Bringing Services Closer to People? Distance to Administrators, Citizen Engagement, and Public Service Delivery in Uganda

Marcelo Gantier-Mita

Paris School of Economics (PSE)

STEG Annual Conference 2026

January 10, 2026

Motivation

- Governments across the world often face several challenges in providing public goods and services to their citizens (World Bank, 2016)
  - This situation is particularly salient in developing countries where governments often face limited state capacity

- Looking to improve public service delivery, many developing countries have expanded the number of subnational administrative units over the past three decades (Grossman, Pierskalla, and Boswell Dean, 2017; Cohen, 2024)

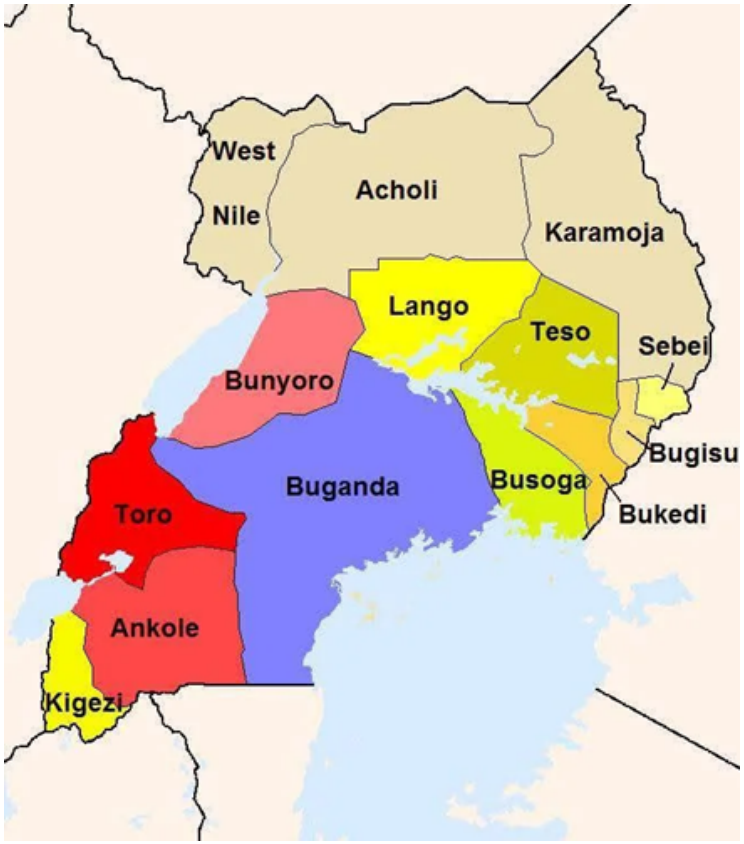
Motivation

- Governments across the world often face several challenges in providing public goods and services to their citizens (World Bank, 2016)
  - This situation is particularly salient in developing countries where governments often face limited state capacity

- Looking to improve public service delivery, many developing countries have expanded the number of subnational administrative units over the past three decades (Grossman, Pierskalla, and Boswell Dean, 2017; Cohen, 2024)
  - Uganda 39 (1997) to 135 (2024)
  - Ghana 110 (1988) to 261 (2020)
  - Zambia 72 (2011) to 116 (2018)
  - Kenya has gone through a district proliferation in the 2000s, reversed in 2010

Motivation

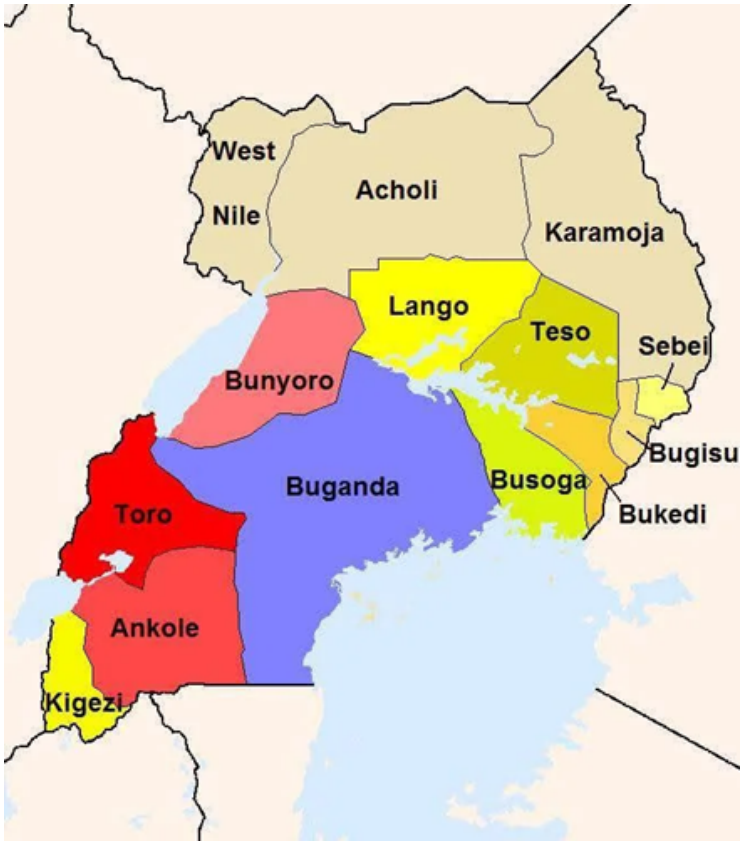
Figure: Administrative units in Uganda



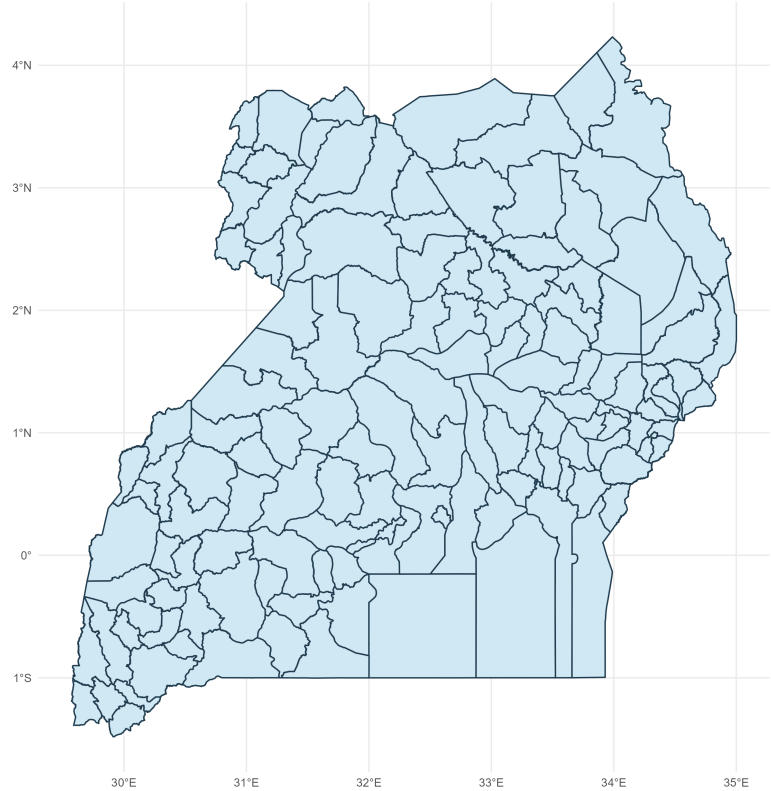
(a) Districts 1962

Motivation

Figure: Administrative units in Uganda



(a) Districts 1962



(b) Districts 2020

Motivation

- Theories of decentralization emphasize:
  - Bridging information gaps $\rightarrow$ local preferences (Oates et al., 1972; Tiebout, 1956; Alesina and Spolaore, 1997)
  - Strength political accountability (Boffa, Piolatto, and Ponzetto, 2016)
- However, the creation of new local governments can generate costs:
  - Elite capture (Bardhan, 2002)
  - Losses in economies of scale (Alesina and Spolaore, 1997)

Motivation

- Theories of decentralization emphasize:
  - Bridging information gaps → local preferences (Oates et al., 1972; Tiebout, 1956; Alesina and Spolaore, 1997)
  - Strength political accountability (Boffa, Piolatto, and Ponzetto, 2016)
- However, the creation of new local governments can generate costs:
  - Elite capture (Bardhan, 2002)
  - Losses in economies of scale (Alesina and Spolaore, 1997)
- Reducing the geographic size of jurisdictions can improve public service delivery if it generates civic engagement and stronger political incentives (Narasimhan and Weaver, 2024)

Motivation

- Theories of decentralization emphasize:
  - Bridging information gaps → local preferences (Oates et al., 1972; Tiebout, 1956; Alesina and Spolaore, 1997)
  - Strength political accountability (Boffa, Piolatto, and Ponzetto, 2016)
- However, the creation of new local governments can generate costs:
  - Elite capture (Bardhan, 2002)
  - Losses in economies of scale (Alesina and Spolaore, 1997)
- Reducing the geographic size of jurisdictions can improve public service delivery if it generates civic engagement and stronger political incentives (Narasimhan and Weaver, 2024)
- We still lack evidence on how geographic distance shapes state-citizen relationships and whether increased proximity to local administrations translates into more public service access

This paper

Research Questions

Does reducing geographic distance to local government centers improve citizen engagement with the state? If so, does it translate into higher public service provision?

This paper

Research Questions

Does reducing geographic distance to local government centers improve citizen engagement with the state? If so, does it translate into higher public service provision?

- Analyzes an episode of redistricting in Uganda, which introduced exogenous variation in distance to the districts' capital → IV

Analyzes two potential mechanisms:

- State presence
- Accountability

Preview of findings

Main takeaway

Households located closer to newly created administrative headquarters have higher levels of citizen engagement with the government, as well as higher access to public goods and services

- Proximity to administrators:
  - ↑ Satisfaction with local leader's work
  - ↑ Involvement in decision making
  - ↑ Contact with civil servants
  - ↑ Access to education, drinking water, electricity, roads

Preview of findings

Main takeaway

Households located closer to newly created administrative headquarters have higher levels of citizen engagement with the government, as well as higher access to public goods and services

- Proximity to administrators:
  - ↑ Satisfaction with local leader's work
  - ↑ Involvement in decision making
  - ↑ Contact with civil servants
  - ↑ Access to education, drinking water, electricity, roads
- Mechanisms:
  - ↑ State presence
  - ↑ Accountability

Contributions

State capacity, accountability, and citizen participation: physical distance can undermine accountability (Campante and Do, 2014), and introduce information frictions (Asher, Nagpal, and Novosad, 2018). Smaller units can improve public service delivery (Narasimhan and Weaver, 2024)

- Provides causal evidence on how physical proximity to the state reshapes citizen-state relationships

Contributions

State capacity, accountability, and citizen participation: physical distance can undermine accountability (Campante and Do, 2014), and introduce information frictions (Asher, Nagpal, and Novosad, 2018). Smaller units can improve public service delivery (Narasimhan and Weaver, 2024)

- Provides causal evidence on how physical proximity to the state reshapes citizen-state relationships

Decentralization through administrative unit creation: mixed results on public service delivery (Grossman, Pierskalla, and Boswell Dean, 2017; Billing, 2019; Dahis and Szerman, 2024; Cohen, 2024)

- Distance to administrators is a key mechanism for redistricting policies

Contributions

State capacity, accountability, and citizen participation: physical distance can undermine accountability (Campante and Do, 2014), and introduce information frictions (Asher, Nagpal, and Novosad, 2018). Smaller units can improve public service delivery (Narasimhan and Weaver, 2024)

- Provides causal evidence on how physical proximity to the state reshapes citizen-state relationships

Decentralization through administrative unit creation: mixed results on public service delivery (Grossman, Pierskalla, and Boswell Dean, 2017; Billing, 2019; Dahis and Szerman, 2024; Cohen, 2024)

- Distance to administrators is a key mechanism for redistricting policies

Spatial inequality and local development: Urban proximity and economic growth (Fafchamps and Shilpi, 2005; Michaels, Rauch, and Redding, 2012; Storeygard, 2016)

- Effects of proximity to administrative centers

Institutional Background

- In 1987 Uganda went through a decentralization process, establishing a five-tier structure: villages (LCI), parishes (LCII), sub-counties (LCIII), counties (LCIV), and districts (LCV)
  - Local Governments: Districts and Sub-counties
  - Attributions: Implement public service delivery projects
- New constitution of 1995:
  - Parliament has the power to create new administrative units
  - The number of districts went from 39 in 1997 to 135 in 2024
  - District creation exogenously changed the distance to administrators
- District creation:
  - Local people → District Council → MoLG → Cabinet → Parliament

Institutional Background

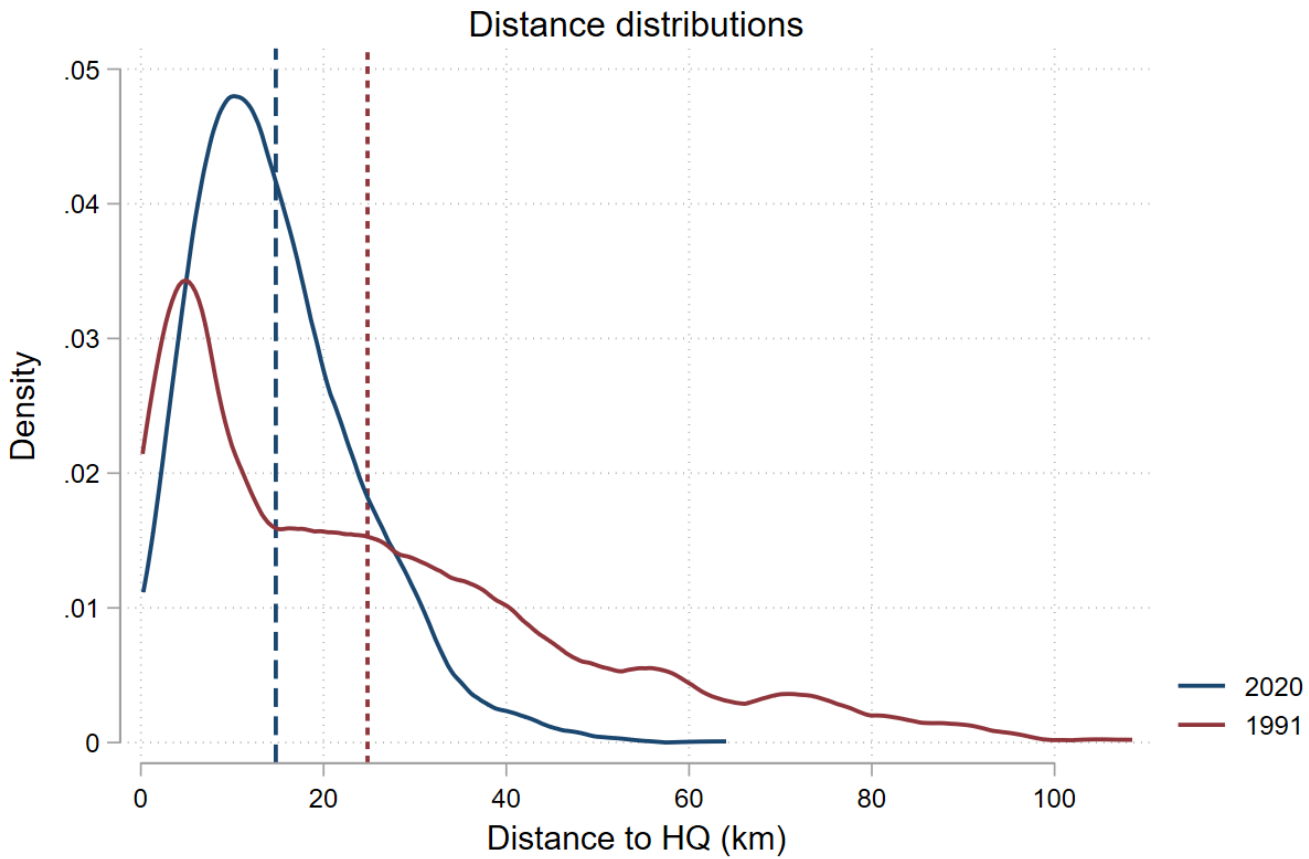
Figure: New districts' headquarters

Isingiro Headquarters

Lwengo Headquarters

Distance to Headquarters

Figure: Distance to Headquarters 1991, 2020



Data

Survey Data

- National Service Delivery Survey (NSDS-2021).
  - Satisfaction with local leaders, participation in decision-making, contact with public servants
  - Education, health, water, electricity, roads, and agricultural inputs
  - Covers around 10,000 households, in more than 1,000 parishes, in all existing districts
- Afrobarometer (Round 10, 2024)
  - Engagement in protest, conflict resolution, presence of services

Geospatial Data

- 135 District's headquarters geo-coordinates
- District evolution 1991-2021 (UBOS)

Remote Sensing Data

- Land use dynamics at the parish level
- MODIS 2021-2023 (500m resolution)
- Landsat 2015-2019 (30m resolution)

Empirical Framework

- Establishing a causal relationship between new local government headquarters and state-citizen relationships/public service delivery is challenging:
  - Headquarters' location is an endogenous decision
  - Usually located in places with service availability
- Use quasi-random variation in headquarter's location → Instrumental Variables

Identification strategy

Implementation rule

District headquarters are deliberately located in the geographical middle of newly created districts.

- Build on (Campante and Do, 2014) and use the household's distance to the district's centroid as an instrument

Identification strategy

Implementation rule

District headquarters are deliberately located in the geographical middle of newly created districts.

- Build on (Campante and Do, 2014) and use the household's distance to the district's centroid as an instrument
- The instrument uses the distance variation coming from new districts

distances

$$DistanceHH\_DC \times NewDistrict_{1991-2020}$$

where: HH = Household; DC = District's centroid

Identification strategy

$$LogDistHH\_HQ_{i,d} = \gamma_0 + \gamma_{DN}(LogDistHH\_DC \times NewDistrict_{1991-2020})_i + \gamma_D LogDistHH\_DC_i + \gamma_N NewDistrict_{1991-2020,d} + \mathbf{X}'_{i,d}\gamma_X + \upsilon_{i,d} \quad (1)$$

$$Y_{i,d} = \alpha + \beta \widehat{LogDistHH\_HQ}_{i,d} + \beta_D LogDistHH\_DC_i + \beta_N NewDistrict_{1991-2020,d} + \mathbf{X}'_{i,d}\beta_X + \varepsilon_{i,d}, \quad (2)$$

- where:
  - $LogDistHH\_HQ_{i,d}$ = Self-reported household's distance to the district's town council (in log.)
  - $Y_{i,d}$ = Citizen engagement with the government (satisfaction with local leaders, participation in decision making, dispute resolution)
  - $\mathbf{X}'_{s,d}$ = Set of controls (ever split, area in 1991, dist HH_HQ in 1991, lakes, elevation, macro-region)
  - $\upsilon_{i,d}$; $\varepsilon_{i,d}$ = Standard errors clustered at the parish level (LCII)

Identification strategy

Relevance

- Holds to the extent that policymakers comply with the governmental guidelines centroids

Independence

- A district's centroid is exclusively determined by the geographical shape of the new administrative unit

Exclusion restriction

- The interaction between a household's distance to the district's centroid and new districts created in 1991-2020, conditional on the set of controls, should affect citizen engagement only through the household's distance to the district headquarters

Exclusion Restriction

Likely to hold because:

- Distance to centroid has no direct effect on outcomes (Campante and Do, 2014)
- Controls for pre-existing remoteness (distance to old centroid in 1991)
- Controls for split timing, geography (elevation, water), macro-regions, and district size

Exclusion Restriction

Likely to hold because:

- Distance to centroid has no direct effect on outcomes (Campante and Do, 2014)
- Controls for pre-existing remoteness (distance to old centroid in 1991)
- Controls for split timing, geography (elevation, water), macro-regions, and district size

Main potential threat:

- Strategic centroid placement → unlikely because:
  - Complex legal procedure with multiple actors
  - Borders determined by colonial county lines
  - Population density & night-lights don't predict HQ placement
  - Anecdotal: HQs often built from scratch

First-Stage

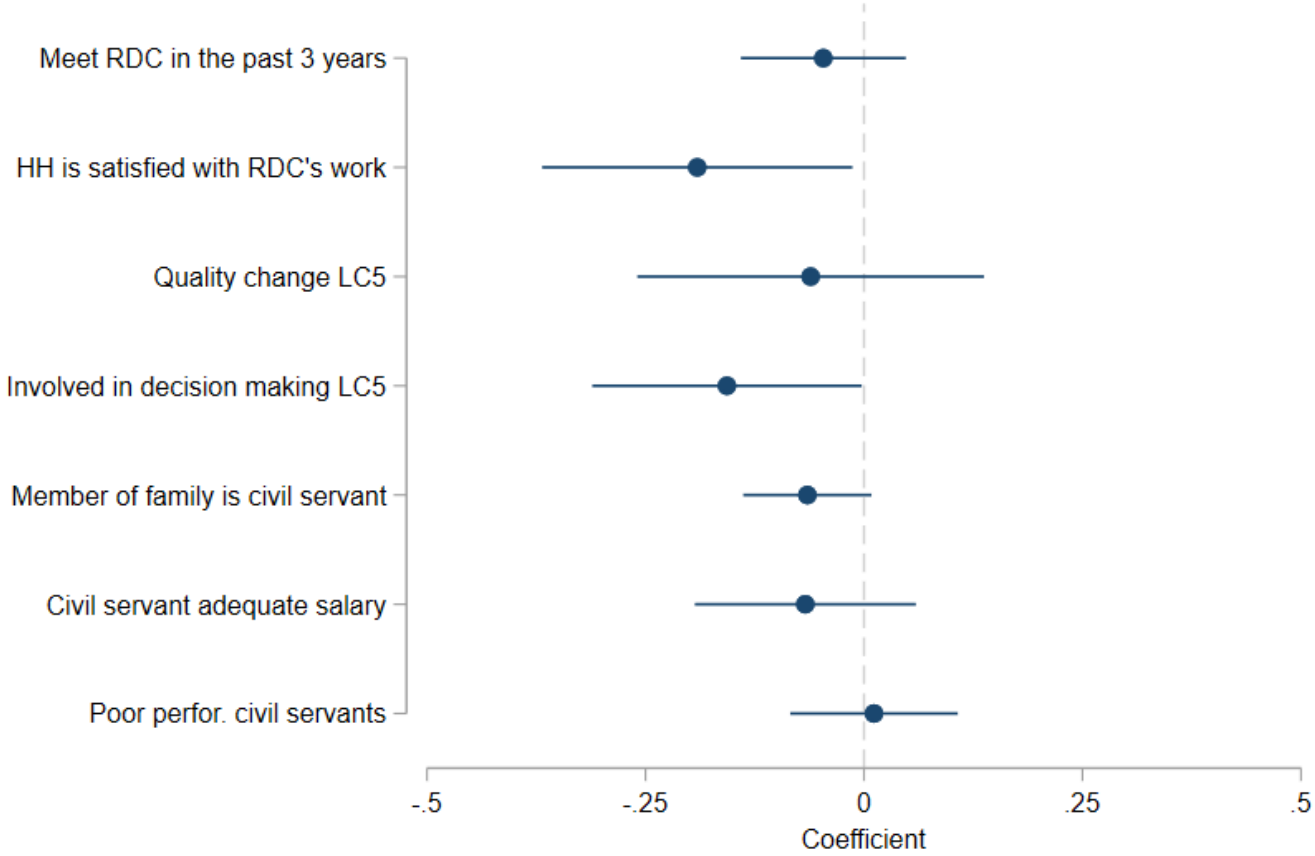
Table: First Stage: Distance Household - District's Headquarters

	Log SR Distance Household - District Headquarters	
	NSDS 2021	Afrobarometer R10
Log Distance Household - District's centroid X New District 91-20	0.021***	0.456***
	(0.006)	(0.0996)
Log Distance Household - District's centroid	0.018	0.205***
	(0.063)	(0.0579)
New district between 1991-2020	-0.765***	-1.990***
	(0.132)	(0.307)
Observations	9,137	2,388
Number of Parishes	1076	298
Mean of Dependent Variable	2.456	2.407
IV F-stat Kleibergen-Paap rk Wald	13.935	21.074
Controls	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

Results

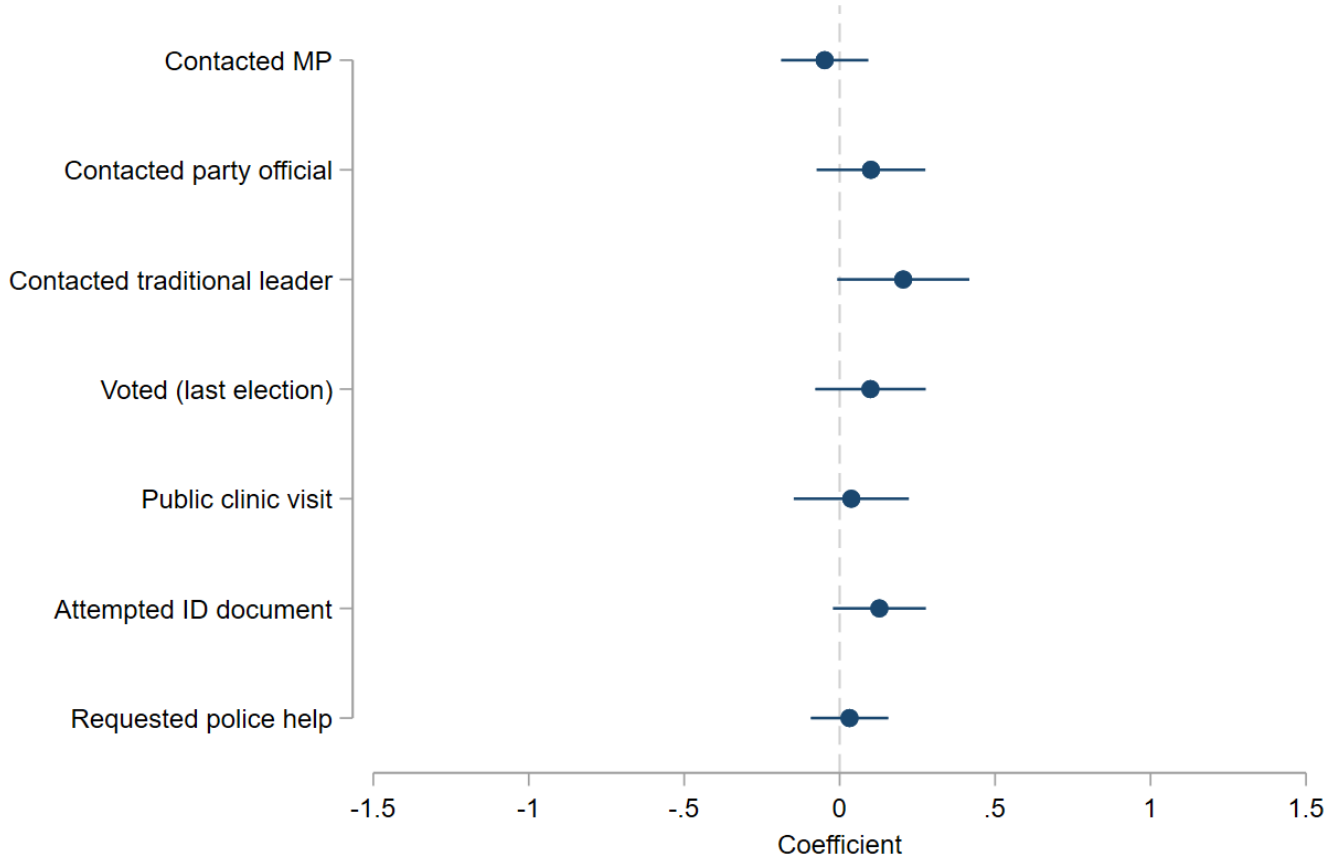
Figure: Citizen Engagement with the Government



table

Results

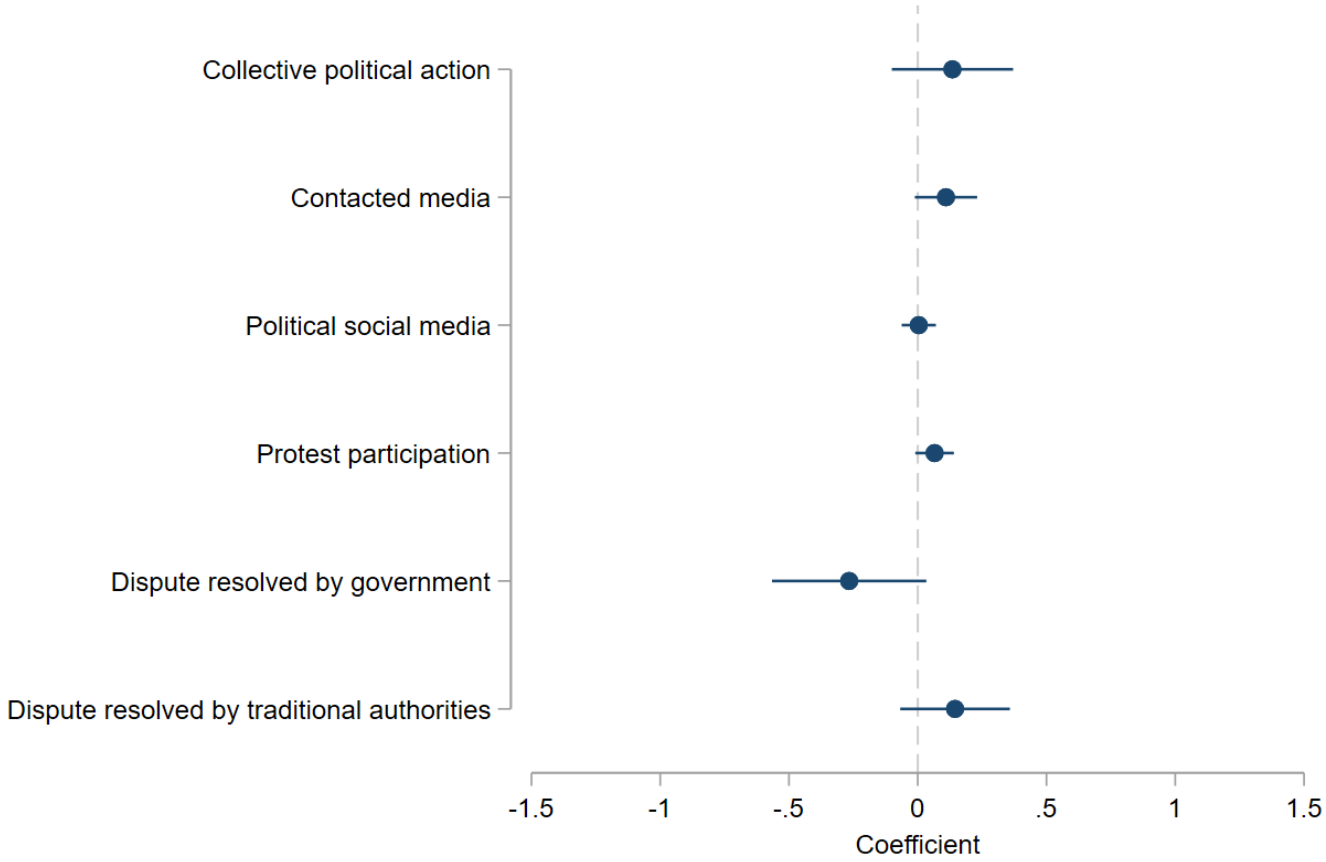
Figure: Citizen Engagement with the Government - Afrobarometer



table

Results

Figure: Citizen Engagement with the Government - Afrobarometer



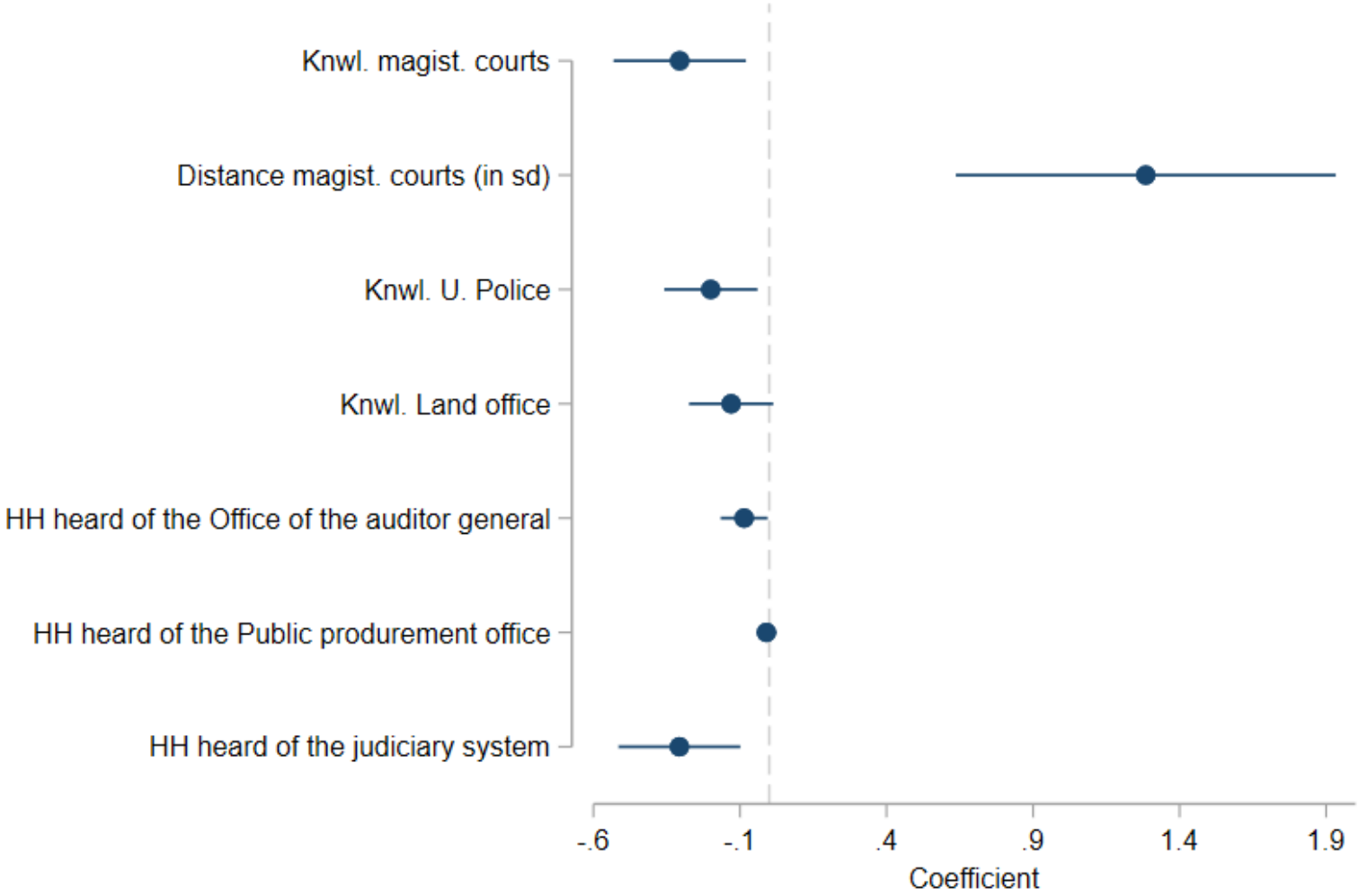
table

Robustness

- *Headquarters' placement*: Population density and night lights within new districts do not predict headquarters placement HQ placement
- *Reduced form results with old districts*: distance to centroids does not have any effect on main outcomes Distance centroids old
- *Distance to large towns*: instrument remains stable Dist large towns
- *Only new districts*: effects are consistent (slightly larger) New District
- *Alternative distance*: Household PC - District's headquarters Geo-ref distance
- *Placebo tests*:
  - Distance to lower-level local governments Distance LCI-LCIII
  - Instrument does not affect variables unrelated to headquarters' distance Placebos

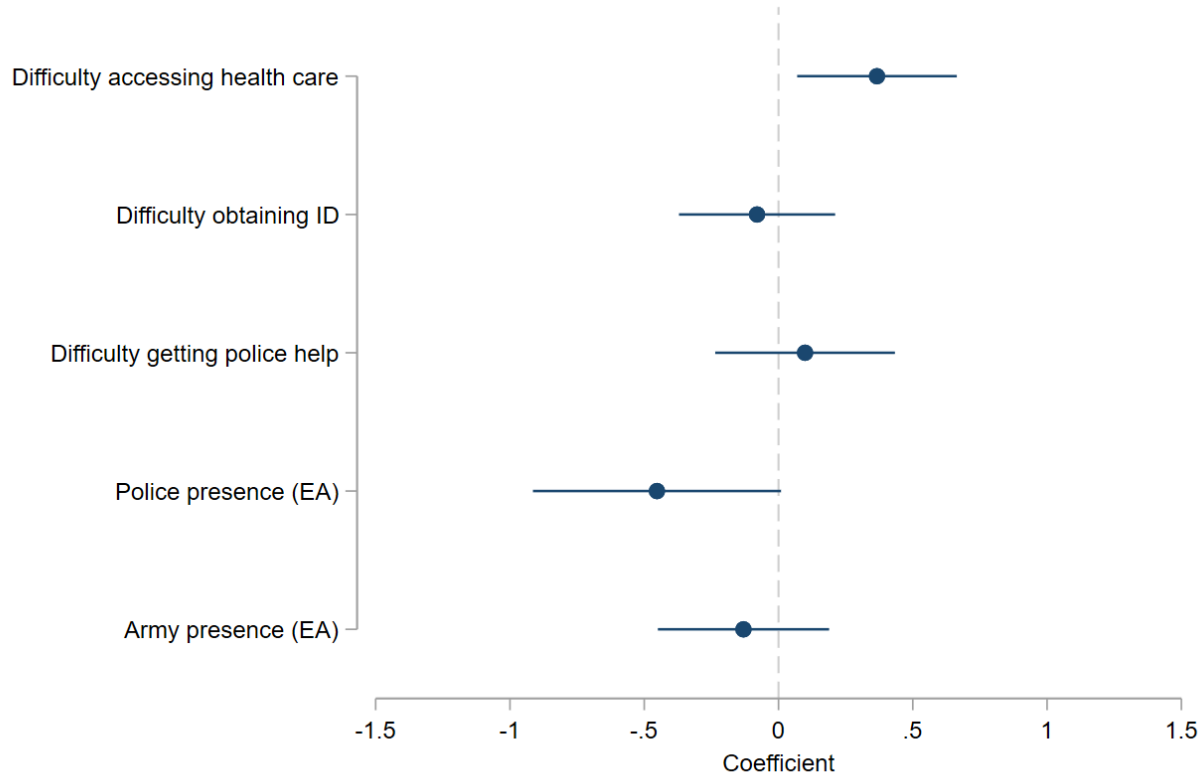
Mechanisms

Figure: State Presence



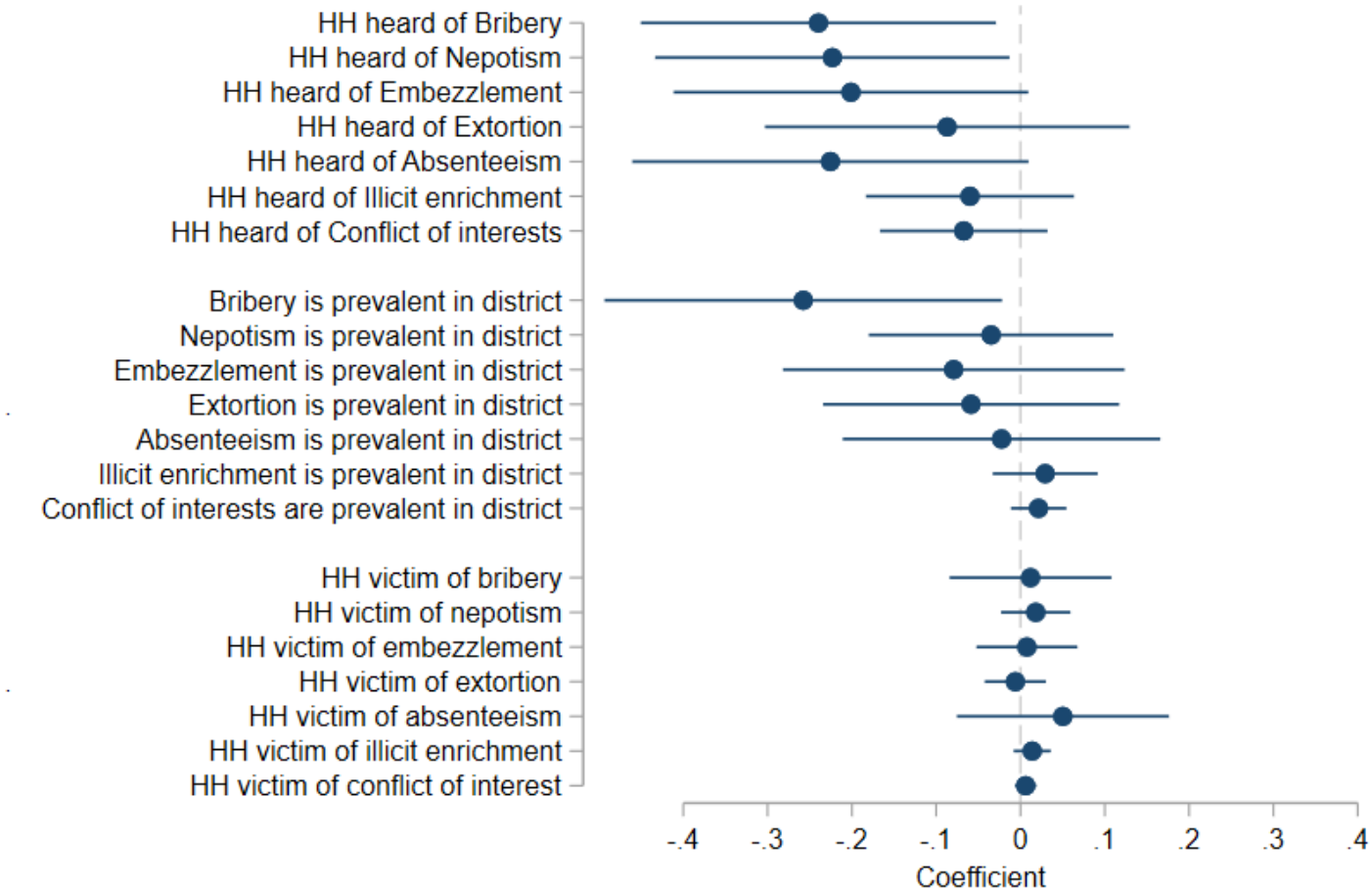
Mechanisms

Figure: State Presence - Afrobarometer



Mechanisms

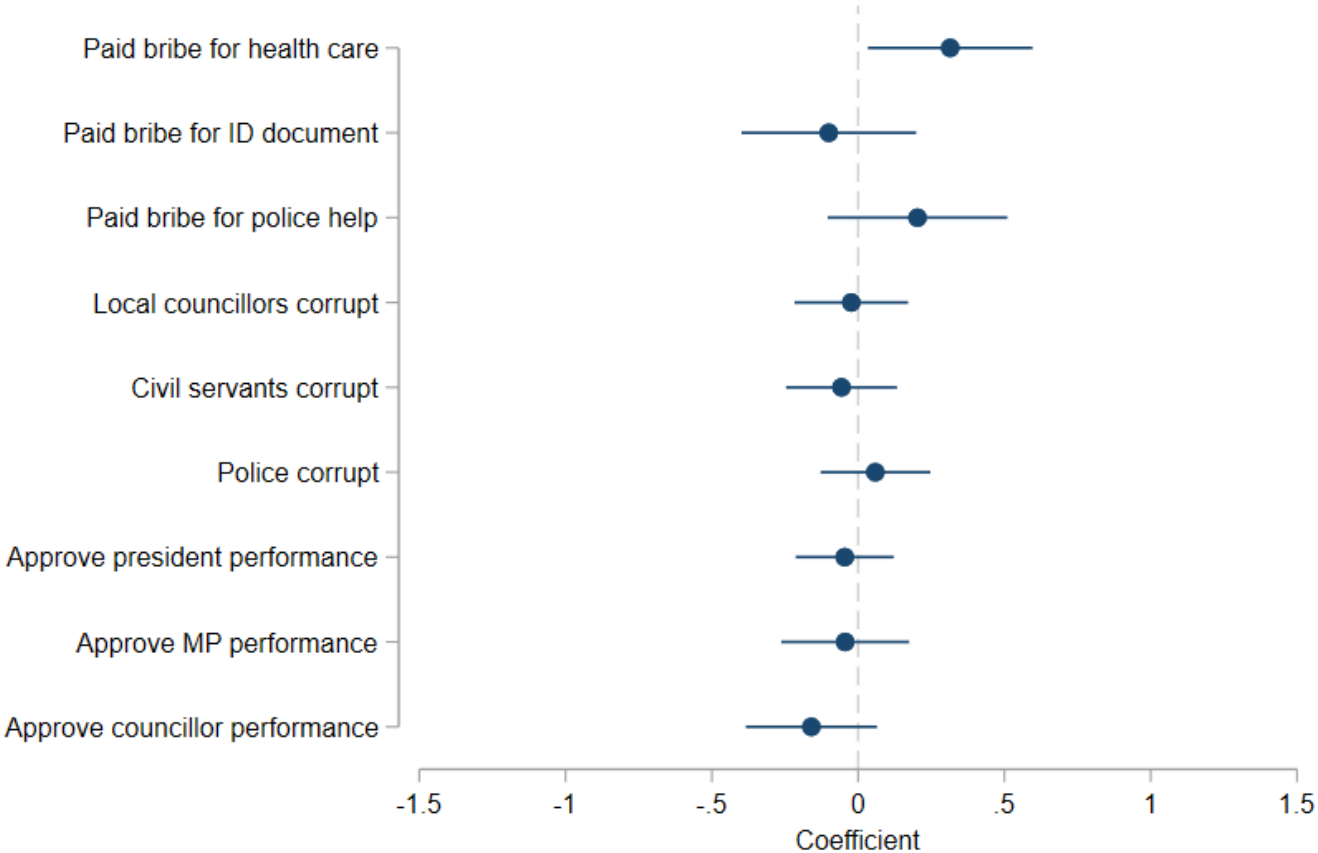
Figure: Accountability



table

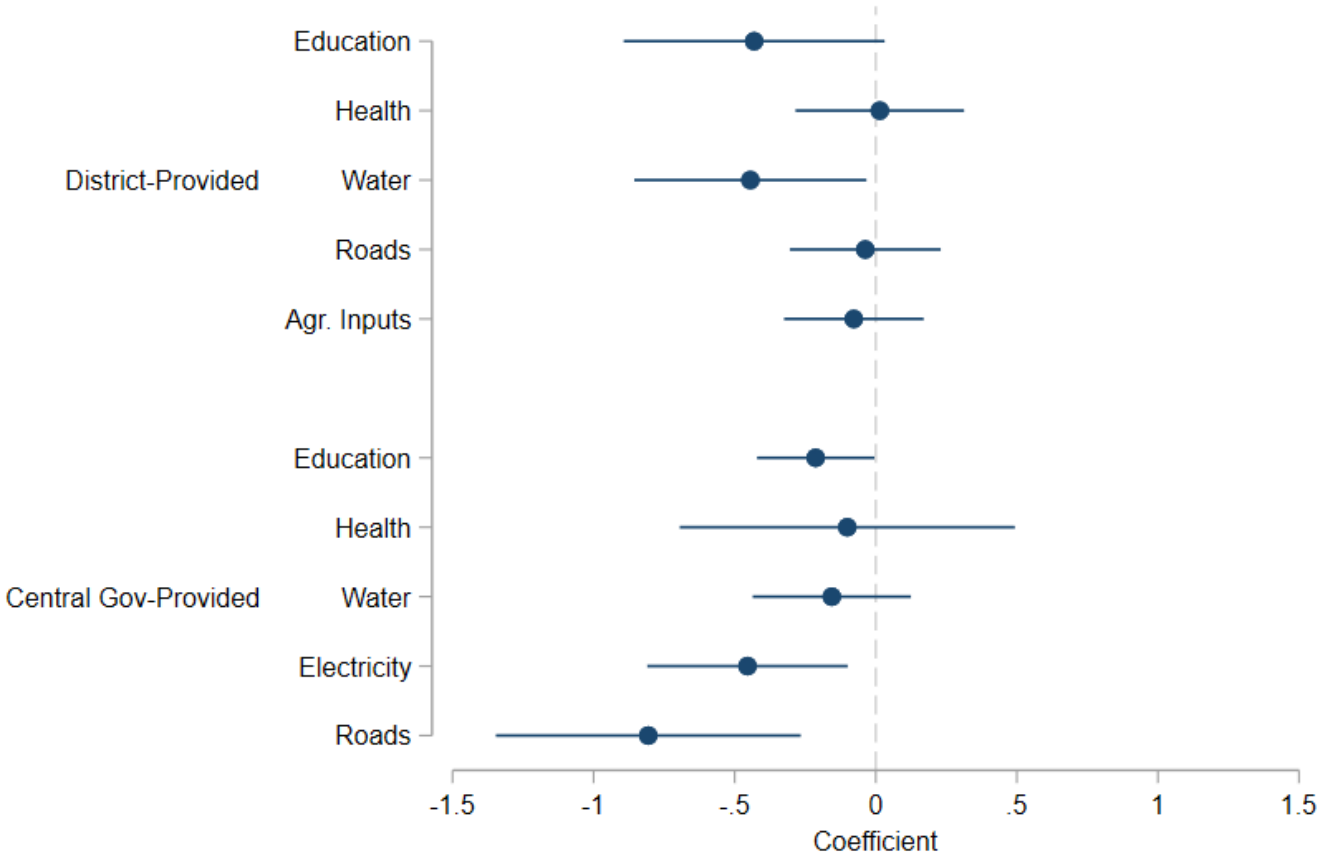
Mechanisms

Figure: Accountability - Afrobarometer



Effects on Public Service Delivery

Figure: Public Service Delivery

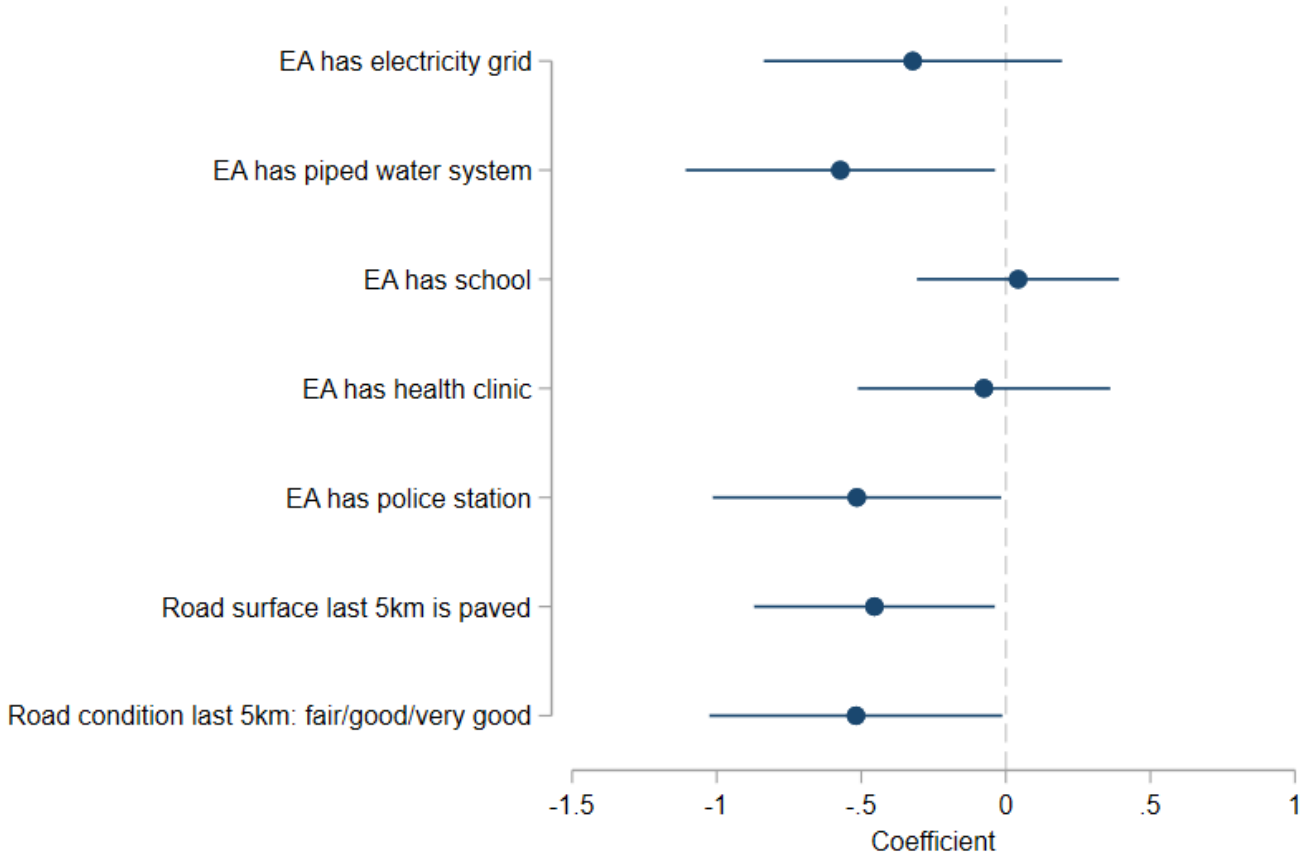


Schools dist | Health dist | Water dist | Roads dist | Agri inputs dist | Schools cgov | Water cgov | Electricity cgov | Roads cgov

table | Top priorities

Effects on Public Service Delivery

Figure: Public Service Delivery - Afrobarometer



Dynamics

- Effects on public service delivery may evolve as newly created administrative centers develop over time
- I use repeated cross-sections to analyze how the relevance of distance changes over time
  - NSDS 2015 and NSDS 2021
  - Afrobarometer R7 (2017) and R10 (2024)
- Focus on households in districts created between 1991 and 2014

Dynamics

Table: Impact of Household's distance to Headquarters on Indices of Major Outcomes

	Education district (1)	Education central gov (2)	Health district (3)	Water district (4)	Water central gov (5)	Electricity central gov (6)	Roads district (7)	Agr inputs district (8)
Panel A. NSDS 2015 - Period 1991-2014								
Log SR Distance HH - District HQ	-0.155	-0.063	-0.014	-0.067	0.115	0.172	-0.103	-1.274***
SE	(0.143)	(0.122)	(0.157)	(0.197)	(0.200)	(0.154)	(0.197)	(0.391)
p-value	[0.280]	[0.605]	[0.929]	[0.734]	[0.565]	[0.264]	[0.603]	[0.001]
sharpened q-value	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{1.000}	{0.010}
Mean of Dependent Variable	-0.017	-0.006	0.104	0.004	0.010	-0.019	0.005	0.026
Observations	5,271	4,048	8,918	8,934	8,928	8,940	8,940	8,940
Number of Parishes	946	938	953	953	953	953	953	953
IV F-stat Kleibergen-Paap rk Wald	16.620	18.056	17.799	17.512	17.598	17.505	17.505	17.505
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B. NSDS 2021 - Period 1991-2014								
Log SR Distance HH - District HQ	-0.588*	-0.251**	0.086	-0.451*	-0.175	-0.319*	-0.054	-0.041
SE	(0.301)	(0.122)	(0.174)	(0.232)	(0.161)	(0.170)	(0.146)	(0.140)
p-value	[0.051]	[0.040]	[0.654]	[0.052]	[0.276]	[0.061]	[0.714]	[0.772]
sharpened q-value	{0.140}	{0.140}	{0.630}	{0.140}	{0.283}	{0.140}	{0.630}	{0.630}
Mean of Dependent Variable	-0.015	0.014	0.025	0.006	0.027	0.010	0.002	-0.006
Observations	6,898	3,435	8,298	8,390	8,390	8,390	8,390	8,390
Number of Parishes	977	954	998	999	999	999	999	999
IV F-stat Kleibergen-Paap rk Wald	11.637	11.778	11.480	11.547	11.547	11.547	11.547	11.547
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. All regressions control for district ever split between 1991-2014, lake Victoria district, districts' area in Km^2 as of 1991, household's parish centroid distance to district's capital as of 1991 (in log.), district contains a lake other than Victoria, sub-county mean elevation (in m.a.s.l.), and four major regions. The instrument for the household's distance to the district's capital is the interaction of distance from the household's parish centroid to the district's centroid and an indicator for new districts between 1991-2014. Standard errors clustered at the Parish level are in parenthesis. Unadjusted p-values are in brackets. Anderson's sharpened False Discovery Rate (FDR) q-values are in curly brackets.

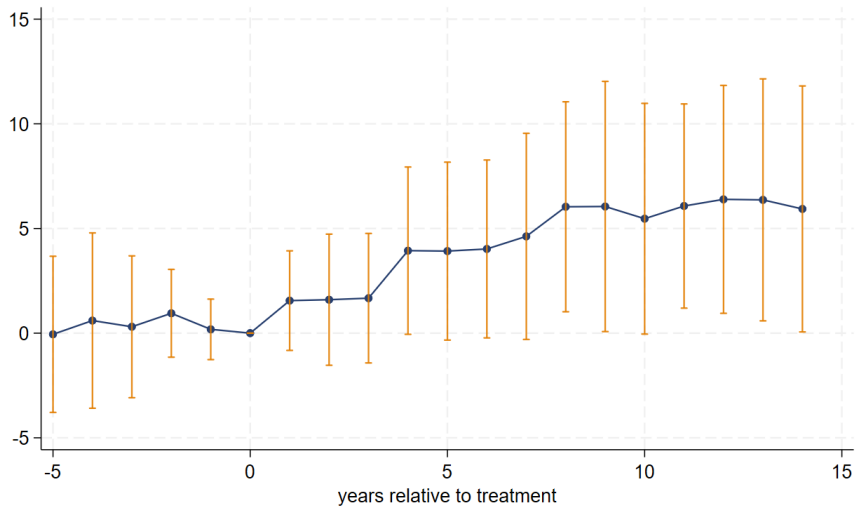
Conclusions

- This paper provides empirical evidence on the impact of distance to administrative centers on state-citizen interactions and public service delivery in the context of redistricting in Uganda
- Households located closer to administrators:
  - ↑ Citizen engagement with the government
  - ↑ Public Service Delivery
- The results highlight administrative proximity as a key channel through which decentralization can strengthen governance and improve public service delivery
- Create institutional channels for citizen participation, especially in local councils, budget priority-setting meetings (baraza), increase monitoring and accountability mechanisms

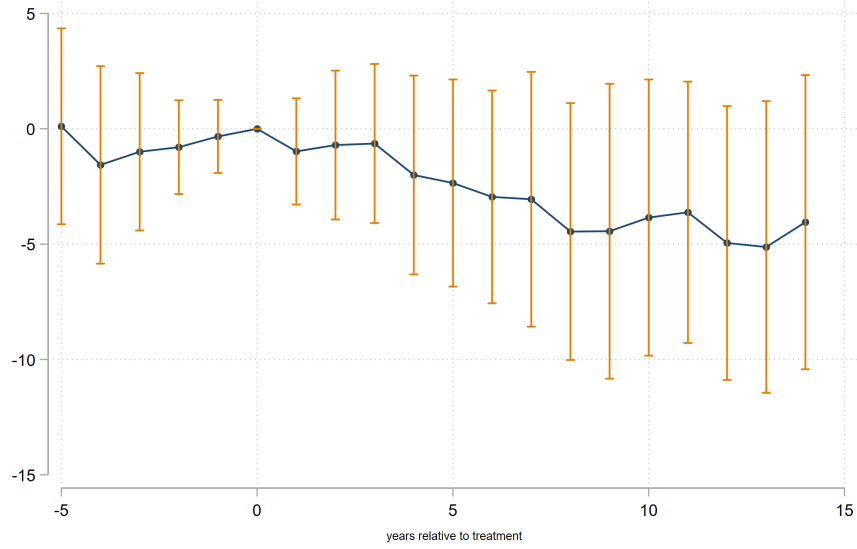
Next Steps

- Incorporate UNPS data analysis
- Gather administrative data to analyze supply side
- Develop a model to capture trade-offs
- Analyze structural changes

Land Use Dynamics



(a) Crop Land Cover



(b) Crop Land Vegetation Cover

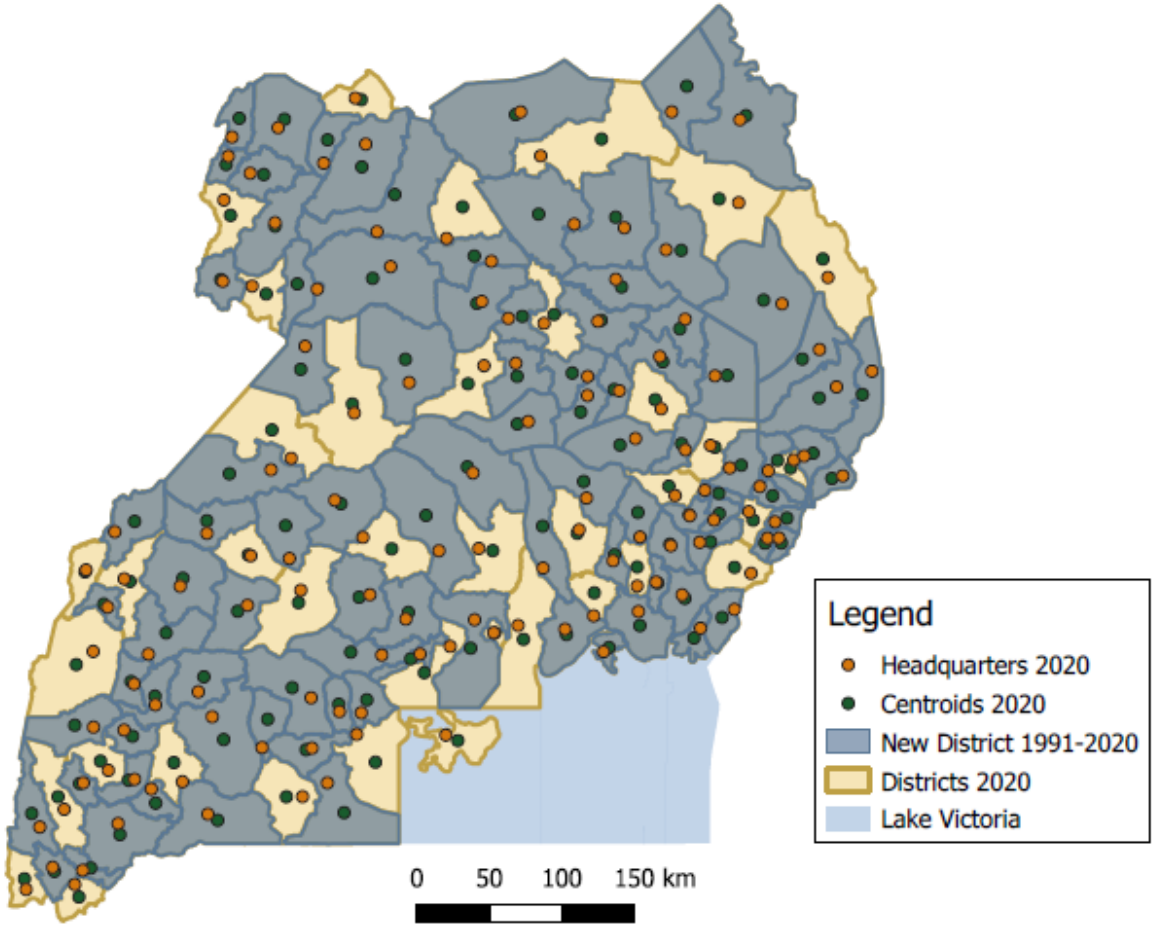
Figure: Event study graphs of Headquarter Creation on Land Use at the Parish Level

Thank you!

Email: marcelo.gantier@psemail.eu

Centroids map

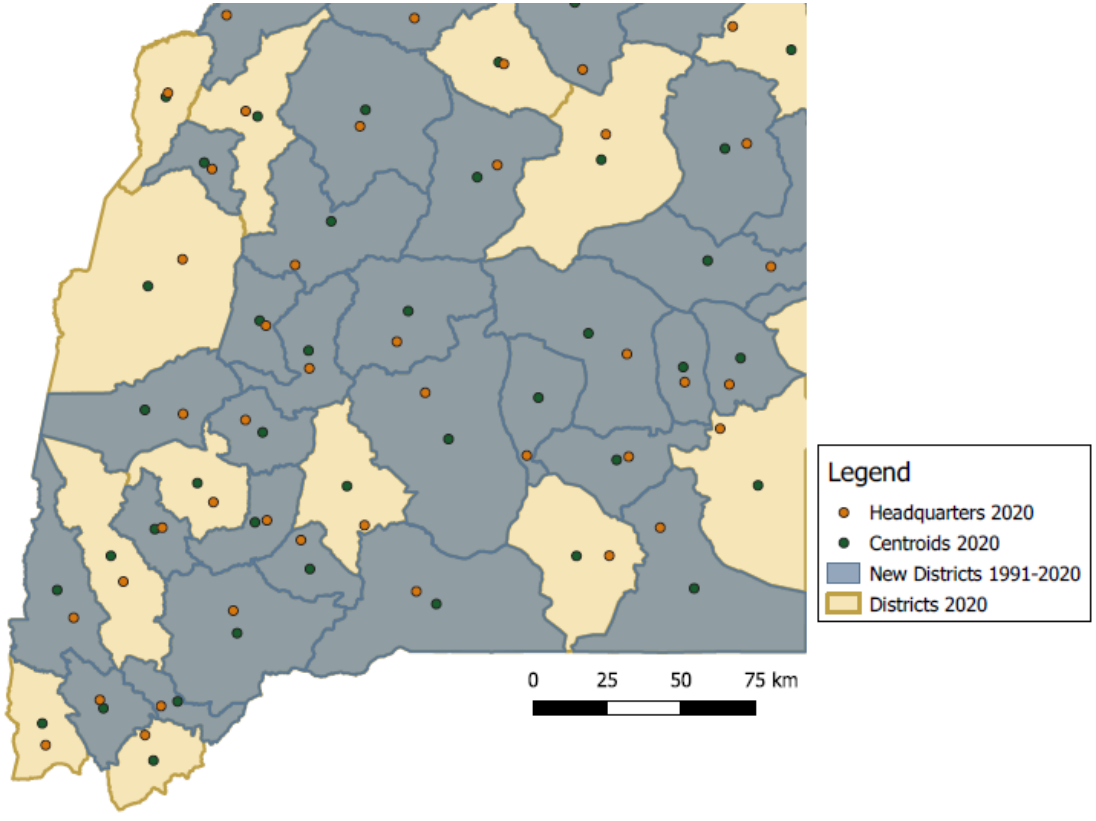
Figure: District's capitals and centroids



back

Centroids map

Figure: District's capitals and centroids



back

Results

Citizen Engagement

Table: Citizen engagement

	Meet RDC in the past 3 years	HH is satisfied with RDC's work	Quality change LC5	Involved in decision making LC5	Member of family is civil servant	Civil servant adequate salary	Poor perfor. civil servants
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log SR Distance HH - District HQ	-0.047	-0.191**	-0.061	-0.157**	-0.065*	-0.067	0.011
	(0.048)	(0.091)	(0.101)	(0.079)	(0.037)	(0.065)	(0.049)
Mean of Dependent Variable	0.099	0.324	1.475	0.244	0.055	0.221	0.078
Observations	9073	9073	4835	9073	9070	9070	7946
Number of Parishes	1071	1071	977	1071	1071	1071	1067
IV F-stat Kleibergen-Paap rk Wald	13.935	13.935	21.085	13.935	13.868	13.868	21.142
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Citizen Engagement - Afrobarometer

Table: Citizen Engagement - Afrobarometer

	(1) Contacted MP	(2) Contacted party official	(3) Contacted traditional leader	(4) Voted (last election)	(5) Public clinic visit	(6) Attempted ID document	(7) Requested police help
l_dist_hh_tc	-0.059	0.133	0.176*	0.045	-0.005	0.136*	0.045
	(0.068)	(0.082)	(0.101)	(0.083)	(0.083)	(0.072)	(0.060)
Observations	2388	2396	2362	2400	2400	2399	2399
Number of clusters	298	298	298	298	298	298	298
Mean of Dependent Variable	0.161	0.213	0.260	0.693	0.719	0.191	0.163
IV F-stat (Kleibergen-Paap rk Wald)	21.022	21.032	21.442	21.029	21.029	21.045	21.074

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Citizen Engagement - Afrobarometer

Table: Citizen Engagement - Afrobarometer

	(1) Collective political action	(2) Contacted media	(3) Political social media	(4) Protest participation	(5) Dispute resolved by government	(6) Dispute resolved by traditional authorities
l_dist_hh_tc	0.150	0.098*	0.019	0.061*	-0.209	0.154
	(0.108)	(0.054)	(0.032)	(0.033)	(0.147)	(0.109)
Observations	2398	2400	2398	2400	2327	2327
Number of clusters	298	298	298	298	298	298
Mean of Dependent Variable	0.352	0.092	0.038	0.035	0.565	0.203
IV F-stat (Kleibergen-Paap rk Wald)	21.001	21.029	21.065	21.029	21.440	21.440

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Mechanisms

State Presence

Table: State capacity

	Knwl. magist. courts	Distance magist. courts	Knwl. U. Police	Knwl. Land office	HH heard of the Office of the auditor general	HH heard of the Public produrement office	HH heard of the judiciary system
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log SR Distance HH - District HQ	-0.306***	17.082***	-0.199**	-0.130*	-0.086**	-0.009	-0.306***
	(0.115)	(4.397)	(0.081)	(0.073)	(0.041)	(0.017)	(0.106)
Mean of Dependent Variable	0.374	11.763	0.928	0.153	0.095	0.024	0.382
Observations	9068	3387	9070	9068	9073	9073	9073
Number of Parishes	1071	951	1071	1071	1071	1071	1071
IV F-stat Kleibergen-Paap rk Wald	13.861	16.510	13.874	13.861	13.935	13.935	13.935
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Mechanisms

Accountability

Table: Corruption

	HH heard of Bribery (1)	HH heard of Nepotism (2)	HH heard of Embezzlement (3)	HH heard of Extortion (4)	HH heard of Absenteeism (5)	HH heard of Illicit enrichment (6)	HH heard of Conflict of interests (7)	Bribery is prevalent in district (8)	Nepotism is prevalent in district (9)	Embezzlement is prevalent in district (10)	Extortion is prevalent in district (11)
Panel A											
Log SR Distance HH - District HQ	-0.240**	-0.223**	-0.201*	-0.087	-0.225*	-0.060	-0.067	-0.258**	-0.035	-0.079	-0.059
	(0.107)	(0.107)	(0.107)	(0.110)	(0.120)	(0.063)	(0.051)	(0.120)	(0.074)	(0.103)	(0.090)
Mean of Dependent Variable	0.806	0.492	0.647	0.341	0.489	0.156	0.111	0.534	0.208	0.333	0.139
Observations	9067	9067	9067	9067	9068	9073	9073	9073	9073	9073	9073
Number of Parishes	1071	1071	1071	1071	1071	1071	1071	1071	1071	1071	1071
IV F-stat Kleibergen-Paap rk Wald	13.871	13.871	13.871	13.871	13.883	13.935	13.935	13.935	13.935	13.935	13.935
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Absenteeism is prev in district (12)	Illi. enrichment is prev in district (13)	Conflict of interests are prev in district (14)	HH victim of brivery (15)	HH victim of nepotism (16)	HH victim of embezzlement (17)	HH victim of extortion (18)	HH victim of absenteeism (19)	HH victim of illi. enrichment (20)	HH victim of confl. of interest (21)
Panel B										
Log SR Distance HH - District HQ	-0.022	0.029	0.022	0.012	0.018	0.008	-0.006	0.050	0.014	0.006
	(0.096)	(0.032)	(0.017)	(0.049)	(0.021)	(0.031)	(0.019)	(0.064)	(0.011)	(0.007)
Mean of Dependent Variable	0.262	0.034	0.018	0.121	0.034	0.037	0.027	0.073	0.004	0.003
Observations	9073	9073	9073	9073	9073	9073	9073	9073	9073	9073
Number of Parishes	1071	1071	1071	1071	1071	1071	1071	1071	1071	1071
IV F-stat Kleibergen-Paap rk Wald	13.935	13.935	13.935	13.935	13.935	13.935	13.935	13.935	13.935	13.935
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Public Service Delivery

Table: Service Delivery Indices

	(1) Education district	(2) Health district	(3) Water district	(4) Roads district	(5) Agricultural inputs district
Panel A: District level					
Log SR Distance HH – District HQ	-0.431*	0.014	-0.444**	-0.037	-0.078
	(0.236)	(0.152)	(0.210)	(0.137)	(0.126)
Observations	7498	9073	9073	9073	9073
Number of clusters	1049	1071	1071	1071	1071
Mean of Dependent Variable	-0.010	0.021	-0.000	-0.001	-0.006
IV F-stat (Kleibergen-Paap rk Wald)	16.712	13.935	13.935	13.935	13.935

	(6) Education central gov	(7) Health central gov	(8) Water central gov	(9) Electricity central gov	(10) Roads central gov
Panel B: Central government					
Log SR Distance HH – District HQ	-0.213**	-0.101	-0.156	-0.455**	-0.806***
	(0.106)	(0.303)	(0.143)	(0.181)	(0.276)
Observations	3717	8901	9073	9073	8865
Number of clusters	1025	1049	1071	1071	1044
Mean of Dependent Variable	0.011	0.035	0.016	-0.016	-0.015
IV F-stat (Kleibergen-Paap rk Wald)	15.040	13.657	13.935	13.935	13.884

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991–2020, lake Victoria district, district area in km^2 (1991), distance to district capital (1991, log), other-lake indicator, sub-county mean elevation, and four regions. Standard errors clustered at the Parish level.

back

Robustness

Headquarters placement

Table: Future headquarters' placement: population density and night lights

	New headquarter in 2014-2020			
	(1)	(2)	(3)	(4)
Population Density in 2010	-0.000231	0.000458		
	(0.000873)	(0.000933)		
Night Lights in 2013			-0.142	-0.0745
			(0.346)	(0.345)
Constant	-1.802***	-1.889***	-1.847***	-1.602***
	(0.230)	(0.603)	(0.126)	(0.0324)
Mean of Dependent Variable	0.135	0.135	0.135	0.135
Observations	178	178	178	178
District FE	No	Yes	No	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Logistic regression of future district headquarters' placement (2014-2020) on population density as of 2010 and night lights as of 2013. Each observation corresponds to one sub-county of the 24 newly created districts between 2014 and 2020. Robust standard errors clustered at the district level in parenthesis.

excl rest robustness

Robustness

Distance effects on engagement - mother districts

Table: Citizen engagement

	Meet RDC in the past 3 years	HH is satisfied with RDC's work	Quality change LC5	Involved in decision making LC5	Member of family is civil servant	Civil servant adequate salary	Poor perfor. civil servants
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Log SR Distance HH - District HQ	0.001	0.032*	0.024	0.027	0.029***	-0.048**	-0.001
	(0.017)	(0.019)	(0.042)	(0.023)	(0.008)	(0.024)	(0.025)
Mean of Dependent Variable	0.025	0.313	1.525	0.240	0.066	0.253	0.097
Observations	4,737	4,737	2,444	4,737	4,716	4,716	4,199
Number of Parishes	569	569	520	569	568	568	567
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

robustness

Robustness

Only new districts

Table: Citizens' engagement with local government - District (LC5)

	Meet RDC in the past 3 years (1)	HH is satisfied with RDC's work (2)	Quality change LC5 (3)	Involved in decision making LC5 (4)	Member of family is civil servant (5)	Civil servant adequate salary (6)	Poor perfor. civil servants (7)
IV							
Log SR Distance HH - District HQ	-0.053*	-0.100**	0.010	-0.069	-0.031	-0.089**	0.018
	(0.031)	(0.049)	(0.065)	(0.058)	(0.021)	(0.043)	(0.028)
Mean of Dependent Variable	0.091	0.329	1.425	0.244	0.044	0.187	0.057
Observations	4,471	4,471	2,409	4,471	4,469	4,469	3,832
Number of Parishes	510	510	464	510	510	510	507
IV F-stat Kleibergen-Paap rk Wald	34.529	34.529	53.739	34.529	34.329	34.329	52.158
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dataset	Household	Household	Household	Household	Household	Household	Household

Notes: * p<0.1, ** p<0.05, *** p<0.01. Coefficients from regressions of citizens' involvement with local government variables on self-reported household's distance to the district's capital. All regressions control for Lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Victoria, sub-county mean elevation (in m.a.s.l.), and four major regions. The instrument for the household's distance to the district's capital is the distance from the household's parish centroid to the district's centroid. Standard errors clustered at the Parish level are in parenthesis.

back

Robustness

Distance to large towns

Table: First Stage: Distance Household - Large Town

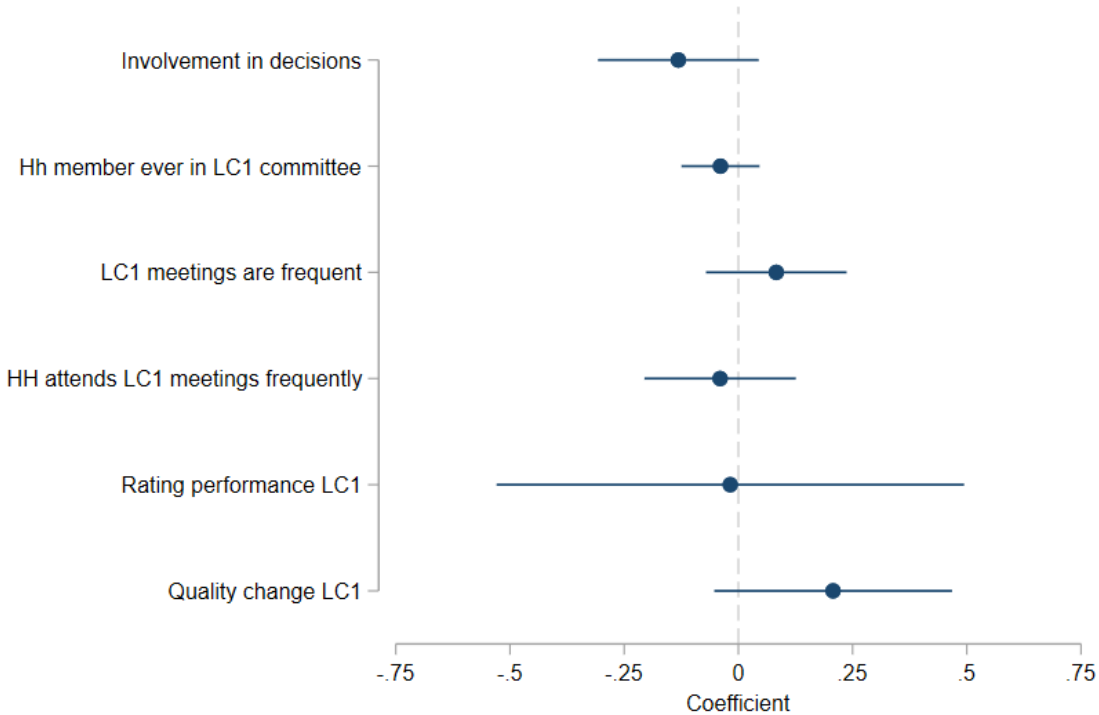
	Log SR Distance Household - District Headquarters Satisfaction with RDC's work				
	(1)	(2)	(3)	(4)	(5)
Log Distance Household's PC - District's centroid X New District_91_20	0.021***	0.019***	0.021***	0.019***	0.015***
	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)
Log Distance Household's PC - District's centroid	0.018	0.041	0.015	0.044	0.113
	(0.063)	(0.063)	(0.063)	(0.070)	(0.074)
New district between 1991-2020	-0.765***	-0.725***	-0.754***	-0.778***	-0.692***
	(0.132)	(0.130)	(0.130)	(0.129)	(0.130)
Log Distance Household - Closest Large City		0.054*			0.109***
		(0.033)			(0.030)
Log Distance Household - Closest Large City within Region			0.038		0.074**
			(0.037)		(0.034)
Log Distance Household - Kampala				-0.115**	-0.234***
				(0.055)	(0.054)
Mean of Dependent Variable	2.453	2.453	2.453	2.453	2.453
Observations	9,073	9,073	9,073	9,073	9,073
Number of Sub-counties	1071	1071	1071	1071	1071
IV F-stat Kleibergen-Paap rk Wald	13.935	12.601	13.739	10.948	6.769
Controls	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Robustness

Figure: Citizen Engagement with the Government - LCI-LCIII



back

Robustness

Placebo outcomes

Table: Placebo tests - IV estimates

	HH uses a cookstove (1)	Used air transport (last 2 years) (2)	HH member in the mining sector (3)
Log SR Distance Household - District HQ	-0.059	-0.002	0.001
	(0.066)	(0.007)	(0.020)
Mean of Dependent Variable	0.920	0.007	0.018
Observations	9,069	9,073	9,071
Number of Parishes	1071	1071	1071
IV F-stat Kleibergen-Paap rk Wald	14.309	13.935	13.931
Controls	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Table: Education and Health Outcomes

	School attendance (prim. age) (1)	School attendance (second. age) (2)	Public school (3)	School travel time (4)	Public hospital (5)	HH member sick/injured (6)	Health center travel time (7)
Panel A. OLS							
Log SR Distance Household - Town Council	0.009	0.011	0.018	3.113***	0.001	0.007	3.374***
	(0.012)	(0.015)	(0.012)	(0.780)	(0.018)	(0.005)	(1.245)
Mean of Dependent Variable	0.712	0.698	0.517	31.462	0.857	0.141	36.034
Observations	4,803	3,741	5,401	4,498	2,399	9,131	3,382
Number of Parishes	1042	1030	1056	1019	888	1076	925
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B. IV							
Log SR Distance Household - Town Council	0.032	0.120	0.147	21.262***	-0.020	0.032	16.688**
	(0.085)	(0.107)	(0.098)	(7.772)	(0.098)	(0.038)	(8.461)
Mean of Dependent Variable	0.712	0.698	0.517	31.462	0.857	0.141	36.034
Observations	4,803	3,741	5,401	4,498	2,399	9,131	3,382
Number of Parishes	1042	1030	1056	1019	888	1076	925
IV F-stat Kleibergen-Paap rk Wald	21.800	17.274	19.493	15.894	24.092	22.102	21.607
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Table: Water and Electricity Outcomes

	Improved water source (dry s.)	Water distance (dry s.)	Improved water source (wet s.)	Water distance (wet s.)	Water committee	HH has electricity	HH connected to grid	HH interested in grid
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. OLS								
Log SR Distance Household - Town Council	-0.023	0.108***	-0.021**	0.022	0.032**	-0.042***	-0.037***	-0.005
	(0.014)	(0.039)	(0.009)	(0.028)	(0.014)	(0.015)	(0.014)	(0.005)
Mean of Dependent Variable	0.840	0.778	0.892	0.754	0.519	0.485	0.212	0.052
Observations	9,137	7,618	9,137	6,354	8,061	9,137	9,137	9,137
Number of Parishes	1076	1045	1076	1002	1075	1076	1076	1076
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B. IV								
Log SR Distance Household - Town Council	-0.189	0.167	-0.063	0.006	-0.026	-0.360***	-0.172	-0.032
	(0.121)	(0.196)	(0.096)	(0.159)	(0.099)	(0.124)	(0.109)	(0.041)
Mean of Dependent Variable	0.840	0.778	0.892	0.754	0.519	0.485	0.212	0.052
Observations	9,137	7,618	9,137	6,354	8,061	9,137	9,137	9,137
Number of Parishes	1076	1045	1076	1002	1075	1076	1076	1076
IV F-stat Kleibergen-Paap rk Wald	22.116	30.379	22.116	35.440	24.262	22.116	22.116	22.116
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Table: Roads Outcomes

	Sub-county has a tarmac road	Sub-county has a murram road	Sub-county has a feeder road	Sub-county has a communal road
	(1)	(2)	(3)	(4)
Panel A. OLS				
Log SR Distance Household - Town Council	-0.104***	0.021	0.009	0.025***
	(0.019)	(0.015)	(0.010)	(0.008)
Mean of Dependent Variable	0.463	0.626	0.878	0.912
Observations	9,135	9,135	9,135	9,134
Number of Parishes	1076	1076	1076	1076
Controls	Yes	Yes	Yes	Yes
Panel B. IV				
Log SR Distance Household - Town Council	-0.253*	0.034	-0.015	0.151**
	(0.139)	(0.123)	(0.071)	(0.066)
Mean of Dependent Variable	0.463	0.626	0.878	0.912
Observations	9,135	9,135	9,135	9,134
Number of Parishes	1076	1076	1076	1076
IV F-stat Kleibergen-Paap rk Wald	22.060	22.060	22.060	22.045
Controls	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Results

Table: Agricultural inputs

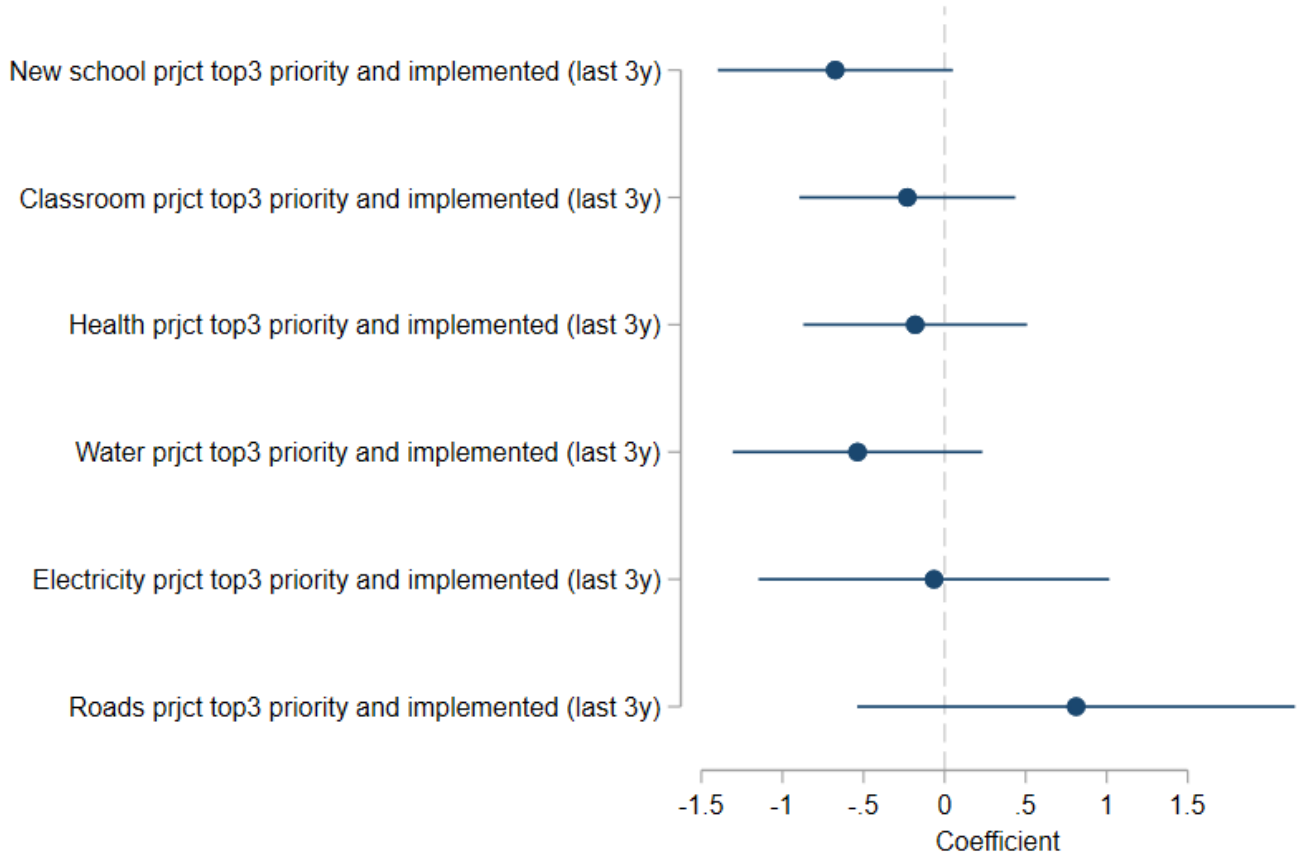
	Used hybrid seeds last year (1)	Hybrid seeds available in SC (2)	Used planting materials last year (3)	Planting materials available in SC (4)	Used pesticides last year (5)	Pesticides available in SC (6)	Used fertilizer last year (7)	Fertilizer available in SC (8)
Panel A. OLS								
Log SR Distance Household - Town Council	0.002	0.007	0.011	0.008	-0.027***	-0.012	-0.005	-0.011
	(0.007)	(0.009)	(0.012)	(0.012)	(0.009)	(0.011)	(0.006)	(0.008)
Mean of Dependent Variable	0.130	0.194	0.331	0.307	0.142	0.224	0.050	0.100
Observations	9,137	9,137	9,137	9,137	9,137	9,137	9,137	9,137
Number of Parishes	1076	1076	1076	1076	1076	1076	1076	1076
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B. IV								
Log SR Distance Household - Town Council	0.082	0.020	-0.176	-0.076	-0.084	0.040	-0.023	0.012
	(0.062)	(0.075)	(0.111)	(0.103)	(0.068)	(0.098)	(0.049)	(0.074)
Mean of Dependent Variable	0.130	0.194	0.331	0.307	0.142	0.224	0.050	0.100
Observations	9,137	9,137	9,137	9,137	9,137	9,137	9,137	9,137
Number of Parishes	1076	1076	1076	1076	1076	1076	1076	1076
IV F-stat Kleibergen-Paap rk Wald	22.116	22.116	22.116	22.116	22.116	22.116	22.116	22.116
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: * p<0.1, ** p<0.05, *** p<0.01. Controls include: district ever split between 1991-2020, lake Victoria district, districts' area in Km^2 as of 1991, household's distance to district's capital as of 1991 (in log.), district contains a lake other than Lake Victoria, sub-county mean elevation (in m.a.s.l.), four major regions. Standard errors are clustered at the Parish level.

back

Local preferences and investments

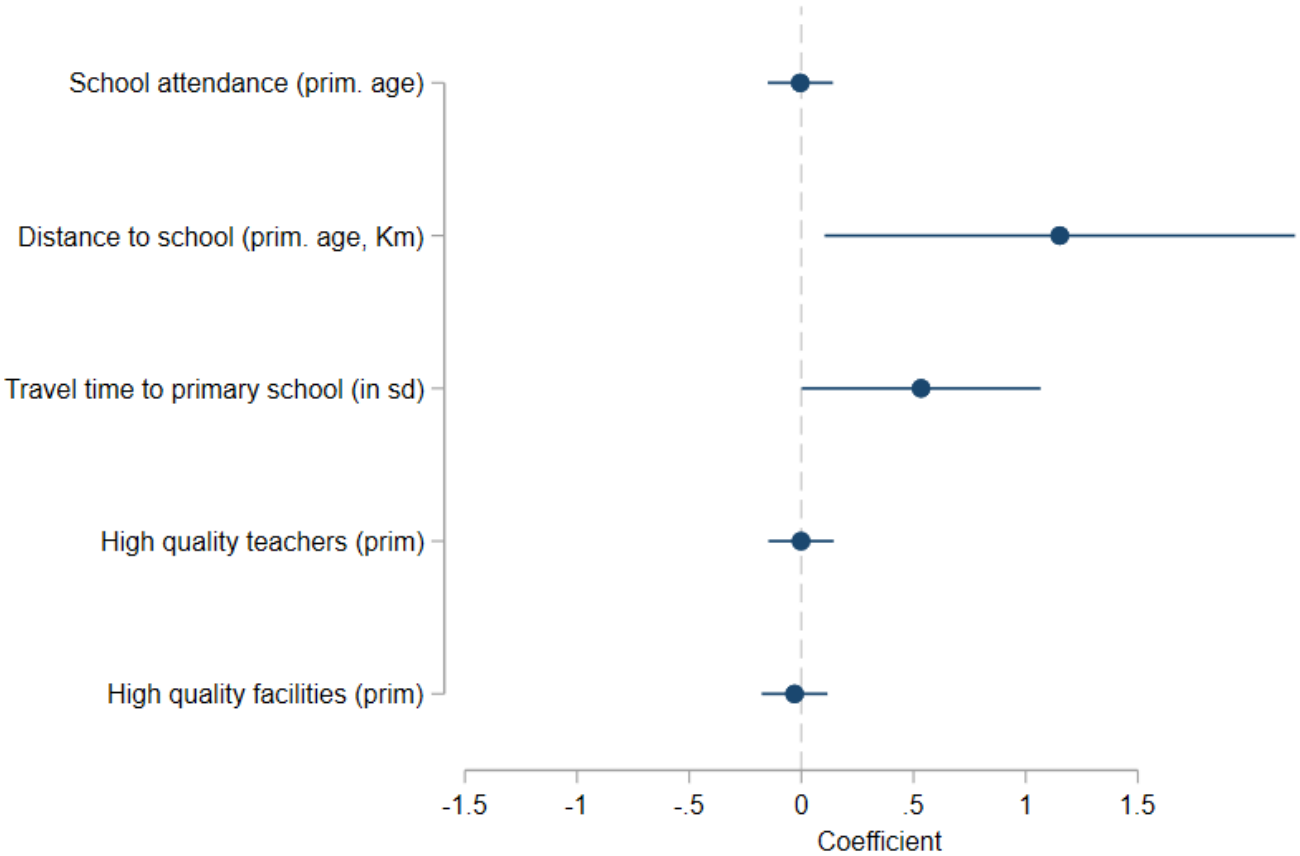
Figure: Local preferences



table

Public Service Delivery

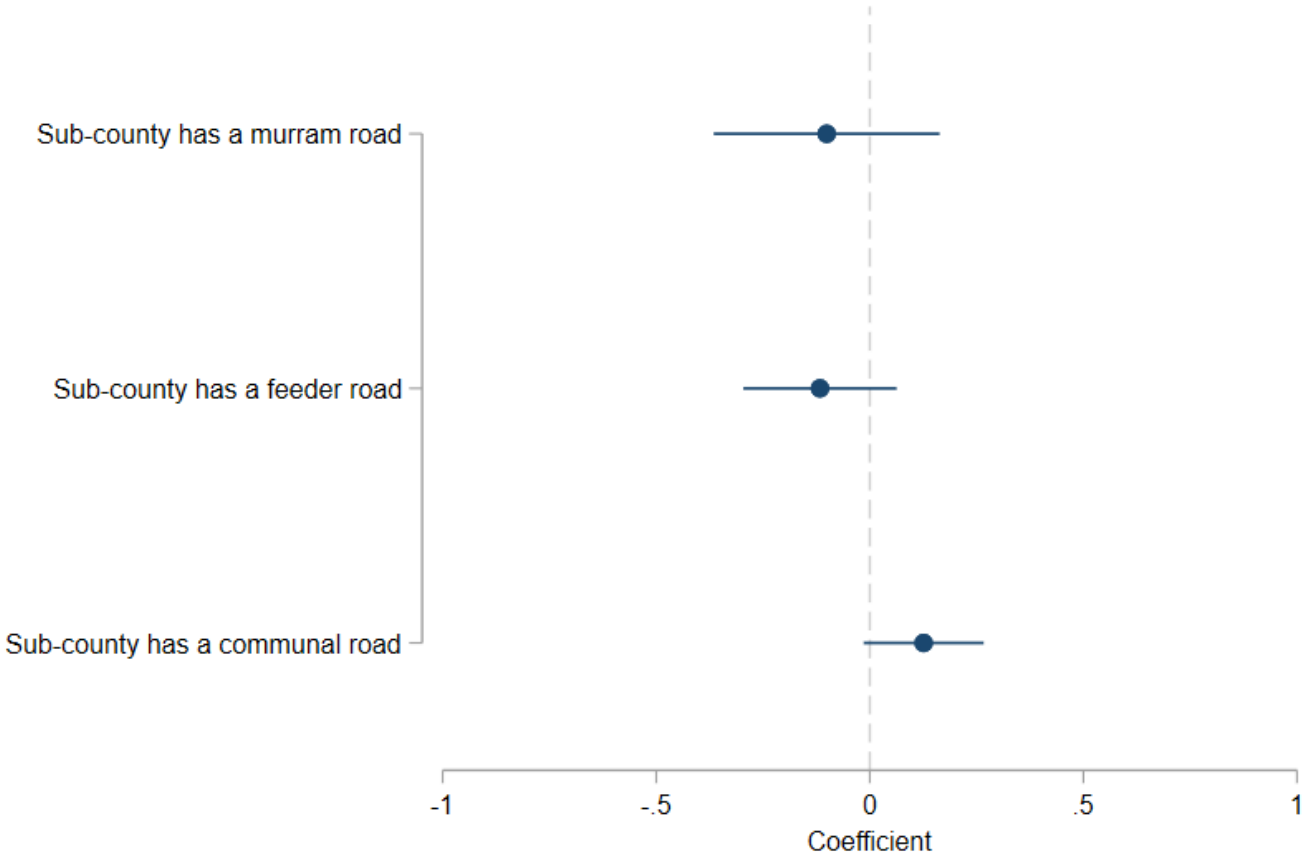
Figure: Education District



table

Public Service Delivery

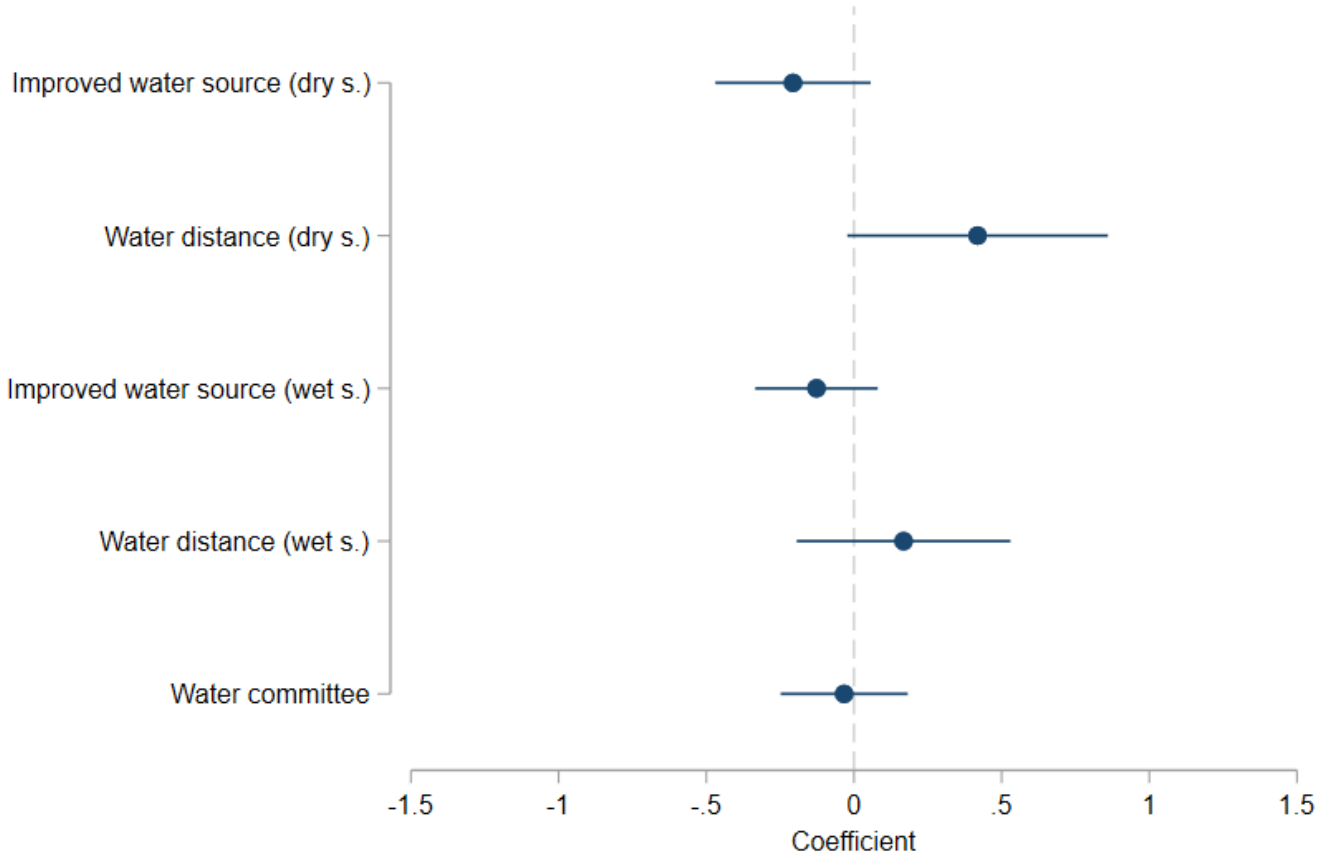
Figure: Roads District



table

Public Service Delivery

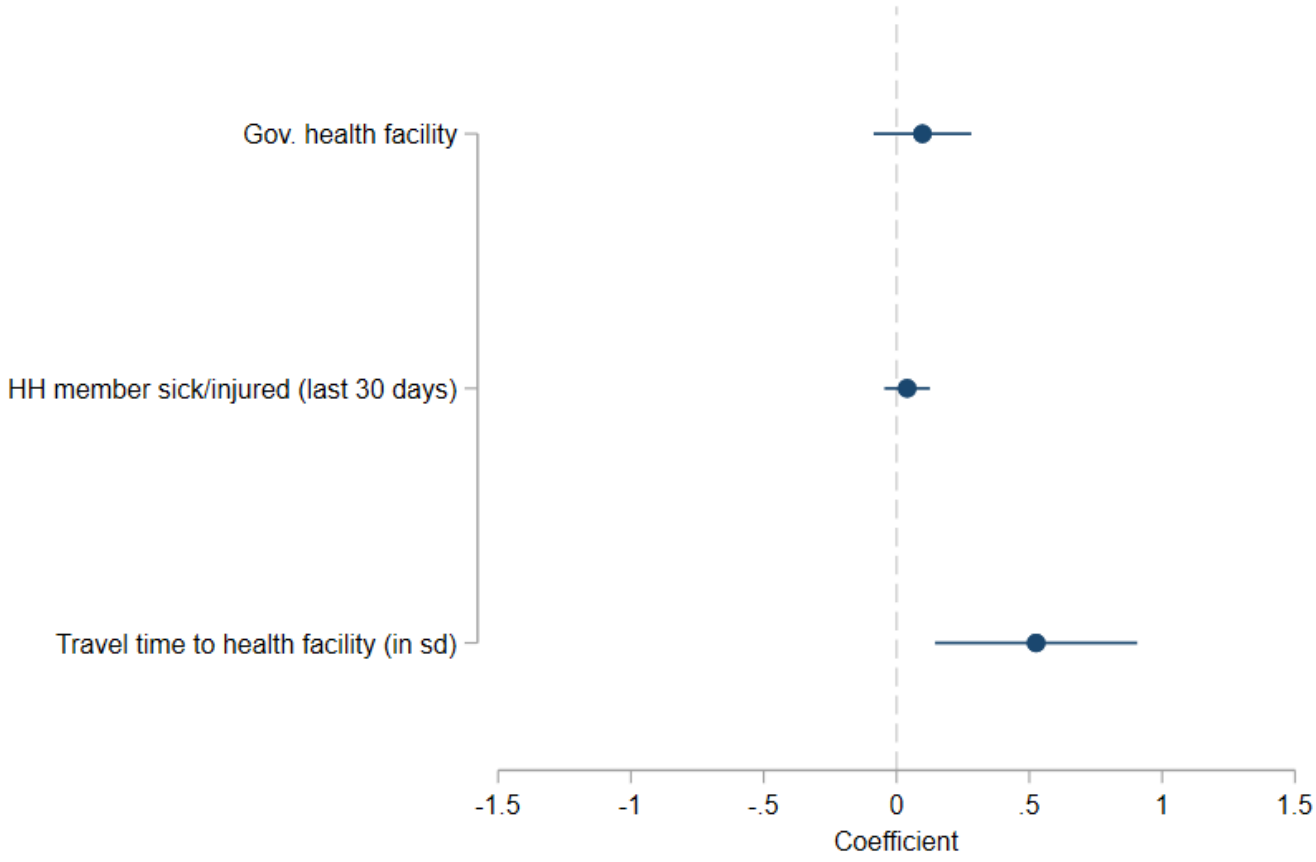
Figure: Water District



table

Public Service Delivery

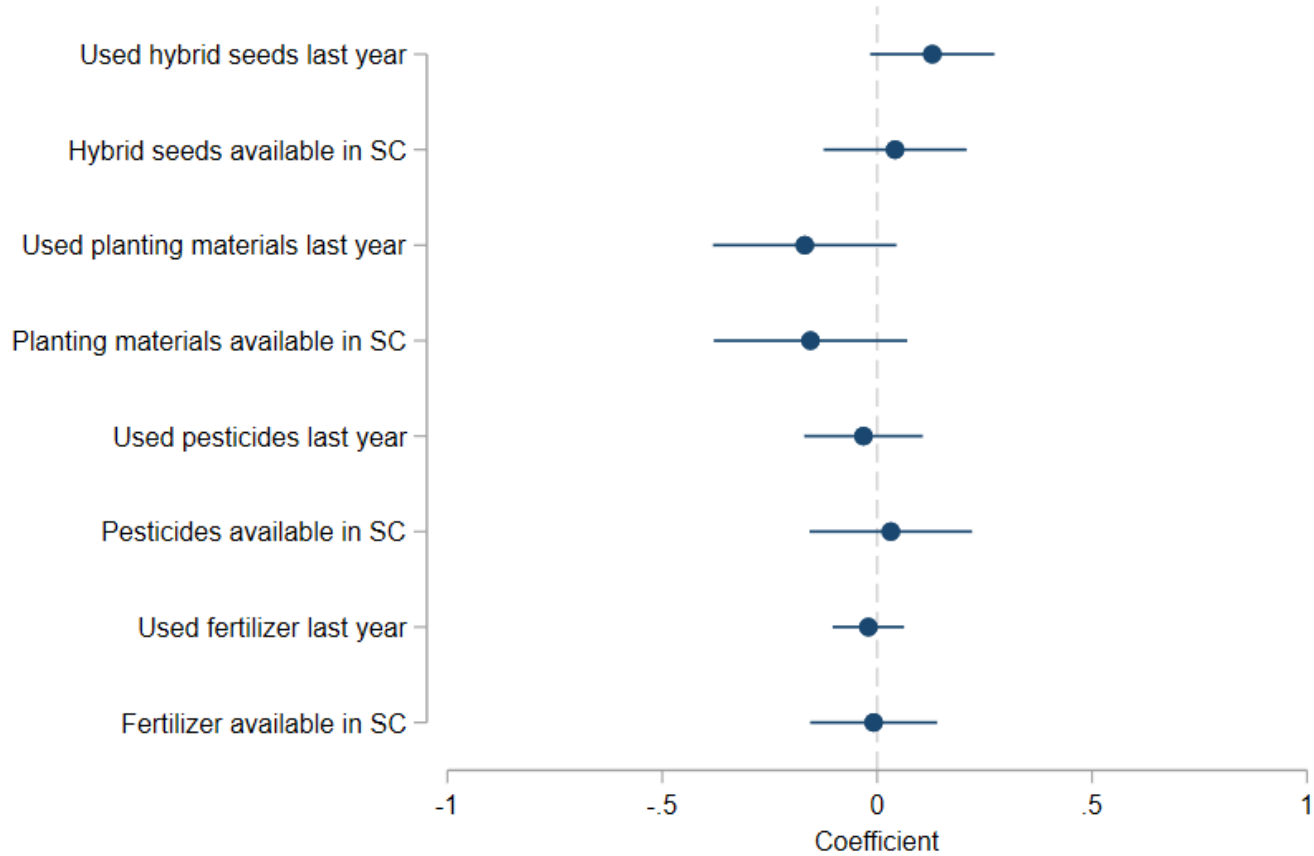
Figure: Health District



table

Public Service Delivery

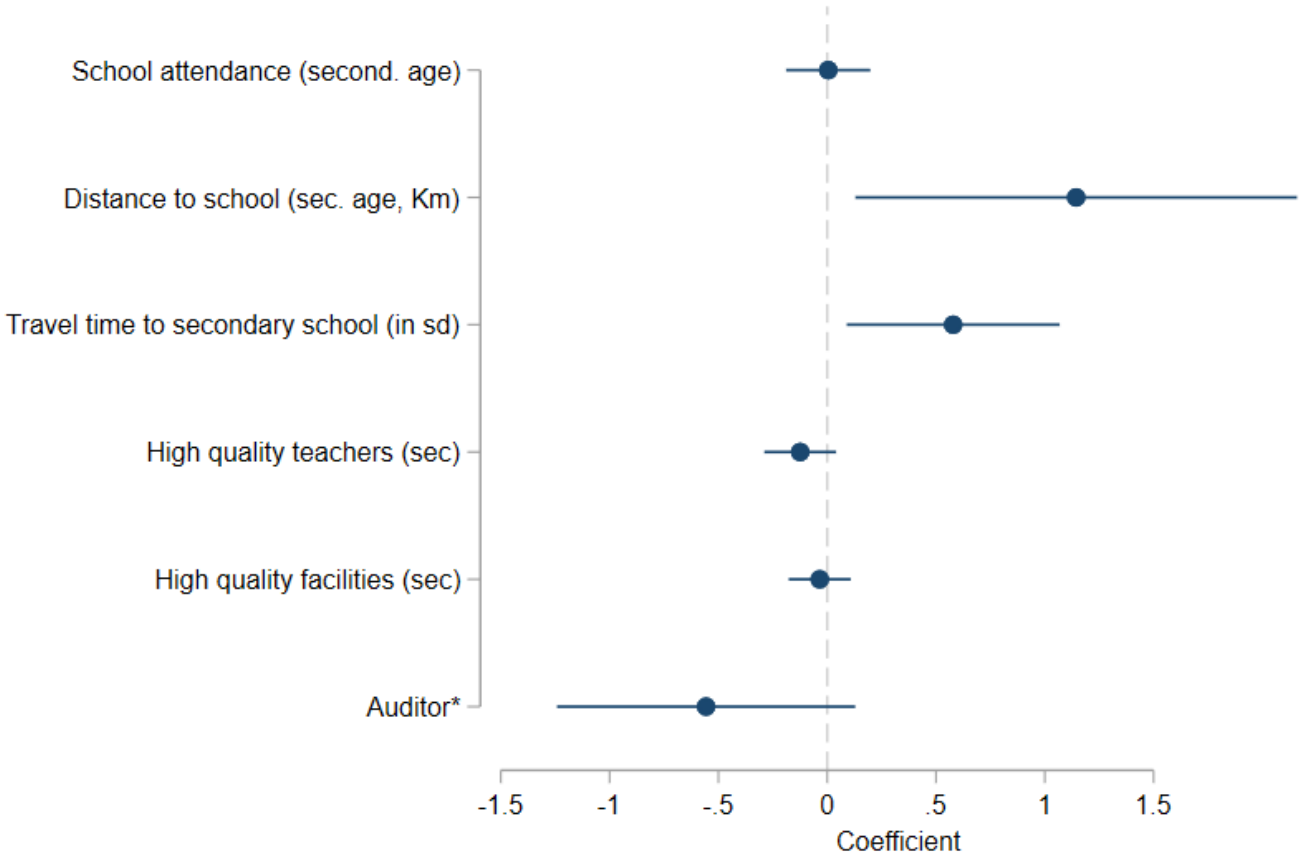
Figure: Agricultural Inputs District



table

Public Service Delivery

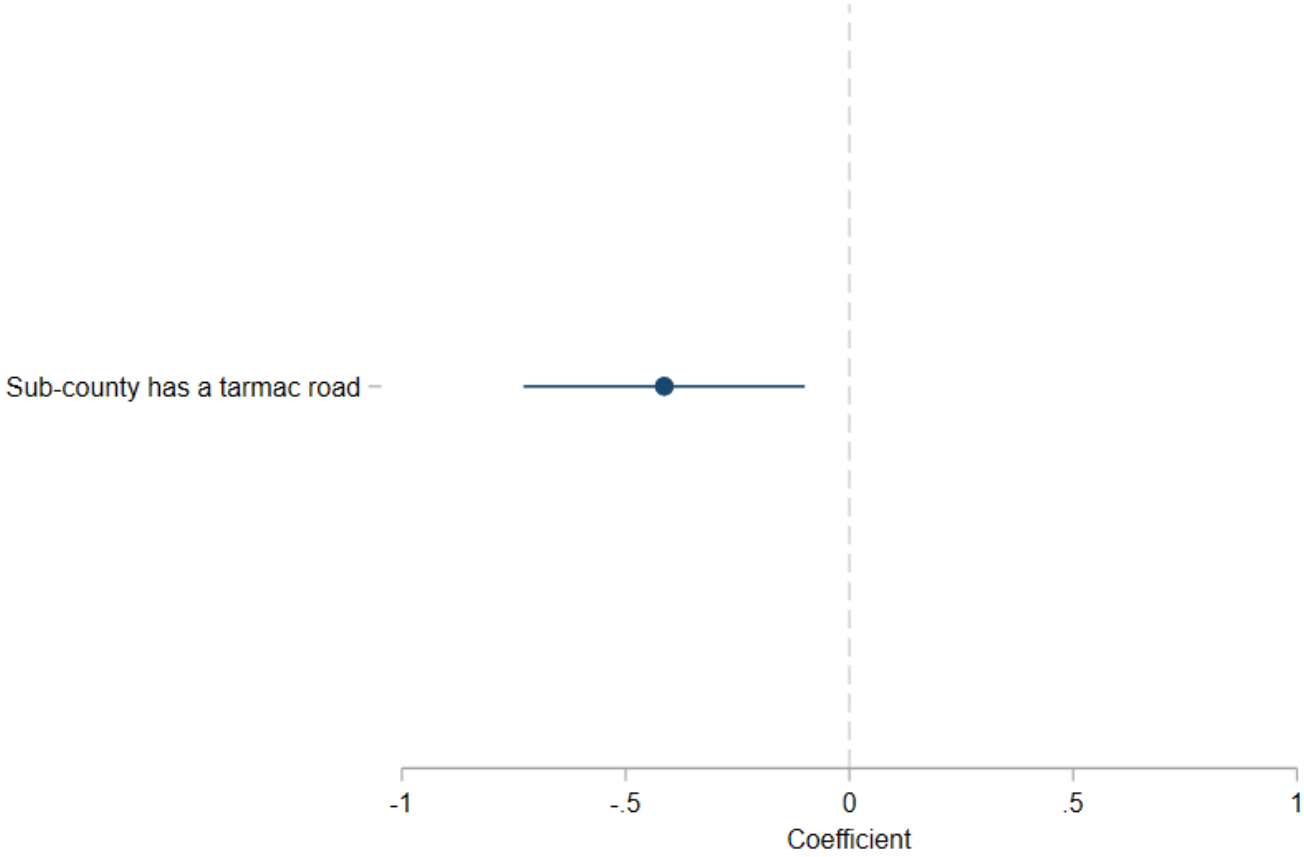
Figure: Education Central Government



table

Public Service Delivery

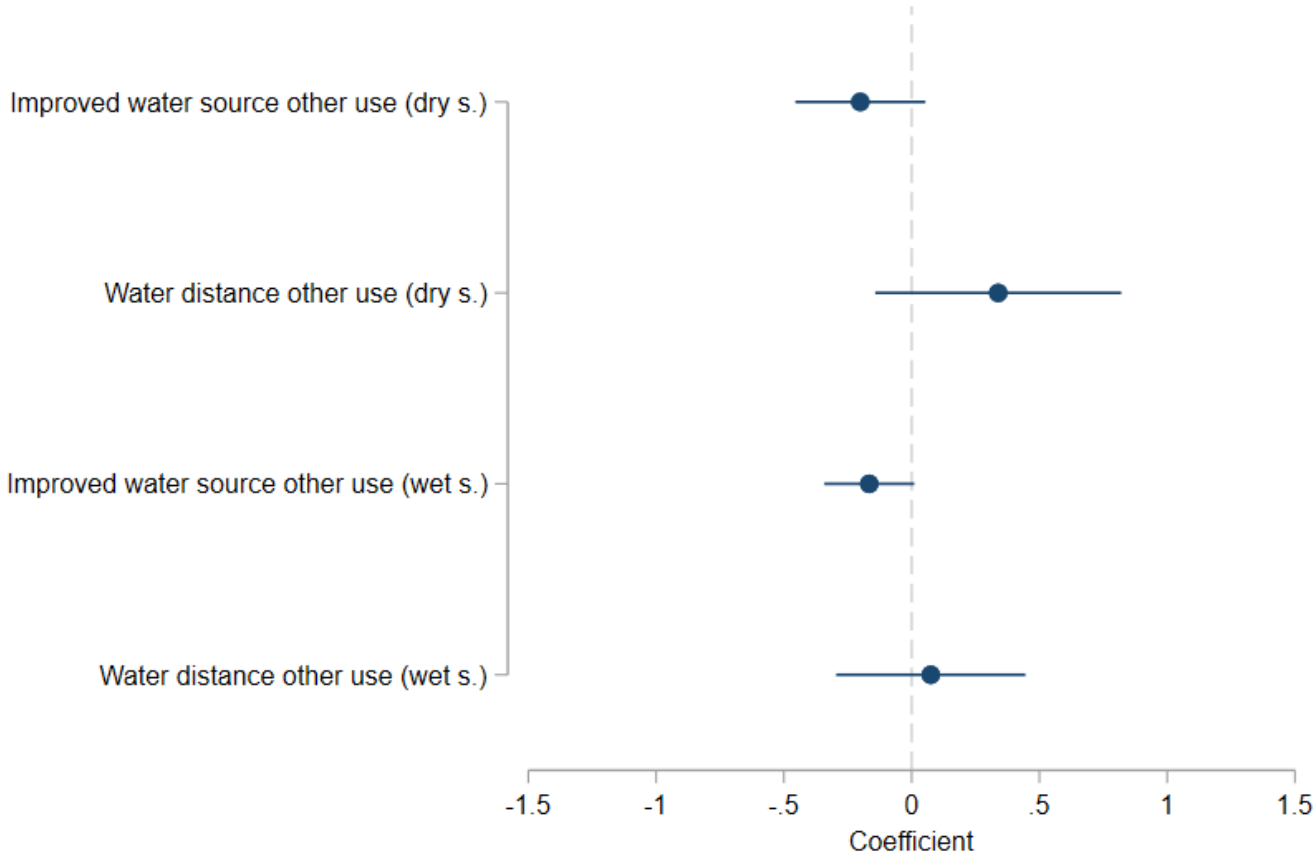
Figure: Roads Central Government



table

Public Service Delivery

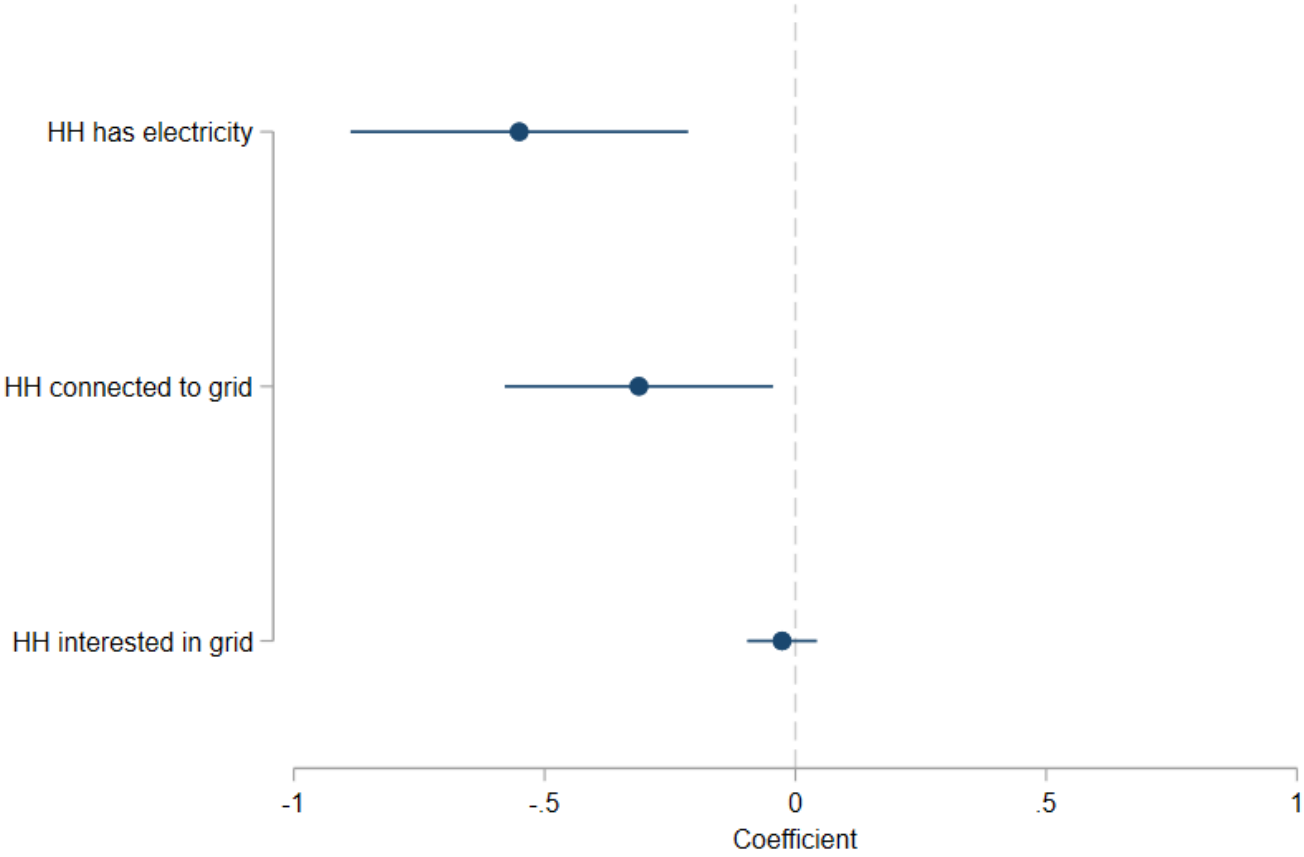
Figure: Water Central Government



table

Public Service Delivery

Figure: Electricity Central Government



table