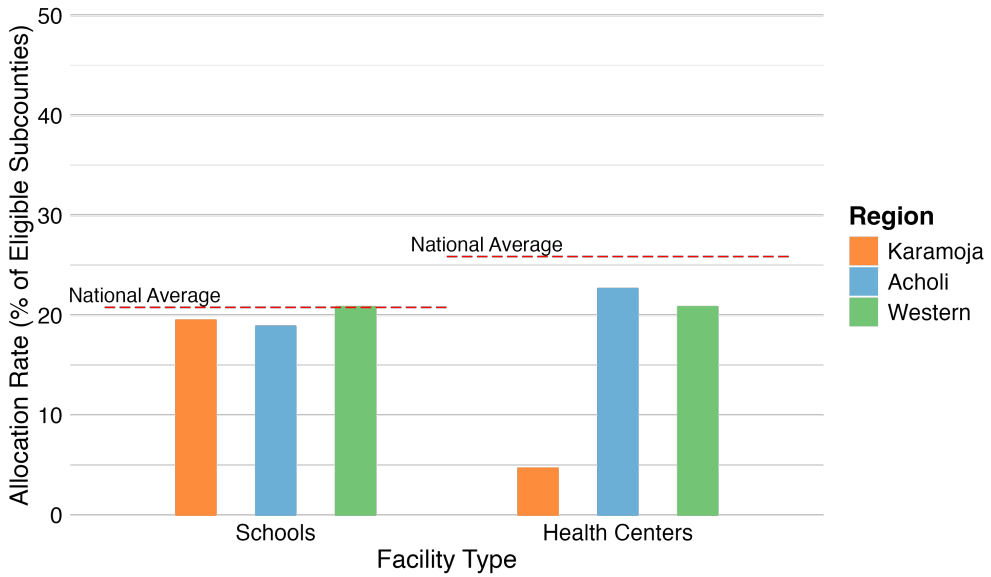
Note: All data come from the 2014 Ugandan census, except for poverty data which comes from UBOS analyses of 2016/17 Uganda National Household Surveys. Poverty data is available at the sub-region level; all other data is presented at the district level. Grey areas depict major bodies of water. Black lines depict the extent of the Western region. Red lines depict the extent of the Acholi and Karamoja sub-regions.

one secondary school and health center III (mid-level health facility) in every subcounty, or group of parishes. By formally requiring that new schools and clinics go toward parishes and subcounties that do not already have these facilities, the NRM government limits geographic inequities in public infrastructure access.

The NRM government could still discriminate in determining *which* of the localities lacking public infrastructure receive new facilities. It might, for instance, prioritize Western subcounties that lack secondary schools over similar subcounties in Acholi and Karamoja. Evidence from UgIFT—the main program under which the government is building secondary schools and health centers III—suggests that this largely is not the case. I aim to reconstruct the list of subcounties elgibile for schools and health centers under UgIFT (see Appendix A8). A disproportionate number of Acholi and Karamoja subcounties are eligible for UgIFT facilities, since these regions have somewhat less existing infrastructure than the rest of the country (Appendix A8). And, as Figure 3 shows, eligible subcounties in Acholi and Karamoja receive public facilities at rates very similar to eligible Western subcounties and the national

average.[3] The one exception to this rule is the near-total exclusion of Karamoja from UgIFT health center allocation: the government is instead building new health infrastructure in Karamoja through the separate Karamoja Infrastructure Development Project, the only such regional initiative, complicating direct comparisons. On the whole, the government does not substantially discriminate against peripheral areas, or in favor of co-ethnic areas, when allocating public infrastructure.

Figure 3. *Facility Allocation Rates in the Core and Periphery*



Note: This plot depicts the percentage of eligible subcounties which received schools and clinics under UgIFT in Karamoja, Acholi, and Western Uganda, relative to the national average. Karamoja receives health infrastructure under a separate project, the Karamoja Infrastructure Development Project.

2.2 Expansion Has Been Hollow

But equity does not tell the whole story: the expansion of Ugandan public facilities over the past few decades has largely been hollow. After the NRM government built over 1,000 health centers II (low-level dispensaries) in the 1990s and 2000s, it quickly decided to start phasing all of them out, citing staffing shortages: "[I]t became obvious that if there were

[3] About 20% of health centers went to apparently ineligible subcounties; Appendix A8 uses eligibility as a predictor rather than a precondition and finds similar results to those presented here.

health centres II built all over the country, we would need an additional labour force in the health sector of more than 60,000 health workers and there was no budgetary provision for this purpose" (Rugunda, 2014). As early as 2006, the NRM party manifesto acknowledged discontent with newly-constructed facilities: "[a]lthough the government is building a lot of health centres, there are a lot of complaints from the population regarding the absenteeism of health workers and lack of drugs" (NRM, 2006).

Allegations of hollowness also dogged the government's postwar reconstruction program in Northern Uganda. Residents described new schools and clinics as "mere structures" without adequate staff or supplies (International Alert, 2013). A government review of the program called for later funds to go toward facility operations, since many newly-built structures were non-functional. Yet a later review found that "this principle was not applied during implementation" and that "the overwhelming majority of expenditure again went on new infrastructure" (Government of Uganda, 2015). The new secondary schools and health centers built under UgIFT appear headed for a similar fate: a variety of journalistic accounts describe a staffing crisis in the new secondary schools (Nangonzi, 2022; Kabanza, 2024; Kisekka et al., 2022), and the government currently has a ban on all healthworker recruitment (Walubiri, 2012; New Vision, 2024).

The Ugandan Opposition also consistently criticizes the NRM government for building hollow facilities. In 2023, the then-Leader of the Opposition Mathias Mpuuga visited schools and health centres around the country in a widely-publicized tour to expose corruption and hollowness in Ugandan public facilities (Serugo, 2023). The Opposition's 2022 alternative policy statement on health pledged to end hollow expansion by "focus[ing] on making available health infrastructure functional instead of investing in non-functional, poorly equipped health infrastructure" (Lusala, 2022).

Administrative data attest to the hollowness in Ugandan public facilities. According to government data, half of all posts in lower-tier health facilities are vacant.[4] Medicine

[4]Health staffing data accessible at https://hris.health.go.ug/.

availability is even more dire. While the National Medical Stores (NMS) is supposed to send six medicine shipments to each health facility per year, online delivery logs show that the NMS sends the average health center only 2.3 medicine shipments per year, fulfilling 38.5% of scheduled deliveries (see Appendix A2 for more details). And interviewees both for this and other studies frequently cite that each medicine shipment, which is meant to last two months, instead lasts only two weeks.[5] Hollowness plagues the education sector as well: in Ugandan public primary schools, there is only one teacher for every 52 students,[6] and each textbook is shared across more than five primary school students (NRM, 2021).

Survey data also show that Ugandans are aware of and frustrated with hollowness in their public facilities. In original surveys conducted in rural parts of the Northern and Western regions, 63% of citizens and 86% of local councilors agree or strongly agree that the government "often builds facilities like schools and clinics without making sure that there's enough staff or supplies in those facilities." Only 23% (28%) of citizen survey respondents express satisfaction with their public health (education) services, which respondents list as their top two policy priorities. Respondents cite the lack of teachers (33%) and medicine (69%) as their biggest problems with public education and health services, respectively; respondents are far less concerned with their distance to public schools and clinics.

In some domains, hollowness is more severe in the marginalized periphery than in the state's co-ethnic core. For example, in Acholi and Karamoja, the numbers of public primary school students per teacher are 56.1 and 61.9, respectively, compared to 42.3 in the West. But in most domains, hollowness indiscriminately plagues facilities across all regions. For instance, the state often misses bimonthly medicine shipments to *all* health facilities at once. As a result, regional disparities in medicine shipments are small: the government fulfills only 38% of scheduled medicine deliveries to Western facilities, comparable to figures for Acholi

[5]This "two week" figure was referenced in the following interviews with the author: interview with local councilor, Northern Uganda, August 28, 2023; interview with local councilor, Northern Uganda, August 29, 2023; interview with local councilor, Western Uganda, September 8, 2023. One interviewee provided the same two-week figure in a separate study (Ugandan Inspectorate of Government, 2021).

[6]All student-teacher ratios calculated from Ugandan Education Management Information System data, dated 2021.

(34%) and Karamoja (40%). In Acholi and Karamoja, the numbers of public secondary school students per teacher are 18.0 and 23.8, respectively, compared to 17.7 in the West, a relatively minor difference. Staffing in rural dispensaries (health centers II) is slightly *worse* in the West (58.8% of positions filled) than in Acholi (66.4%) and Karamoja (62.1%). And in an original survey of rural citizens, large majorities of both Acholi (75%) and Western (71%) respondents say that it is unlikely or very unlikely that health workers would be available to serve them if they showed up to the nearest public clinic on a weekday afternoon. At the same time, the *effects* of hollowness are likely disproportionately concentrated on citizens in the marginalized periphery, as these citizens are less able to afford or access superior, private services. For example, 34% of Western students are enrolled in private schools, versus only 21% of Acholi and 18% of Karamoja students.

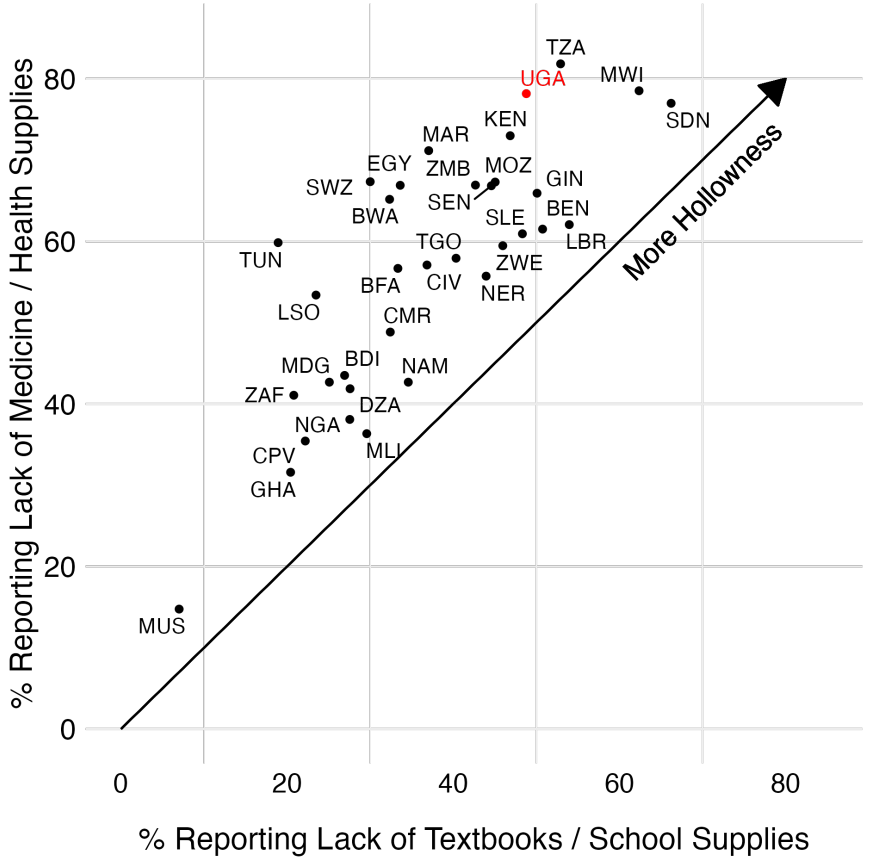
2.3 Hollow, Equitable Expansion In Other Countries

The patterns of equitable, hollow expansion likely also obtain in many other—but not all—sub-Saharan African countries. Hintson (2024) shows that, in most sub-Saharan African countries, governments have meaningfully reduced disparities in access to public infrastructure, and they have not meaningfully diverted infrastructure projects toward politically powerful ethnic groups. Equitable expansion appears to be the rule, rather than the exception, in sub-Saharan Africa.

Afrobarometer data show that complaints of hollowness plague many sub-Saharan African countries, though these complaints are particularly prevalent in Uganda. Figure 4 plots the percentage of Round 5 survey respondents reporting that they encountered supply shortages in their public schools and clinics in the past twelve months. Nearly 80% of Ugandans report having experienced shortages of medicine or other supplies in public health centers, and nearly 50% report having encountered shortages of textbooks or other school supplies. These figures are extreme even within sub-Saharan Africa, where respondents in the median country complain of hollowness at high rates (60% for health centers and 36% for schools,

respectively). In some countries, though, complaints of hollowness are far less widespread: in Ghana, only 32% of respondents report medicine or other health supply shortages, and only 20% report school supply shortages.

Figure 4. *Complaints of Hollowness by Country, Afrobarometer Survey Data*



Note: Data from Round 5 of Afrobarometer (2011-12). More recent rounds do not ask the relevant questions. Axes present the percentage of respondents in each country that report having ever encountered a lack of textbooks/other school supplies and a lack of medicine/other health supplies in local public schools and clinics in the last 12 months.

Qualitative accounts also describe hollow expansion in other sub-Saharan African countries. As the Bertelsmann Stiftung foundation (2016) describes of Angola:

> The construction and reconstruction of infrastructures has been a top priority for the government over the past several years, resulting in the rehabilitation of primary and secondary roads, railways, and the construction of schools and health centers across the country. However, although the improved road and

railway network has significantly eased the travel of persons and goods, schools and health centers lack qualified personnel to deliver services.

Similarly, one journalistic account of primary health centre (PHC) construction in Nigeria found that "most of the PHCs are still locked up months after they were built, [and] others that have opened to the public lack equipment, drugs and health personnel to man them" (Omeje, 2016). While Uganda is an archetypal "hollow state," it is not alone in this designation.

3 A Theory of Rent-Seeking and Blame Diversion

This section addresses two questions. First, why do states engage in equitable but hollow expansion? Second, how do leaders get away with hollow expansion in the face of substantial public outrage over hollowness?

I answer the first question with an argument rooted in *rent-seeking*: unconstrained elites who seek to embezzle construction funds are willing to build numerous hollow facilities and to allocate them equitably, including to peripheral regions. I contrast this account with plausible alternative explanations for equitable, hollow expansion.

I answer the second question with an argument about *blame diversion*. Leaders can effectively blame hollowness on petty corruption and negligence by lower-ranking figures within the hollow state. This enables them to benefit from widespread corruption while escaping significant political backlash for the expansion of a hollow state.

3.1 Rent-Seeking Drives Hollow Expansion

Corrupt leaders and state officials can embezzle funds from both facility operations budgets and facility construction budgets. These officials extract rents from construction projects by demanding that firms provide kickbacks in exchange for contracts. To facilitate this quid pro quo exchange, officials inflate project budgets and contractors cut costs by compromising

construction quality. Officials can extract rents from facility operations budgets by putting "ghost" workers on government payrolls or procuring supplies at inflated prices.

Faced with these options for embezzlement, why are unconstrained rent-seeking elites likely to engage in the hollow expansion of public infrastructure? I propose that these elites prefer to bloat construction budgets, relative to operations budgets, and that their embezzlement from construction budgets does not reduce the quantity of infrastructure to the same extent that their embezzlement from operations budgets reduces the quantity of staff and supplies.

First, all else equal, rent-seeking elites with power over budgetary allocations face incentives to over-fund construction because embezzlement from construction budgets is easier to conceal than embezzlement from operations budgets. The construction sector is marked by substantial information asymmetries: the "true" costs of construction are hard to measure, allowing officials to conceal price inflation, and contractors can cut corners covertly (Adam and Fazekas, 2023). But many facility inputs are standardized goods whose prices are readily verifiable, making it harder to hide embezzlement. For example, the Ugandan Ministry of Health faced substantial blowback after watchdogs revealed that it purchased COVID-19 masks for more than the widely-known market price (Musisi, 2021). Powerful construction tycoons may also persuade elites to channel funds into the construction sector for rent-seeking.

Additionally, in many countries, facility operations are devolved to local governments. In these countries, local officials reap a substantial share of the rents from, for instance, hiring ghost workers. Central government officials with power over budget allocations face incentives to bloat construction budgets and to deplete operations budgets if local officials are able to siphon much of the rents from the latter but not from the former.

Finally, much of the corruption in the construction sector occurs on the quality rather than the quantity margin. Elites can build numerous public facilities while still embezzling large portions of project budgets because they can direct contractors to cut costs by com-

promising construction quality. But nearly all of the embezzlement from facility operations budgets must occur on the quantity margin. State officials cannot hire low-quality workers for a fraction of the standard salary; they must instead hire fewer workers by employing ghosts. Similarly, because many facility supplies are standardized goods, officials cannot embezzle funds by compromising the quality of the procured supplies. For example, officials cannot easily purchase substandard acetaminophen for government clinics; instead, they compromise on quantity, purchasing less medicine at inflated prices. As a result, embezzlement from both operations and construction budgets typically leads states to produce an abundance of low-quality infrastructure with very few staff or supplies.

We might expect rent-seeking to produce unfinished facilities instead of hollow ones. But there are three reasons that even rent-seekers are likely to ensure that projects are completed, at least to a minimally usable extent. First, international lenders often finance construction projects; these lenders may overlook quality compromises but demand that states ensure that the facilities are completed. Second, half-built facilities provide even more political ammunition against the government than hollow ones, as they do not even provide a pretense of service delivery and put government waste on display. Third, contractors often do not receive full payment for construction works until local civil servants certify the projects as complete (Williams, 2017). While civil servants may accept bribes in exchange for premature certification, they risk punishment or backlash for doing so, particularly if projects are egregiously unfinished.

3.2 Rent-Seeking Drives Equitable Expansion

Why does rent-seeking lead to a more equitable expansion of public infrastructure than we would otherwise predict? One reason is that rent-seekers do not principally construct facilities to target supporters or woo swing voters, so they may not go to great lengths to interfere with technocratic allocations of public facilities based on formal eligibility criteria. More importantly, however, rent-seeking elites seek to steal *more* from projects in marginal-

ized, peripheral areas. This ability to discriminate in extraction weakens their incentives to discriminate in facility allocation; they have little reason to shift projects away from the periphery when they can use those projects as their cash cows.

Elites may seek to discriminate in extraction either because they are more willing or more able to steal from projects in marginalized peripheries. They are more willing to steal from marginalized peripheries because those regions have few advocates in the halls of power, and the state is accustomed to shortchanging them. By contrast, elites seek to constrain their own rent-seeking from projects in the government's ethnoregional power base. These elites limit their embezzlement because they share personal ties to co-ethnic communities, because they anticipate opposition from powerful regional elites who are not party to the rent-seeking scheme, or because they fear the breakdown of a broader compact between the regime and the core group keeping it in power.

Elites are better *able* to steal from projects in marginalized, peripheral regions if locals in these regions push back less strongly against contractor corruption. In remote areas, local leaders and citizens may lack information about how to hold contractors accountable. They may also possess little formal education or literacy in the state's official language, which state agents and contractors can exploit to conceal embezzlement. Additionally, leaders and citizens in marginalized peripheries may have long given up on attempting to hold the state accountable, making it easier for the state-contractor nexus to defraud the local population.

The implication of these arguments is that certain communities receive public facilities not because the state is responsive to their interests but precisely because it is not. I focus on communities in 'marginalized peripheries' because they possess a confluence of disadvantages, including political disempowerment, poverty, and geographic remoteness, which are separable in principle but covary in practice. When possible, empirical analyses attempt to distinguish which of these disadvantages lead to greater rent extraction, as well as whether elites steal more from marginalized peripheries because they are more willing or more able to do so. While Herbst (2000) and others argue that states find it prohibitively costly to expand

infrastructure into peripheral regions, I argue that this expansion is actually a lucrative enterprise for corrupt elites.

3.3 Alternative Explanations for Hollow Expansion

I consider four alternative explanations for the hollow expansion of public infrastructure. These alternative explanations do not immediately imply equitable expansion, but they are not inherently inconsistent with equity. In the following section, I consider the empirical evidence and case selection criteria needed to rule out each of these explanations for hollow expansion.

The first alternative explanation concerns *donor funding*. Donors may be willing to pay for infrastructure construction but not for facilities' recurrent operations, as they prefer not to pay for indefinite expenditures. This funding preferences may lead to the over-construction of hollow facilities, even without elite rent-seeking. Donors could also pressure states to expand infrastructure equitably; however, existing research argues that states readily and easily divert donor funds toward favored regions (Briggs, 2017; Jablonski, 2014).

The second alternative explanation for hollow expansion concerns *coalition shifts*. A regime or ruling coalition may support the expansion of infrastructure into a certain region, but a subsequent regime or coalition with different preferences may have little interest in funding those facilities' operations. This argument generalizes that of Williams (2017), who shows that development projects often go unfinished because the coalitions that initially backed them break down.

The third alternative explanation is state capacity. Policy-oriented discussions of hollowness often focus on the state's difficulty in attracting qualified staff and getting them to show up to their posts in rural areas (Lehmann et al., 2008), or on the logistical challenges of supply chain management (Bizana et al., 2015). A benevolent state may try to expand services equitably into peripheral and marginalized areas, but capacity constraints may limit its ability to keep facilities operating after they are constructed. This account, however, does

not explain why states would continue to expend large sums building facilities they know they cannot readily staff or supply.

The fourth and final alternative explanation concerns incumbents' *short-term political gain*. Leaders could build public facilities to win immediate support before elections, subsequently neglecting them and dashing citizens' hopes. This rationale for hollow expansion mirrors the Ugandan state's likely rationale for proliferating administrative units: the NRM creates numerous new local governments in order to win immediate electoral support, but these new entities are stretched thin and hobbled by under-funding (Grossman and Lewis, 2014).

3.4 Blame Diversion Enables Hollow Expansion

Independent of any short-run political benefits, hollow state expansion is an unpopular long-run strategy. Citizens in rural areas heavily prioritize public health and education services (Post and Kuipers, 2023; Goyal and Harding, 2021), and hollow structures put voters' unmet expectations on display. How do regimes sustain a long-run strategy of unchecked hollow expansion in the face of public opposition over hollowness?

Certainly, incumbents in non-democratic and hybrid regimes often manage the political fallout from unpopular policies through repression and co-option (Svolik, 2012). But repression risks backfiring against incumbents (Francisco, 2005; Kuran, 1991), and co-option is costly and empowers potential rivals (Roessler, 2016). Leaders of all regime types prefer simply to pass blame for unpopular policies onto other actors, but this is particularly challenging for relatively unconstrained executives (Williamson, 2020).

I argue that leaders can persuasively scapegoat local middlemen for hollowness. The center can accuse these middlemen—from local officials to service providers—of engaging in petty corruption, stealing resources from the center, or of negligence, failing to pursue citizens' requests with higher authorities. This tactic shifts voters' attention toward gaps in the service delivery pipeline and away from under-funding and corruption by the central

government. Leaders powerfully exploit the petty corruption and negligence of subordinates within the hollow state as political cover for grand corruption and negligence at the center.

This blame diversion tactic is likely to succeed because it appeals to the ways in which citizens in hollow states experience and perceive different levels of government. First, hollow states are often dysfunctional at all levels, as governing elites principally concerned with rent-seeking are unlikely to develop strong institutions to combat local graft and poor performance. As such, voters often already have legitimate grievances against local middlemen.

Further, voters observe misbehavior by local middlemen far more easily than they observe misbehavior by the center. Rural citizens have limited access to information about the central government (Conroy-Krutz, 2013), and they may not hear about high-level corruption scandals or funding decisions. But they often observe local, petty corruption directly, or they hear about it from their neighbors. Similarly, rural citizens can ensure that local middlemen hear their complaints, but they do not know whether those complaints reach higher authorities. This provides the center with a level of plausible deniability about local needs.

Finally, to rural citizens in regions of limited state presence, the central government appears distant but wealthy (Nathan, 2023). These citizens may find it easy to believe that the distant center cannot monitor resources on the ground, or that it needs to rely on local intermediaries to relay local needs. They may find it harder to believe that a lavishly wealthy state cannot or will not properly fund public services.

By blaming local middlemen for petty corruption and negligence, leaders can evade accountability for poor service delivery under more expansive conditions than previously assumed. Existing research argues that leaders are punished for poor service delivery if the central government is clearly responsible for and capable of providing services. By blaming local middlemen for petty corruption and negligence, the center can affirm its responsibility and capacity to provide resources to public facilities while still avoiding blame for poor service delivery.

First, consider the center's responsibility to provide services. A significant body of research finds that political accountability requires clear attribution for service provision (Harding, 2015; Tavits, 2007; Martin and Raffler, 2021). Harding (2015), for instance, shows that Ghanaian voters hold Presidents accountable for the provision of centralized services but not for decentralized ones. In part, this is because the 'leakage' of government resources muddles responsibility for decentralized services (p. 682). However, I argue that the center can divert blame even for centralized services with clear formal attribution, as local middlemen can still thwart central government service delivery through petty corruption or negligence. In this way, the center can retain its substantive and formal authority over service provision, as well as its ability to credit claim, while still passing the buck for poor service delivery onto local actors.

Second, consider the center's capacity to provide services. Citizens must believe that incumbents are capable of providing services in order to punish them for under-provision. Low voter expectations of state capacity allow incumbents to get away with poor performance (Gottlieb, 2016), and formal models of political accountability show that citizens struggle to differentiate "good" from "bad" leaders in the face of overriding resource constraints (Ferejohn, 1986). As previously noted, however, citizens in poor, rural areas often view the state as extraordinarily wealthy. Leaders may not be able to convince citizens that they do not have the capacity to provide resources to public facilities. Instead, they can appeal to the state's perceived deficit in *legibility*, or "the breadth and depth of the state's knowledge of its citizens and their activities" (Lee and Zhang, 2017; Scott, 1998). Leaders can convince voters that they are able to provide resources to public facilities but must rely on local intermediaries to serve as the state's eyes and ears on the ground, monitoring resource diversion and relaying citizens' needs to the center. In these ways, leaders can evade blame for poor service delivery even when citizens believe that the central government has the authority and ability to send resources to public facilities.

4 Testing the Rent-Seeking Argument

This section describes the data and empirical tests used to demonstrate that rent-seeking explains why the Ugandan government engages in the equitable but hollow expansion of public infrastructure. Table 1 summarizes the evidence and data sources used to support this explanation and to rule out alternatives.

TABLE 1. *Testing the Proposed and Alternative Explanations for Equitable, Hollow Expansion*

Proposed Explanation	**Observable Expectations**	**Data Source(s)**
Rent-Seeking	Credible allegations of centrally-planned corruption	• Parliamentary records • Elite and non-elite interviews • Journalistic accounts
	Regional inequity in malfeasance & information provision	• Project Progress Reports • Project Audits • UgIFT site survey
Alternative Explanation	**Inconsistent Evidence**	**Data Source(s)**
Donor Funding	State funds hollow expansion without grants and with fungible aid; state consistently ignores donor preferences	*Ruled out by case selection*
Coalition Shifts	Hollowness precedes change in government	*Ruled out by case selection*
State Capacity	Hollowness in "easy-to-fill" domains	*Ruled out by case selection*
	Evidence of (unequal) corruption	*Same as rent-seeking evidence*
Short-Term Political Gain	Projects stall near finish	• Project Progress Reports
	Projects are not targeted toward incumbent supporters or swing voters	• Election returns
	Locals anticipate hollowness	• UgIFT site survey • Citizen survey
	Projects do not increase local incumbent support	• Election returns

I focus my data collection on Uganda's latest major program of public infrastructure construction: the Ugandan Intergovernmental Fiscal Transfers Program, or UgIFT, which began in 2017 and is ongoing as of 2024. Under UgIFT, the Ugandan government is building over 600 secondary schools and mid-level health center maternity wards, financing this construction with $440 million in loans and $60 million in grants from the World Bank. Focusing on UgIFT construction offers several advantages. First, it is relatively easy to collect data on recently-constructed UgIFT facilities, compared to facilities built longer ago. Second, as Figure 3 demonstrated, the allocation of UgIFT facilities has been fairly equitable (with the exception of health centers in Karamoja). Completed UgIFT facilities also appear to be largely hollow: the idle secondary school mentioned in the opening paragraph was constructed under UgIFT, and journalistic accounts describe a staffing crisis in UgIFT schools and a ban on the recruitment of new healthworkers for the newly constructed UgIFT health centers (Nangonzi, 2022; Kabanza, 2024; Kisekka et al., 2022; Walubiri, 2012; New Vision, 2024). Third, UgIFT secondary schools and health center maternity wards have standardized specifications, so projects in different regions are directly comparable and ought to be identical to one another (see Appendix A5 for pictures).

There are two principal observable implications of the rent-seeking explanation for equitable, hollow expansion. First, we should observe credible allegations of centrally-planned corruption in the construction of public facilities. The architects of public infrastructure construction programs must plausibly have designed them with the intention of extracting rents. I employ parliamentary records, journalistic accounts, elite interviews, and interviews at UgIFT construction sites to show that both ruling party and Opposition figures tell a credible and internally consistent story of planned corruption by Ministry leaders, particularly those with familial ties to President Museveni, in the construction of UgIFT facilities.

Second, we should observe quantitative evidence of regional disparities in extraction from construction projects and in the state's willingness to aid local accountability efforts. Rent-seeking elites are willing to allocate public facilities relatively equitably because they

can steal from these facilities inequitably, extracting more rents from peripheral projects while aiding co-ethnics' efforts to hold contractors accountable. The data used to establish regional inequities in extraction and accountability come from three sources. The first is a set of internal government project audits, and the second is a set of Ministry reports describing the progress of each construction project. These data cover projects from all regions of the country, but they include limited information on each project. Therefore, I also conduct an original, face-to-face survey of key informants at UgIFT construction sites, collecting data on contractor malfeasance and monitors' access to project information.

This survey samples 390 local officials in 65 subcounties, each home to a UgIFT construction project, across 18 districts of Northern and Western Uganda. Additional site sampling details are presented in Appendix A6, though I conceal exact site locations in order to protect respondent anonymity. Importantly, the Northern sample consists of both the Lango sub-region, a non-"hard-to-reach" area home to the current Minister of Health as well as former President Milton Obote, along with the Acholi sub-region; only the latter qualifies as "peripheral" by official designation.[7]

In each subcounty, the survey targets five local politicians—the subcounty (LC3) chairperson, the district councilor representing the subcounty, and three directly-elected subcounty councilors[8]—plus the chairperson of the facility's management committee, a citizen appointed by the subcounty chairperson. These six officials serve as key informants about the construction works, as they play a major role in monitoring local development projects. Appendix A6 describes sampling in greater depth. The survey excludes projects built in the earliest phases of UgIFT, which may have been close to completion before the current councilors were elected in 2021, as well as those constructed under the most recent phases, which may not have made meaningful progress at the time of survey implementation. All but

[7]The Western sample consists of the Ankole and Toro sub-regions, both of which are firmly within the state's ruling coalition (Vogt et al., 2015). Outcomes are largely similar in these Western sub-regions, and this analysis pools them.

[8]These councilors each represent one parish within the subcounty. The survey sampled the councilor from the parish home to the construction site, as well as two random additional councilors. The survey focuses on non-quota-elected councilors as they are likely afforded the most information about facility construction.

six sampled projects were complete or nearly-complete (roofed) by the time of the survey.

These data serve to establish support for the rent-seeking explanation for equitable, hollow expansion. Demonstrating that elites embezzle much more from marginalized, peripheral areas also serves to rule out other "benevolent" explanations for equity in facility allocation.

I now consider the four alternative explanations for hollow expansion. Features of hollow expansion in Uganda rule out explanations based on donor funding and coalition shifts. Several considerations indicate that Uganda does not build hollow public facilities simply because donors will pay for construction and not for operations. First, Uganda builds numerous hollow public facilities—like those constructed under UgIFT—with loans that it must repay with taxpayer dollars, and parliamentary records suggest that legislators do not view these loans as free money.[9] Second, while donors are loathe to fund staff salaries, they heavily fund medicine provision in Uganda (Nyakato, 2024), yet medicine supplies are still scant in Ugandan public facilities. Third, as the previous discussion of Uganda's donor-funded postwar recovery program indicated, the government repeatedly shifts aid funds toward new facility construction and away from facilities' recurrent operations (Government of Uganda, 2015). Finally, donors are also unlikely to force Uganda to allocate facilities equitably, as the Ugandan government repeatedly ignores donor preferences in a variety of domains: with respect to UgIFT projects, the state finishes construction well behind schedule and does not meet agreed-upon staffing requirements for constructed facilities, yet the World Bank consistently consistently rates government performance as "moderately satisfactory" and continues to disburse funds.[10]

By focusing on Uganda, I can also rule out explanations for hollow expansion rooted in coalition shifts. President Museveni has ruled Uganda since 1986, and his co-ethnic base has not changed in this period. Additionally, many public facilities—like the schools and health centers described in the introduction—*never* receive meaningful staff or supplies. It

[9]See Hansards from the discussion of approving additional UgIFT financing on May 11, 2021: https://www.parliament.go.ug/documents/hansards

[10]See ratings details and progress toward stated objectives at https://projects.worldbank.org/en/projects-operations/project-detail/P160250.

is therefore implausible that the state builds facilities with the intention of staffing and supplying them, only to change course in response to preference shocks.

We can also rule out state capacity as the principal force driving hollow expansion in Uganda. First, capacity constraints cannot fully explain hollowness in Uganda because the government does not supply even easy-to-provide resources to its public facilities. For example, the lowest-skill positions in Ugandan health centers—security guards and cleaners—have vacancy rates of 46.5% and 42.1%. These positions are easy to fill in even the most remote villages, as they do not require education qualifications. The fact that the Ugandan government has put a freeze on all healthworker recruitment also suggests that an inability to fill posts does not fully explain hollowness in public facilities. Additionally, we can rule out the idea that the government *intends* to prioritize service delivery in the marginalized periphery with evidence of extreme extraction from projects in marginalized areas.

The most credible alternative explanation for hollow expansion is that the government builds facilities with the intention to win votes in the short term, abandoning them after elections. Here I describe a set of tests to exclude this alternative explanation. First, corruption often leads projects to experience long delays, especially at the end of the construction process when defects emerge or when contractors are paid prematurely. But leaders that primarily seek to use projects to win votes should try hard to avoid long delays that forestall commissioning ceremonies or push project completion past election dates. I examine project completion with government progress reports. Second, leaders using infrastructure construction to win votes ought to target projects toward swing voters or supporters (Dixit and Londregan, 1996). I use historical election returns to assess evidence for facility targeting. Third, building public infrastructure is unlikely to benefit the incumbent if voters expect hollowness. I use evidence from the original survey of councilors in UgIFT project areas, as well as the survey of voters described in the next section, to assess whether locals expect facilities to be hollow. Finally, if the state builds public infrastructure in order to win votes in the short term, then we would expect these efforts to be succesful; I use election returns

to determine whether infrastructure projects actually increase support for the ruling party at the ballot box.

5 Rent-Seeking Evidence and Results

Here I present evidence in favor of the rent-seeking explanation for equitable, hollow expansion. I begin by describing credible and consistent allegations that Ugandan Ministry leaders engage in a scheme to award contracts in exchange for kickbacks, with contractors compromising construction quality to compensate. The central government then thwarts local efforts to hold contractors accountable. Next, I present results from project progress reports, audits, and the original survey of key informants at UgIFT construction sites. These data provide evidence of far more extreme corruption in marginalized, peripheral areas than in other parts of the country, and these disparities are likely driven by central government preferences. Additionally, the state is far more likely to provide Westerners with the information needed to monitor projects effectively and to hold contractors accountable. This evidence provides support for a rent-seeking explanation for hollow, equitable expansion, and it rules out more benign explanations for equity in public goods allocation. Finally, I rule out electoral explanations for infrastructure construction, showing that projects are not targeted toward swing voters or supporters and do not win votes for the incumbent party.

5.1 Qualitative Evidence of Rent-Seeking

5.1.1 Elites Provide Credible, Consistent Allegations of Rent-Seeking

The clearest descriptions of collusion between top state officials and UgIFT contractors come from parliamentary proceedings. On May 11, 2021, the Ugandan Parliament discussed whether to borrow $240 million in additional loans to fund UgIFT. The construction of the first set of UgIFT facilities began in 2018 under a $200 million loan from the World Bank.

While MPs appreciated that the government was funding development projects, a number

of MPs from both the ruling and opposition parties told a consistent story of corruption via construction kickbacks. One Opposition MP from Eastern Uganda, Paul Mwiru, alleged that "there is a cartel in the Ministry of Education and Sports, which has taken over awarding contracts in this model."[11] Mwiru went on to note, "They say that when they give you 10 schools to construct, the four are not yours but for those people who are in the Ministry and the six are yours... once we pass the loan, you see them celebrating; they would have finished yet our aim is to ensure that there is service delivery." He then alleged that he spoke with one contractor who sued the government after being ousted from a UgIFT construction site for failing to remit kickbacks to the Ministry.

Even ruling party MPs corroborate this story. As NRM MP Noah Mutebi, from Central Uganda, explained, "there is a mutual understanding between the contractor and people from the Ministry. I would like to give you an example of a contract worth Shs 4 billion. The contractor will come and sign, but in agreement, the Shs 2 billion will be for the people within the Ministry." Mutebi went on to decry a poorly-built UgIFT health center in his own constituency whose bricks cracked when you kicked them.

The Ministry jointly selects UgIFT contractors with district governments. However, the former chair of the Committee on Public Accounts alleged that the Ministry dictates that districts select from a set list of favored contractors, who are "extremely pig-headed" and "do not respect the districts" (Mapenduzi, 2014). A sweeping 2022 report by this committee found numerous instances of irregular and unauthorized payments to UgIFT contractors (Committee on Public Accounts, 2022). In an interview with the author, one Opposition MP alleged that kickbacks primarily flow from contractors to district Chief Administrative Officers (CAO) up to the Permanent Secretaries (PS) of the relevant Ministries and the Ministry of Finance.[12]

Another Opposition MP from Central Uganda argued that contractors are protected by

[11] All quotes come from the Ugandan Hansards, May 11, 2021, accessed at https://www.parliament.go.ug/documents/hansards.

[12] Interview with author, Kampala, August 24, 2023.

the President's office: "We have contractors who do shoddy work but they are untouchable... you are chasing a thief and then he runs and enters the State House. They are arrogant, they say 'What are you going to do'?"[13] This MP noted that the Minister of Education is the President's wife, Janet Museveni, which frustrates accountability efforts; the Permanent Secretary of the Ministry of Health, Dr. Diana Atwine, also has close personal ties to the President and served as his former physician.

Certain UgIFT contractors wield independent political power, such as MPs Sam Otada (Otada Construction Company) and William Chemonges (Wiljon Estates Limited). Others appear simply to "pass through the armpits" (i.e. under the wing) of a more powerful, unknown benefactor, as one local Western Ugandan leader claimed.[14] But enriching powerful contractors is likely a secondary state objective to enriching powerful officials in government. Indeed, President Museveni sought to remove *all* contractors from UgIFT projects in 2021, citing poor performance, and instead hand construction over to the military's engineering brigade (Independent, 2022). One Opposition MP argued that this move, which the World Bank blocked, was meant not only to centralize rents but also to give projects "classified" military status, thwarting efforts at accountability.[15]

5.1.2 Locals Corroborate Rent-Seeking and Cover-Up

Local leaders and residents corroborate evidence of rent-seeking by officials and contractors, and they credibly corroborate that the central government works to thwart local efforts to hold contractors accountable. Qualitative accounts provide reason to believe that the government embezzles significant sums even from Western, co-ethnic regions, but that its efforts to extract rents and thwart accountability are far more extreme in marginalized, peripheral regions.

Both elites and ordinary Ugandans tend to estimate that, at a baseline, around 40-

[13]Interview with author, Kampala, August 24, 2023.
[14]Interview with author, Western Uganda, September 8, 2023.
[15]Interview with author, August 24, 2023.

50% of project funds are lost to corruption. As noted above, MP Paul Mwiru remarked that the equivalent of four out of ten schools goes toward lining Ministry officials' pockets, and MP Noah Mutebi remarked that 2 billion Shs of a 4 billion Shs contract gets lost to corruption. On a public Facebook post describing the construction of a new 1.9 billion Shs UgIFT secondary school in Western Uganda, 12 out of 39 comments expressed incredulity at the 1.9 billion figure, with three separate Ugandan commenters claiming based on the attached pictures of the school that "[the] school is just worth 900m," that it "is not even worth half that 1.9b," and that "[at] least corruption has only take about 40% of that money which is not so bad." Together, these remarks provide crude, ballpark estimates that, even in "favored" regions, the state manages to siphon nearly half of all project funds through price inflation. Similarly, even a local Western NRM subcounty chairperson complained that monitoring teams from the Ministry ignored locals' inputs on construction problems, stating that "there are some hidden interests, starting from awarding of contract at the center and supervision."[16]

Interviews in the country's marginalized periphery provide evidence consistent with *additional* state efforts to embezzle funds and thwart local accountability in these regions. In a quote similar to that of the Western subcounty chiarperson above, one NRM Acholi subcounty chairperson complained of hidden, high-level corruption in his local UgIFT project: "I can feel that there is something being hidden from the beginning... there is a big person behind this." But unlike his Western counterpart, this official was even denied access to the project's Bill of Quantities, a detailed document outlining all items, costs, and quantities in the project specifications.[17] Additionally, the Acholi project remained abandoned and incomplete, and another local official noted that the contractor had left the facility without paying the local laborers he had hired.[18] By contrast, the project in the Western chairperson's constituency was fully complete, and in a focus group discussion one participant said

[16]Interview with author, Western Uganda, September 8, 2023.
[17]Interview with author, Northern Uganda, August 28, 2023
[18]Interview with author, Northern Uganda, August 28, 2023

that he had helped to build the facility and had been paid appropriately for his work.[19]

Journalistic accounts also suggest widespread construction problems with UgIFT facilities. Each contractor is awarded too many contracts, forcing them to abandon sites for long periods of time (Muhereza, 2023). Complaints of poor-quality materials abound, and the Inspector General of Government ordered an investigation into the construction of all UgIFT schools (Amanyisa, 2024). And many projects get "stuck" right before their completion and commissioning, either because officials paid contractors in full shortly before project completion, or because an array of defects must be addressed before the facility can be commissioned (Atuganyira, 2022; Kasooha, 2022). Indeed, as of June 2023, a disproportionate share of unfinished UgIFT health centers were at 90-99% completion, and over a third of UgIFT secondary schools were listed as completed but not commissioned (Appendix A9). Together, all of this evidence is consistent with a scheme by UgIFT architects in the Ugandan central government to embezzle large shares of public expenditures on construction and then to thwart local efforts to hold contractors accountable.

5.2 Regional Inequities in Extraction and Information Provision

I now employ quantitative evidence to demonstrate that state efforts to embezzle funds and thwart local accountability efforts are not uniform throughout the country. Contractors engage in far more egregious behavior in the country's marginalized periphery, with the apparent blessing of the central government. And the state only provides its co-ethnic power base with certain information needed to hold these contractors accountable.

5.2.1 Contractor Malfeasance is More Extreme in the Marginalized Periphery

First, as noted above, corruption often delays nearly-finished facilities from becoming fully completed and commissioned, whether due to premature contractor payment or an overwhelming number of defects (Atuganyira, 2022; Kasooha, 2022). The ratio of nearly-finished

[19] Interview with author, Western Uganda, September 8, 2023.

to fully completed and commissioned facilities therefore offers a useful metric for corruption. Ministry data from June 2023 show the completion percentages of UgIFT health centers and classify UgIFT schools as ongoing, completed but not commissioned, or commissioned; this analysis considers health centers to be nearly-finished if construction is at 90-99% completion, and it considers schools to be nearly-finished if they are classified as completed but not commissioned.[20]

Table 2 shows that "nearly-finished" facilities are disproportionately common in the peripheral regions of Acholi and Karamoja. Despite the small sample of nearly or fully finished facilities in the periphery, this large disparity (35 p.p.) is statistically significant even with Fisher's exact test ($p = 0.0003$). In addition, Table 2 shows that June 2023 Ministry of Health reports were more likely to mention defects, snags, project stalling, or contractor abandonment for peripheral projects ($p = 0.004$). These results remain if we include other government-designated "hard-to-reach" areas outside of Acholi and Karamoja, but not if we exclude Acholi and Karamoja from those areas (Appendix A10). The UgIFT construction site survey corroborates these results: only 8% of nearly-finished (roofed) Acholi projects were fully commissioned in March 2024, versus 51% of other projects in the sample.

The construction site survey also provides evidence of differential corruption on a richer array of outcomes. Disparities between the peripheral Acholi region and the remaining sample are enormous (Figure 5). 44% of Acholi respondents say they have heard that the contractor was paid for incomplete works, versus 13% in Lango and 14% in the West. Strikingly, nearly three-quarters of Acholi respondents report hearing that the contractor did not pay the local laborers it hired to build the facility, versus barely one-quarter of Lango and Western respondents. This suggests that officials and contractors are willing to pocket funds from peripheral projects even by stealing local workers' wages. Acholi respondents are also 25 and 42 percentage points more likely than non-Acholi respondents to report hearing that the contractor used substandard bricks and abandoned the construction site for long periods

[20]Even when formal works are complete, the need to correct defects can prevent completed facilities from being commissioned.

TABLE 2. *Evidence of Additional Corruption in the Periphery: Ministry Progress Reports*

	Stuck Near Finish	Fully Finished	Row Total
Acholi & Karamoja	14 (56.0%)	11 (44.0%)	25 (100%)
Rest of Country	67 (21.1%)	250 (78.9%)	317 (100%)

Pearson $\chi^2 = 13.714$, $p = 0.0002$. Fisher exact $p = 0.0003$.

	Mentions of Defects, Snags, Stalling or Abandonment	No Mention	Row Total
Acholi & Karamoja	8 (33.3%)	16 (66.7%)	24 (100%)
Rest of Country	36 (10.4%)	310 (89.6%)	346 (100%)

Pearson $\chi^2 = 13.714$, $p = 0.002$. Fisher exact $p = 0.004$.
Note: Row percentages in parentheses.

of time, though these forms of malfeasance are fairly common outside of Acholi as well.[21] Curiously, these complaints are somewhat more common in the West than in Lango, though Westerners may simply have access to better information about contractor malfeasance, as the following section demonstrates.

Does the central government encourage greater extraction from the periphery, or do rent-seekers simply face weaker resistance from peripheral populations? Three pieces of evidence strongly suggest the former. First, as Figure 5 shows, Acholi respondents are nearly 60 percentage points more likely than non-Acholi respondents to agree that their UgIFT contractor was "arrogant because they feel they are connected to powerful people in Kampala." Second, as Appendix A14 shows, 74% of Acholi respondents say centrally-procured contractors are

[21] These analyses exclude respondents who say they "don't know" if they have heard of these problems. Counting those responses as "No's" only increases the observed disparities.

Figure 5. *Reports of Egregious Contractor Behavior by Project Location*

Note: Error bars depict 95 *percentile* confidence intervals, constructed by cluster bootstrapping the data by construction project.

more likely to produce poor works than district-procured contractors, compared to 57% of Lango and 41% of Western respondents. Third, as Appendix A13 shows that Acholi local councilors are actually better-educated than their Western counterparts and just as likely to ask for project specifications when they are not freely provided.

Notably, within-region measures of geographic remoteness do not predict extraction or empowerment to hold contractors accountable (Appendix A13); while the Ugandan government discriminates against its most remote, peripheral ethnic regions, it does not appear to discriminate against more geographically remote localities within regions. At the same time, survey respondents, especially in the North, believe that contractors are far more likely to produce shoddy works in poor and remote subcounties and that councilors in these subcounties are far less likely to receive access to project monitoring information (Appendix A15).

The implication of the results in this section are that rent-seeking elites face plenty of incentives to extend state infrastructure into marginalized, peripheral regions, as peripheral projects constitute these elites' cash cows. This fact contravenes two conventional views: that state expansion into under-served, peripheral regions is prohibitively costly to gov-

erning elites (Herbst, 2000), and that elites face incentives to divert development projects away from marginalized regions. This account demonstrates that public goods provision need not indicate state responsiveness to local needs and may even be driven by the state's *un*responsiveness to those needs.

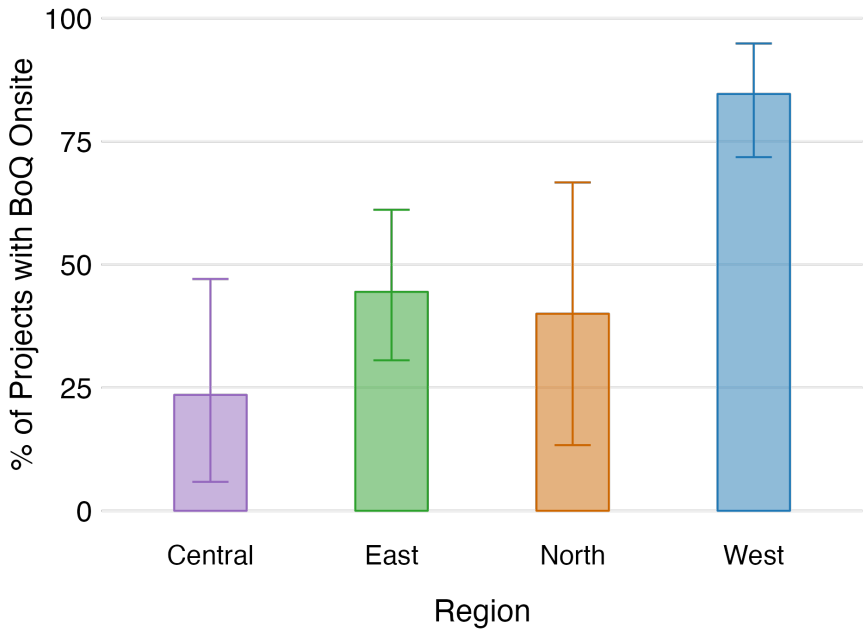
5.2.2 Only Favored Groups Are Typically Empowered to Engage Contractors

I now turn to disparities in locals' empowerment to hold UgIFT contractors accountable. I demonstrate that only officials in Western Uganda, Museveni's favored home region, are given widespread access to the information they need to supervise projects effectively. The most relevant information is the project Bill of Quantities (BoQ), which outlines the costs, quantities, and specifications of each item that the contractor must provide and install (see Appendix A12 for one UgIFT BoQ). Monitors without this information cannot check whether the contractor has completed all components listed in the project specifications, or whether the contractor is using materials of the required quality.

I first present data from Ministry monitoring visits in 2020, which record the presence of a BoQ at health center construction sites. Monitoring reports are not readily publicly accessible but are stored under hidden links with patterned alphanumeric codes; trying all code combinations yielded reports for 107 health facilities. While uncertainty is large in this small sample, Western projects are significantly more likely to have BoQs onsite, by margins of 40 to 60 percentage points over other regions (Figure 6, see A11 for regression analyses).

These Ministry monitoring reports are likely biased against reporting problems, and the presence of BoQs onsite does not immediately translate into local monitors' access to those documents. The UgIFT site survey asks local monitors whether they accessed the project BoQ, whether they were provided this BoQ without asking, and whether they requested the BoQ if not. Figure 7 shows that half of all Western survey respondents had accessed the project BoQ, compared to less than a quarter of Northern respondents. Almost no Northern councilors or citizens were provided the BoQ without asking, but one-quarter of Western

Figure 6. *BoQ Availability by Region: Ministry Audits*



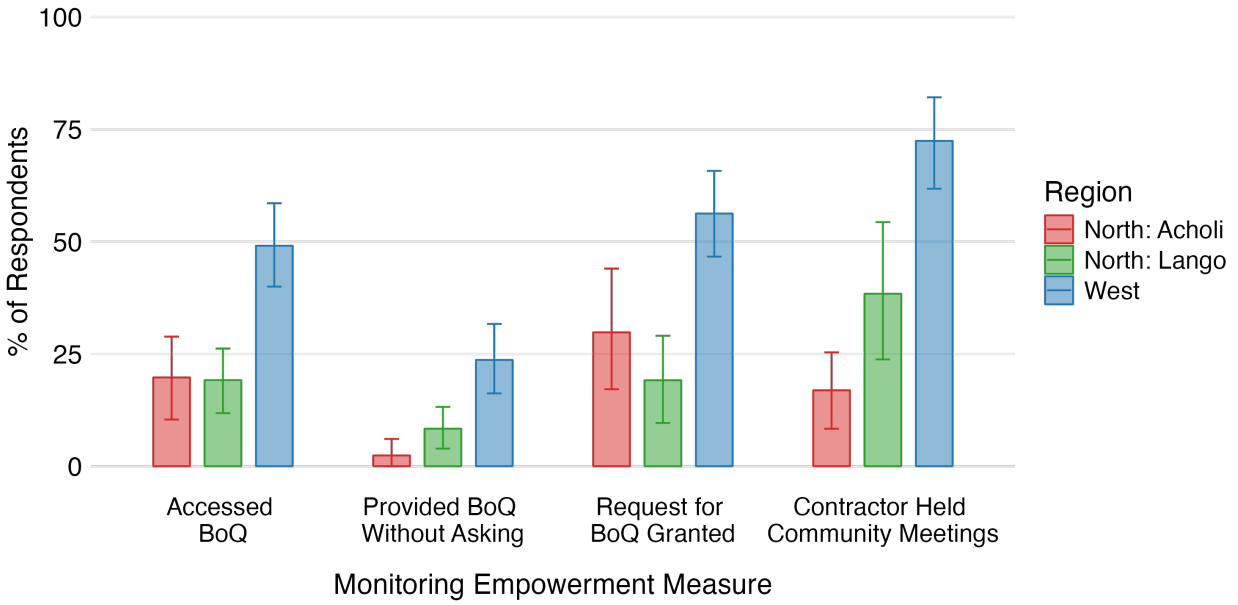
Note: Error bars depict 95 *percentile* bootstrap confidence intervals.

respondents were. Further, over half of the Western respondents who said they asked to see the BoQ ultimately received access, compared to around one-quarter of Northerners.

By contrast, Appendix A13 shows that there are no meaningful regional differences in the rates at which project monitors request BoQs, and that Westerners report much less difficulty than Northerners in accessing BoQs. Finally, Figure 7 shows that Westerners are uniquely empowered to hold contractors accountable in ways that extend beyond BoQ access. A full 72% of Western respondents reported that the contractors held community meetings at the construction site, versus only 38% of Lango and 17% of Acholi respondents.

Again, these disparities appear to be attributable to regional differences in the center's willingness to share information. While local monitors typically receive BoQs from either contractors or district government officials, Figure 8 shows that Northern councilors believe they are far less likely to receive necessary monitoring information for centrally-procured projects than for district-procured projects. By contrast, Western councilors believe they are slightly more likely to receive monitoring information for centrally-procured projects.

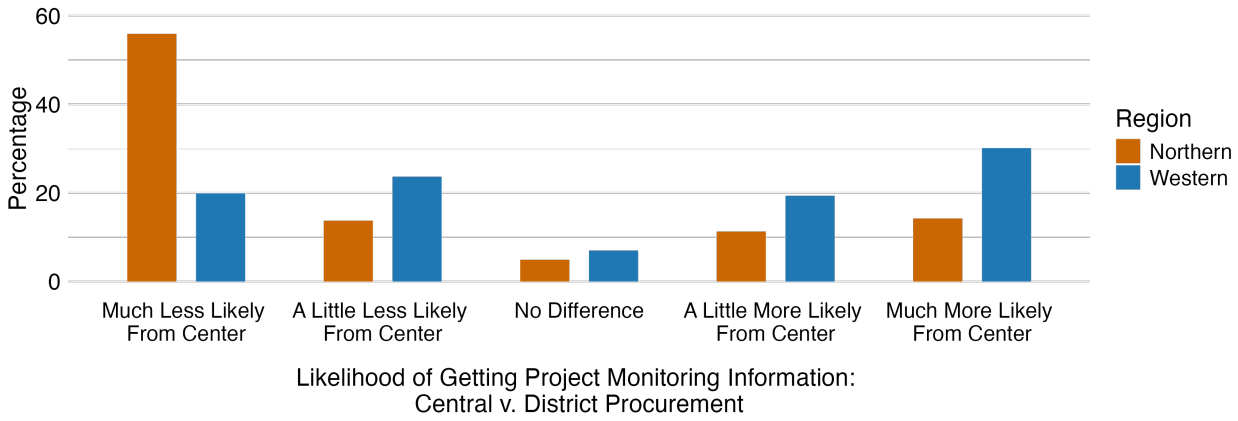
Figure 7. *Locals' Empowerment to Monitor and Engage Contractor, by Region*



Note: Error bars depict 95 *percentile* confidence intervals, constructed by cluster bootstrapping the data by construction project.

The implication of these findings is that rent-seeking elites may not seek to flood favored regions with development projects if they are unwilling to stop residents of these regions from holding contractors accountable.

Figure 8. *Expected Access to Information Under Central vs. District Procurement by Region*



Note: Bar graphs depict the percentage of respondents in each region providing each answer.

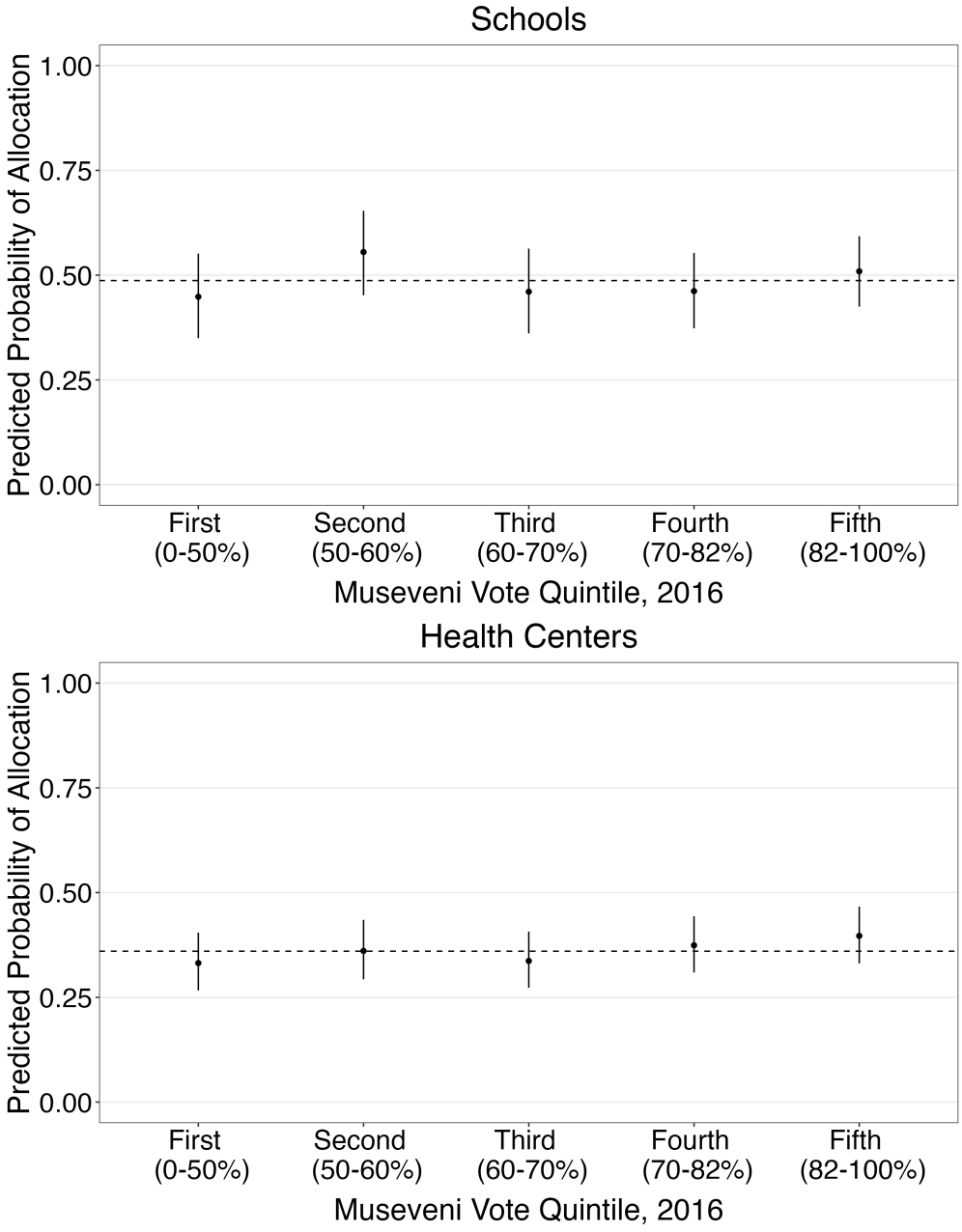
5.3 Electoral Motives Do Not Explain Ugandan State Expansion

The available evidence is inconsistent with electoral explanations for the (hollow) expansion of infrastructure. First, as noted previously, corruption often prevents or delays nearly-completed projects from being commissioned (see Appendix A9). But vote-seeking incumbents are principally concerned with ensuring that public facilities are promptly commissioned, as these commissioning ceremonies offer opportunities to credit claim. In addition, while the first tranche of secondary schools was originally slated for completion well prior to the January 2021 elections, contractor delays bogged down the projects so much that the first one was not commissioned until December 2021 (Agaba, 2022). These delays denied the NRM an opportunity to drum up votes at commissioning ceremonies in time for national elections.

Second, as Figure 9 shows, the predicted probabilities that an eligible subcounty receives a UgIFT school or health center do not meaningfully vary with that subcounty's prior electoral support for President Museveni. We would expect incumbents who build infrastructure to win votes, rather than to extract rents, to target infrastructure either toward past supporters or swing voters. No such targeting appears to occur.

Finally, the state does not appear to win additional votes in places where it constructs public facilities, likely because citizens expect them to be hollow. As noted previously, in original surveys of Northern and Western citizens and local councilors, 63% of citizens and 86% of councilors agree or strongly agree that the government "often builds facilities like schools and clinics without making sure that there's enough staff or supplies in those facilities." Locals *expect* hollowness, undermining the vote-seeking logic of expanding public infrastructure. Using a range of empirical specifications, Appendix A7 shows that the NRM did not appear to win additional votes from subcounties that were allocated UgIFT facilities, and Appendix A3 shows that appears to be the case for *all* school and health center construction over the last several election cycles.

Figure 9. *Probability of Facility Allocation by Prior Support for Museveni*



Note: Plots depict the predicted probability that an eligible, rural subcounty that existed prior to 2016 receives a UgIFT school or clinic, as a function of prior (2016) vote share for Museveni. Subcounty populations, estimated with 2016 registered voter totals, are set to subsample means. Underlying logit models include township/urban status, newly-created subcounties, and the logged number of registered voters in 2016 as covariates. The school logit models restrict the sample to eligible subcounties; the health center logit models include eligibility as a covariate since some ineligible subcounties received health centers. Dotted lines depict mean values across the five quantiles.

6 Testing the Blame Diversion Argument

How do leaders get away with hollow expansion? This section first establishes that President Museveni and officials in the Ugandan central government do in fact scapegoat local middlemen for hollowness, citing their petty corruption and negligence, and that these messages appear salient to voters in qualitative interviews. I then describe a survey of Ugandan voting-age citizens, with two embedded survey experiments, that assesses the extent to which voters blame the central government for hollowness and that tests the effectiveness of the center's blame diversion messages.

6.1 Blame Diversion Messaging in Uganda

For decades, the NRM government has responded to allegations of hollowness with a tried-and-true strategy of blaming service providers and local leaders for thwarting central government resource provision. The NRM's 2006 Manifesto attributed medicine and staffing shortages to drug theft and absenteeism by healthworkers. The same dynamic played out in the 2011 elections:

> "The opposition concentrated on bringing out the issues of drug stock-out and the lack of enough health workers, trying to show that the current government has not delivered much. Throughout his campaign, President Museveni solely blamed the poor health service delivery on health workers [e.g. by] telling a rally in Tororo county that the major problem to Uganda's health system was theft of drugs by medical staff..." (Kagumire, 2011)

Similarly, President Museveni frequently casts citizens' local representatives as lazy, corrupt, and incapable of or unwilling to obtain central government resources for their constituents. As he lamented in one speech, "Some NRM legislators are lazy, they cannot even monitor projects in their constituents, but on the other hand, those from the Opposition are useless and simply cause confusion" (Nsubuga, 2021). One analysis of the 2011 elections

noted that Museveni "dealt with public frustration over corruption by trying to deflect blame for poor government performance onto local officials" (Izama and Wilkerson, 2011). Museveni has also blamed citizens for electing representatives without close ties to his regime: "You are now crying for roads and electricity when you don't know how to tap resources" (Daily Monitor, 2015).

Qualitative interviews attest to the persuasive power of these appeals. One bureaucrat in Eastern Uganda noted that, although the government was only sending the local health centre III the amount of medicine meant for a health centre II, "there was a time when the in-charge (facility director) was mistreated at the facility by some community members accusing her for stealing the drugs."[22] And one resident of Western Uganda alleged that local leaders' negligence, rather than central government under-provision, undermines service delivery: "The Ministry is working but they do not get the reports from the political leaders; that's why the drugs are not there in the facilities."[23] Similarly, one Northern Ugandan citizen expressed that "we do raise our complaints to leaders like the LC3 (subcounty) chairperson who take our complaints to the government to address, but now we don't know whether our leaders do report our issues or not."[24]

6.2 A Survey of Ugandan Citizens

I design a survey that seeks to assess whom citizens blame for hollow facilities and that tests whether blame diversion messaging and counter-messaging alters assignments of blame. This survey sample consists of 1,224 voting-age rural citizens in four Ugandan districts, two in the Acholi ethnic sub-region and two in Museveni's home Ankole ethnic sub-region of Western Uganda. Appendix A16 provides a map of study sites and further details on district selection. Acholi and Ankole lie at opposite ends of the state's socioeconomic and political hierarchies, and the NRM has a much stronger hold on Ankole than Acholi (winning 87% vs. 60% in

[22]Interview with author, Eastern Uganda, August 31, 2023.
[23]Focus group discussion with author, Western Uganda, September 8, 2023.
[24]Focus group discussion with author, Northern Uganda, August 28, 2023.

the 2021 presidential election). By selecting "most different" locations, we can distinguish whether blame diversion tactics are effective in both favored and peripheral areas. I focus only on rural areas for three reasons. First, the literature on state expansion and state scarcity principally concerns rural areas. Second, the state may target blame diversion efforts toward rural citizens in information-poor environments. Third, public education and health services are most salient to rural voters, who enjoy few other public services and few private alternatives (Post and Kuipers, 2023).

This survey randomly sampled seventeen villages within each district, using 2010 household population estimates as a sampling weight. Enumerators randomly sampled eighteen households per village from village leaders' household rosters. Enumerators then randomly sampled one adult per household, ages 18 to 75, stratifying on gender within each village to produce a gender-balanced sample of 1,224 respondents.

6.2.1 Petty Corruption Vignette

The survey consists of two pre-registered, vignette-based survey experiments.[25] The first vignette experiment tests the effectiveness of the center's strategy of blaming medicine shortages on petty larceny by healthworkers, diverting attention from central government underfunding and corruption. All respondents first hear the following vignette:

> A woman named Brenda[26] is feeling ill and goes to a public health centre III a few kilometers from her village. While she is there, a health worker diagnoses her with malaria, but informs her that the facility is out of medicine to treat malaria. The healthworker writes Brenda a prescription to purchase Panadol and Coartem at a private clinic, but Brenda cannot afford to buy it. She returns home without receiving any medicine. People in Brenda's community complain that this happens often.

[25] The pre-analysis plan is available here: https://osf.io/rb4a7

[26] To match respondents' religion, Muslim respondents instead receive the name Shamim; however, 99% of the sample is Christian.

The outcome question asks respondents to apportion blame for service delivery failures like this one across three groups: (1) the central government, including the Ministry of Health, and national leaders in Kampala; (2) local government and local leaders at the district and subcounty; and (3) health workers at the health center. Respondents are provided ten "blame tokens" to allocate across the three groups (pictures in Appendix A17). The outcome of interest is the share of blame placed on the central government and national leaders.

Respondents are randomly assigned to three groups with equal probability. The control group allocates blame immediately after hearing the vignette, and their allocations of blame are important descriptive quantities. Two other groups receive additional prompts before they allocate blame. First, enumerators provide respondents in the *leakages* treatment group with ten "medicine tokens" and ask them to estimate the extent of drug theft before introducing the blame question:

> Let's say this stack of tokens represents the amount of medicine that the government purchases and supplies to a typical health center in Uganda in one year. On average, how much of this medicine do you think gets taken by drug theft before it can reach the patients who need it?

Respondents' estimates are important descriptive quantities, but the question itself primes citizens to think about petty corruption, or leakages in government resources. This treatment aims to demonstrate that merely thinking about leakages reduces blame on the center, abstracting from specific leaders' appeals to blame a particular group. The **primary hypothesis** of this experiment is that respondents in the leakages treatment will place less blame on the center than respondents in the control.[27]

Enumerators instead ask a separate *supply* treatment group to estimate the extent of government (under-)provision:

[27]Primary and secondary distinctions are preserved from the pre-analysis plan.

> Let's say this stack of tokens represents the amount of medicine that a typical health center in Uganda needs to treat everyone in the community who requires care for an entire year, without ever running low on any drugs. On average, how much medicine do you think the government actually purchases and supplies to a typical health center each year?[28]

Priming respondents to estimate government under-provision could redirect citizens' ire back onto the center. The two **secondary** hypotheses for this experiment are that respondents in the supply treatment group will place more blame on the center than respondents in the leakages or control groups. Note that neither of these primes inform respondents that the *central* government supplies medicine to public health facilities, as doing so could introduce an additional effect on respondents' attitudes independent of the primes themselves. Instead, the primes seek to show that emphasizing theft reduces blame onto the center while emphasizing under-provision increases it, even without explicitly distinguishing between the actors involved in this theft and provision.

6.2.2 Neglected Complaints Vignette

In addition to this vignette about medicine shortages, respondents receive another vignette-based experiment (with order randomized) about citizens seeking more resources for their local health center. The purpose of experiment is to assess whether citizens fault local middlemen for neglecting their complaints when resources from the central government do not materialize. All respondents first hear the following story:

> Many citizens in a rural village are frustrated with the services at their local health center. The facility does not have enough health workers, so people wait a long time to receive care. The facility also does not have enough beds, so patients often must share beds or sleep on the floor. The facility director informs

[28] To exclude effects from information about attribution, neither prime specifies which level of government supplies medicine.

the citizens that the Ministry of Health in the central government is responsible for providing beds and for authorizing the recruitment of more healthworkers.

Respondents are assigned to two groups with equal probability. Respondents in the *vertical* condition hear that the citizens take their complaints to their subcounty chairperson (LC3) to raise to the Ministry by way of the district chairperson (LC5):

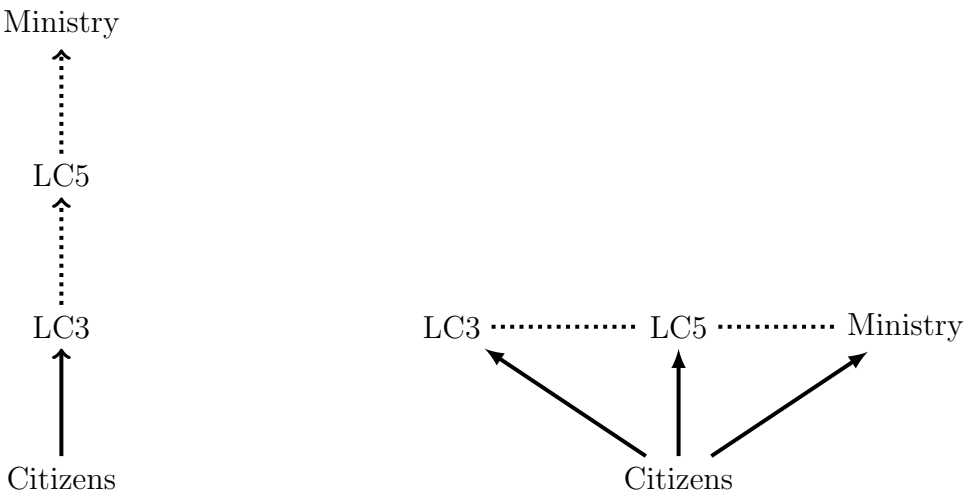
> The citizens want to get these problems fixed, so they take their concerns to their LC3. The citizens tell the LC3 to raise the issues repeatedly with the LC5 at the district, so that the LC5 will then petition the Ministry of Health to send the necessary resources to the facility.

Respondents in the *horizontal* condition instead hear that the citizens take their complaints to all three actors:

> The citizens want to get these problems fixed, so they take their concerns to their LC3, their LC5, and an official from the Ministry of Health who was visiting the district on other business. The citizens tell each of them to work to make sure that the Ministry sends the necessary resources to the facility.

Figure 10 depicts the difference between conditions. Note that the vertical condition better approximates normal affairs in Uganda; 28% of respondents say they have ever contacted their LC3 about education and health services, but only 10% say they have contacted their LC5 and a paltry 1% say they have contacted a Ministry official. Further, 83% of local councilors in the UgIFT survey strongly agree that local leaders must follow the subcounty-district-center chain of command rather than taking local matters directly to the center.

In both conditions, respondents hear that the resources did not materialize: "But after the citizens raise their complaints, a year goes by and the facility is still lacking beds and staff." Respondents are then asked to allocate ten blame tokens across the LC3, LC5, and Ministry of Health for the continued lack of resources. Note that the vignette informs all



(a) *Vertical Condition* **(b)** *Horizontal Condition*

Figure 10. *Vertical and Horizontal Vignette Conditions*

respondents that the Ministry is responsible for providing these resources. Further, at the time of survey implementation, the Ministry had frozen all healthworker recruitment: no local leaders could have obtained more staff from the Ministry. If respondents nevertheless place substantial blame on local leaders, this is powerful evidence that the center can divert blame even when attribution for service delivery rests squarely on its shoulders.

The **primary hypothesis** for this experiment is that respondents in the vertical vignette condition will place less blame on the Ministry of Health than respondents in the horizontal condition. The reason is that this condition creates opportunities for local leaders to drag their feet and fail to bring the citizens' complaints to the center. While local leaders do not have obvious political incentives to sit on citizens' complaints, many respondents attribute this negligence to pure laziness or indifference, arguing that their local representatives exert little effort on their behalf and are often truant from their posts. In the horizontal vignette condition, the citizens do not have to go through local leaders to relay their complaints to the center, and the center does not have plausible deniability about local needs. To establish that the vignette conditions affect respondents' beliefs about whether citizens' complaints reached the central government, a **secondary hypothesis** holds that respondents in the vertical condition will be less likely to believe that the citizens' complaints reached Ministry

decision-makers (measured on a four-point scale).

Another **secondary hypothesis** holds that the main effect will obtain among Acholi (Northern) respondents. The Western region is politically connected to the center; as such, citizens may not need to rely solely on their local representatives to relay concerns to the central government. By contrast, Acholi residents may have few other channels through which to reach the center. As such, the vertical treatment condition may have greater effects on Acholi residents' expectations that citizens' complaints reached the Ministry and, by extension, the blame these residents place on the center. Alternatively, effects may be concentrated among Acholi respondents simply because they better approximate "swing voters." The results will demonstrate that the former explanation is more consistent with observed outcomes. Table 3 summarizes the pre-registered hypotheses for the two survey experiments.

TABLE 3. *Summary of Experiments and Pre-Registered Hypotheses*

Experiment	**Hypothesis Type**	**Hypothesis**	**Expected Sign**
Top-Down Leakages	Primary	Leakage prime reduces central government blame, relative to control	−
	Secondary	Leakage prime reduces central government blame, relative to supply prime	−
	Secondary	Supply prime increases central government blame, relative to control	+
Bottom-Up Leakages	Primary	Vertical condition reduces blame on Ministry	−
	Secondary	Vertical condition reduces blame on Ministry among Northerners (Acholi)	−
	Secondary	Vertical condition reduces perceived likelihood that Ministry decision-makers received complaints	−

7 Blame Diversion Evidence and Results

7.1 Petty Corruption Vignette

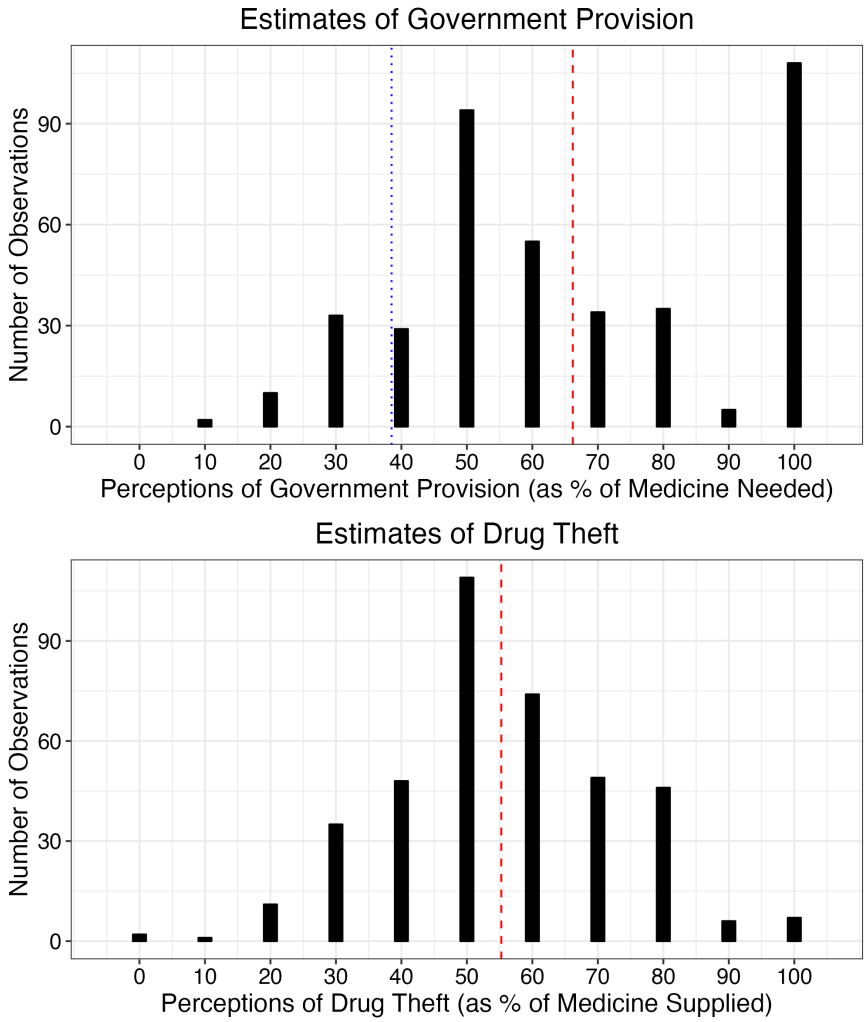
I now turn to the results of the blame diversion survey and survey experiments, starting with the medicine shortage vignette. First, I consider descriptive statistics. Whom do respondents blame for medicine shortages? On average, in the condition condition, respondents put three blame tokens on the center (30.4%), three on the local government (29.1%), and four on healthworkers (40.5%). This suggests that the government successfully diverts substantial blame for medicine shortages onto healthworkers.

Descriptive evidence from the two medicine token exercises suggest that citizens believe that the government sends substantial quantities of medicine to health facilities, most of which is stolen. The top panel of Figure 11 shows that, on average, respondents in the supply treatment group believe that the government supplies health centers with 66% of the medicine they need. This figure is implausibly high, as the center fulfills only 38.5% of bimonthly medicine shipments, and even these shipments are widely perceived as insufficient for two months. The modal respondent says that the government provides *all* the medicine that health centers need. Yet this sub-group of respondents is nevertheless dour about the availability of medicine: 76% of them report dissatisfaction with the availability of medicine in public clinics.

The bottom panel of Figure 11 helps to reconcile these findings: respondents estimate that drug theft is rampant, taking an average of 55% of all supplied medicine. There are few objective benchmarks with which to compare respondents' estimates, and I do not deny the prevalence of petty drug theft. Rather, it seeks to show that petty drug theft enables the center to evade blame for providing insufficient resources, as residents divorce medicine shortages from central under-provision.

Next, I turn to experimental results. Does priming citizens to estimate drug theft and drug provision affect their allocations of blame? Table 4 reports the main results of the survey

Figure 11. *Descriptive Results: Medicine Token Exercises*



Note: Red lines mark sample averages. The top blue line marks the proportion of scheduled medicine deliveries which are fulfilled.

experiment. All specifications include a set of pre-specified covariates, which are largely balanced across experimental conditions and do not affect overall results (Appendix A18).[29] Column (1) shows strong support for the primary hypothesis: respondents asked to estimate the extent of drug theft place significantly fewer blame tokens on the center than respondents in the control condition ($p < 0.000001$). The effect size is a meaningful reduction of 0.83 blame tokens (0.34σ), or 27% of baseline blame. Appendix A19 shows that this prime shifts blame entirely onto healthworkers and does not affect local government. Indeed, respondents

[29]Covariates include: district indicators, primary and secondary school completion, age, gender, a pre-specified wealth index, and NRM affiliation.

who receive the leakages prime put over twice as much blame for medicine shortages on healthworkers (4.9 tokens) as they do on the central government (2.2 tokens).

TABLE 4. *Experimental Results: Petty Corruption Vignette*

	Dependent variable:		
	Proportion of Blame Tokens on Central Government		
	(1)	(2)	(3)
	Relative to Control	Relative to Supply Prime	Relative to Control
Leakages Prime	-0.083^{***}	-0.038^{**}	
	(0.017)	(0.016)	
Supply Prime			-0.044^{**}
			(0.018)
Covariates	Yes	Yes	Yes
Observations	819	793	836
R^2	0.056	0.038	0.022

Note: Robust (HC2) SEs in Parentheses. *p<0.1; **p<0.05; ***p<0.01

Columns (2) and (3) of Table 4 report results for the two secondary hypotheses of this experiment. Consistent with expectations, respondents who receive the leakages prime place significantly less blame on the center than respondents who receive the supply prime. However, contrary to expectations, respondents who are asked to estimate the extent of government (under-)provision place *less* blame on the center than respondents in the control condition. This supply prime has roughly half of the blame-reducing effect of the leakages prime, and it shifts blame from the center onto healthworkers (Appendix A19). Because many respondents estimated that the government provides plenty of medicine to public clinics, the supply prime may have simply reinforced respondents' beliefs that healthworker drug theft, and not central government under-provision, is responsible for medicine shortages.

Appendix A20 shows that most respondents believe that local district and subcounty governments, rather than the center, are most responisble for stopping drug theft. They also overwhelmingly agree that the center "has a lot of money at its disposal, even if that

money does not always reach the people" (Appendix A20). In open-ended responses, those respondents who do primarily blame the center cite its under-provision of medicine, and those who blame healthworkers overwhelmingly cite drug theft (Appendix A21 provides a random sample of responses). Respondents who blame local government cite both drug theft by local leaders, poor monitoring of service providers, and failures to relay citizens' needs to the center.

7.2 Neglected Complaints Vignette

Table 5 presents the results of the "neglected complaints" survey experiment. Consistent with the primary hypothesis, respondents in the vertical vignette condition place less blame on the Ministry than respondents in the horizontal condition. However, the effect size is small (0.29 tokens) and only marginally significant ($p = 0.066$). The Ministry receives a plurality, but not a majority, of blame in both the horizontal (48%) and vertical (45%) conditions. Appendix A22 shows that the vertical condition shifts blame from the Ministry onto the subcounty chairperson (LC3), citizens' first point of contact in the vignette.

TABLE 5. *Experimental Results: Neglecting Complalints Vignette*

	Dependent variable:			
	Share of Tokens on Ministry			Complaints Reached
	(1)	(2)	(3)	(4)
Vertical Condition	−0.029*	−0.096***	−0.024	−0.257***
	(0.016)	(0.035)	(0.039)	(0.056)
Respondent Sub-Group	All	Northern	Western	All
Pre-specified Covariates	Yes	Yes	Yes	Yes
Observations	1,224	612	612	1,224
R^2	0.055	0.067	0.039	0.114

Note: Robust (HC2) SEs in Parentheses. *p<0.1; **p<0.05; ***p<0.01

The two secondary hypotheses find strong support. The vertical condition only reduces blame on the Ministry in the Northern (Acholi) sub-sample, and it does so by a meaningful

amount (0.96 tokens, or 0.6 tokens in a bivariate specification). Respondents in the vertical condition are also significantly less likely to believe that powerful people in the Ministry learned of the citizens' complaints. This effect is driven by Northern (Acholi) respondents, consistent with the view that those respondents have fewer outside options for reaching the Ministry. However, most respondents in both conditions believe it is likely that Ministry decision-makers learned of the citizens' complaints, though those who doubt this place very little blame on the Ministry (Appendix A23).

Respondents' open-ended answers often blame the district (LC5) and subcounty (LC3) chairpersons for likely sitting on the citizens' complaints out of laziness or indifference. But even in the horizontal condition, respondents argue that these local leaders likely failed to keep raising matters with the Ministry (e.g. the LC3 "should have kept reminding the LC5 so that people get beds"; or the LC5 "doesn't forward complaints of citizens to Ministry of Health to emphasize on the one citizens took to the official."). Many respondents assign only conditional blame to the Ministry (e.g. "If indeed [the Ministry] got the information and did nothing, yet they are responsible for ensuring that the services are [there], they are also to blame."). These open-ended answers, a random sample of which are presented in Appendix A24, explain why citizens assign substantial blame to local actors for service delivery failures even when they are informed that the center is responsible for providing those services.

Across the two experiments, five of the six pre-registered hypotheses find support at the 10% significance level, four of which find support at the 5% level. The only hypothesis that is categorically unsupported is that priming respondents to estimate the extent of government medicine provision will increase blame on the center. Instead, this prime appears to backfire, as respondents double down on the view that central under-provision is not the source of hollowness. Appendix A25 accounts for multiple comparisons using the Holm correction, which does not affect these inferences.

Together, these results suggest that the center pays a relatively small political price for hollow expansion. Incumbents can use petty larceny by service providers as political cover

for the grand corruption underpinning hollowness in Ugandan public facilities, convincing voters that the center is providing plenty of resources but that these are stolen on the ground. Similarly, because citizens believe local leaders often sit on their complaints, the center has political leeway to ignore citizens' complaints itself.

8 Conclusion

Scholars often attribute the expansion of basic public services to developmental agendas or electoral concerns (Stasavage, 2005; Matfess, 2015). I demonstrate instead that rent-seeking plausibly motivates leaders to extend public infrastructure to rural villages long outside of the state's reach. While Herbst (2000) famously argues that African states find it too costly to extend infrastructure into remote regions, I argue that state leaders can profit heavily off of this construction. Indeed, they can profit the most off of projects in remote, marginalized communities with few means with which to check government corruption.

The prevailing view holds that African states are vessels for dominant ethnic groups to allocate public resources toward themselves (Bates, 1974). Another view depicts these states as cartels of a handful of corrupt elites, who steal broadly from all segments of society (Coolidge and Rose-Ackerman, 2000; Reno, 1998). I find support for a hybrid view of the Ugandan state: a handful of elites embezzle public funds from all regions of the country and hollow out Ugandan public services from the center, but these elites embezzle more from peripheral and politically marginal ethnic groups than from their co-ethnic base.

These elites can evade blame for under-supplying public resources—both in co-ethnic and non-co-ethnic communities—precisely because corruption and negligence pervades all levels of the hollow state. Citizens often attribute resource deficits to locally salient petty larceny, overestimating the center's initial provision and tasking local government with monitoring and preventing this theft. In this way, voters can attribute resource provision to the central government while blaming local actors for shortfalls.

Not all African states engage in rent-driven, hollow expansion. As documented in Figure 4, Ghanaians are less than half as likely as Ugandans to report supply shortages in their public schools and clinics. And Ethiopia, a so-called 'developmental state,' has been "hailed as a model in sub-Saharan Africa" for its expansion of rural primary health services (Croke, 2020). At the same time, rent-seeking appears to pervade public infrastructure construction in countries like Angola and Nigeria (Bertelsmann Stiftung, 2016; Omeje, 2016), and there are common accusations in these countries that public facilities lie hollow (Soares de Oliveira and Taponier, 2013; Omeje, 2016).

This paper does not seek to explain variation in hollow expansion; rather, it aims to explain a puzzling outcome that appears to obtain in a variety of places. Still, certain scope conditions are necessary for states to engage in the rent-driven hollow expansion of public services. First, for leaders to effectively divert blame for hollowness onto other actors, citizens' must share expectations that local middlemen are negligent and corrupt. Second, rent-driven, hollow expansion is more likely to occur in countries where there is either limited political competition (reducing the costs of political opposition) or where the returns to leaders for doling out private spoils exceed those for spending on public goods. Third, rent-driven, hollow expansion requires that there are few institutional checks on organized corruption; this is likely to occur when a regime's survival heavily depends on co-opting a few elites with public resources rather than on winning broad-based public support. In places where these conditions hold, rural citizens are unlikely to encounter a "scarce" or distant state but rather one that is abundant and hollow.

References

Adam, I. and Fazekas, M. (2023). Overview of corruption and anti-corruption in infrastructure development. *Bergen: U4 Anti-Corruption Resource Centre, Chr. Michelsen Institute (U4 Helpdsk Answer, 2023: 9)*, pages 1–16.

Agaba, N. (2022). Government set to commission 69 seed secondary schools.

Amanyisa, Z. (2024). Igg to investigate shoddy works at seed schools.

Atuganyira, I. (2022). Kiryandongo leaders reject seed school over shoddy works.

Bates, R. H. (1974). Ethnic competition and modernization in contemporary africa. *Comparative Political Studies*, 6(4):457–484.

Bertelsmann Stiftung (2016). Bti 2016: Angola country report.

Bizana, N., Naude, M., and Ambe, I. (2015). Supply chain management as a contributing factor to local government service delivery in south africa. *Journal of Contemporary Management*, 12(1):664–683.

Boone, C. (2003). *Political topographies of the African state: Territorial authority and institutional choice*. Cambridge University Press.

Briggs, R. C. (2017). Does foreign aid target the poorest? *International Organization*, 71(1):187–206.

Burgess, R., Jedwab, R., Miguel, E., Morjaria, A., and Padró i Miquel, G. (2015). The value of democracy: evidence from road building in kenya. *American Economic Review*, 105(6):1817–1851.

Committee on Public Accounts (2022). Report of the committee on public accounts [local government] on the report of the auditor general for financial year 2020/21 on 49 district local governments, 6 cities, and 5 municipal councils.

Conroy-Krutz, J. (2013). Information and ethnic politics in africa. *British Journal of Political Science*, 43(2):345–373.

Coolidge, J. and Rose-Ackerman, S. (2000). Kleptocracy and reform in african regimes: Theory and examples. In *Corruption and Development in Africa: Lessons from Country Case Studies*, pages 57–86. Springer.

Croke, K. (2020). The origins of ethiopia's primary health care expansion: the politics of state building and health system strengthening. *Health Policy and Planning*, 35(10):1318–1327.

Daily Monitor (2015). Museveni regrets giving residents district.

Daily Monitor (2019). Health centre waits 10 years for drugs.

Datzberger, S. (2022). Lost in transition? modernization, formal education and violence in karamoja. *World Development*, 158:106013.

Dixit, A. and Londregan, J. (1996). The determinants of success of special interests in redistributive politics. *The Journal of Politics*, 58(4):1132–1155.

Duflo, E., Hanna, R., and Ryan, S. P. (2012). Incentives work: Getting teachers to come to school. *American Economic Review*, 102(4):1241–1278.

Dunovant, D. (2016). Northern uganda: Protection in displacement, protection on return. *Forced Migration Review*, (53).

Eyoku, G. (2022). Abandoned seed school turns into cattle kraal.

Ferejohn, J. (1986). Incumbent performance and electoral control. *Public Choice*, pages 5–25.

Francisco, R. A. (2005). The dictator's dilemma. *Repression and Mobilization*, 64(2):58–81.

Franck, R. and Rainer, I. (2012). Does the leader's ethnicity matter? ethnic favoritism, education, and health in sub-saharan africa. *American Political Science Review*, 106(2):294–325.

Gottlieb, J. (2016). Greater expectations: A field experiment to improve accountability in mali. *American Journal of Political Science*, 60(1):143–157.

Government of Uganda (2015). The peace recovery development plan 3 for northern uganda (prdp3).

Goyal, T. and Harding, R. (2021). Do voters in local elections prefer campaign promises about attributable policies? *Available at SSRN 3886411*.

Grossman, G. and Lewis, J. I. (2014). Administrative unit proliferation. *American Political Science Review*, 108(1):196–217.

Harding, R. (2015). Attribution and accountability: Voting for roads in ghana. *World Politics*, 67(4):656–689.

Herbst, J. (2000). *States and Power in Africa: Comparative Lessons in Authority and Control*, volume 149. Princeton University Press.

Hintson, J. (2024). State expansion in contemporary africa: Evidence from satellite imagery. *Working Paper*.

Hodler, R. and Raschky, P. A. (2014). Regional favoritism. *The Quarterly Journal of Economics*, 129(2):995–1033.

Holland, A. (2024). The contracting state: How infrastructure failed to develop latin america. *Manuscript*.

Independent, T. (2022). Ministry orders cancellation of contracts for stalled seed schools.

International Alert (2013). Monitoring the impact of the peace, recovery and development plan on peace and conflict in northern uganda.

Izama, A. and Wilkerson, M. (2011). Uganda: Museveni's triumph and weakness. *J. Democracy*, 22:64.

Jablonski, R. S. (2014). How aid targets votes: the impact of electoral incentives on foreign aid distribution. *World Politics*, 66(2):293–330.

Kabanza, R. (2024). Inadequate staffing irks operations at the newly opened seed school.

Kagumire, R. (2011). The plight of health workers.

Kasooha, I. (2022). Pm refuses to commission health facility over shoddy works, orders contractor to rectify the defects.

Kisekka, C., Ssekweyama, Ezekiel, L. B., and Kirinya, A. (2022). Newly opened seed schools operating without teachers, basic equipment.

Knighton, B. (2003). The state as raider among the karamojong: 'where there are no guns, they use the threat of guns'. *Africa*, 73(3):427–455.

Kok, M. C., Dieleman, M., Taegtmeyer, M., Broerse, J. E., Kane, S. S., Ormel, H., Tijm, M. M., and De Koning, K. A. (2015). Which intervention design factors influence performance of community health workers in low-and middle-income countries? a systematic review. *Health Policy and Planning*, 30(9):1207–1227.

Kramon, E. and Posner, D. N. (2013). Who benefits from distributive politics? how the outcome one studies affects the answer one gets. *Perspectives on Politics*, 11(2):461–474.

Kuran, T. (1991). Now out of never: The element of surprise in the east european revolution of 1989. *World Politics*, 44(1):7–48.

Lee, M. M. and Zhang, N. (2017). Legibility and the informational foundations of state capacity. *The Journal of Politics*, 79(1):118–132.

Lehmann, U., Dieleman, M., and Martineau, T. (2008). Staffing remote rural areas in middle- and low-income countries: a literature review of attraction and retention. *BMC Health Services Research*, 8:1–10.

Lusala, T. (2022). Alternative ministerial policy statement: Ministry of health fy 2022/23.

Mapenduzi, O. (2014). Ugandan parliamentary hansards: August 24, 2022.

Martin, L. and Raffler, P. J. (2021). Fault lines: the effects of bureaucratic power on electoral accountability. *American Journal of Political Science*, 65(1):210–224.

Matfess, H. (2015). Rwanda and ethiopia: Developmental authoritarianism and the new politics of african strong men. *African Studies Review*, 58(2):181–204.

Matovu, M. (2023). Mpuuga pushes for probe into nms activities following drug shortage at healthcare facilities.

Muhereza, R. (2023). Minister calls for inquiry as contractors abandon projects.

Musisi, F. (2021). Lifting the veil off the shs78b facemask deal.

Nangonzi, Y. (2022). Looming crisis for new seed schools due to understaffing.

Nathan, N. L. (2023). *The Scarce State*. Cambridge University Press.

New Vision (2024). Lift ban on health workers recruitment, mps tell govt.

NRM (2006). Nrm 2006 manifesto.

NRM (2021). Nrm 2021-2026 manifesto.

Nsubuga, M. (2021). Museveni blames govt failures on 'useless' mps.

Nyakato, I. (2024). Nms seeks fivefold budget increase to end reliance on donors for medicines.

Omeje, C. (2016). N2 billion primary health centres waste away across nigeria.

Posner, D. N. (2005). *Institutions and Ethnic Politics in Africa*. Cambridge University Press.

Post, A. E. and Kuipers, N. (2023). City size and public service access: Evidence from brazil and indonesia. *Perspectives on Politics*, 21(3):811–830.

Raleigh, C. and Wigmore-Shepherd, D. (2022). Elite coalitions and power balance across african regimes: introducing the african cabinet and political elite data project (acped). *Ethnopolitics*, 21(1):22–47.

Reno, W. (1998). *Warlord politics and African states*. Lynne Rienner Publishers.

Roessler, P. (2016). *Ethnic Politics and State Power in Africa: The Logic of the Coup-Civil War Trap*. Cambridge University Press.

Rugunda, R. (2014). Ugandan parliamentary hansards: December 10, 2014.

Scott, J. C. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*. yale university Press.

Serugo, G. (2023). Mpuuga tours expose the rot in government hospitals and schools.

Soares de Oliveira, R. and Taponier, S. (2013). "o governo está aqui": Post-war state-making in the angolan periphery. *Politique Africaine*, (2):165–187.

Ssekweyama, E. (2022). Schools in lyantonde understaffed.

Stasavage, D. (2005). The role of democracy in uganda's move to universal primary education. *The Journal of Modern African Studies*, 43(1):53–73.

Svolik, M. W. (2012). *The Politics of Authoritarian Rule*. Cambridge University Press.

Tavits, M. (2007). Clarity of responsibility and corruption. *American Journal of Political Science*, 51(1):218–229.

The Independent (2023). Public schools struggle with staffing shortages.

Ugandan Inspectorate of Government (2021). Cost and extent of corruption in the health sector in uganda.

Vogt, M., Bormann, N.-C., Rüegger, S., Cederman, L.-E., Hunziker, P., and Girardin, L. (2015). Integrating data on ethnicity, geography, and conflict: The ethnic power relations data set family. *Journal of Conflict Resolution*, 59(7):1327–1342.

Walubiri, M. (2012). Gov't told to lift ban on healthworkers recruitment.

Williams, M. J. (2017). The political economy of unfinished development projects: Corruption, clientelism, or collective choice? *American Political Science Review*, 111(4):705–723.

Williamson, S. (2020). *The King can do no Wrong : Delegation and Blame under Authoritarian Rule*. PhD thesis, Stanford University.

Zhou, Y.-Y., Grossman, G., and Ge, S. (2023). Inclusive refugee-hosting can improve local development and prevent public backlash. *World Development*, 166:106203.

Appendices

A1 Citizens' Policy Priorities and Satisfaction

The following figures report data on citizens' policy priorities and satisfaction with education and health services from the original survey of citizens in Northern and Western Uganda.

Figure A1. *Top Problem Citizens Want Government to Address*

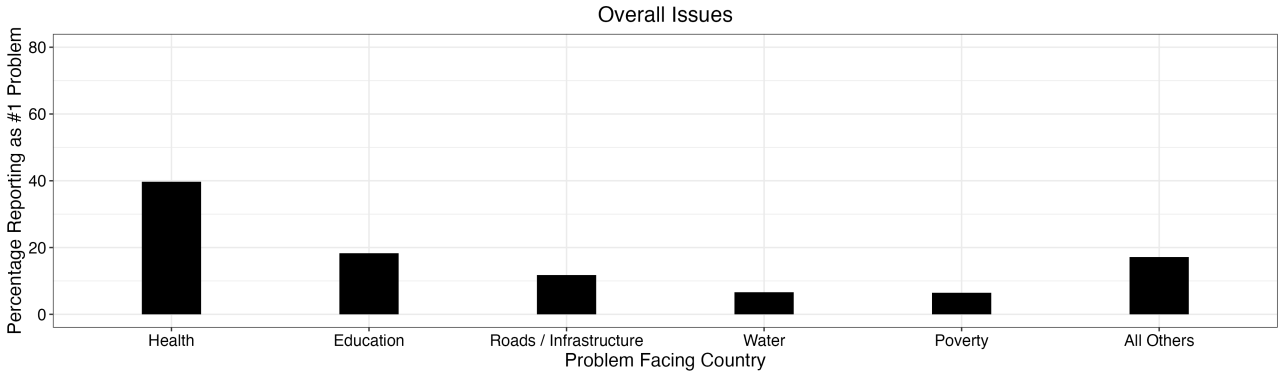


Figure A2. *Top Problem Within Education Citizens Want Government to Address*

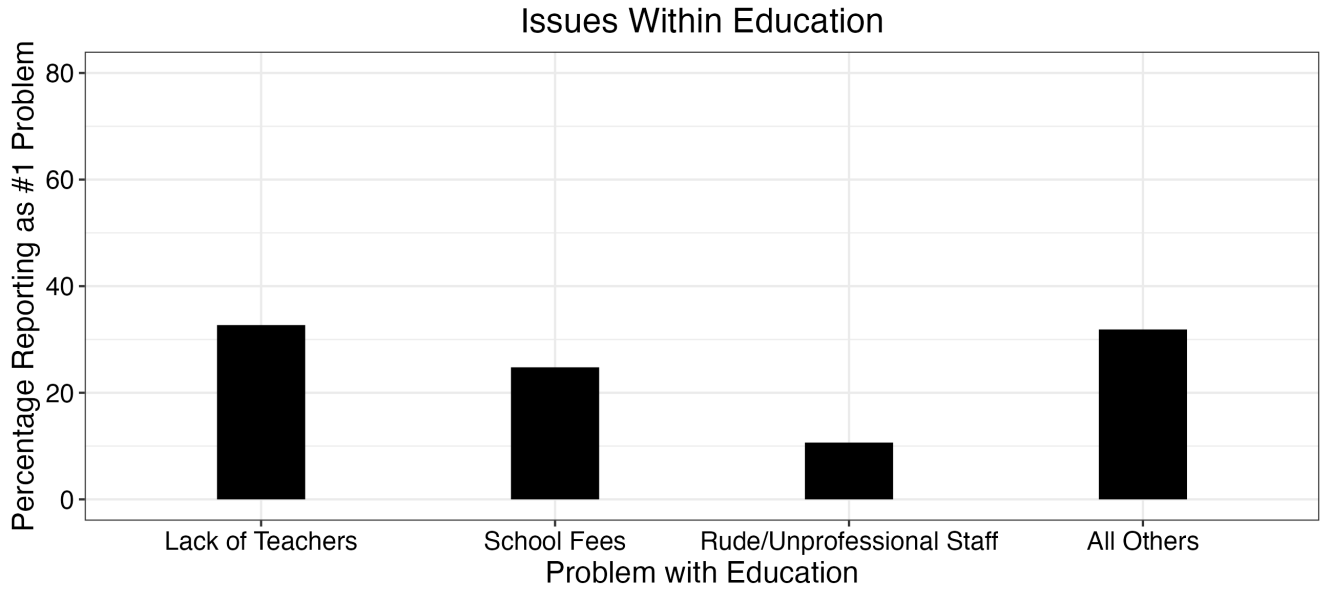


Figure A3. *Top Problem Within Healthcare Citizens Want Government to Address*

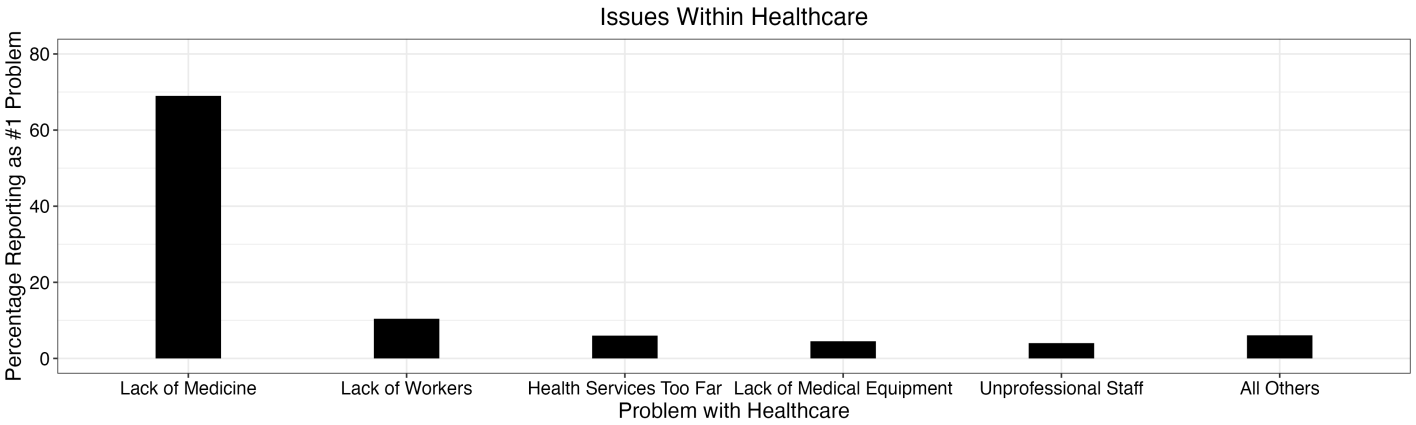


Figure A4. *Satisfaction with Education Services*

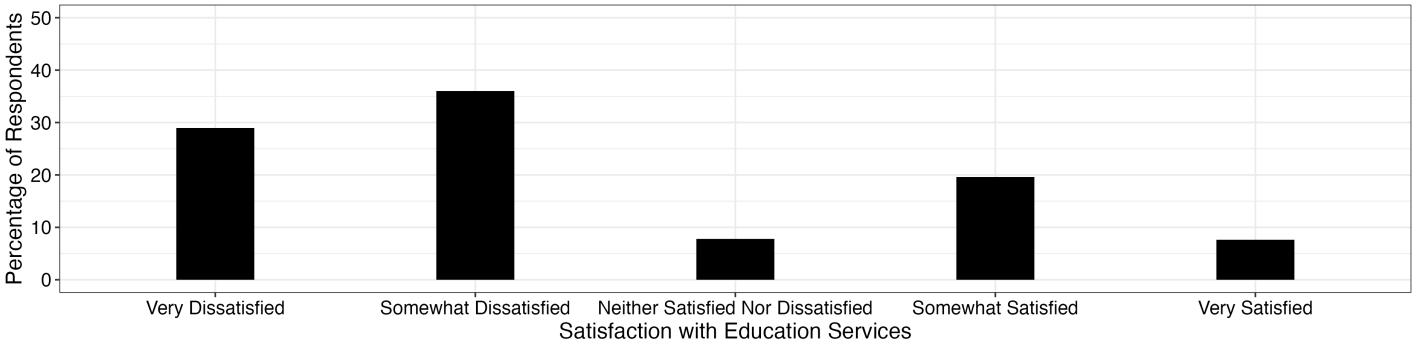
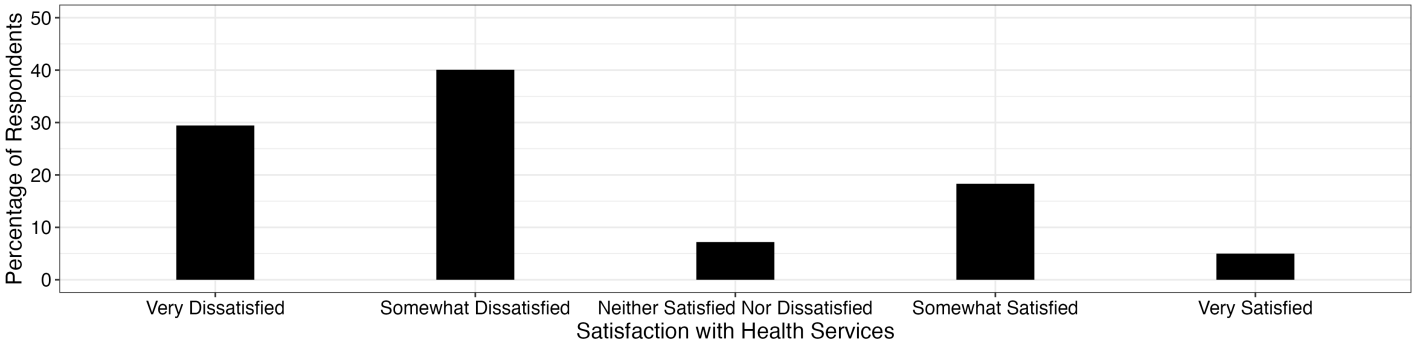


Figure A5. *Satisfaction with Health Services*



A2 Medicine Deliveries

Data on NMS essential medicine deliveries was accessed here: http://dmt.nms.go.ug. I calculate the proportion of scheduled medicine shipments which are delivered to each health center, focusing on the financial years for which full data is available (the years 2017-18 through 2022-23). I aggregate data across health centres II, III, and IV. I err on the side of over-estimating government medicine provision. This analysis excludes any health centres which have never been registered to receive NMS shipments and are therefore excluded from their database, and it does not count any health centre until the facility first receives a medicine shipment. Additionally, this analysis double-counts delayed shipments that are meant to cover the previous shipment cycle in addition to the current one.

Figure A6 plots the distribution of the number of medicine shipments delivered to Ugandan health facilities in each year of the data. On average, health facilities receive 2.3 out of 6 scheduled medicine shipments per year, or 38.5%.

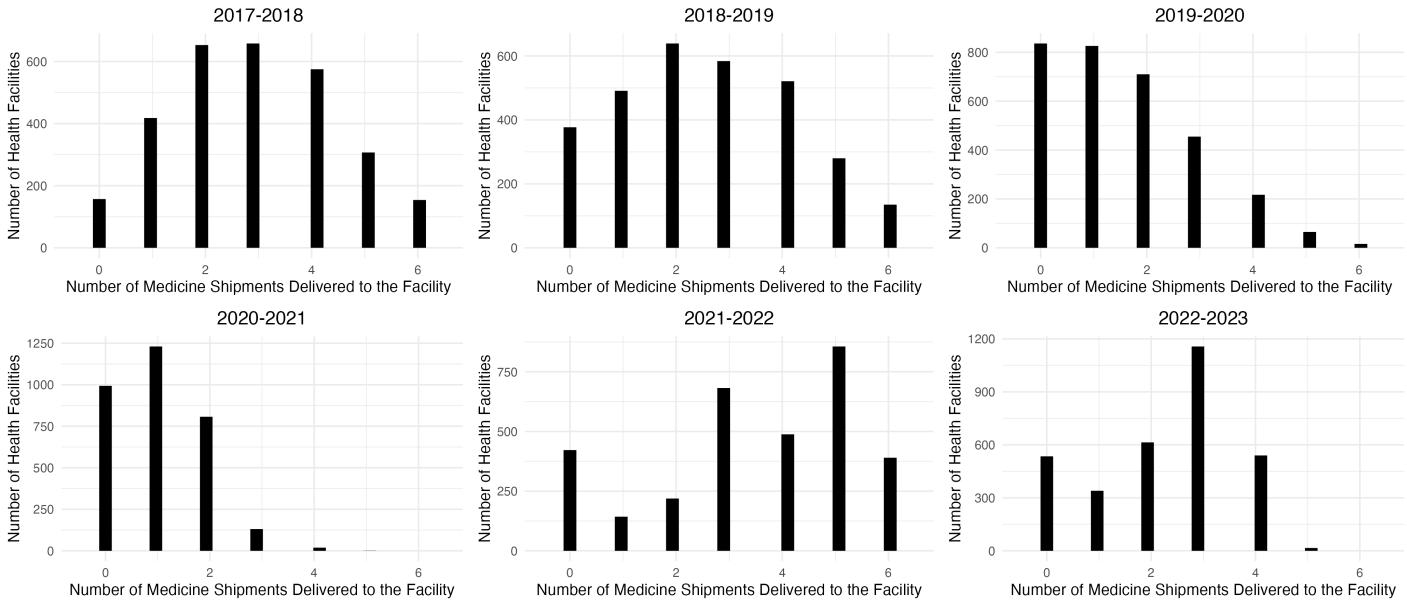


Figure A6. *NMS Essential Medicine Delivery Shipments Per Year*

A3 Effects of Construction on Votes

Tables A1 and A2 assess the general effects of primary school and health center construction using Ugandan administrative data and empirical specifications from Zhou et al. (2023). These analyses depart from Zhou et al. (2023) by simply estimating the parish-level effects of new school foundings and new health center openings on NRM vote share, rather than the effects of downstream "service access" variables. These analyses also use corrected public school lists from the Ministry of Education. As an important caveat, these analyses are substantially affected by measurement error: school founding dates are often inaccurate and may not reflect the dates of actual infrastructure construction, and facilities may be imperfectly matched to Ugandan parishes.

Following Zhou et al. (2023), all specifications include parish and region-year fixed effects. Tables A1 and A2 present results with and without the parish-year covariates from Zhou et al. (2023). They also alternately use vote share for Museveni and the first-difference *change* in vote share for Museveni as dependent variables. Analyses of health center construction separate the construction of new centers from the upgrading of existing centers.

Primary school foundings do not appear to have any effect on parish-level vote share for Museveni. Health center foundings and upgrades also do not appear to boost support for Museveni, and may even decrease vote share for Museveni.

TABLE A1. *General Effects of Public Primary School Construction, 2001-2016*

	Dependent variable:			
	Museveni Vote Share		Δ Museveni Vote Share	
	(1)	(2)	(3)	(4)
Number of Public Primary Schools	0.001	0.002		
	(0.003)	(0.003)		
New Primary School Founded			−0.0003	0.001
			(0.006)	(0.006)
Covariates	No	Yes	No	Yes
Parish FEs	Yes	Yes	Yes	Yes
Region-Year FEs	Yes	Yes	Yes	Yes
Observations	19,431	19,431	14,209	14,209
R^2	0.895	0.913	0.586	0.645

Note: *p<0.1; **p<0.05; ***p<0.01
Covariates and models from Zhou et al. (2023). SEs clustered by parish.

TABLE A2. *General Effects of Public Health Center Construction, 2006-2016*

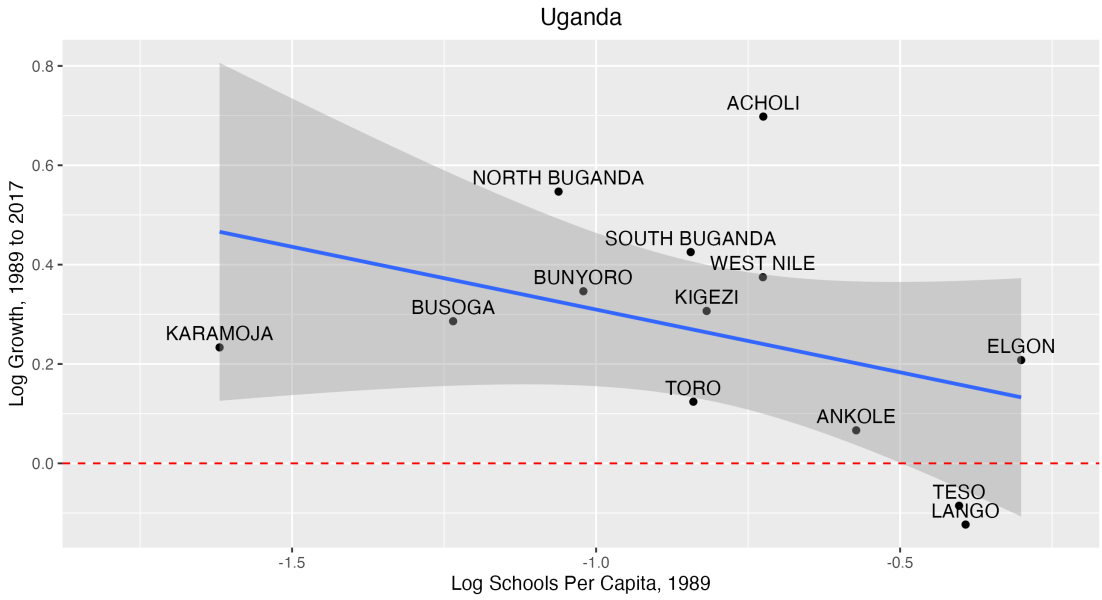
	Dependent variable:					
	Museveni Vote Share		Δ Museveni Vote Share			
	(1)	(2)	(3)	(4)	(5)	(6)
Number of Health Centers	−0.006*	−0.008***				
	(0.003)	(0.003)				
New Health Center Founded			−0.023	−0.025		
			(0.019)	(0.019)		
New Health Center Upgrade					−0.008	−0.010*
					(0.007)	(0.006)
Covariates	No	Yes	No	Yes	No	Yes
Parish FEs	Yes	Yes	Yes	Yes	Yes	Yes
Region-Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,192	15,192	10,016	10,016	10,016	10,016
R^2	0.899	0.918	0.666	0.720	0.666	0.720

Note: *p<0.1; **p<0.05; ***p<0.01
Covariates and models from Zhou et al. (2023). SEs clustered by parish.

A4 Satellite Data

Figure A7 aggregates satellite-based data on school construction from Hintson (2024) across Uganda's various ethnic sub-regions. The plot shows that ethnic sub-regions with fewer schools per capita in 1989 experienced greater growth in school construction per capita between 1989 and 2017.

Figure A7. *Convergence in Uganda (Ethnic Regions / Sub-Regions)*



Unsurprisingly, Karamoja ranks as the ethnic sub-region with the fewest schools per capita in 1989. School construction in Karamoja has lagged behind expectations, likely because citizens in the region reject public schooling at far higher rates than any other region in the country. The Acholi region ranks as the one with the greatest growth in school construction since 1989. This is likely largely due to postwar construction efforts in the region.

Still, it is surprising that satellite data find large numbers of schools per capita in Acholi, even prior to 1989. As Figure 2 demonstrated, Acholi residents are still, on average, slightly further from public schools than the national average. This discrepancy is due to geography. First, government data show that the Acholi region does not lag behind the rest of the

country in schools per capita. At the same time, it does lag behind the rest of the country in citizens' *proximity* to public schools, since the Acholi population is so dispersed. Second, the satellite data are derived from mid-size settlements with 250-4,000 people. Most Ugandans reside in such settlements, but most Acholi residents reside in settlements of fewer than 250 people. Mid-size Acholi settlements actually have *more* schools than mid-size settlements in the rest of the country, but this difference is outweighed by the fact that most Acholis live in small settlements far from schools.

A5 UgIFT facilities

Figure A8. *Example UgIFT health centers*

Figure A9. *Example UgIFT secondary schools*

A6 Construction Survey Sample

This survey sampled 9 districts in Northern Uganda (Acholi and Lango sub-regions) and 9 in Western Uganda (Toro and Ankole sub-regions). This survey only sampled among districts with more than one qualifying UgIFT project, and it used the number of qualifying UgIFT projects in a district as a sampling weight. After the 18 districts were selected, all qualifying UgIFT projects in those districts were surveyed. The one exception to this rule is that, when a subcounty received more than one UgIFT project (which is rare), the survey only asked local officials about one of the projects.

One Western district was replaced with a backup Western district because its leaders refused to allow the study. One Acholi UgIFT facility was replaced with another Acholi facility because construction had not yet begun.

As noted in the text, the survey targeted the LC3 chairperson, three LC3 councilors, and the LC5 councilor for each subcounty, along with the chairperson of the constructed facility's management committee. The survey sampled the LC3 councilor from the parish home to the construction site, as well as two random additional councilors. The survey focuses on non-quota-elected councilors as they are likely afforded the most information about facility construction.

When management committee chairpersons were newly appointed, and had not served for the majority of the construction works, enumerators were instructed to instead interview the former management committee chairperson who served during the majority of the construction works.

In a few cases, the relevant respondents were sick, had died, or had left the district for an extended period of time. In these cases, enumerators were instructed to survey backups through the following procedures. When directly-elected LC3 councilors were unavailable, enumerators were instructed to survey quota-elected (women's) LC3 councilors from the same parishes. When LC3 chairpersons were unavailable, enumerators were instructed to survey vice chairpersons. When the chairperson of the facility management committee was

unavailable, enumerators were instructed to survey vice chairpersons or chairpersons of a similar body such as the Parent Teachers' Association. In one case, an Acholi facility had no management committee and enumerators surveyed the subcounty chief. Finally, when LC5 councilors were unavailable, enumerators were instructed to survey the LC5 chairperson or vice chairperson.

A7 Electoral Effects of UgIFT

This appendix estimates the electoral effects of UgIFT facility allocation through different estimation procedures. First, Table A3 simply regresses a subcounty's change in vote share for Museveni on whether it received a UgIFT school / health centre. I also separately look at effects of receiving a UgIFT school / health centre in the early phases of UgIFT, since construction on later-phase facilities may not have begun by the 2021 elections. For analysis of school effects, I restrict the sample to eligible subcounties; for analysis of health center effects, I do not restrict the sample but instead include eligibility as a covariate (since some ineligible subcounties received health facilities). This analysis does not include any other covariates. In general, facilities appear to have a small, negative effect on Museveni vote share of around 2.5-3 p.p.

However, Table A4 adds the following covariates: sub-region, 2016 subcounty-level vote share for Museveni, the logged number registered voters in 2016, township/urban status, and whether the subcounty was created after 2016. With these covariates, the negative effects of UgIFT facility allocation disappear, and the facilities appear to have no effects on Museveni's vote share in the 2021 elections.

I also report results from matching estimators. I match UgIFT-beneficiary subcounties to non-UgIFT-beneficiary subcounties. To do so, I conduct optimal matching on 2016 vote share for Museveni / 2016 logged number of registered voters, and I require exact matches on subregion, township/urban status, and whether the subcounty was newly created. Figure A10 shows that matching greatly improves balance, and Figure A11 shows null effects of UgIFT facility allocation on Museveni's vote share in 2021.

TABLE A3. *Effects of UgIFT Facility Allocation on Support for Museveni: Bivariate OLS*

	Dependent variable:			
	Change in Museveni Vote Share			
	(1)	(2)	(3)	(4)
UgIFT School	−0.027**			
	(0.011)			
UgIFT School: Initial Phase		−0.029*		
		(0.016)		
UgIFT Health			−0.005	
			(0.009)	
UgIFT Health: Initial Phase				−0.026*
				(0.016)
Eligibility Restrictions/Covariates	Yes	Yes	Yes	Yes
Other Covariates	No	No	No	No
Observations	1,224	1,224	2,138	2,138
R^2	0.006	0.004	0.008	0.009

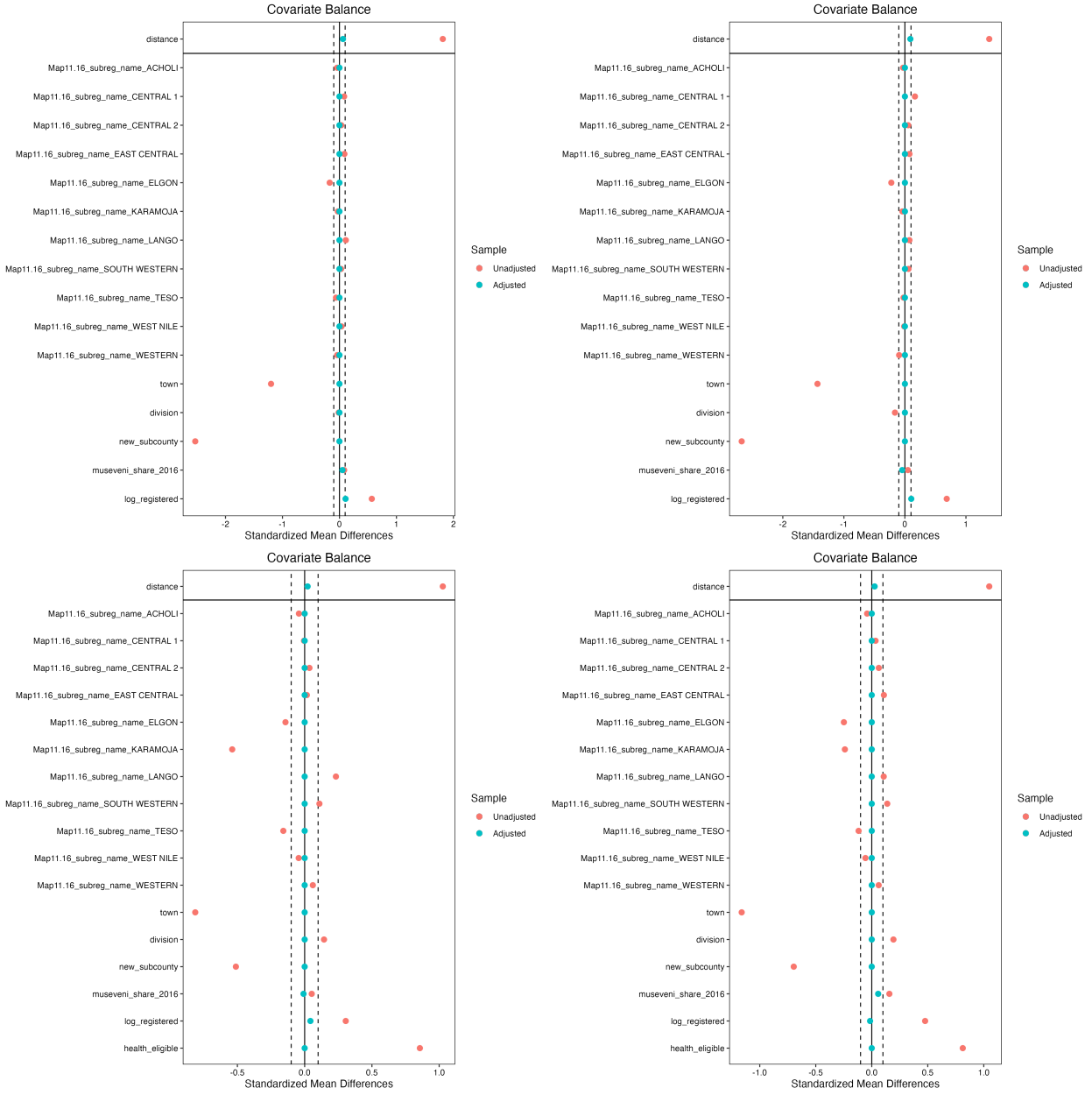
Note: Data at subcounty level. HC2 SEs in parentheses. *p<0.1; **p<0.05; ***p<0.01

TABLE A4. *Effects of UgIFT Facility Allocation on Support for Museveni: Multivariate OLS*

	Dependent variable:			
	Change in Museveni Vote Share			
	(1)	(2)	(3)	(4)
UgIFT School	−0.010			
	(0.007)			
UgIFT School: Initial Phase		−0.007		
		(0.009)		
UgIFT Health			0.001	
			(0.005)	
UgIFT Health: Initial Phase				−0.001
				(0.008)
Eligibility Restrictions/Covariates	Yes	Yes	Yes	Yes
Other Covariates	Yes	Yes	Yes	Yes
Observations	1,224	1,224	2,138	2,138
R^2	0.692	0.691	0.736	0.736

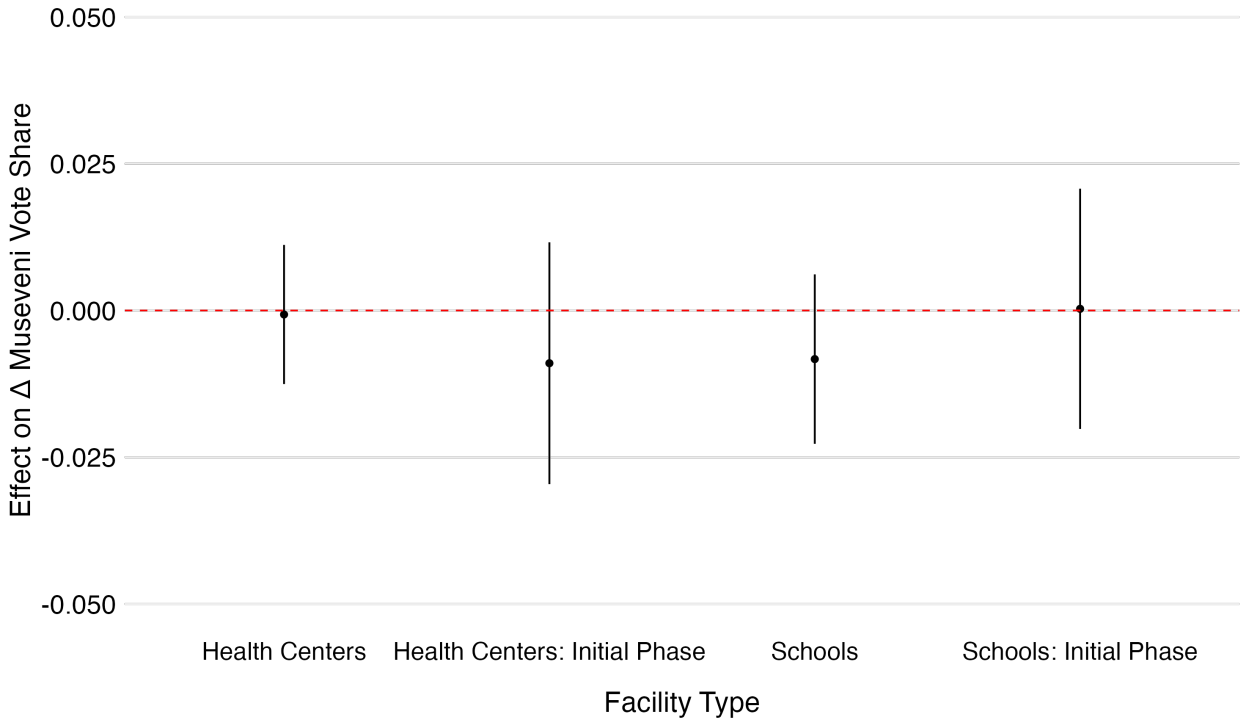
Note: Data at subcounty level. HC2 SEs in parentheses. *p<0.1; **p<0.05; ***p<0.01

Figure A10. *Pre- and Post-Matching Balance: Optimal Matching (Schools)*



Note: Exact matches are required for subregion, township/division status, and newly created subcounty. Top left = matching for all UgIFT schools. Top right = matching for early-phase UgIFT schools. Bottom-left = matching for all UgIFT health centres. Bottom-right = matching for early-phase UgIFT health centres.

Figure A11. *Matching Results: Effects of UgIFT Facility Allocation on Museveni Vote Share*



Note: Matching conducted using optimal matching on prior Museveni vote share and prior (log) registered voters; exact matches are required for eligibility, township/division status, and newly created subcounties. A small portion of facilities (between 0 and 15%, depending on the model) are excluded due to the absence of exact matches.

A8 UgIFT Eligibility and Regional Allocation

I attempt to reconstruct the list of UgIFT-eligible subcounties in the following ways. First, I use June 2023 Ministry of Education data on the list of subcounties with and without secondary schools. Very few subcounties received secondary schools through programs other than UgIFT while UgIFT was ongoing, so this list likely closely aligns with the list of UgIFT school-eligible subcounties after we include the subcounties which actually received UgIFT schools. I make the assumption that all UgIFT school-beneficiary subcounties were in fact eligible.

I reconstruct the subcounties which did not have health centres III (or higher-level health centers), and which were therefore eligible for UgIFT health centre upgrades, as of approximately 2017/18, when UgIFT began. To do so, I use data from Zhou et al. (2023) on health facility locations. With this data, 20% of UgIFT health facilities appear to have gone to ineligible subcounties, though it is possible that some health centres were matched to incorrect subcounties. Nevertheless, estimated eligibility strongly predicts UgIFT health centre allocation. In the analyses below, I report results in which eligibility for UgIFT heath centres is required for sample inclusion, as well as results in which this eligibility is used a covariate.

According to these reconstructed lists, 65% of Acholi and 81% of Karamoja subcounties were eligible for UgIFT secondary schools, compared to a national average of 57%. Additionally, 55% of Acholi and 65% of Karamoja subcounties were eligible for UgIFT health centres III, compared to a national average of 53%.

Is there regional discrimination as to which *eligible* subcounties receive UgIFT facilities? Table A5 shows that the small regional differences in Figure 3 are not statistically significant, with two exceptions. First, as noted, Karamoja received significantly fewer health centres under UgIFT than the national average, as it is receiving separate health infrastructure under a region-specific program. Second, in models that use eligibility for UgIFT health centres as a covariate and not as a sample restriction, Western subcounties are slightly more likely

than the rest of the country to receive UgIFT health centres, though this difference is small (3 p.p.) and only marginally significant ($0.05 < p < 0.10$).

TABLE A5. *UgIFT Facility Allocation by Region: Linear Probability Models*

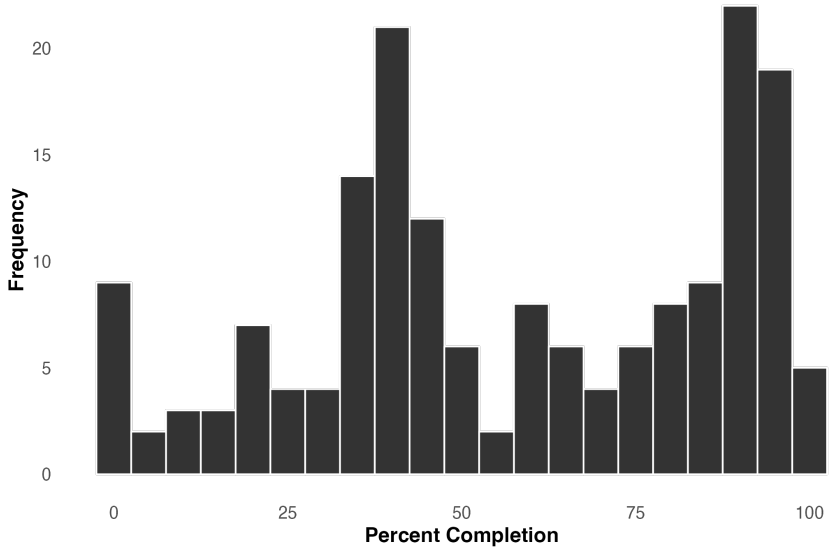
	Dependent variable: Facility Allocation					
	Schools	Health Centres		Schools	Health Centres	
	(1)	(2)	(3)	(4)	(5)	(6)
Acholi Subcounty	−0.029	−0.028	−0.026	0.012	0.017	0.007
	(0.043)	(0.051)	(0.031)	(0.037)	(0.052)	(0.031)
Karamoja Subcounty	−0.023	−0.218***	−0.167***	0.010	−0.113***	−0.110***
	(0.046)	(0.030)	(0.021)	(0.042)	(0.033)	(0.022)
Western Subcounty	−0.009	0.048	0.032*	−0.019	0.040	0.032*
	(0.027)	(0.031)	(0.019)	(0.024)	(0.029)	(0.018)
Covariates	No	No	No	Yes	Yes	Yes
Require Eligibility	Yes	Yes	No	Yes	Yes	No
Observations	1,224	1,128	2,138	1,224	1,128	2,138
R^2	0.001	0.019	0.076	0.278	0.119	0.137

Note: HC2 SEs. *p<0.1; **p<0.05; ***p<0.01

Figure A12 shows that a disproportionate share of unfinished UgIFT facilities were nearly finished (90-99% completion) as of June 2023.

A9 Distribution of Unfinished Health Centers

Figure A12. *Unfinished UgIFT Health Centers: Completion Distribution*



Note: Data from Ministry of Health, June 2023.

A10 Corruption Outcomes Regression Results

First, Table A6 shows that projects in the periphery (Acholi and Karamoja) which are at least nearly complete are less likely to be fully completed and commissioned. Ministry reports are also more likely to mention stalling, defects, snags, or abandonment for Acholi/Karamoja projects. These effects hold if we treat "the periphery" as all areas where civil servants receive hard-to-reach/hard-to-stay hardship allowances, though the effect sizes are somewhat smaller. The results do not hold if we exclude Acholi and Karamoja from these hard-to-reach/hard-to-stay locations.

TABLE A6. *Project Outcomes: Ministry Progress Reports*

	Dependent variable:					
	Fully Completed Given Near Completion			Mentions Defects/ Stalling/etc.		
	(1)	(2)	(3)	(4)	(5)	(6)
Acholi & Karamoja	−0.349***			0.318**		
	(0.104)			(0.151)		
Hard-To-Reach Areas		−0.195***			0.188**	
		(0.065)			(0.077)	
Hard-To-Reach (Minus Acholi & Karamoja)			−0.075			0.082
			(0.075)			(0.084)
Observations	342	342	342	144	144	144
R^2	0.046	0.033	0.003	0.071	0.063	0.009

Note: *p<0.1; **p<0.05; ***p<0.01
HC2 SEs in parentheses.

Table A7 shows that the results in Figure 5 are statistically significant. To address potential confounders, this analysis controls for the respondent's office, whether the respondent is NRM-affiliated, and whether the facility is a school or health centre. Uncertainty is estimated by cluster bootstrapping by construction site.

Finally, A8 restricts the sample to one key informant per facility site. I focus on the re-

TABLE A7. *Survey-Based Corruption Outcomes: Regression Specifications*

	Dependent variable:				
	Paid for Incomplete Works	Contractor Abandoned	Workers Unpaid	Substandard Materials	Arrogant from Connections
	(1)	(2)	(3)	(4)	(5)
Acholi	0.320***	0.441***	0.438***	0.258***	0.591***
	(0.151,0.489)	(0.290,0.595)	(0.303,0.573)	(0.092,0.413)	(0.426,0.725)
Covariates	Yes	Yes	Yes	Yes	Yes
Observations	357	375	364	387	380
R^2	0.123	0.163	0.135	0.050	0.253

Note: *p<0.1; **p<0.05; ***p<0.01
Cluster (block) bootstrap 95 percentile confidence intervals in parentheses.

spondents whose office should be "best suited" to answer each question. The district (LC5) councilor should be best suited to know whether contractors were paid for incomplete works since the district government pays these contractors. Facility management committee representatives should be best suited to know whether the contractor abandoned the construction site, didn't pay local workers, and used substandard materials, since their work is based at the construction site. Finally, the LC3 chairperson is arguably best suited to know whether the contractor was arrogant due to political connections, since the LC3 is the head of the subcounty and uniquely responsible for interfacing with contractors on local development projects.

TABLE A8. *Corruption Outcomes: Only Most-Informed Respondents*

	Dependent variable:				
	Paid for Incomplete Works	Contractor Abandoned	Workers Unpaid	Substandard Materials	Arrogant from Connections
	(1)	(2)	(3)	(4)	(5)
Acholi	0.416***	0.500***	0.573***	0.335**	0.542***
	(0.147)	(0.112)	(0.105)	(0.153)	(0.121)
Covariates	Yes	Yes	Yes	Yes	Yes
Observations	64	65	62	60	65
R^2	0.164	0.234	0.234	0.106	0.211

Note: *p<0.1; **p<0.05; ***p<0.01
HC2 SEs in parentheses.

A11 Empowerment Outcomes Regression Results

First, Table A9 shows that the results in Figure 6 are statistically significant. Ministry monitoring visits were more likely to find BoQs onsite at Western UgIFT health centers. The Ministry monitoring reports cover facilities begun in 2018 as well as those begun in 2019. This analysis controls for this distinction, since later-phase facilities were more likely to have BoQs as construction was more likely to be actively ongoing at the time of Ministry monitoring visits in 2020.

TABLE A9. *BoQ Availability by Region: Ministry Audits*

	Dependent variable:
	BoQ Available Onsite
West	0.440***
	(0.085)
Later Phase	0.204**
	(0.090)
Constant	0.322***
	(0.062)
Observations	107
R^2	0.239
Note:	*p<0.1; **p<0.05; ***p<0.01
	HC2 SEs in parentheses.

Next, A10 shows that the results in Figure 7 are statistically significant. Westerners are more likely to have access to tools and information with which to hold contractors accountable. To address potential confounders, this analysis controls for the respondent's office, whether the respondent is NRM-affiliated, and whether the facility is a school or health centre. Uncertainty is estimated by cluster bootstrapping by construction site.

Finally, A11 replicates these results but restricts the sample to one key informant per construction site. For BoQ questions, I focus only on the LC3 chairperson in each subcounty, since the LC3 is the highest ranking politician in the subcounty and can arguably do the

TABLE A10. *Survey-Based Empowerment Outcomes: Regression Specifications*

	Dependent variable:			
	Accessed BoQ (1)	Freely Provided Access (2)	Access Request Granted (3)	Contractor Held Meetings (4)
West	0.308***	0.204***	0.308**	0.489***
	(0.191,0.423)	(0.125,0.281)	(0.047,0.508)	(0.351,0.618)
Covariates	Yes	Yes	Yes	Yes
Observations	364	390	179	345
R^2	0.101	0.074	0.121	0.231

Note: *p<0.1; **p<0.05; ***p<0.01
Cluster (block) bootstrap 95 percentile confidence intervals in parentheses.

most to hold the contractor accountable if given the BoQ. For the question about whether the contractor held site meetings, I focus only on facility management committee representatives since they are best suited to know whether the contractor held site meetings.

TABLE A11. *Survey-Based Empowerment Outcomes: Only Most Relevant Respondents*

	Dependent variable:			
	Accessed BoQ (1)	Freely Provided Access (2)	Access Request Granted (3)	Contractor Held Meetings (4)
West	0.404***	0.271***	0.431**	0.465***
	(0.128)	(0.100)	(0.172)	(0.110)
Covariates	Yes	Yes	Yes	Yes
Observations	65	65	39	65
R^2	0.152	0.117	0.161	0.227

Note: *p<0.1; **p<0.05; ***p<0.01
HC2 SEs in parentheses.

A12 Bill of Quantities Example

Figure A13 provides an example of part of a UgIFT project bill of quantities (BoQ).

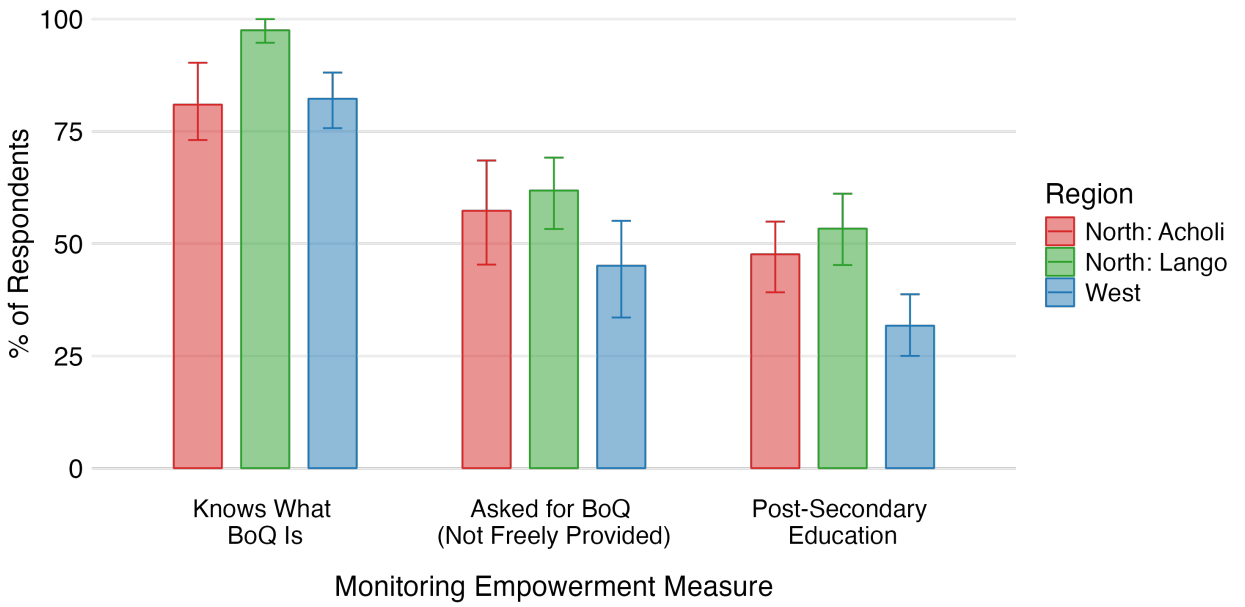
Figure A13. *Example Page from a UgIFT BoQ: Lama Health Centre III in Moyo District*

ITEM	DESCRIPTION	UNIT	QTY	% CUM CERT 3	RATE (UgX)		BILLED AMOUNT (UgX)
	BILL NO. 3.1 **MATERNITY BLOCK** **ELEMENT NO. 1** **SUBSTRUCTURES** **ALL PROVISIONAL** **The work in this element includes all works up to and including the ground floor slab**						
A	Allow for maintaining and upholding sides of excavation: clear off all fallen material, rubbish	ITEM	1	1	100,000	100,000	100,000
B	Allow for keeping the whole of the excavation free from general water	ITEM	1	1	100,000	100,000	100,000
C	Excavate oversite average 200mm deep to remove vegetable top soil; remove from site	SM	600	1	10,000	6,000,000	6,000,000
D	Mass excavation to reduce levels not exceeding 1.5 meters deep from stripped level.	CM	400	1	7,000	2,800,000	2,800,000
E	Excavate for column bases not exceeding 1.5 meters deep from reduced level.	CM	40	1	7,000	280,000	280,000
F	Excavate for foundation trench not exceeding 1.5 meters deep from reduced level.	CM	196	1	7,000	1,372,000	1,372,000
G	Ditto but 1.5 - 3m : ditto	CM	85	1	7,000	595,000	595,000
H	Extra over excavations for excavating in rock.	CM	10	1	10,000	100,000	100,000
I	Return fill and ram selected excavated material around foundations.	CM	120	1	7,000	840,000	840,000
J	Load and cart away surplus excavated material from site.	CM	25	1	8,000	200,000	200,000
K	Load from spoil heaps, spread and level surplus excavated materials where directed on site including compacting in layers not exceeding 150mm thick using 15 ton vibrating roller to 95% MDD to Engineer's approval	CM	30	1	8,000	240,000	240,000
L	Approved marrum fill to make up levels; well rolled and compacted to 95% MDD to Engineer's approval	CM	70	1	12,000	840,000	840,000
M	200mm Thick bed of hand packed stone base, well rolled and compacted.	SM	346	1	14,000	4,844,000	4,844,000
N	50mm thick stone dust blinding over surfaces of hardcore	SM	346	1	8,000	2,768,000	2,768,000
O	Insecticide treatment to surface of 50mm thick blinding, tops of foundation walling, sides and bottoms of excavation.	SM	503	1	1,000	503,250	503,250
	CONCRETE WORK **PLAIN CONCRETE CLASS 10; 20mm AGGREGATE : in**					-	
P	50mm Thick blinding layer under column bases	SM	20	1	30,000	600,000	600,000
Q	50mm Thick blinding layer under strip foundations	SM	0	1		-	-
	VIBRATED REINFORCED CONCRETE CLASS 25; 20mm AGGREGATE : in					-	
R	Column Bases	CM	6	1	400,000	2,400,000	2,400,000
S	Column stubs	CM	2	1	400,000	633,600	633,600
T	Ground Beams	CM	8	1	400,000	3,200,000	3,200,000
	VIBRATED MASS CONCRETE CLASS 20; 20mm AGGREGATE : in					-	
U	200 mm thick Strip foundations	CM	25	1	300,000	7,459,200	7,459,200
	TOTAL CARRIED TO COLLECTION					35,875,050	**35,875,050**

A13 Additional UgIFT Survey Results

Figure A14 shows that regional disparities are not driven by differences in education, knowledge (about BoQs), or effort (asking for BoQs).

Figure A14. *Respondent Human Capital and Effort, By Region*



Note: Error bars depict 95 *percentile* confidence intervals, constructed by cluster bootstrapping the data by construction project.

Tables A12 and A13 show that geographic remoteness (measured by reported distances from the facility to the nearest tarmac road, and by local population density within 10km of the respondent) is not associated with contractor malfeasance or locals' empowerment to monitor contractors, after accounting for the major regional differences in these outcomes. For simplicity, these results restrict the sample to each facility's "best positioned" respondent as described in Appendices A10 and A11.

TABLE A12. *Remoteness and Malfeasance: Only Key Respondents*

	Dependent variable:				
	Paid for Incomplete Works	Contractor Abandoned	Workers Unpaid	Substandard Materials	Arrogant from Connections
	(1)	(2)	(3)	(4)	(5)
Acholi	0.463***	0.583***	0.472***	0.274*	0.550***
	(0.137)	(0.131)	(0.124)	(0.156)	(0.113)
Nearest Major Paved Road	−0.002	0.003	0.001	−0.003	−0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Local Population Density	0.037	0.121***	−0.073	−0.085	−0.035
	(0.026)	(0.043)	(0.048)	(0.058)	(0.034)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	64	65	62	60	65
R^2	0.217	0.305	0.283	0.151	0.234

Note: *p<0.1; **p<0.05; ***p<0.01
HC2 SEs in parentheses.

TABLE A13. *Remoteness and Empowerment: Only Key Respondents*

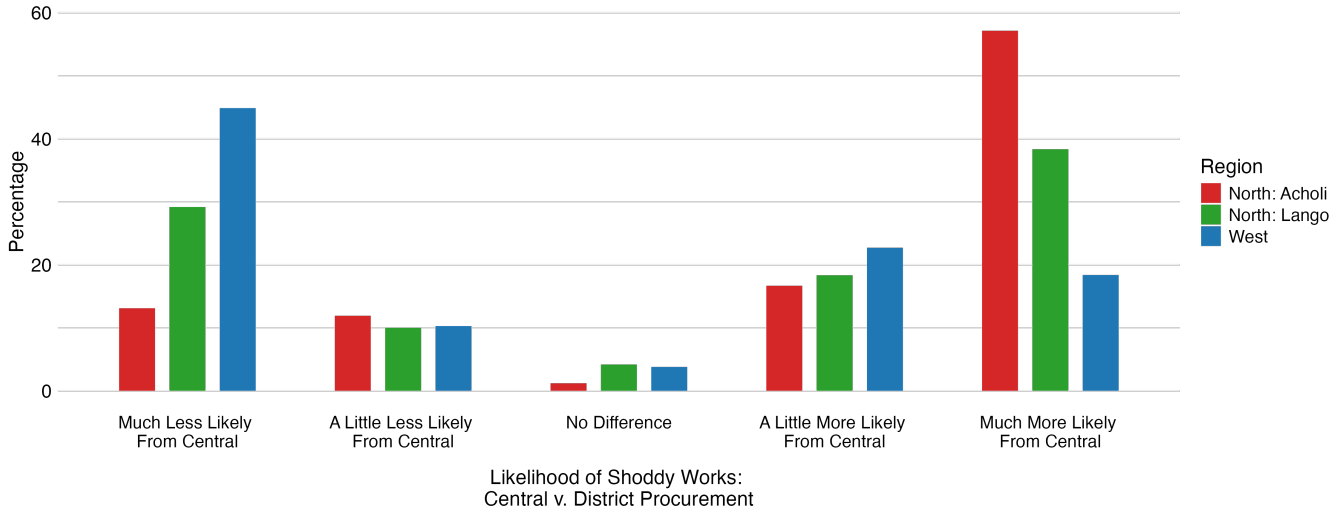
	Dependent variable:			
	Accessed BoQ	Freely Provided Access	Access Request Granted	Contractor Held Meetings
	(1)	(2)	(3)	(4)
West	0.286*	0.230*	0.254	0.497***
	(0.166)	(0.123)	(0.227)	(0.131)
Nearest Major Paved Road	−0.001	−0.0005	−0.001	0.001
	(0.002)	(0.002)	(0.004)	(0.003)
Local Population Density	0.054	0.019	0.091	−0.011
	(0.059)	(0.041)	(0.078)	(0.053)
Covariates	Yes	Yes	Yes	Yes
Observations	65	65	39	65
R^2	0.180	0.123	0.207	0.230

Note: *p<0.1; **p<0.05; ***p<0.01
HC2 SEs in parentheses.

A14 Attitudes Toward Central v. District Procurement

Figure A15 shows that Westerners tend to believe that centrally-procured projects are more likely to result in shoddy works than district-procured projects, whereas Northerners—especially Acholi—tend to believe the opposite.

Figure A15. *Central v. District Procurement and Expectations of Shoddy Works*



A15 Attitudes about Remoteness/Poverty and Corruption

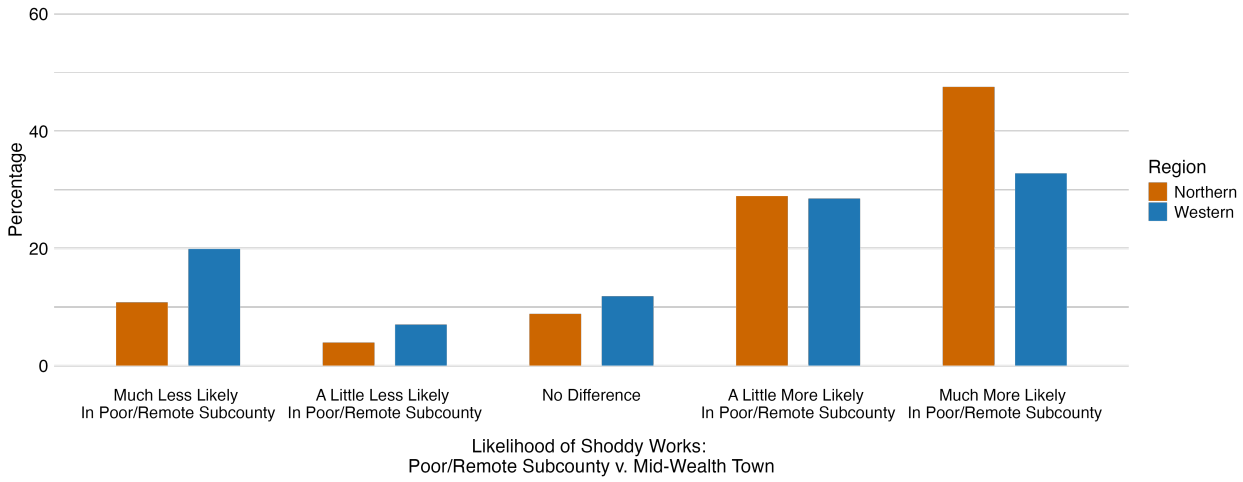
These questions begin with the following exposition: "Now suppose the government decides to build two new health centers in your district. Procurement for both health centers is done by the central government. One of the health centers is built in a poor and remote subcounty. The other health center is built in a town council near the district headquarters with average wealth."

One outcome question asks about the likelihood of shoddy construction works:

"Compared to the contractor for the health center in the town council, do you think the contractor for the health center in the poor and remote subcounty is more or less likely to produce shoddy works?"

Respondents in both regions, but especially in the North, report that shoddy works are more likely in poor and remote areas (Figure A16).

Figure A16. *Beliefs about Shoddy Works in Poor and Remote Areas*



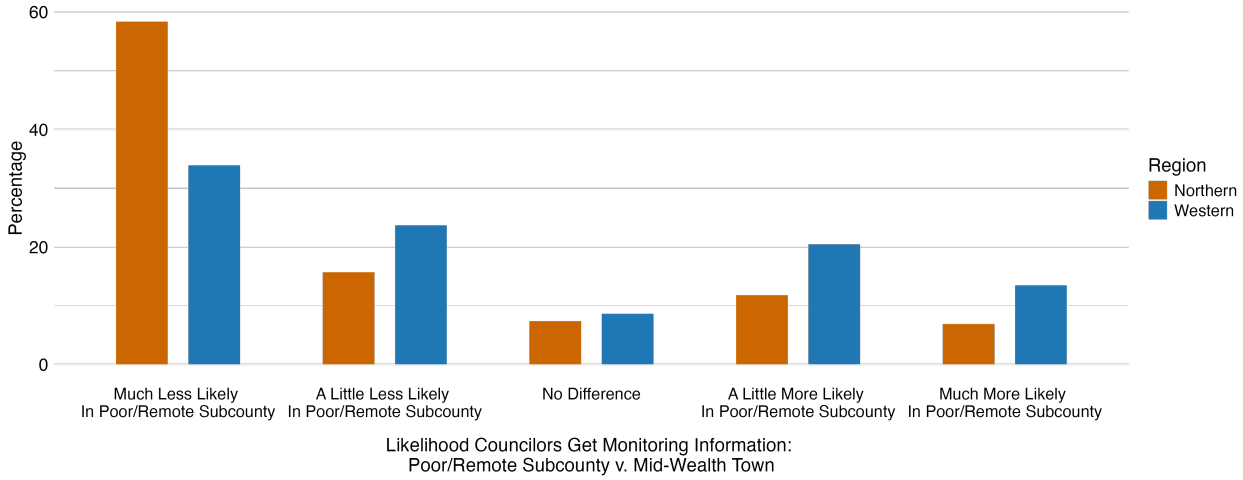
Note: Data from survey of project monitors.

Another outcome question asks about the likelihood of local councilors receiving project information:

"Compared to the councilors in the town council, do you think the councilors in the poor and remote subcounty are more or less likely to get the information they need to monitor the construction works?"

Again, respondents in both regions—but especially the North—believe that project information provision is less likely in poor and remote areas (Figure A17).

Figure A17. *Beliefs about Information Access in Poor and Remote Areas*

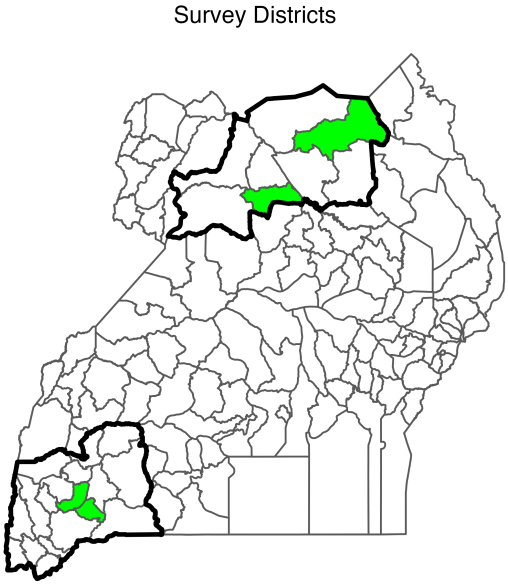


Note: Data from survey of project monitors.

A16 Citizens Survey Details

Below is a map of the Ankole and Acholi sub-regions, as well as the four specific districts where the survey took place (Kitgum, Omoro, Rwampara, and Sheema).

Figure A18. *Citizens Survey Locations*



Note: Dark black lines depict the Acholi and Southwestern sub-regions from which districts were selected. The four sampled districts of Omoro, Kitgum, Rwampara, and Sheema are depicted in green. Both Southwestern districts are in the Ankole sub-region; certain classifications treat Ankole as its own sub-region while others combine Ankole and Kigezi into a single Southwestern sub-region.

These districts were selected by randomly sampling from all Acholi and Southwestern (Ankole-Kigezi) districts, after making the following exclusions. First, each region's urban capital (Gulu and Mbarara) was excluded from consideration. Second, the local partner survey firm provided a list of 'sensitive' districts with an elevated risk of interference and harassment by local authorities: Amuru, Rukungiri, Ntungamo, Kazo, and Kiruhura. These were excluded from consideration. Ntungamo is Museveni's home district and Kiruhura is the site of his upcountry State House; this is largely why they were excluded, since these districts are most likely to repress any research that could plausibly be deemed anti-government. As such, the

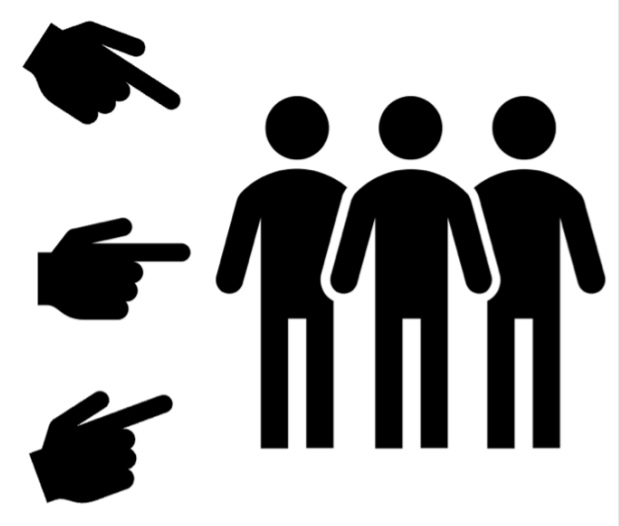
two Western districts with arguably the strongest ties to the center were excluded from the sampling process. Two districts each were randomly selected from among the remaining six eligible Acholi districts and thirteen eligible Southwestern districts. By chance, both Southwestern districts fell within the Ankole ethnic area, the area within Southwestern Uganda where Museveni is from. The four sampled districts contain two urban municipalities—Kabwohe in the West and Kitgum in the North—which were excluded prior to sampling villages within those districts.

A17 Vignette Tokens

Figures A19 and A20 show images of the medicine and blame tokens, respectively.

Figure A19. *Medicine Token Example*

Figure A20. *Blame Token Example*



A18 Vignette Experiments: Covariates and Balance

First, Table A14 assesses covariate balance across each comparison of experimental conditions. On the whole, covariates are balanced across experimental conditions; however, NRM-identifying respondents are more likely to be assigned to the horizontal condition than to the vertical condition in the neglecting complaints vignette experiment, and both NRM-identifying respondents and respondents without a secondary education are more likely to be assigned to the supply prime than to the control condition in the petty corruption vignette experiment.

Next, Tables A15 and A16 demonstrate that the main experimental results do not meaningfully differ with the exclusion of covariates.

TABLE A14. *Covariate Balance for Both Experiments*

	Dependent variable:			
	Vertical Condition	Supply Prime	Leakages Prime	
	(1)	(2)	(3)	(4)
Female	−0.020	0.009	−0.031	−0.038
	(0.030)	(0.036)	(0.037)	(0.037)
Age	−0.0002	−0.0002	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Completed Primary	−0.036	0.056	0.012	−0.047
	(0.033)	(0.040)	(0.041)	(0.041)
Completed Secondary	−0.009	−0.120**	−0.081	0.041
	(0.046)	(0.055)	(0.056)	(0.059)
NRM	−0.083**	0.103**	0.063	−0.039
	(0.042)	(0.050)	(0.050)	(0.054)
Rwampara	0.033	0.011	−0.015	−0.024
	(0.047)	(0.057)	(0.058)	(0.059)
Sheema	−0.006	0.007	−0.002	−0.006
	(0.048)	(0.058)	(0.058)	(0.060)
Kitgum	0.060	0.100*	0.069	−0.029
	(0.043)	(0.051)	(0.053)	(0.053)
Wealth Index	−0.010	0.002	−0.001	−0.004
	(0.012)	(0.015)	(0.015)	(0.015)
Reference Group	Horizontal Condition	Control	Control	Supply Prime
Observations	1,224	836	819	793
R^2	0.007	0.017	0.009	0.005
Adjusted R^2	−0.0002	0.007	−0.003	−0.006

Note: Robust (HC2) SEs in Parentheses. *p<0.1; **p<0.05; ***p<0.01

TABLE A15. *Bivariate Experimental Results: Petty Corruption Vignette*

	Dependent variable:		
	Proportion of Blame Tokens on Central Government		
	(1)	(2)	(3)
	Relative to Control	Relative to Supply Prime	Relative to Control
Leakages Prime	-0.083^{***}	-0.037^{**}	
	(0.016)	(0.016)	
Supply Prime			-0.046^{***}
			(0.017)
Covariates	No	No	No
Observations	819	793	836
R^2	0.030	0.006	0.009

Note: Robust (HC2) SEs in Parentheses. *p<0.1; **p<0.05; ***p<0.01

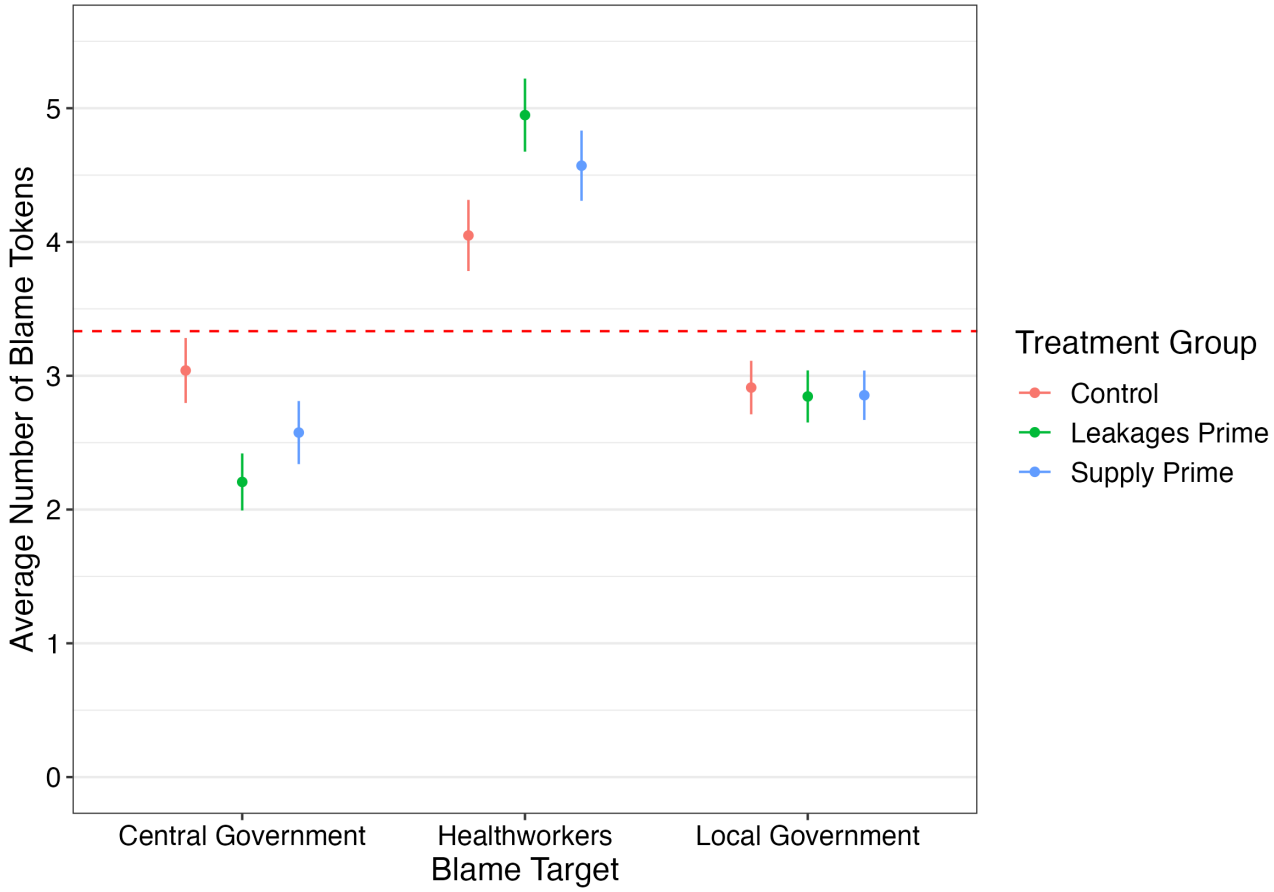
TABLE A16. *Bivariate Experimental Results: Neglecting Complaints Vignette*

	Dependent variable:			
	Share of Tokens on Ministry			Complaints Reached
	(1)	(2)	(3)	(4)
Vertical Condition	-0.030^{*}	-0.058^{**}	-0.004	-0.259^{***}
	(0.016)	(0.025)	(0.020)	(0.058)
Respondent Sub-Group	All	Northern	Western	All
Covariates	No	No	No	No
Observations	1,224	612	612	1,224
R^2	0.003	0.009	0.0001	0.016

Note: Robust (HC2) SEs in Parentheses. *p<0.1; **p<0.05; ***p<0.01

A19 Leakages Experiment: Blame by Treatment Condition

Figure A21. *Blame by Treatment Condition: Medicine Experiment*

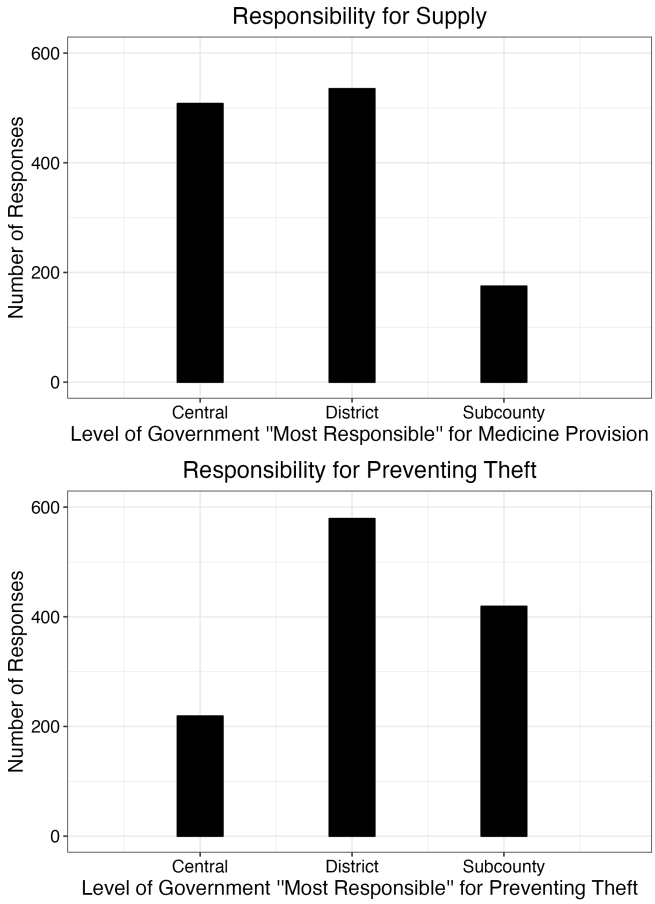


This figure plots the average number of blame tokens that each group receives (out of 10) in each treatment condition, with 95% CIs. Blame in the leakages and supply prime conditions shifts away from the central government and onto healthworkers. The red line marks an even distribution of blame (1/3 on each group).

A20 Additional Leakages Descriptive Results

Figure A22 shows that, while respondents split responsibility for service provision across the central and district governments, they place little responsibility for stopping drug thefts on the central government, instead assigning this responsibility to local district and subcounty governments. Note that, while respondents assign the district substantial responsibility for supplying medicine, open-ended answers suggest that respondents view their role as simply to distribute medicine provided by the center or to request medicine from the center.

Figure A22. *Perceptions of Responsibility over Service Provision*



Additionally, the survey asks respondents which of two statements they agree with more:

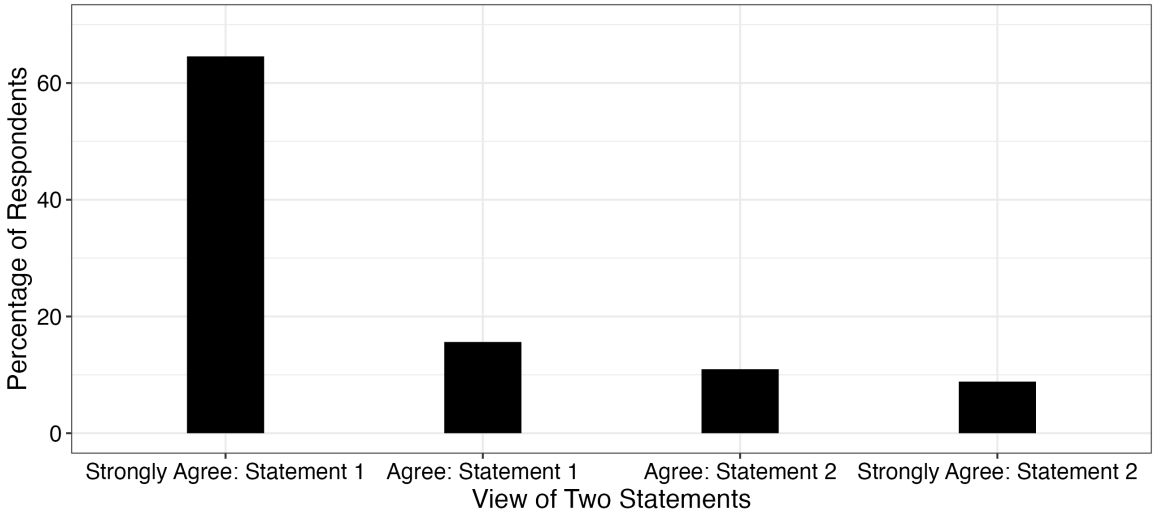
Statement 1: The national government of Uganda has a lot of money at its

disposal, even if that money does not always reach the people.

Statement 2: The national government of Uganda does not have very much money at its disposal, so it is hard for the government to provide enough for its people.

Over 80% of respondents agree more with the former statement, as Figure A23 shows.

Figure A23. *Perceptions of Central Government Resource Capacity*



A21 Leakages Experiment: Free Responses

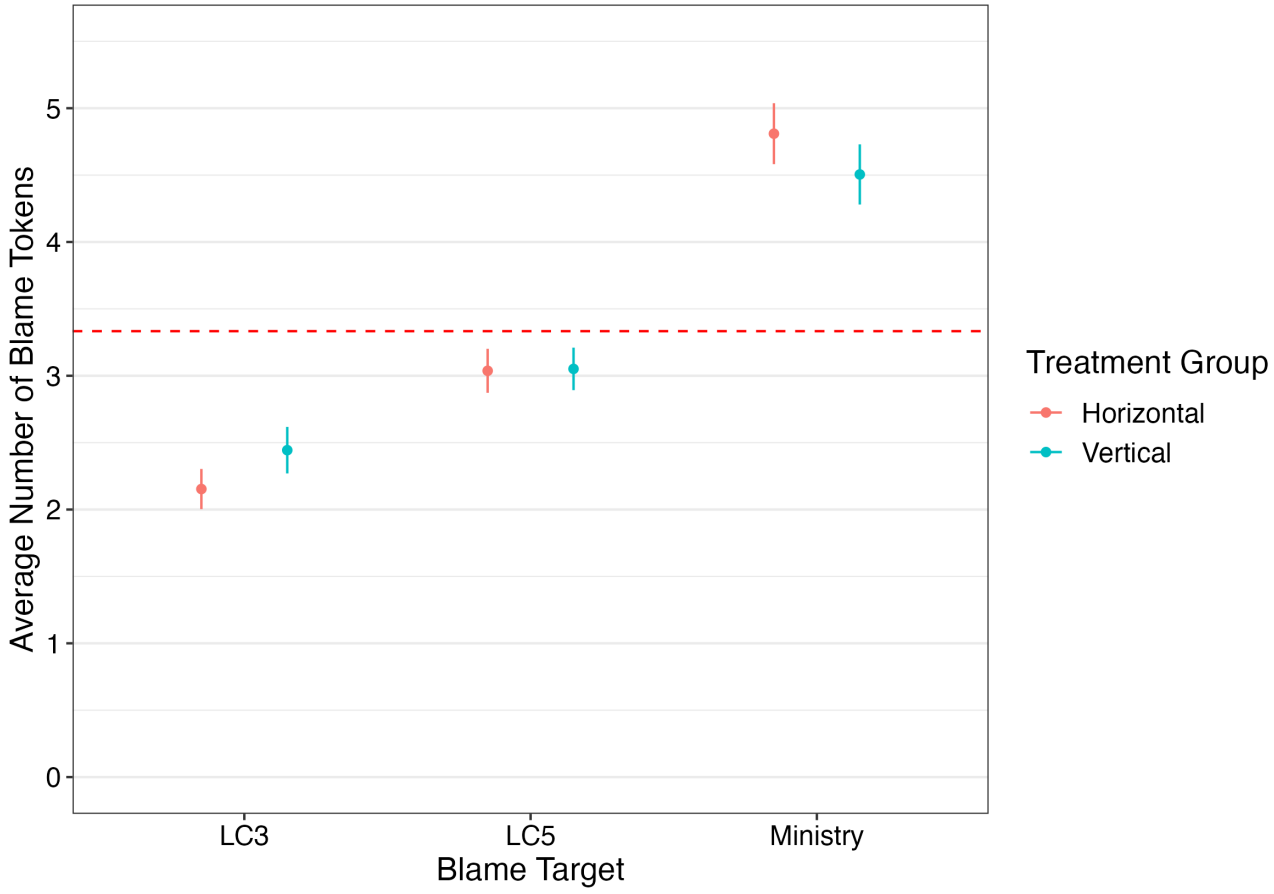
Table A17 provides a random sample of respondents' open-ended reasons for putting the most blame on each of the three actors.

TABLE A17. *Random Sample of Open-Ended Blame Justifications: Leakages Experiment*

Why Blame Central Government Most?	**Why Blame Local Government Most?**	**Why Blame Healthworkers Most?**
1. The government refuse[s] to give us medicine 2. It's the one that is supposed to ensure the medicine is delivered to the last consumer 3. The ministry does not send the medicine on time to the health centers 4. They supply inadequate drugs to health facility 5. The ministry does not bring all the amount of medicine needed for each facility that's why it get[s] finished 6. They don't supply enough drugs to the facilities 7. Corruption; Delay in service delivery 8. It's responsible for supplying the medicine to the facilities 9. The ministry is not supplying enough medicine to the facility that's why it get[s] finished 10. Low supply of medical services	1. They are decentralized and should ensure that the mandate given to them for distribution of medicine at the district level is done well 2. Because they are the basement of all complaint[s] which [are submitted for] referral 3. They receive services and don't deliver them to the people 4. It doesn't investigate the performance of workers 5. The LC3 fails to supervise the health centers [and] ensure that they request for medicine on time 6. They fail to supervise the health workers and to ask for accountability concerning the medicine delivered to them 7. The central government realises things, i.e. medicine, but when it reaches the district , the district has many people who receive the thing and misuse them and send very few [to] the health centers 8. It's [supposed] to follow up the supply of the medicine in the facilities 9. The district should be blamed for not doing enough to ensure that health facilities have medicine 10. They send half of the medicine they receive from the ministry of health.	1. Doesn't report, thefts of drugs 2. Most of the health workers have private clinics so when they supply the medicine in the facilities they steal and sell them to their clinics 3. The government sends medicine but the health workers steal it and they put it in their own clinics and sell it to us afterwards 4. They fail to distribute the medicine according to the needs of the people 5. They don't give the medicine to the patients and later steal the medicine to their own clinics 6. They are supposed to ask from the district and ministry of health to provide medicines when they are done. 7. They need to alert the authorities before the medicines get done 8. Thefts of drugs, bribes for drugs available 9. The health workers [steal] the medicine and take it to their clinics 10. Mismanagement of medicine and theft of drugs are done at health facility

A22 Citizens' Complaints Experiment: Blame by Treatment Condition

Figure A24. *Blame by Treatment Condition: Complaints Experiment*

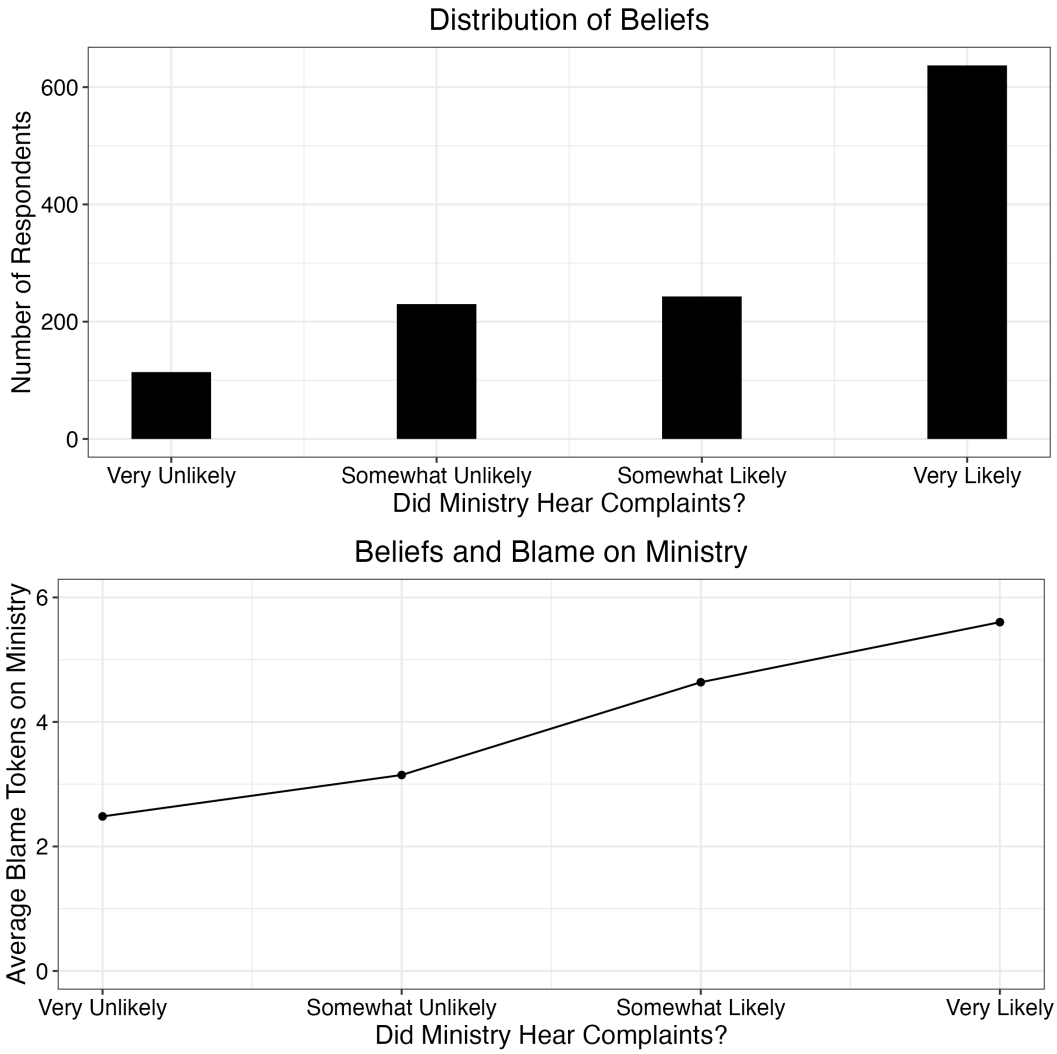


This figure plots the average number of blame tokens that each group receives (out of 10) in each treatment condition, with 95% CIs. Blame in the vertical condition shifts away from the Ministry and onto the LC3. The red line marks an even distribution of blame (1/3 on each group).

A23 Citizens' Complaints Experiment: Beliefs about Ministry Knowledge

Figure A25 shows that, while most respondents believe that top Ministry decision-makers learned of the citizens' complaints, those who do not place substantially less blame on the Ministry. The exact question text is: "In this scenario, how likely do you think it is that the people in the Ministry of Health with control over these resources learned about the citizens' complaints?"

Figure A25. *Blame and Beliefs About Complaints Reaching Ministry*



A24 Citizens' Complaints Experiment: Free Responses

Table A18 provides a random sample of open-ended reasons for blaming each actor, 5 from each treatment condition.

TABLE A18. *Random Sample of Open-Ended Blame Justifications: Citizens' Complaints Experiment*

Why Blame Ministry?	**Why Blame LC5?**	**Why Blame LC3?**
Vertical Condition 1. If indeed they got the information and did nothing yet they are responsible for ensuring that the services are [there] they are also to blame 2. The ministry of health is supposed to inspect the hospitals and ensure they have the required services 3. If they get the information they should be able to act fast which [they] don't 4. Because ministry of health has been informed through district and sub county respectively but no feedback and response from ministry 5. It is the ministry who supplies beds and recruiting health workers so they are the one responsible for all the blame **Horizontal Condition** 1. It is the one with the authority of recruiting more health workers and supplying medical equipments to the facility 2. Failed to supply the necessary medical equipment 3. They don't supply enough beds and staffs 4. The citizens [have] taken their concerns to their office already but instead of working on it they are [quiet] 5. Supplies what is needed but don't follow up	**Vertical Condition** 1. He is blamed for not delivering the message to the ministry 2. They follow you citizens complaint [*sic*] 3. The LC5 have attendance of procrastinating our complaints because they claim [they're] busy hence take long to forward our complaints 4. Much corruption at the district 5. The LC5 would not have a big problem but he should have at least put pressure on the ministry of health because sometimes they forget **Horizontal Condition** 1. The people voted for him but he failed to support them in their time of need when they needed beds and health workers he did not follow up 2. I think the LC3 reminded him but he delayed to take the report to the Ministry of Health or the reminder 3. The LC5 is not reporting to the ministry 4. It is responsible for reporting to the ministry of health to supply the medicine 5. He doesn't forward complaints of citizens to ministry of health to emphasize on the one citizens took to the official	**Vertical Condition** 1. He might have delayed to inform the LC5 2. They don't also make follow ups from the LC5 3. The LC3 though with limited power he should have at least inquired from the ministry of how far the complaint had gone because he was the one whom the citizens approached and it was his responsibility to follow up 4. They fail to give the people feedback about the problems forwarded so the people remain clueless 5. The citizens always bring their concerns to this office since they are more closer to the people **Horizontal Condition** 1. He has the responsibility of taking citizens' concerns to the high level 2. The LC3 also should do followup with the office of the LC5 but he is lazy to do that 3. The LC3 is supposed to follow up with the LC5 concerning the people's problem 4. He should have kept reminding the LC5 so that people get beds 5. Sub county should have followed the community concern to local leaders at the district level.

A25 Addressing Multiple Comparisons

As specified in the pre-analysis plan for the survey experiments, I distinguish between primary and secondary experimental hypotheses, and I control the family-wide error rate (FWER) within each family of secondary hypotheses using the Holm correction, which EGAP notes is "strictly more powerful than Bonferroni, and is valid under the same assumptions."

Under the Holm correction, results are significant if $p_k < \frac{\alpha}{m+1-k}$, where k is the p-value's index. Table A19 reports $p^* = p_k(m+1-k)$, which must be smaller than 0.05 for results to withstand the Holm correction. Indeed, the statistical significance of all results does not change.

TABLE A19. *Holm Corrections Within Each Secondary Hypothesis Family*

Experiment	**Hypothesis Type**	**Hypothesis**	**Expected / Observed Signs**	**Initial p-value**	**Holm Correction** $p^* = p_k(m+1-k)$	**Affects Inference?**
Petty Corruption Vignette	Secondary	Leakage prime reduces central government blame, relative to supply prime	$-$ / $-$	$p = 0.019$	$p^* = 0.019(2+1-2) = 0.019$	No
	Secondary	Supply prime increases central government blame, relative to control	$+$ / $-$	$p = 0.013$	$p^* = 0.013(2+1-1) = 0.025$	No
Neglecting Complaints Vignette	Secondary	Vertical condition reduces blame on Ministry among Northerners	$-$ / $-$	$p = 0.0064$	$p^* = 0.0064(2+1-2) = 0.0064$	No
	Secondary	Vertical condition reduces perceived likelihood that Ministry decision-makers received complaints	$-$ / $-$	$p = 0.000005$	$p^* = 0.000005(2+1-1) = 0.00001$	No

A more conservative approach is to treat all 6 hypotheses across the two experiments as a single hypothesis family; controlling the FWER within this larger family also does not meaningfully affect inferences (Table A20).

TABLE A20. *Holm Corrections With Entire Set of Hypotheses*

Experiment	**Hypothesis Type**	**Hypothesis**	**Expected / Observed Signs**	**Initial p-value**	**Holm Correction** $p^* = p_k(m+1-k)$	**Affects Inference?**
Petty Corruption Vignette	Primary	Leakage prime reduces central government blame, relative to control	$-$ / $-$	$p = 0.0000008$	$p^* = 0.0000008(6+1-1) = 0.0000048$	No
	Secondary	Leakage prime reduces central government blame, relative to supply prime	$-$ / $-$	$p = 0.019$	$p^* = 0.019(6+1-5) = 0.038$	No
	Secondary	Supply prime increases central government blame, relative to control	$+$ / $-$	$p = 0.013$	$p^* = 0.013(6+1-4) = 0.038$	No
Neglecting Complaints Vignette	Primary	Vertical condition reduces blame on Ministry	$-$ / $-$	$p = 0.066$	$p^* = 0.066(6+1-6) = 0.066$	No
	Secondary	Vertical condition reduces blame on Ministry among Northerners	$-$ / $-$	$p = 0.0064$	$p^* = 0.0064(6+1-3) = 0.026$	No
	Secondary	Vertical condition reduces perceived likelihood that Ministry decision-makers received complaints	$-$ / $-$	$p = 0.000005$	$p^* = 0.000005(6+1-2) = 0.000025$	No