Oversight, Capacity, and Inequality

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Citizen complaint systems

Institution that promotes citizen $\rightarrow$ government information transfer about errors of a bureaucrat.

- Complaints generate information that a principal can use to identify and remediate bureaucratic errors.
- Bureaucratic oversight institutions. Prendergast (2003, 2007)

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Frequent source of citizen/government interaction in democracies and autocracies alike.

Question

How does the design of bureaucratic oversight institutions affect "who gets what" from the state?

- Effect of using information from citizens ("fire alarms") on distributive outcomes across a population.

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Two outcomes of interest:

- Policy implementation **capacity**.
- **Inequality** in access to services.

Approach

"Design of oversight" $\rightarrow$ game theoretic model

- Oversight institutions as a contract specifying how a politician will monitor bureaucrat and punish errors.

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"Who gets what?" $\rightarrow$ effects of equilibrium contracts on service provision in different societies:

- Inequality in voice: propensity to complain
- Bureaucratic institutions: insulation, quality

Preview of Results

Relative to a contract that does not incentivize citizens to make complaints, one that incentivizes complaints...

1. Increases inequality in access to services.

2. Has an ambiguous effect on implementation capacity.
   - Depends on the share of citizens induced to complain.

Broader takeaways:

- Service implementation is **distributive**.

- Effects of participatory institutions depend on **who participates**.

Empirical Motivation

Stylized facts

Literature on responses to citizen complaints suggests variation in:

1. **Stakes** of complaints for bureaucrats (Pan and Chen, 2018)

2. Rates of **redress** by politicians (Chen et al.,2015; Christensen and Ejdemyr, 2020; Dipoppa and Grossman, 2020; Hamel and Holliday, 2019)

3. Citizen uptake/rates of **complaint-making**, even holding institutional features fixed (Hamel and Holliday, 2019; Slough, 2024)
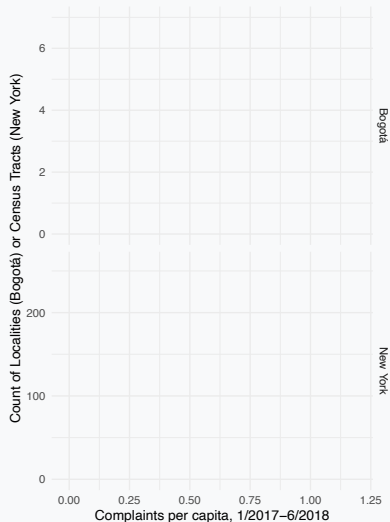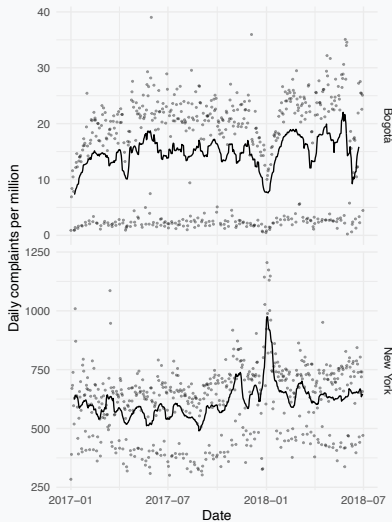
Variation in design of complaint processes across policy areas *within* country.

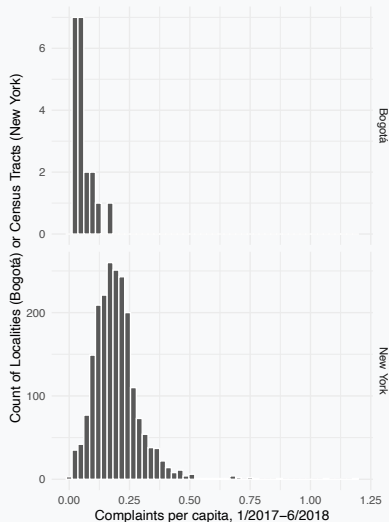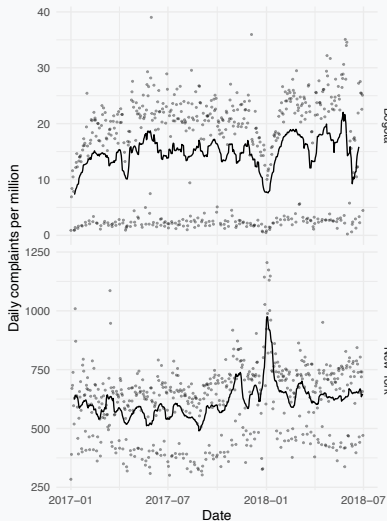In developing countries, donors push participatory oversight systems.

Selection into complaint-making
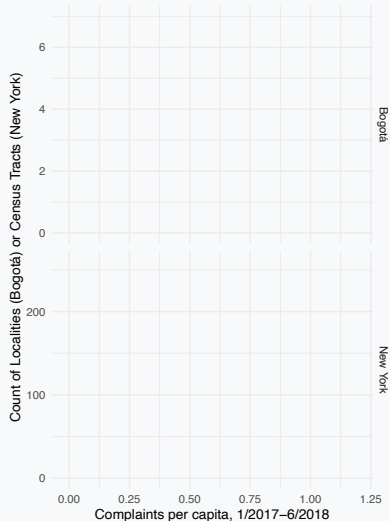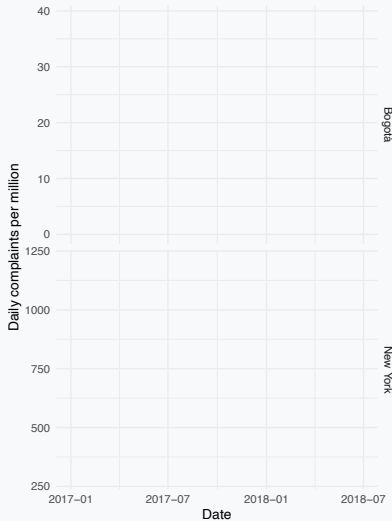
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Model

The basics

Builds upon Prendergast (2003).

Three actors: Citizen, Politician, Bureaucrat.

Eligibility (state) is a citizen characteristic: $\omega \in \{0, 1\}, \Pr(\omega = 1) = \frac{1}{2}$.

- Private information of the citizen

Service allocation, $a^{\dagger} \in \{0, 1\}$, intended to match ω:

- Implementation capacity: ability to match ultimate service ($\alpha^{\dagger}$) to eligibility (ω)

Service provision

Bureaucrat tasked with accurately allocating service (matching citizen's eligibility).

- Chooses effort, $e \in \{0, 1\}$. $e = 1$ incurs cost normalized to 1.

- Determine an allocation, a. $\Pr(a = \omega) = q + pe$.
  - $q \in [\frac{1}{2}, 1]$: bureaucratic quality
  - $p \in [0, 1 - q]$: return to bureaucratic effort

Citizen observes a, decides whether to complain $c \in \{0, 1\}$ at cost $\theta \geqslant 0$.

- θ is common knowledge, independent of ω.

- "Karens" of the world.

Contract

Politician monitors bureaucrat according to contract that specifies:

- Monitoring probabilities $\rho(a, c) \in [0, 1]^4$ for $a \in \{0, 1\}, c \in \{0, 1\}$.
  - Costs $\frac{\rho(a,c)^2}{2}$.
  - Monitoring reveals errors $\rightarrow$ allocation reversed, bureaucrat punished.
  - Ultimate service allocation:

$$a^\dagger = \begin{cases} 1 - a & \text{if } a \neq \omega, \text{ monitored by } P \\ a & \text{else.} \end{cases}$$

- Penalty, $\Delta \in [0, \overline{\Delta})$ for the bureaucrat if $a \neq \omega$.
  - For this talk: $\overline{\Delta} \in \{0, \infty\}$, inverse measure of bureaucratic insulation.

Utilities

Bureaucrat:

$$U_B = -\Delta \cdot \underbrace{\mathbb{I}[a^\dagger \neq a]}_{\substack{\text{allocation} \\ \text{reversed}}} - e$$

Citizen:

$$U_C = a^\dagger - \theta c$$

Politician: Maximizes accuracy of service provision to median citizen.

- Would median citizen complain if denied the service?

$$E[U_P|a, c] = \begin{cases} 1 - \frac{\rho(a,c)^2}{2} & \text{if } \omega = a \\ \rho(a, c) - \frac{\rho(a,c)^2}{2} & \text{if } \omega \neq a \end{cases}$$

Ex-ante expected utility

Sequence, Equlibrium Concept

1. Politician chooses contract.
2. Eligibility is realized and revealed only to the citizen.
3. Bureaucrat chooses effort level and allocates the service.
4. Citizen observes allocation, decides whether to complain.
5. Politician monitors according to the contract. If an error is detected, it is reversed and the bureaucrat is penalized.
6. Utilities are realized.

Solution concept: Bayesian Nash Equilibrium.

Optimal Contracts

Citizen complaints

Citizen's complaint strategy:

- If $\omega = 0$, the citizen will never complain.

- If $\omega = 1$ and $a = 0$, the citizen complains if:

$$\theta \leqslant \underbrace{\rho(0, 1)}_{\text{w/ complaint}} - \underbrace{\rho(0, 0)}_{\text{w/o complaint}}$$

Implication: Citizen's eligibility is revealed iff:

1. Bureaucrat allocated $a = 0$.
2. Citizen is "legible:" $\theta \leqslant \rho(0, 1) - \rho(0, 0)$.

Bureaucrat's effort and allocation strategy

Bureaucrat exerts effort, exert $e = 1$ if:

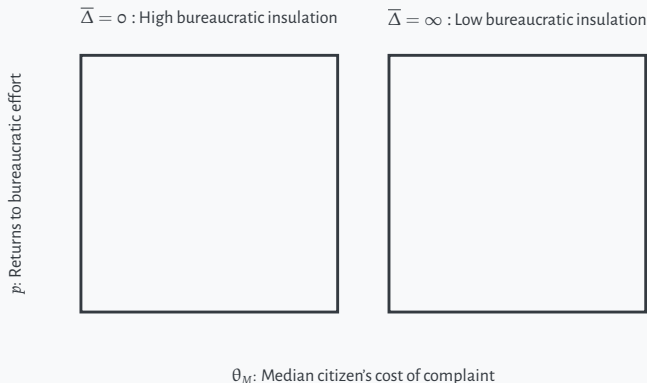$$\Delta \geqslant \frac{2}{p(\rho(0, c) + \rho(1, c))}$$

Two forms of "truth telling" problem: Effort incentives ($\Delta > 0$) introduce the possibility that bureaucrat:

1. Grants service to all legible citizens Prendergast (2003).
2. Denies service to all illegible citizens.

Optimal Contracts
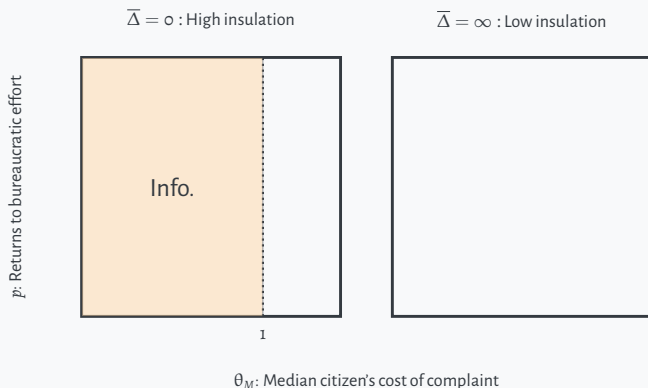
Two qualitative features of contracts:
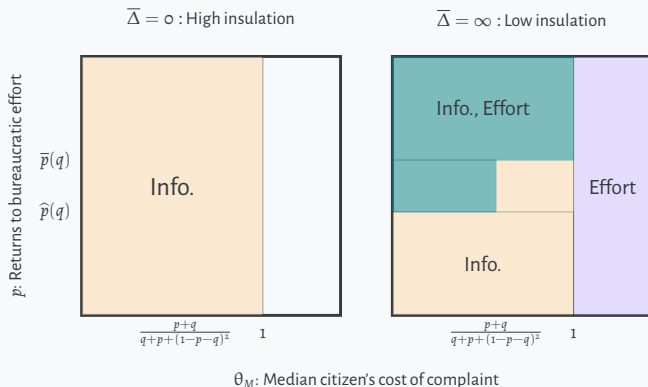
- Effort incentives → will bureaucrat exert effort?
  - Requires sufficient Δ.

- Information transfer → is any citizen incentived to complain?
  - Requires $\rho(0, 1) > \rho(0, 0)$.

$\overline{\Delta} = 0$: High bureaucratic insulation

$\overline{\Delta} = \infty$: Low bureaucratic insulation

p: Returns to bureaucratic effort

θ_M: Median citizen's cost of complaint

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Info.

1

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Distributive Implications

Distributive Outcomes

Implications of contract for:

- Implementation capacity: Aggregate ability to match service to eligibility.

- Inequality: Differences in receipt of service across population (net of eligibility).

Societies vary in distribution of cost of complaint, θ:

- $\theta \sim f(\cdot)$ with cdf $F(\cdot)$, where $F(0) = 0$

- Share of "legible" citizens under contract $\rightarrow$ those that would complain if not granted the service when eligible.
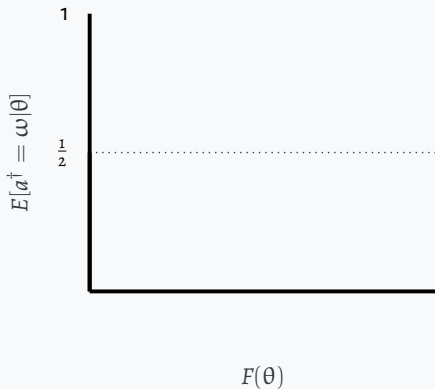
Implications for Implementation Capacity

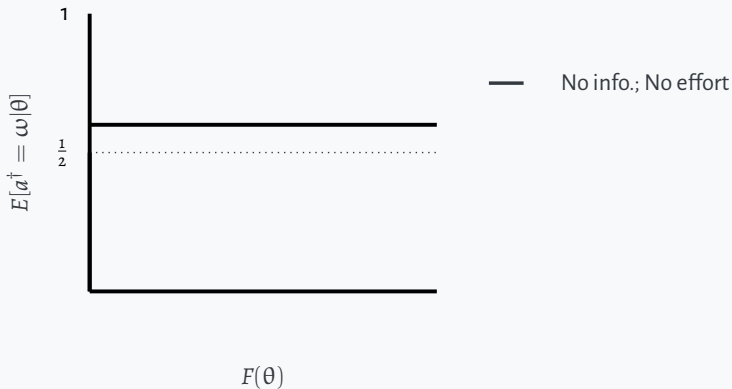Implementation capacity: $E[a^\dagger = \omega]$

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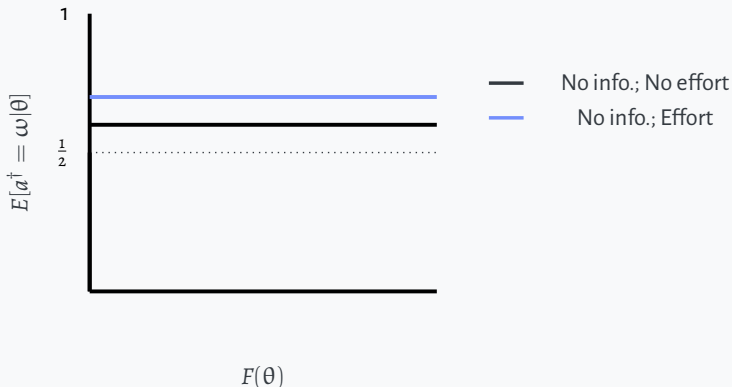Implementation capacity: $E[a^\dagger = \omega]$

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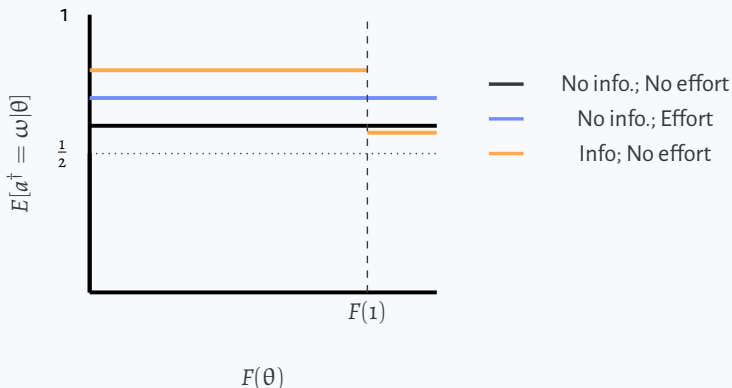Implementation capacity: $E[a^\dagger = \omega]$

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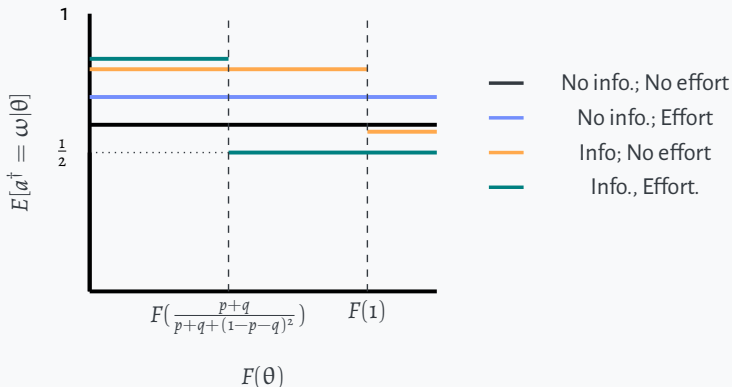Implementation capacity: $E[a^\dagger = \omega]$

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Implications for Implementation Capacity

Information transfer has ambiguous effect on capacity

- If enough of population is endogenously legible $\rightarrow$ weakly $\uparrow$ capacity.

- If not $\rightarrow$ $\downarrow$ capacity.

Important: "illegible" citizens receive worse service than they would under a contract that does not incentivize complaint.

Implications for Inequality

Inequality in post-monitoring allocation, $a^\dagger$:

- Need a measure of inequality distinct from the eligibility, looks at inequality attributable to type (θ)
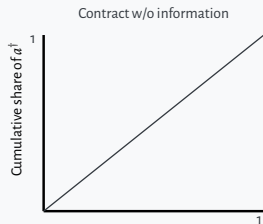
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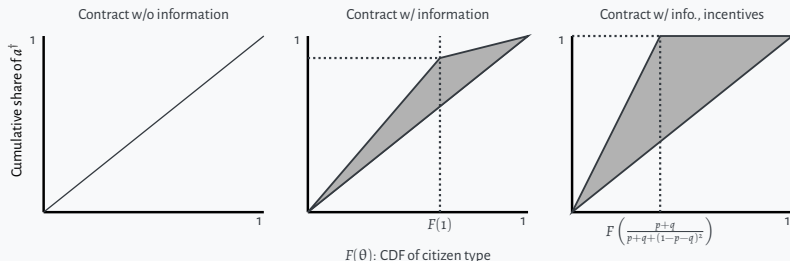
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$F(\theta)$: CDF of citizen type

Inequality higher with information + effort incentives than with information alone.

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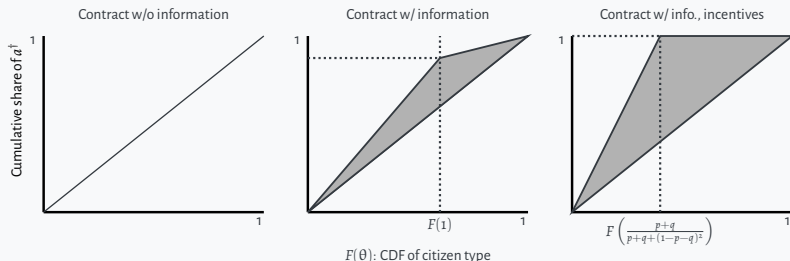
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Cumulative share of $a^{\dagger}$

$F(1)$

$F\left(\frac{p+q}{p+q+(1-p-q)^2}\right)$

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Discussion

Implications for the comparative study of bureaucracy

Distributive consequences of oversight institutions depend on:

$$\underbrace{\text{Insulation } (\overline{\Delta})}_{\text{Public sector personnel systems}} \times \underbrace{\text{Quality and capacity } (q, p)}_{} \times \underbrace{\text{Dist. of complaint costs } F(\cdot)}_{\text{Social structure}}$$

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State information and capacity:

- $\uparrow$ information does not necessarily $\uparrow$ ability to provice services
- State capacity is multidimensional
- Different forms of capacity can be in tension

Recap

Relying on citizen complaints (information) to remedy bureaucratic errors:

- Introduces inequality in service provision when not all can complain, can reduce capacity as well.
- Magnitude of effects relies on underlying distribution of costs of complaint in population.

Design of bureaucratic oversight influences "who gets what."

Thank you!

Comments welcome!
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Politician's *ex-ante* expected utility

$$E[U_P] = \underbrace{\frac{1}{2}}_{\omega=1} \left[\underbrace{(q+pe)}_{a=1}(1 - \frac{\rho(1,c)^2}{2}) + \underbrace{(1-q-pe)}_{a=0}(\rho(0,c) - \frac{\rho(0,c)^2}{2}) \right] +$$

$$\underbrace{\frac{1}{2}}_{\omega=0} \left[\underbrace{(q+pe)}_{a=0}(1 - \frac{\rho(0,c)^2}{2}) + \underbrace{(1-q-pe)}_{a=1}(\rho(1,c) - \frac{\rho(1,c)^2}{2}) \right]$$