

# Climate Change Awareness in Sub-Saharan Africa

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October 28, 2023

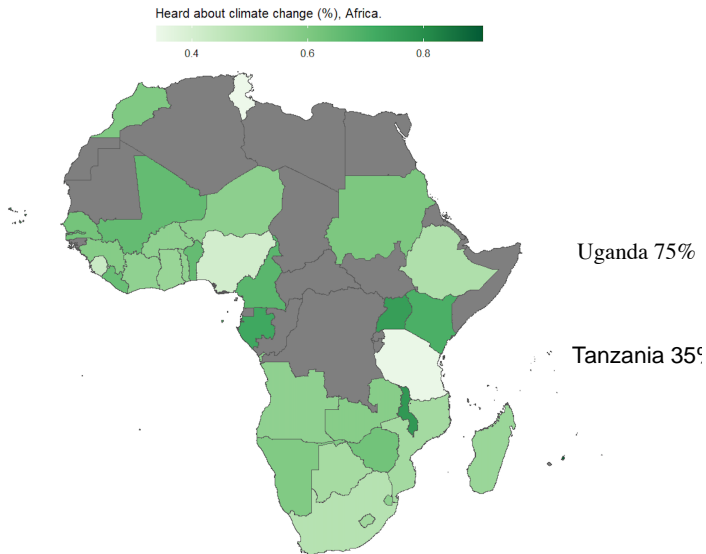
*Most African countries will enter unprecedented high temperature climates earlier in this century than generally wealthier, higher latitude countries, emphasising the urgency of adaptation measures in Africa (IPCC, AR6).*

- Africa facing some of the worst effects of climate change.
- But awareness of climate change remains low.
- Challenges of adaptation; accountability.

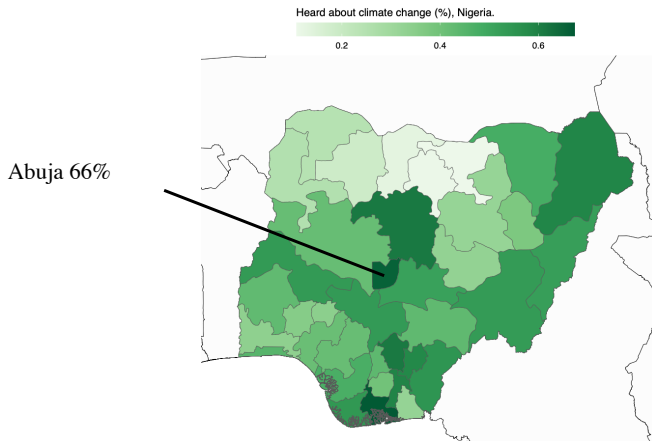
# Research Questions

- 1 What factors promote spread of climate change knowledge?
- 2 How do social or political structures shape information spread?

# Climate Change Awareness



# Climate Change Awareness



# Some Initial Hypotheses

- H1. Temperature shocks ↑
- H2. Expansion of fibre optic backbone ↑
- H3. Socio-Political factors:
  - ▶ Democracy ↑
  - ▶ Ethnolinguistic fractionalization ↓
  - ▶ Road density ↑

- Afrobarometer Round 7:
  - ▶ Heard of Climate Change; Climate Change Affecting Country.
  - ▶ Respondent characteristics (age, sex, education).
- Historical + current temperature (DANTE).
- Fibre optic cable locations + operation dates.
- Polity v2; ethnolinguistic fractionalization; road density.

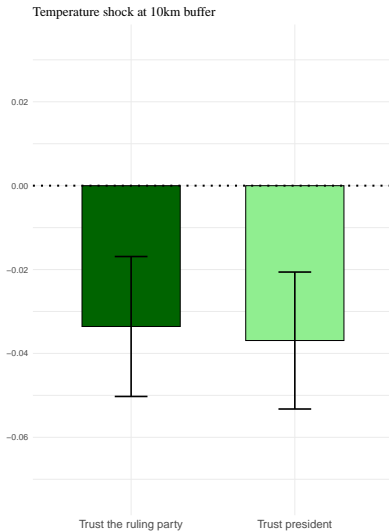
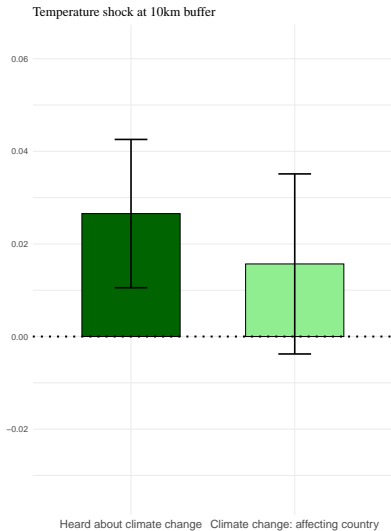
# H1: Temperature Shocks Increase Climate Awareness

$$y_{idt} = Shock_{dt-1}\beta + X_{idt}\theta + \gamma_d + \phi_t + e_{idt}$$

- $y_{idt}$  - outcome for respondent  $i$ , in region  $d$ , year  $t$ .
- $Shock_{dt-1}$  - temperature shock lagged one month.
- $X, \gamma_d, \phi_t$  - confounders, region + year fixed effects.



# H1: Temperature Shocks Increase Climate Awareness

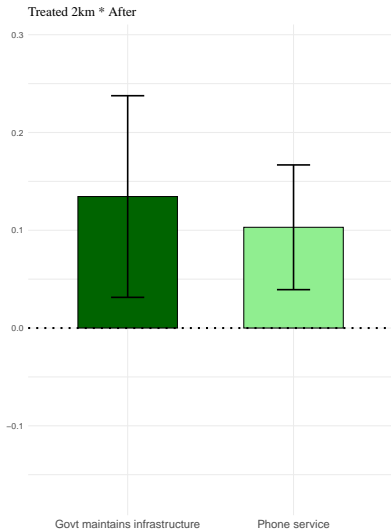
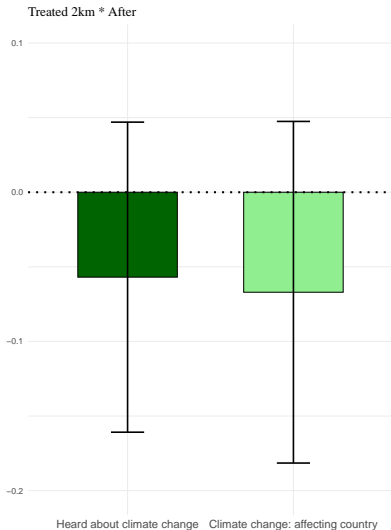


## H2: Internet Access Increases Climate Awareness

$$y_{idt} = Cable_i\beta_1 + Post_t\beta_2 + Cable_i * Post_t\beta_3 + X_{idt}\theta + \gamma_d + \phi_t + e_{idt}$$

- $y_{idt}$  - outcome for respondent  $i$ , in region  $d$ , year  $t$ .
- $Cable_i$  - cable proximity indicator, respondent  $i$ .
- $Post_t$  - cable operation indicator, year  $t$
- $X, \gamma_d, \phi_t$  - confounders, region + year fixed effects.

# H2: Temperature Shocks Increase Climate Awareness

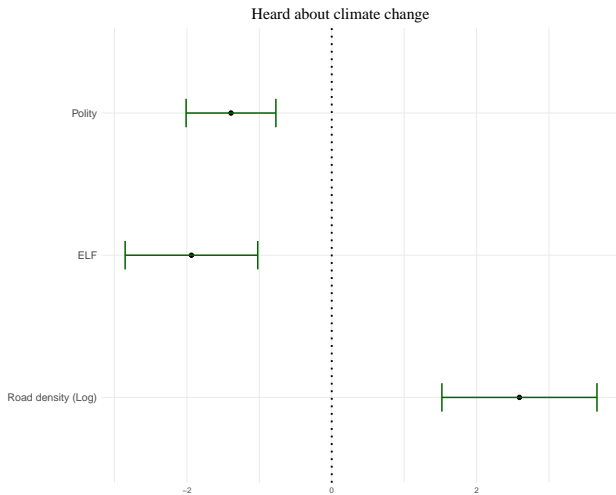


### H3: Social + Political Characteristics

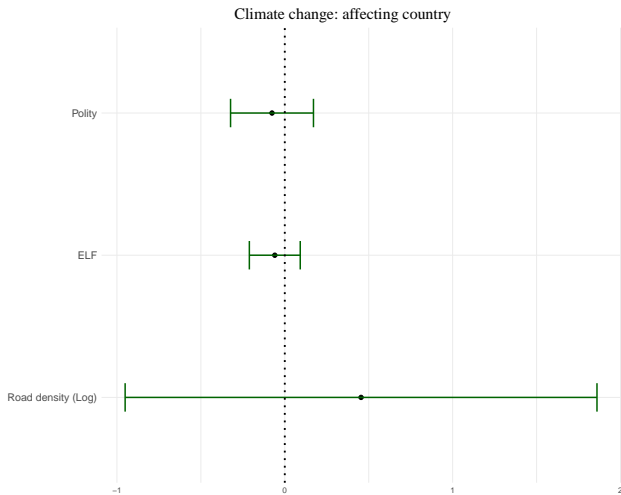
$$y_{idt} = Polity_{dt}\beta_1 + ELF_{dt}\beta_2 + \log(RoadDensity_{dt})\beta_3 + X_{idt}\theta + \gamma_d + \phi_t + e_{idt}$$

- $y_{idt}$  - outcome for respondent  $i$ , in region  $d$ , year  $t$ .
- $X$ ,  $\gamma_d$ ,  $\phi_t$  - confounders, region + year fixed effects.

# H3 (Climate Knowledge)



# H3 (Climate Concern)



# Conclusions

- Temperature shocks + sociopolitical factors impact knowledge.
- But puzzling results for spread of information technology.
- Little predictive power over perceptions of climate impacts.