Bureaucratic Quality and Electoral Accountability

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In search of accountability...

Pervasive "bad governance" in developing democracies.

- Corruption, lack of public goods and services.
- Cited as evidence of limited electoral accountability.
- Recent work on information as an antidote to these problems (e.g., Dunning et al. 2019)

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Challenges:

1. **Mixed findings** in studies of information and accountability.
2. **Asymmetric** treatment of outcomes of limited accountability in developed vs. developing democracies.

Co-production of public goods

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Bureaucratic quality drives the efficiency of public goods investments, which:

- Changes politicians' incentives to allocate budget to public goods vs. rents.
- Affects voters' ability to update on politician type, select "competent" types.

Overview

Theory: Simple model of electoral accountability with a voter, a politician, and a bureaucrat.

- Characterize equilibria at different levels of bureaucratic quality.
- Equilibria imply distinct empirical implications of electoral accountability.

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Design: Theoretically-structured meta-study to test empirical implications against two nested corner cases.

- Extend four studies of accountability of Brazilian mayors.
  - 3 studies on corruption and accountability.
  - 1 study on incumbency disadvantage.

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Theory: Simple model of electoral accountability with a voter, a politician, and a bureaucrat.

Design: Theoretically-structured meta-study to test empirical implications against two "nested" corner cases.

Findings: Data is consistent with the (full) model, not the alternatives.

- Politicians allocate funds to rents (not public goods) as a function of bureaucratic quality.
- Voters update differently at different levels of bureaucratic quality.

Related literature

1. Bureaucracy and electoral accountability. (Fox and Jordan, 2011; Ujhelyi, 2014; Yazaki,2018; Li et al., 2019; Raffler and Martin, 2019; Foarta 2022)

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3. Accumulation and secondary analysis of reduced-form causal estimands. (Banerjee and Duflo, 2009; Dunning et al., 2019; Slough and Tyson, 2022a, 2022b)

Theory

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P of type $\theta \in \{\underline{\theta}, \overline{\theta}\}$ – Incompent or competent.

- Ability to "**get things done**"
- Monitor at rate $\overline{\theta}$ or $\underline{\theta}$, where $0 < \underline{\theta} < \overline{\theta} < 1$
- Private information to P and B
- Voter's prior: $\Pr(\theta = \overline{\theta}) = \pi \in (0,1)$

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Public goods g_t produced according to:

$$g_t = \begin{cases} qa_t & \text{with probability } e_t \\ 0 & \text{with probability } 1 - e_t \end{cases}$$

Election, voter's utility

Voter observes a signal, z, of:

$$z = \begin{cases} g_1 & \text{with probability } p \\ \varnothing & \text{with probability } 1 - p \end{cases}$$

- p used to derive predictions "with" and "without" voter information

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Voter's utility:

$$E[u_v(i)] = E[g_2^i|z] + \phi$$
$$E[u_v(c)] = E[g_2^c]$$

- where $\phi \sim U[-b, b]$, for $b > q$, is a valence shock
- Challenger assumed to act as a first-period incumbent.

Utilities, ctd.

Politician:

- If in office:

$$U_t^P = \underbrace{1 - a_t}_{\text{Rents}} + \underbrace{g_t}_{\text{PG}}$$

- If not in office, U_t^P normalized to 0
- No discounting.

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Bureaucrat:

- Recall that monitoring rate is $\theta \in (0,1)$:

$$U_t^B = -\theta(1 - e_t) - \frac{e_t^2}{2}$$

- Bureaucrat is not forward-looking.

Sequence, equilibrium concept

Sequence:

1. Nature determines θ_1.
2. The incumbent allocates a_1 to the public good.
3. The bureaucrat exerts effort e_1 to produce g_1.
4. With probability p, the voter observes $z = g_1$ and forms posterior $\mu(z)$. ϕ is realized and the voter chooses incumbent or challenger.
5. The incumbent allocates a_2^i (if re-elected), challenger allocates a_2^c (if not re-elected) to the public good.
6. Bureaucrat exerts effort e_2^i or e_2^c to produce g_2^i or g_2^c, respectively.

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Perfect Bayesian Equilibria (PBE) with intuitive criterion refinement.

Analysis

Bureaucrat's optimal effort (in both periods):

$$e_t^* = \theta_t$$

- $E[g_2^i] = qa_2^i\theta_2 \rightarrow$ Politician competence (θ) and bureaucratic quality (q) are complements.

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In a second term, a politician allocates:

$$a_2^{i*} = \begin{cases} 1 & \text{if } q \geq \frac{1}{\theta_2} \\ 0 & \text{else.} \end{cases}$$

Voter's re-election decision

Voter re-elects if $E[u_v(i)] > E[u_v(c)]$ implying:

$$\Pr(\text{re-election}) = \frac{1}{2} + \frac{E[g_2^i|z] - E[g_2^c]}{2b}$$

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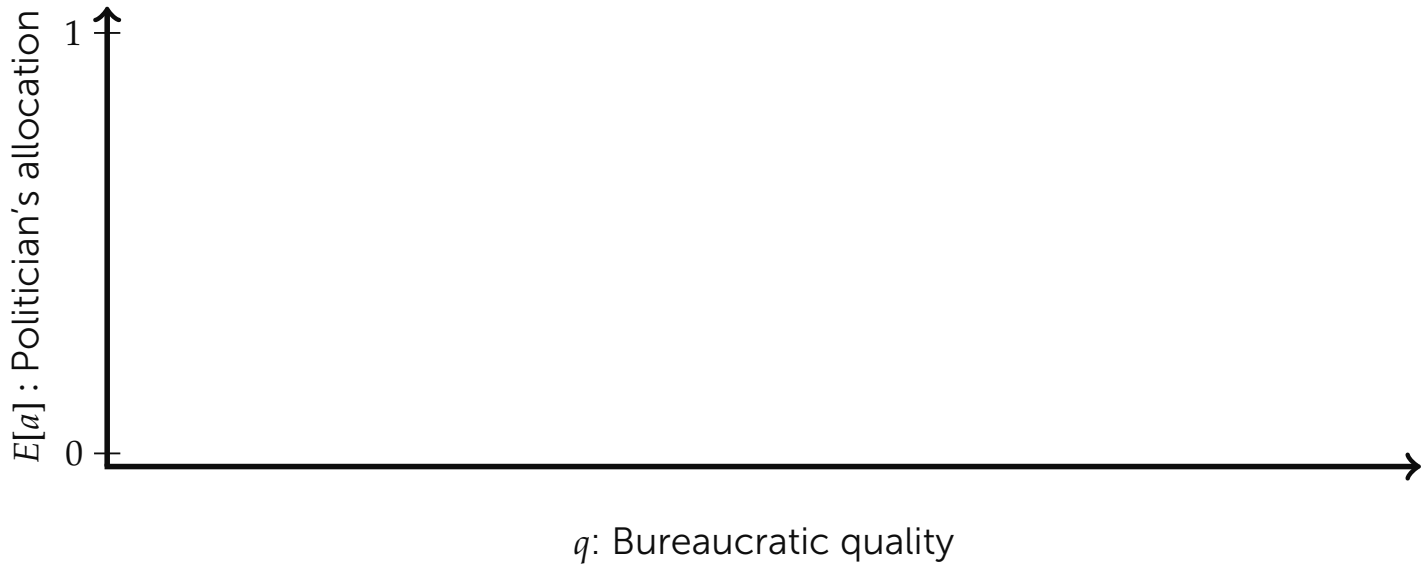
Recall that voter may or may not observe $z \in \{0, qa_t\}$:

- With probability $1 - p$ voter does not observe z and so $\mu = \pi$.
- With probability p voter observes z, but informativeness of public goods signal depends on politician allocation behavior!

Equilibria



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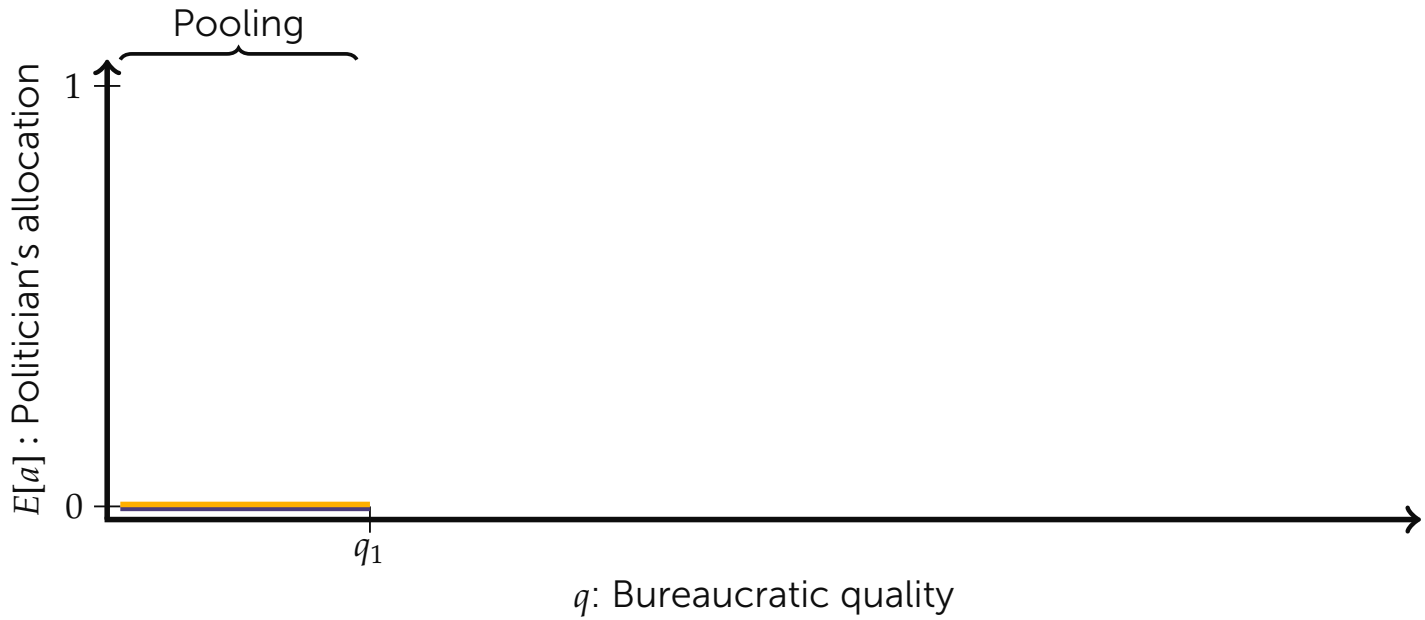

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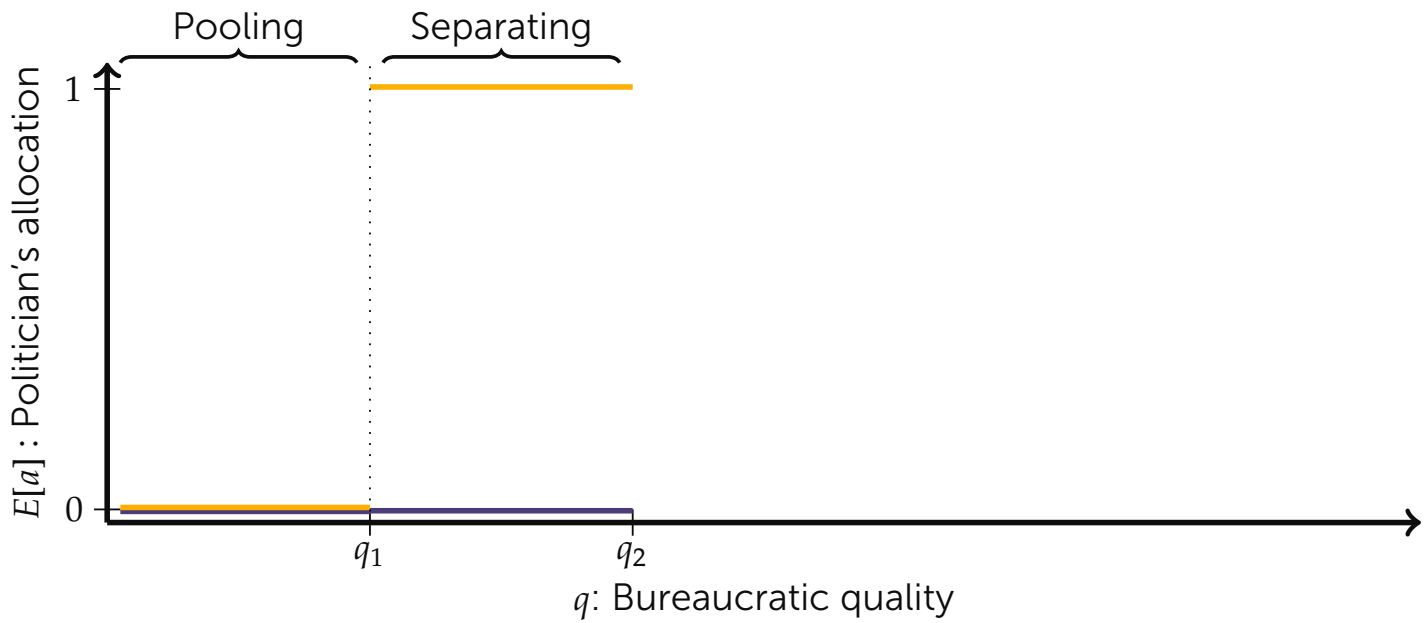

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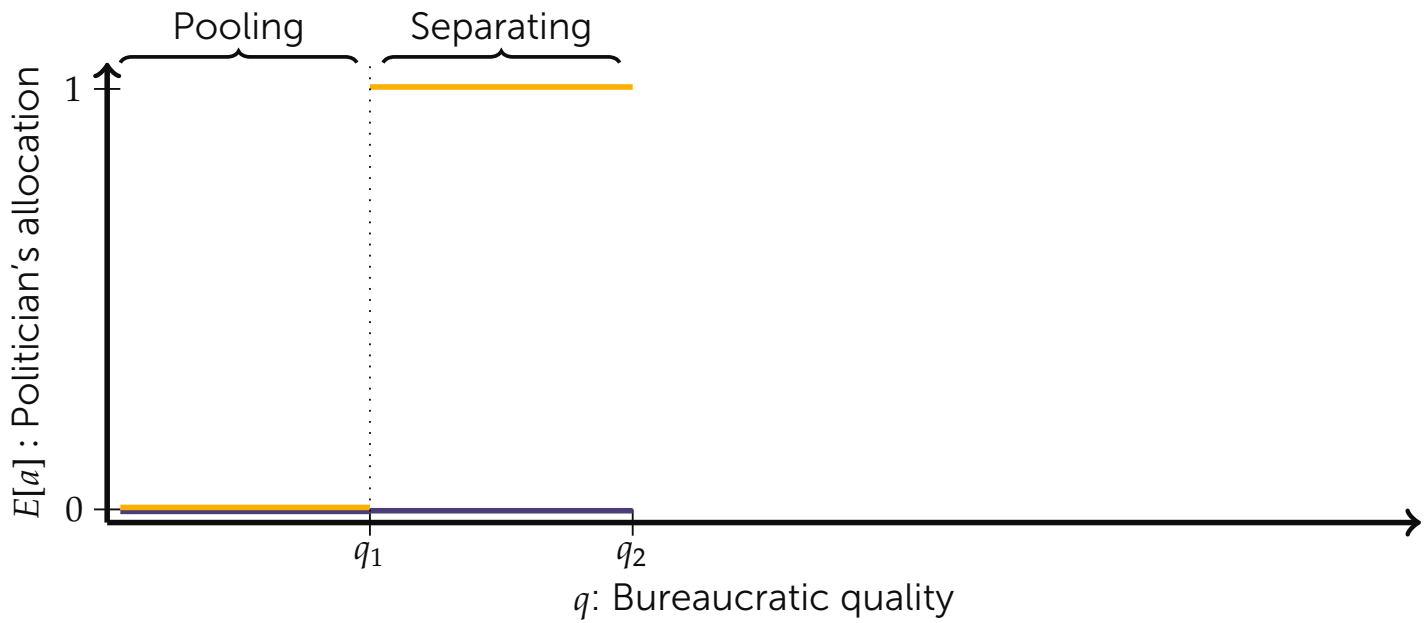

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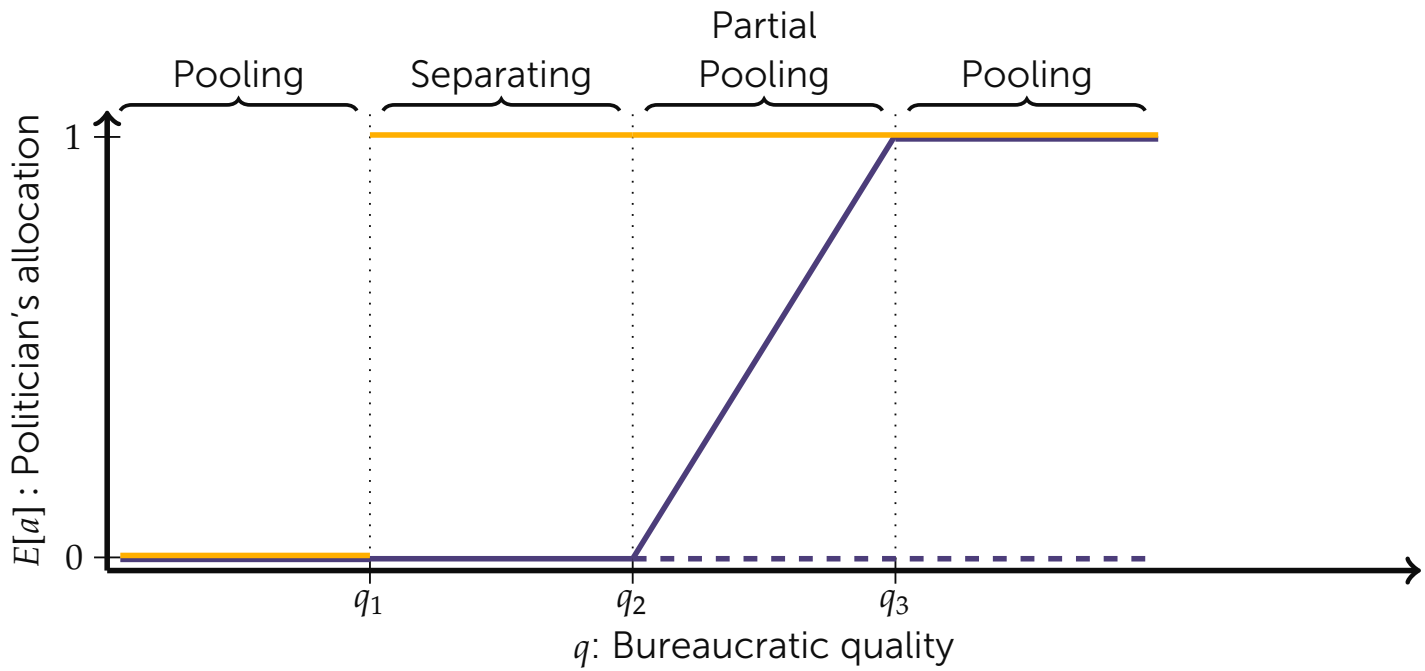

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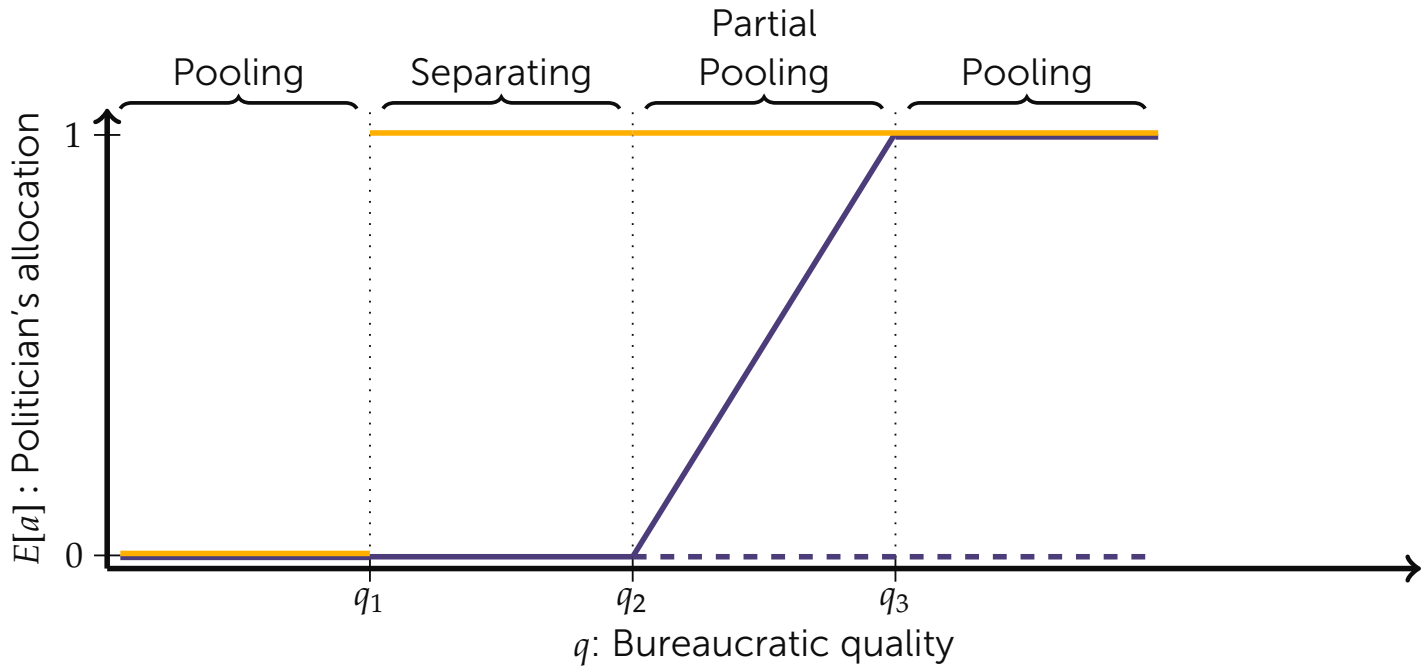

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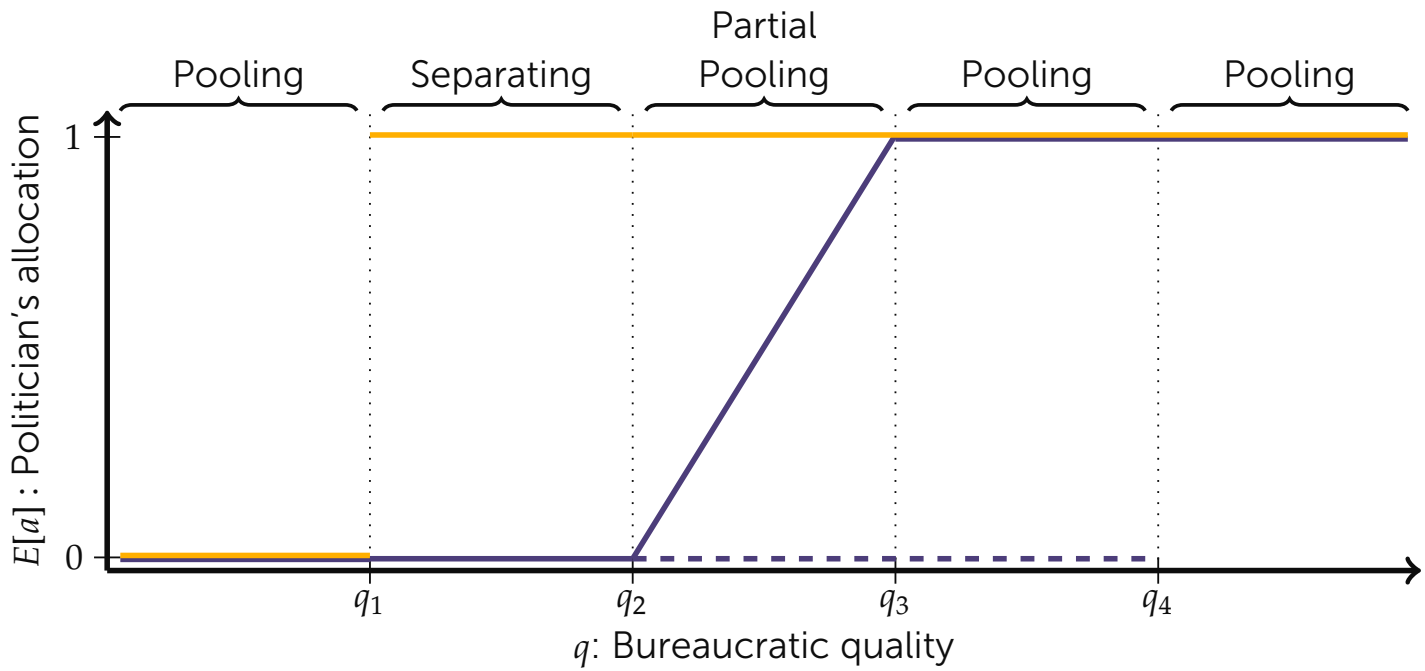

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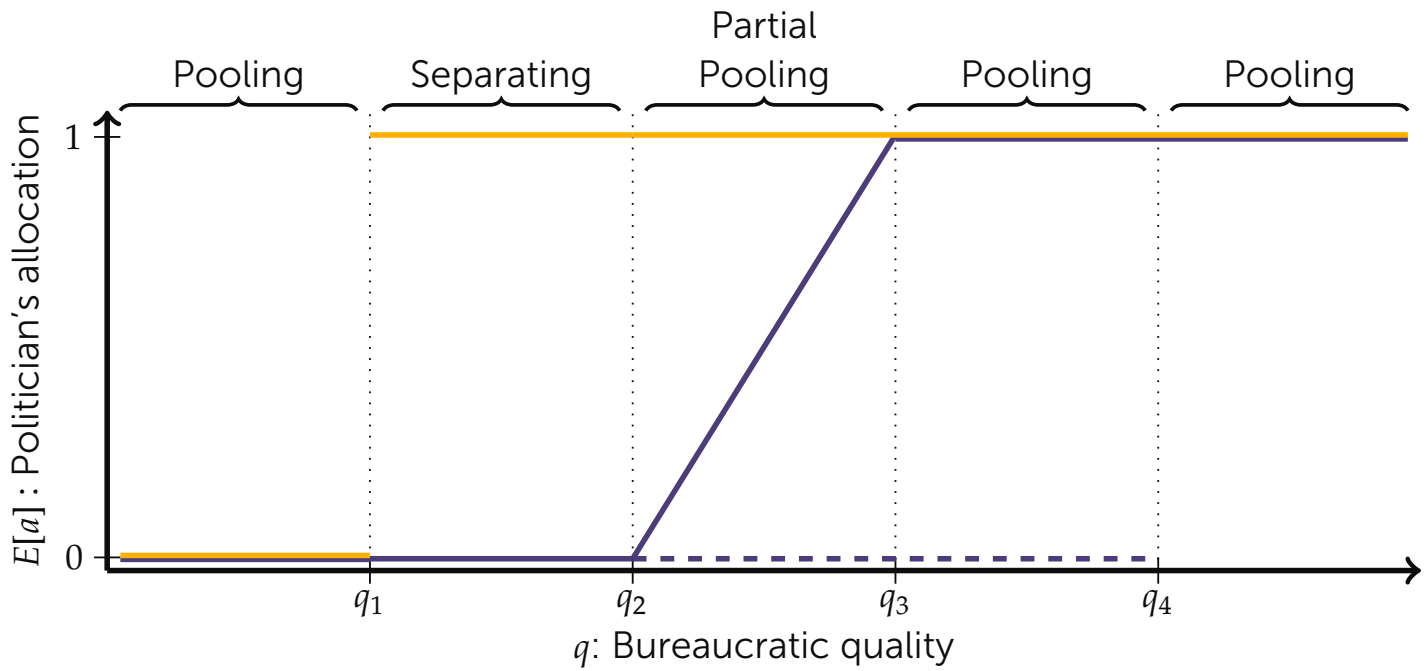

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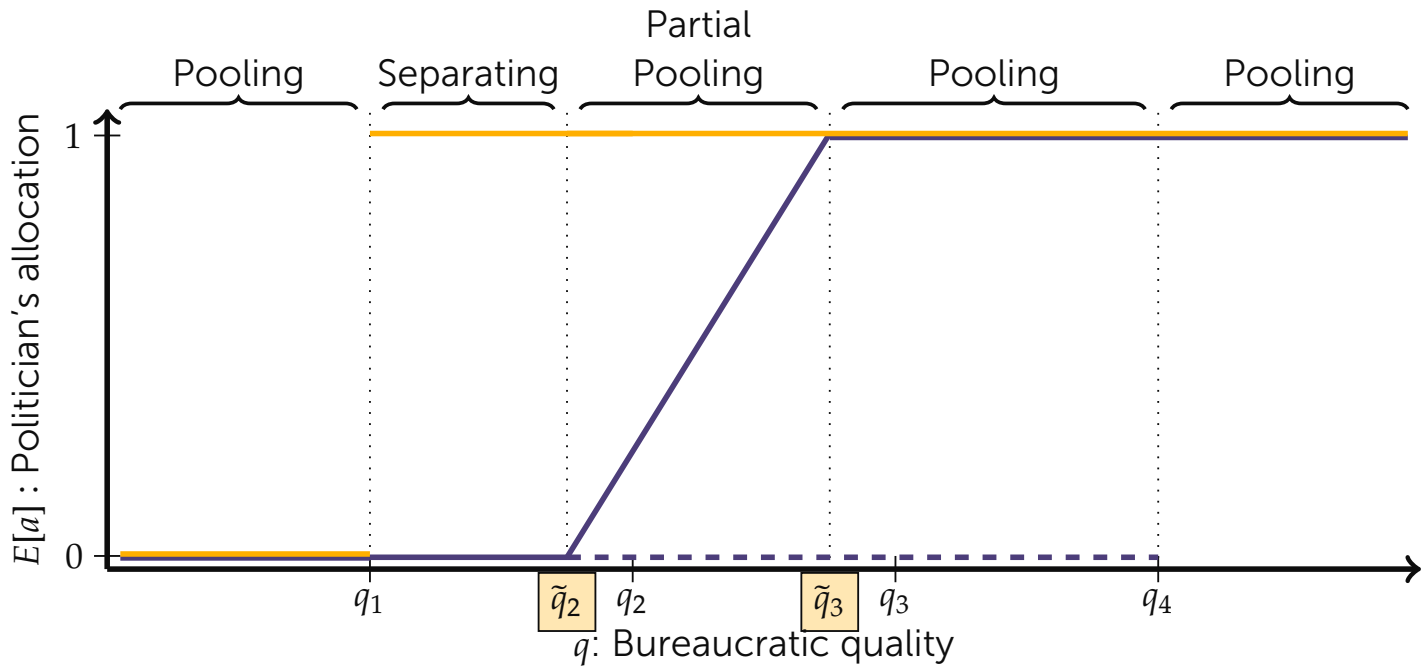

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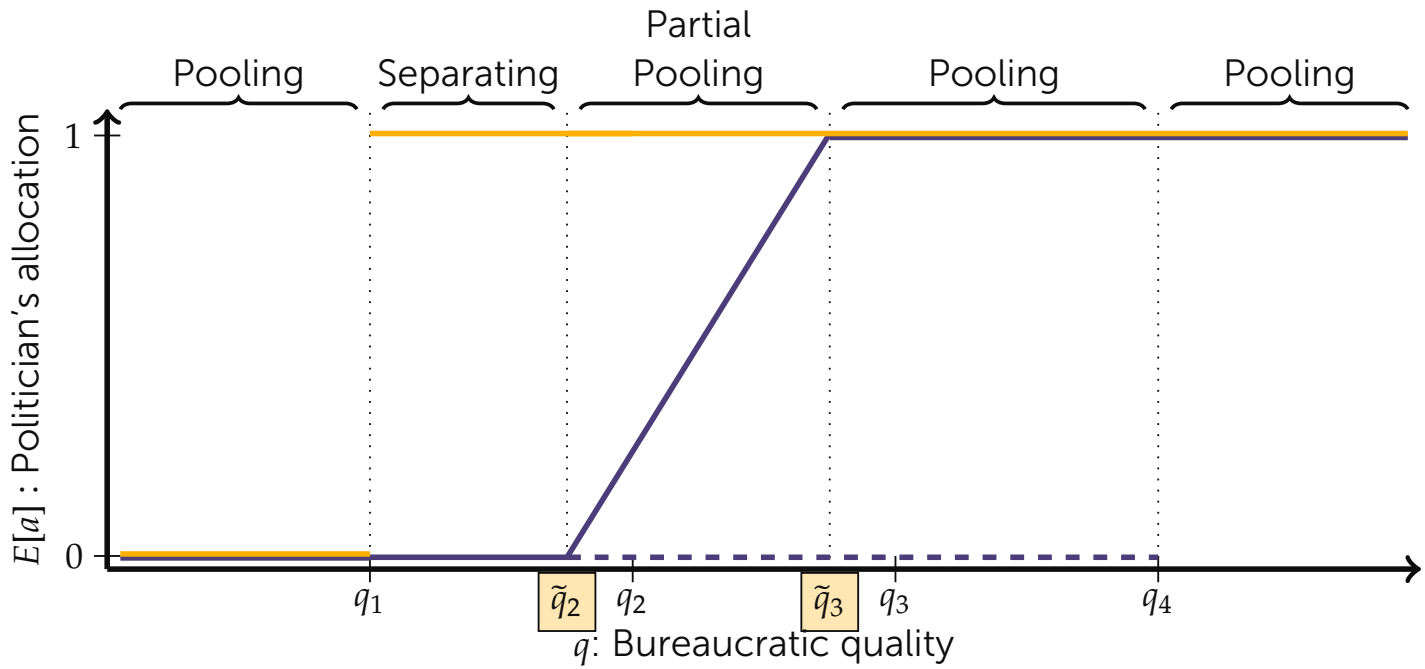

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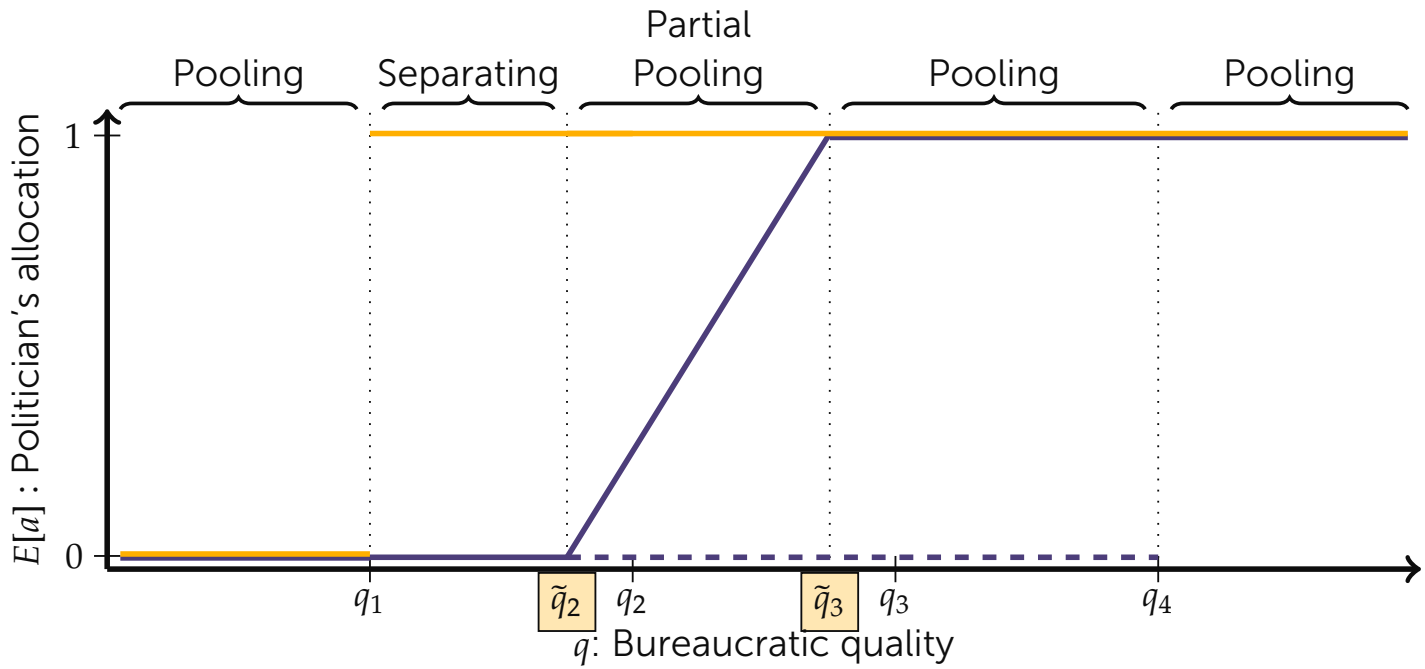

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Research Design

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Existing alternatives → two special/corner cases of the model:

1. **"No bureaucrat"**: competent type can always get public good produced; incompetent cannot ever get public good produced.
2. **(Completely) uninformed voters**: voters never observe the public goods (signal) output and therefore do not update.

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Equilibria provide (interesting) empirical implications with respect to:

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Theoretically-structured meta-studies incorporating results from multiple studies.

Accountability of Brazilian Mayors

Measuring bureaucratic quality, q

Measure: education level of the average municipal bureaucrat (denoted Q_m)

- From IBGE's Municipal Information Survey (MUNIC), 2005-2014
- From counts bureaucrats by education level, measured ≈ triennially

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What drives variation in bureaucratic quality?

- Variation in public sector hiring, contracting processes (Toral 2019)
- Local labor market conditions
  - Include: State FE; decile bins: % formal, avg. ed., GDP per capita, population
  - Collectively these account for only 20% of variation in Q_m

Validating bureaucratic quality measure

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Measure	Autocorrelation
Quality (avg. education)	0.84 [0.83, 0.85]
Total personnel (count)	0.99 [0.98, 0.99]

- First-difference models reveal no evidence that changes in mayor or mayor's party yield differential changes in Q_m.
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For accountability application: zero conditional association with community radio presence, given state FE, and % formal, avg. ed., GDP, population decile bins.

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Correlation between proxies of candidate competence and bureaucratic quality:

Competence based on candidate:	Correlation	Residualized correlation
Education level	0.11 [0.09, 0.13]	0.02 [0.005, 0.02]
Profession	0.08 [0.06, 0.09]	-0.003 [-0.02, 0.02]

Implication #1 (of 3)

1. Politician allocation to private rents is decreasing in bureaucratic quality.
    - Extension of Ferraz and Finan (2008).

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Scope: First 11 rounds of randomized CGU audits, 2003-2004:

- DV is % of audited funds misused Avis et al. (2018)
- Abstracts from politician learning from audits Lichand et al. (2016); Avis et al. (2018)

Prediction #1: Politician allocations and bureaucratic quality

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Purpose: Distinguish general model from "no bureaucrat" case, where separating equilibrium emerges for all q.

Test #1: Politician allocations and bureaucratic quality

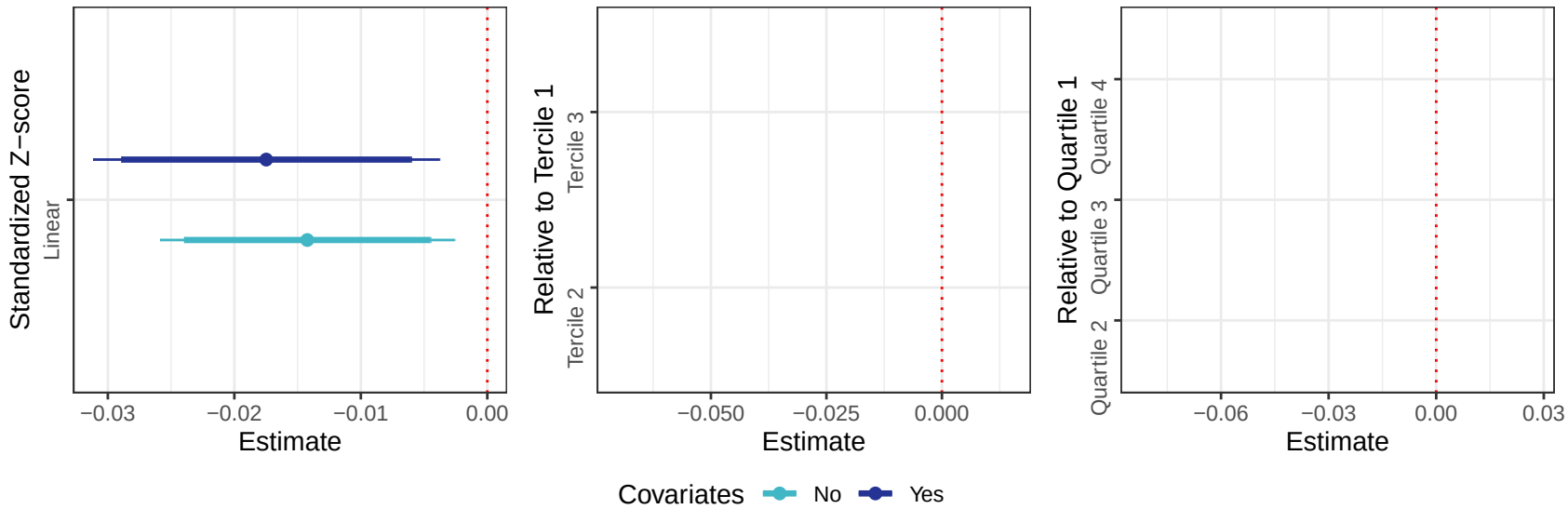
Test: Sign of association between bureaucratic quality and rents extracted.

- Estimation equation:

$$\Upsilon_{msl} = \beta_0 + \beta_1 Q_m + \gamma_s + \lambda_l + \delta \mathbf{X}_m + \epsilon_{msl}$$

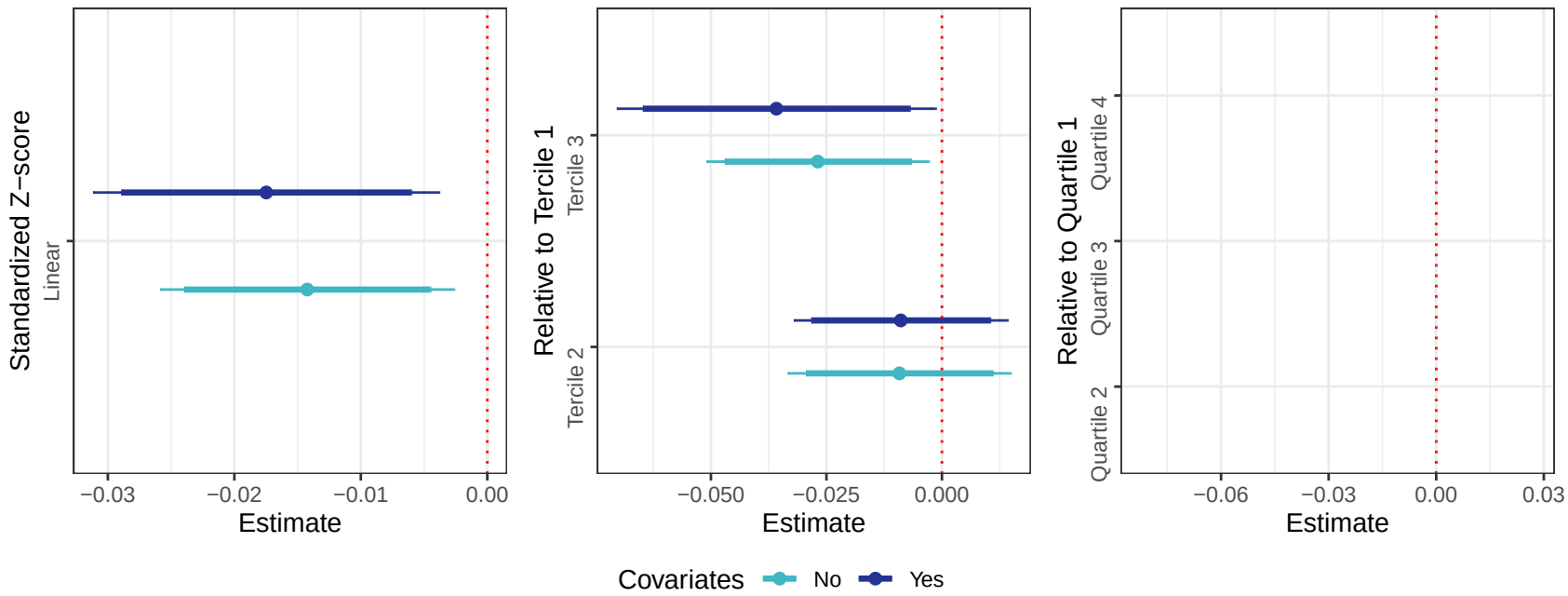
- Prediction: $\beta_1 < 0$.
- Theory implies non-linearities → linear as well as tercile, quartile specifications of Q_m.

Result #1: Rents decrease in bureaucratic quality



Association between Q_m and % of audited funds misused.

Result #1: Rents decrease in bureaucratic quality



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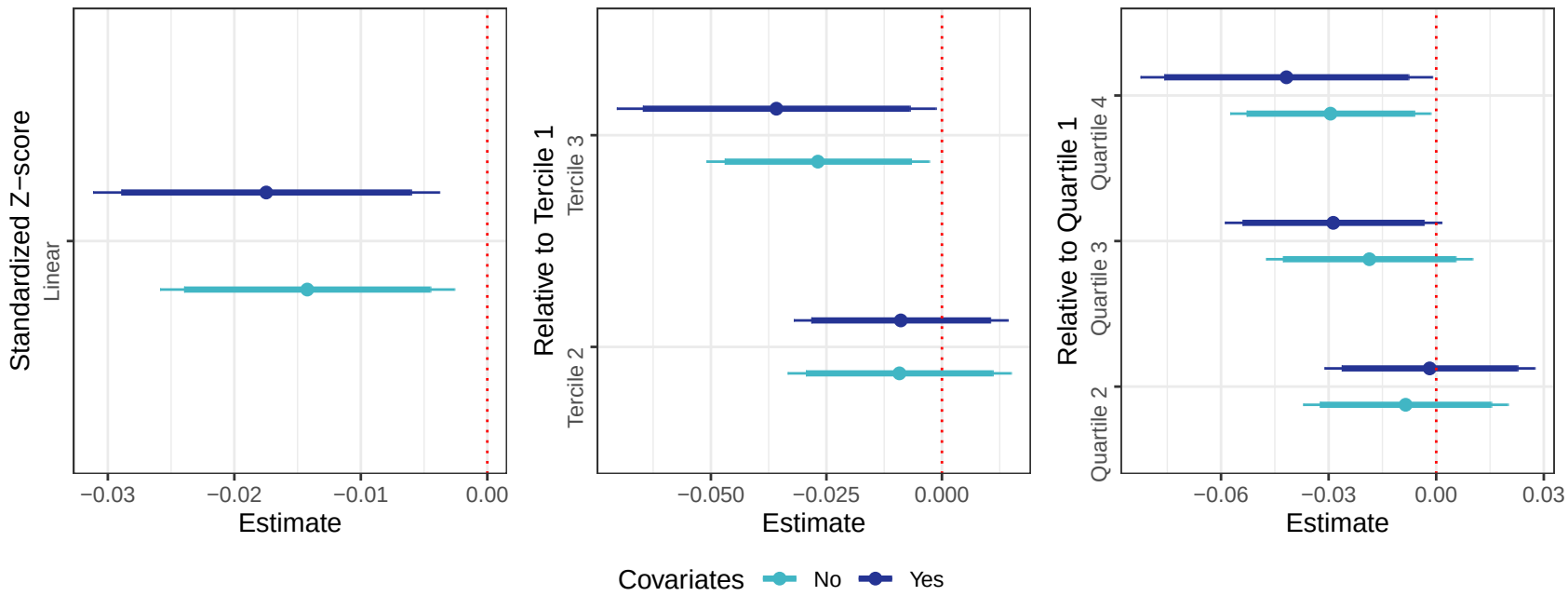
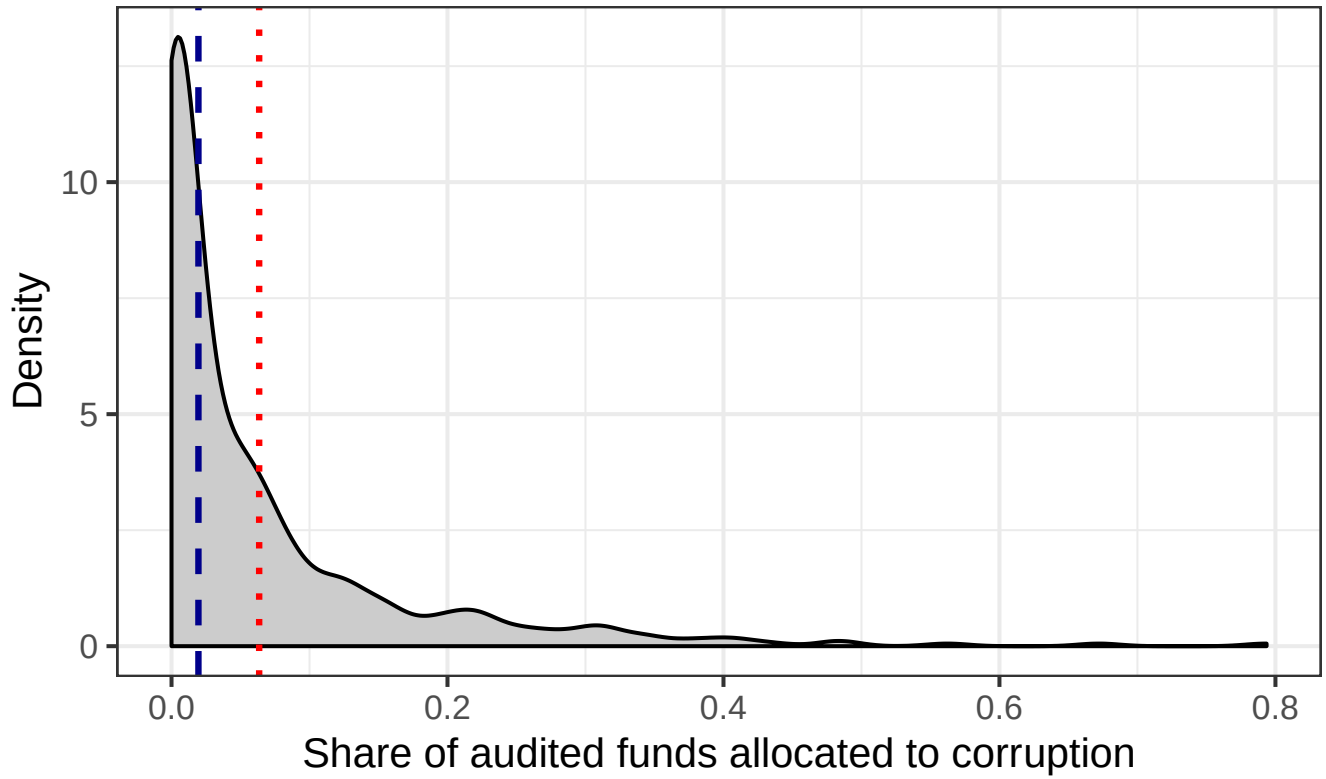


Association between Q_m and % of audited funds misused.

Aside: What is the range of bureaucratic quality in Brazil?



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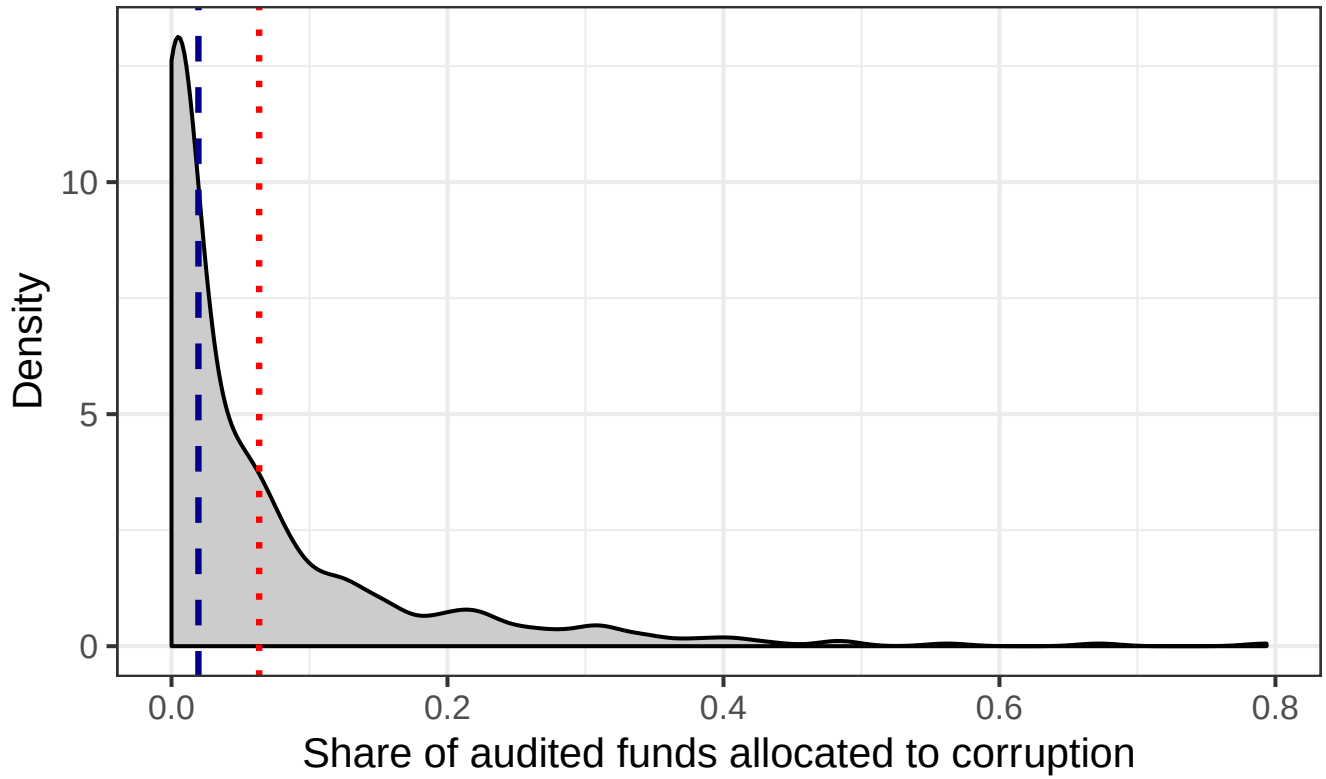

q: Bureaucratic quality

Allocation by type $\overline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$
Allocation by type $\underline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 0$	$a_1 = 1$ w.p. k, $a_2 = 0$	$a_1 = 1, a_2 = 0$	$a_1 = 1, a_2 = 1$

Implication #2 (of 3)

1. Politician allocation to private rents is decreasing in bureaucratic quality.

2. Term effects on politician allocation to rents are attenuated to zero at high levels of bureaucratic quality.
    - Extension of Ferraz and Finan (2011).

Prediction #2: Second term effects on allocations

Prediction: Term effects (difference between second and first terms) are attenuated to zero at high levels of bureaucratic quality.

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Prediction: Term effects (difference between second and first terms) are attenuated to zero at high levels of bureaucratic quality.

Purpose: Separate general model from pure selection case without bureaucrat and uninformed voter case:

- Model without bureaucrat $\rightarrow \downarrow$ rents in second term than first.
- Fully uninformed voters $\rightarrow$ no difference in rents from first to second term.

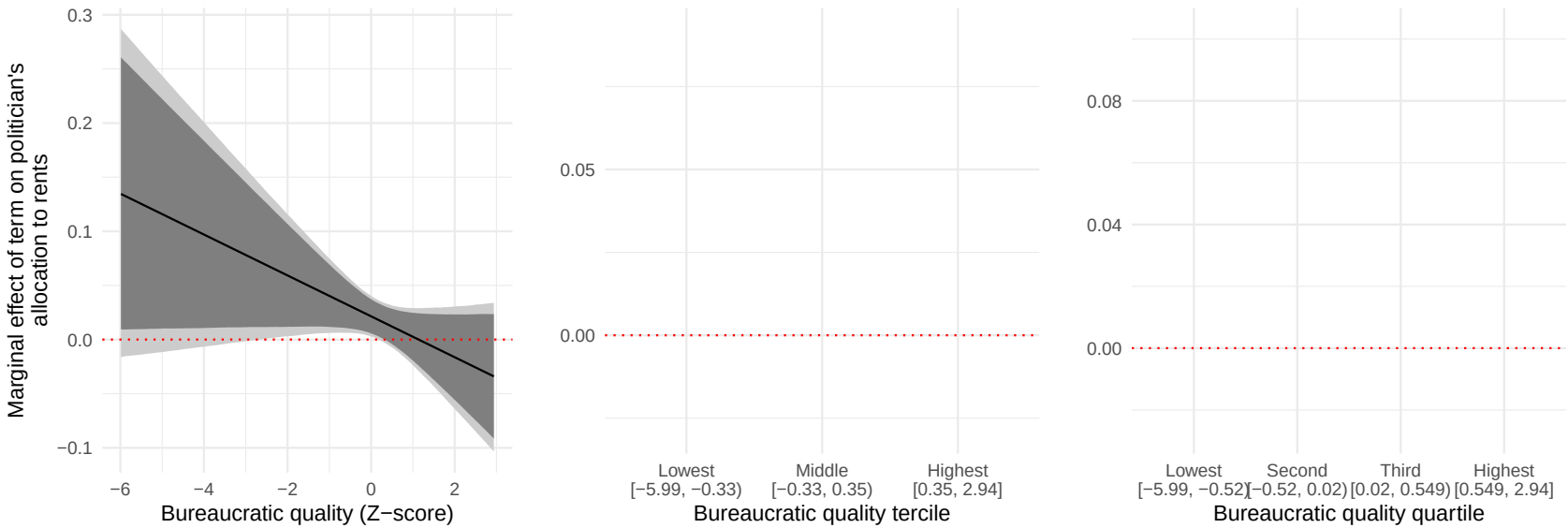
Test #2: Second term effects on allocations

Test: Marginal effect of second term on rents is non-zero at low levels of bureaucratic quality (within sample).

$$Y_{msl} = \beta_1 Q_m + \beta_2 \text{Second term}_m + \beta_3 Q_m \text{Second term}_m + \gamma_s + \lambda_l + \delta \mathbf{X}_m + \epsilon_{msl}$$

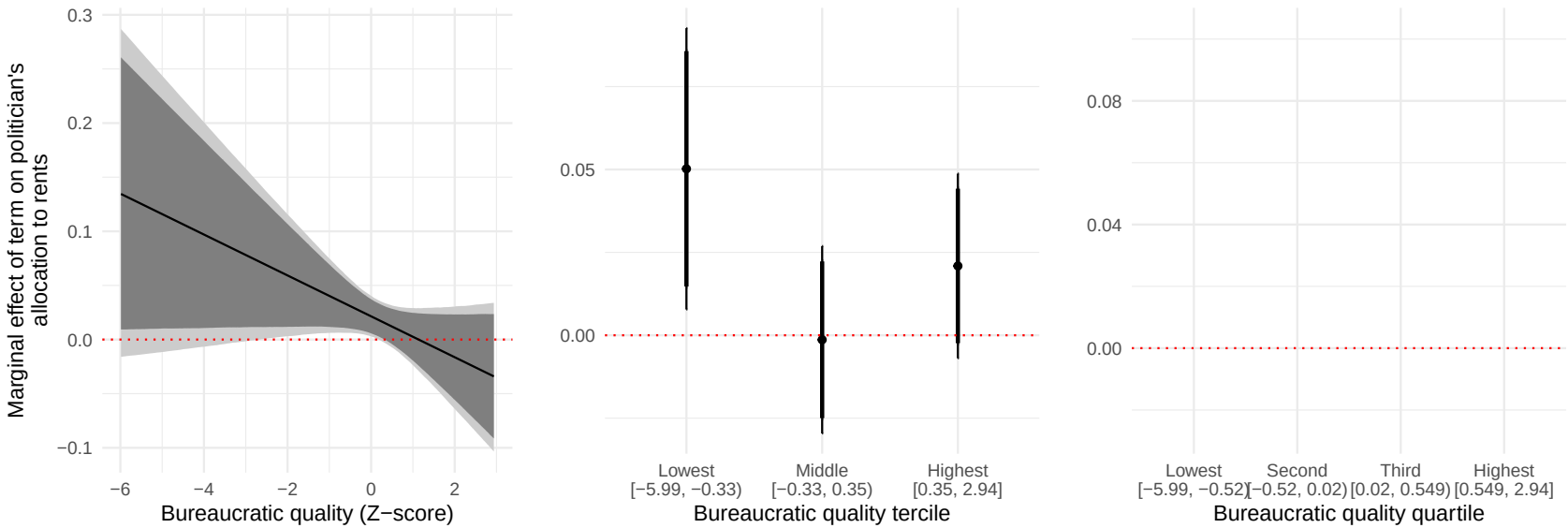
- Brazilian mayors are term-limited to two (consecutive) terms.
  - Second term$_m$ is an indicator for a mayor's final term in office.
- Predictions:
  - $\beta_2 + \beta_3 \neq 0$ for low levels of Q_m (in sample).
  - $\beta_2 + \beta_3 = 0$ for high levels of Q_m (in sample).

Result #2: High bureaucratic quality attenuates term effects



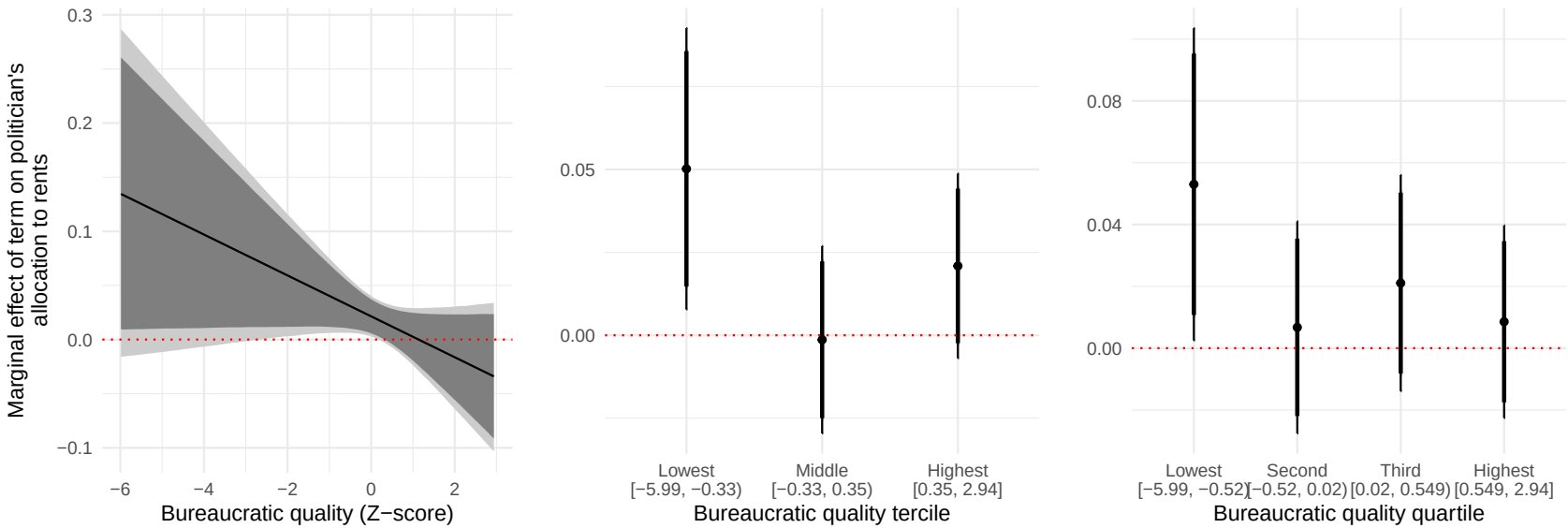
Marginal effect of second term on politician's allocation to rents at different levels of Q_m.

Result #2: High bureaucratic quality attenuates term effects



Marginal effect of second term on politician's allocation to rents at different levels of Q_m.

Result #2: High bureaucratic quality attenuates term effects



Marginal effect of second term on politician's allocation to rents at different levels of Q_m.

Result #2: Mechanisms

Two mechanisms drive term effects:

- **Positive selection** of second-period politicians → ↓ term difference (2nd-1st)
- **Shirking** of low types → ↑ term difference (2nd-1st)

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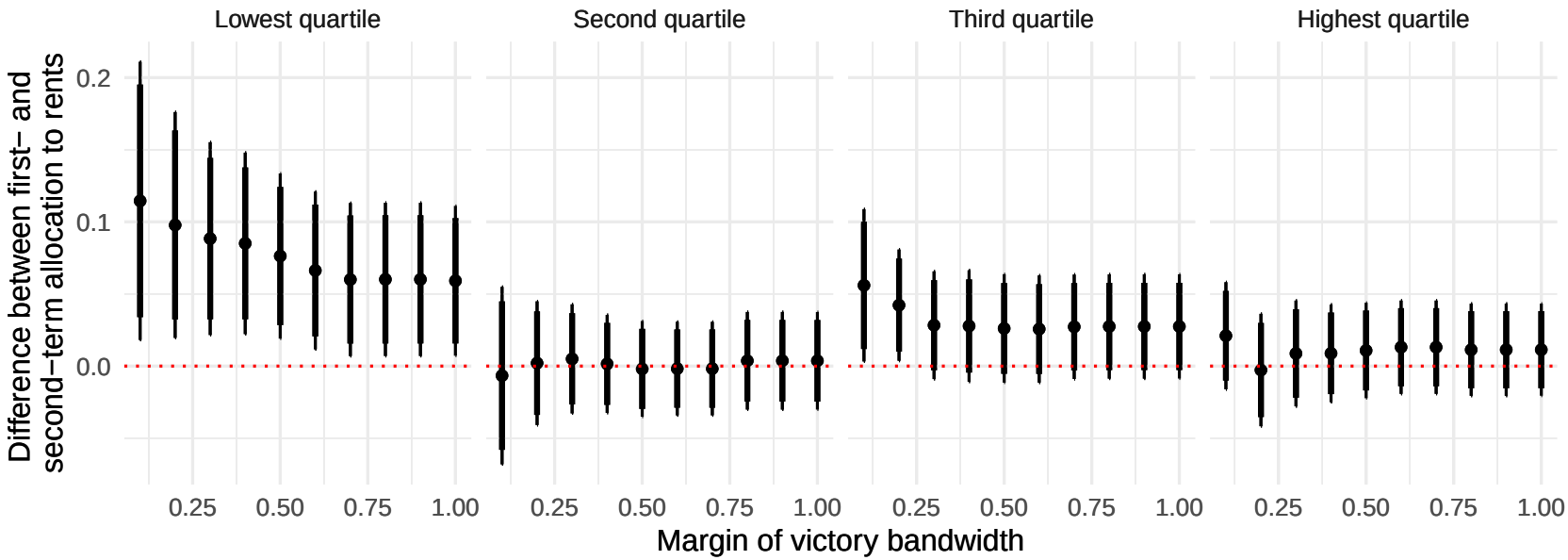

Term effects at varying bandwidths.

Implication #3 (of 3)

1. Politician allocation to private rents is decreasing in bureaucratic quality.

2. Term effects on politician allocation to rents are attenuated to zero at high levels of bureaucratic quality.

3. Voter learning from a "clean" signal is attenuated to zero at high levels of bureaucratic quality.
    - Extension of Weitz-Shapiro and Winters (2016) and Winters and Weitz-Shapiro (2016).

Measuring voter updating

Survey experimental evidence to measure voter (citizen) updating

- Survey experiments offer direct measurement of voter learing.

Measuring voter updating

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- Survey experiments offer direct measurement of voter learing.

Nationally-representative survey experiment Weitz-Shapiro and Winters (2016)

- Conducted in 2013 in 142 Brazilian municipalities.
- Manipulation is information about audit outcome of hypothetical "Mayor Carlos" in "municipality like yours"
- Treatment conditions: (1) no information, (2) clean, or (3) corrupt
- Testing a new prediction for updating on a clean signal.

Prediction #3:

Prediction: At high levels of q, V's posterior (μ) is equal to her prior (π) upon receiving a signal that P allocated no funds to rents.

- Signal is politician allocation behavior → extension with observable allocations.

Purpose: Separate general model from pure selection model (without bureaucrat).

- In model without the bureaucrat **separating equilibrium** emerges at all levels of bureaucratic quality.
- As such, we would expect voters to update on a clean signal everywhere (assuming $\pi \in (0,1)$).

Signal content

Test #3:

CATEs of the clean audit treatment at different levels of bureaucratic quality.

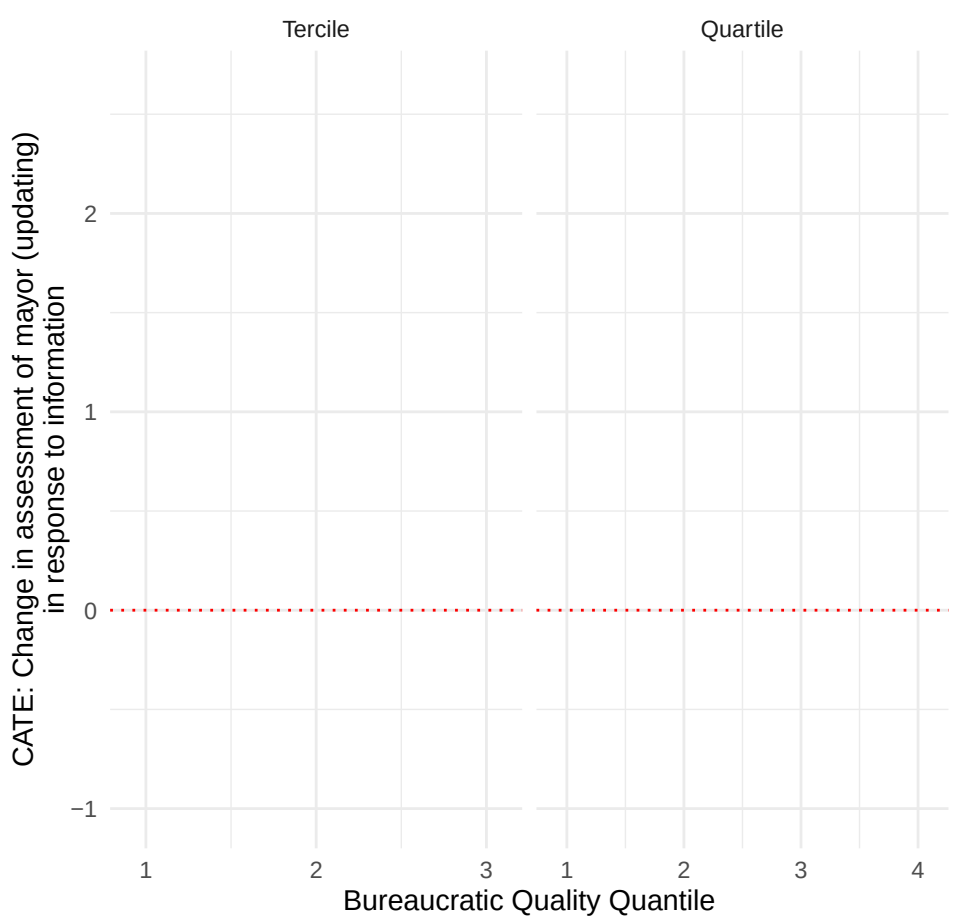
- Estimation equation:

$$\begin{aligned} Y_{ims} = &\beta_1 Q_m + \beta_2 \text{Clean signal}_i + \beta_3 \text{Clean signal}_i Q_m + \\ &\beta_4 \text{Corrupt signal}_i + \beta_5 \text{Corrupt signal}_i Q_m + \gamma_s + \theta X_m + \epsilon_{ims} \end{aligned}$$

- Outcome is 7-point feeling thermometer towards mayor.
- Predictions:
  - $\beta_3 < 0$
  - $\beta_2 + \beta_3 = 0$ at high levels of Q_m.
- Use of corrupt signal allows for "testing" off-path assumptions.

Result #3: Attenuation of voter learning from a clean signal

Updating on clean signal attenuated to 0 as Q_m increases → evidence that voters update consistently with general model predictions.



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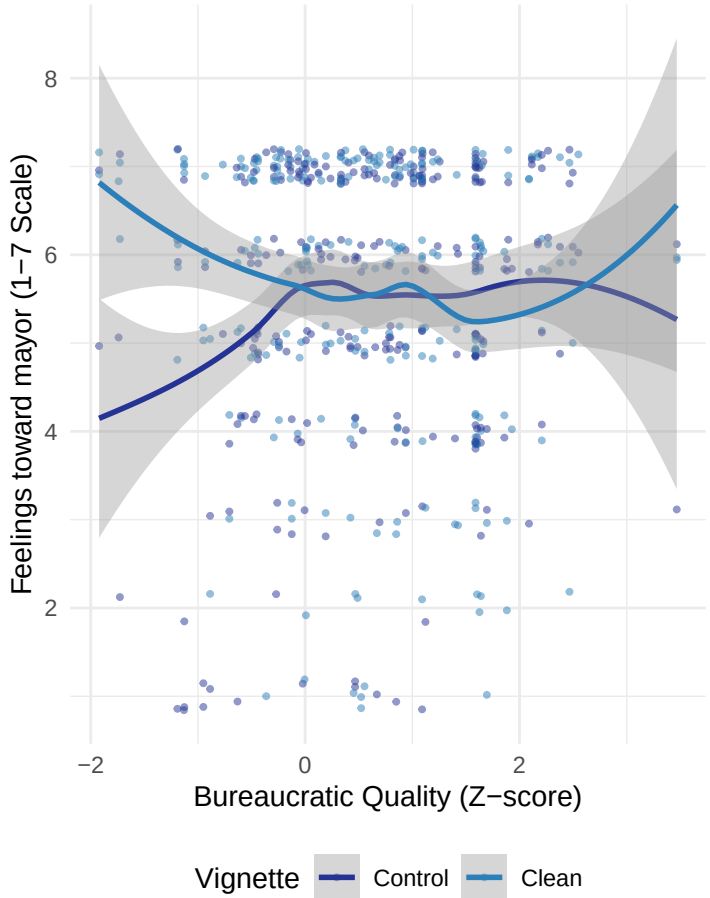

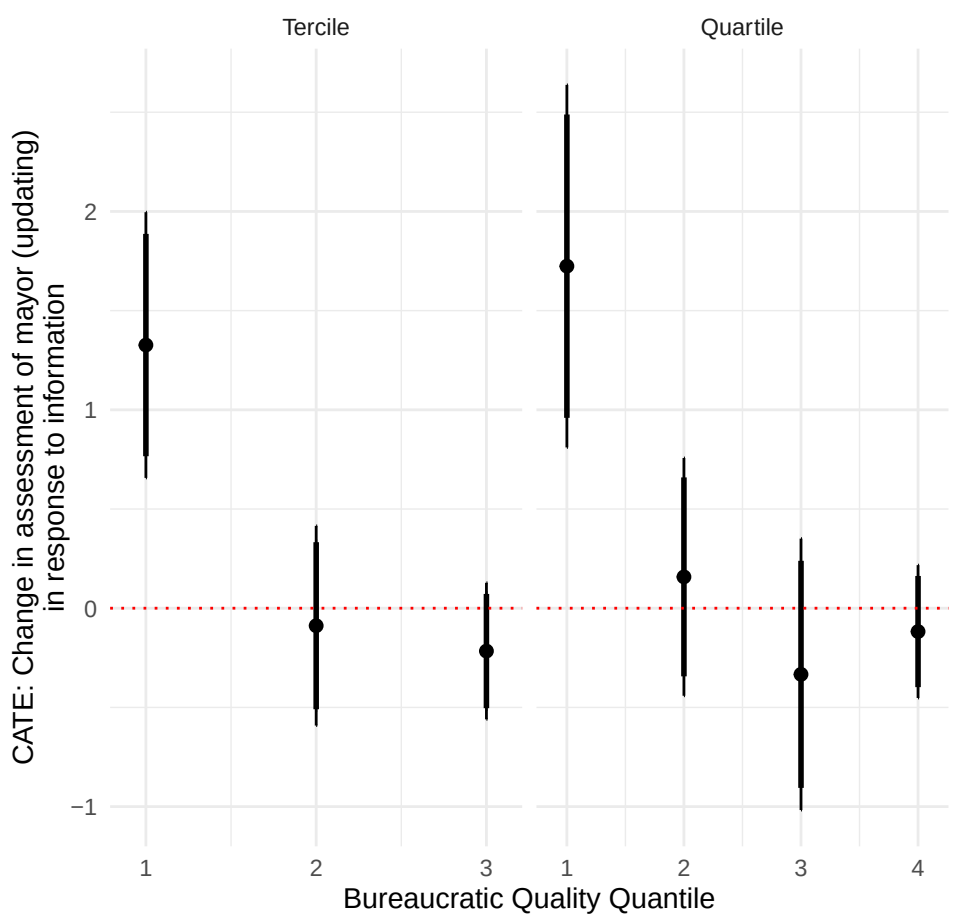

Discussion

Takeaways

1. Observable implications of functioning accountability relations look different in different places.
    - Critical observation: stems from **co-production** of public goods by politicians and bureaucrats.

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1. Observable implications of functioning accountability relations look different in different places.
    - Critical observation: stems from **co-production** of public goods by politicians and bureaucrats.

2. Common logic for understanding accountability in developed and developing democracies.

3. Development of theoretically-structured meta-studies for integrating and organizing findings from multiple studies.

Thank you!

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Contents

General model vs. cases

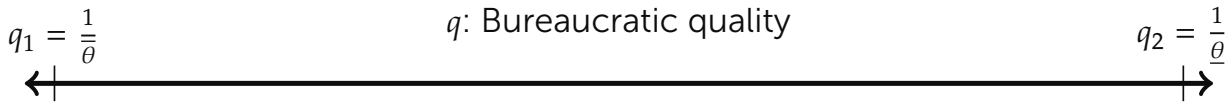
General model:

q: Bureaucratic quality

Allocation by type $\overline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$
Allocation by type $\underline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 0$	$a_1 = 1$ w.p. k, $a_2 = 0$	$a_1 = 1, a_2 = 0$	$a_1 = a_2 = 1$

Case #1: No bureaucrat, $\underline{\theta} = 0, \overline{\theta} = 1$:

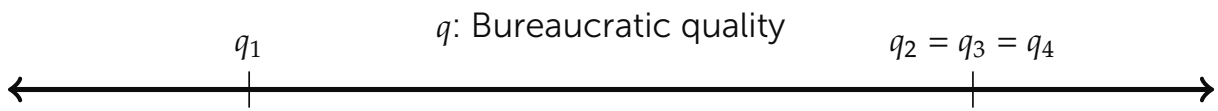
q: Bureaucratic quality



Allocation by type $\overline{\theta}$	$a_1 = a_2 = 1$
Allocation by type $\underline{\theta}$	$a_1 = a_2 = 0$

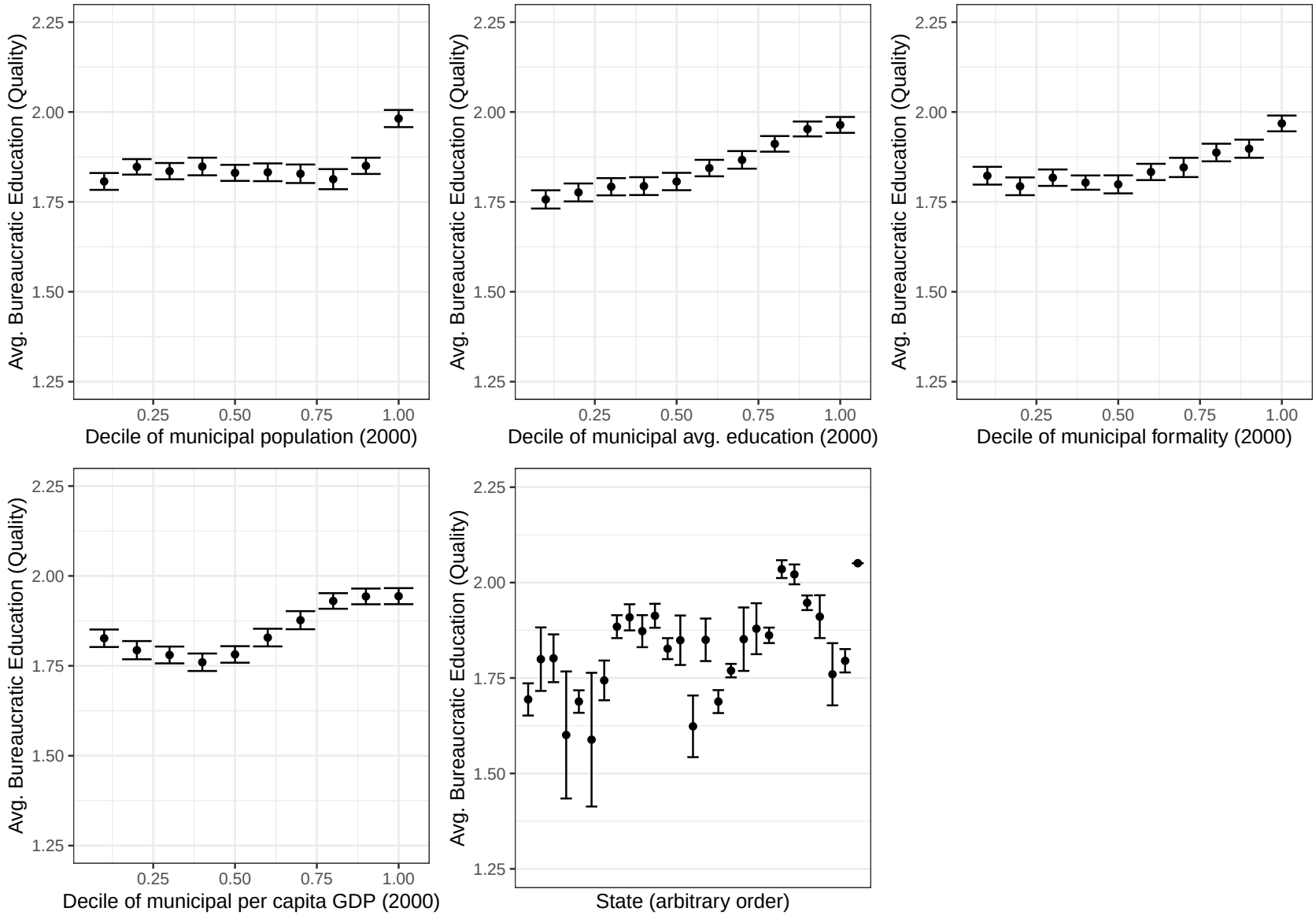
Case #2: Completely uninformed voters, $p = 0$:

q: Bureaucratic quality

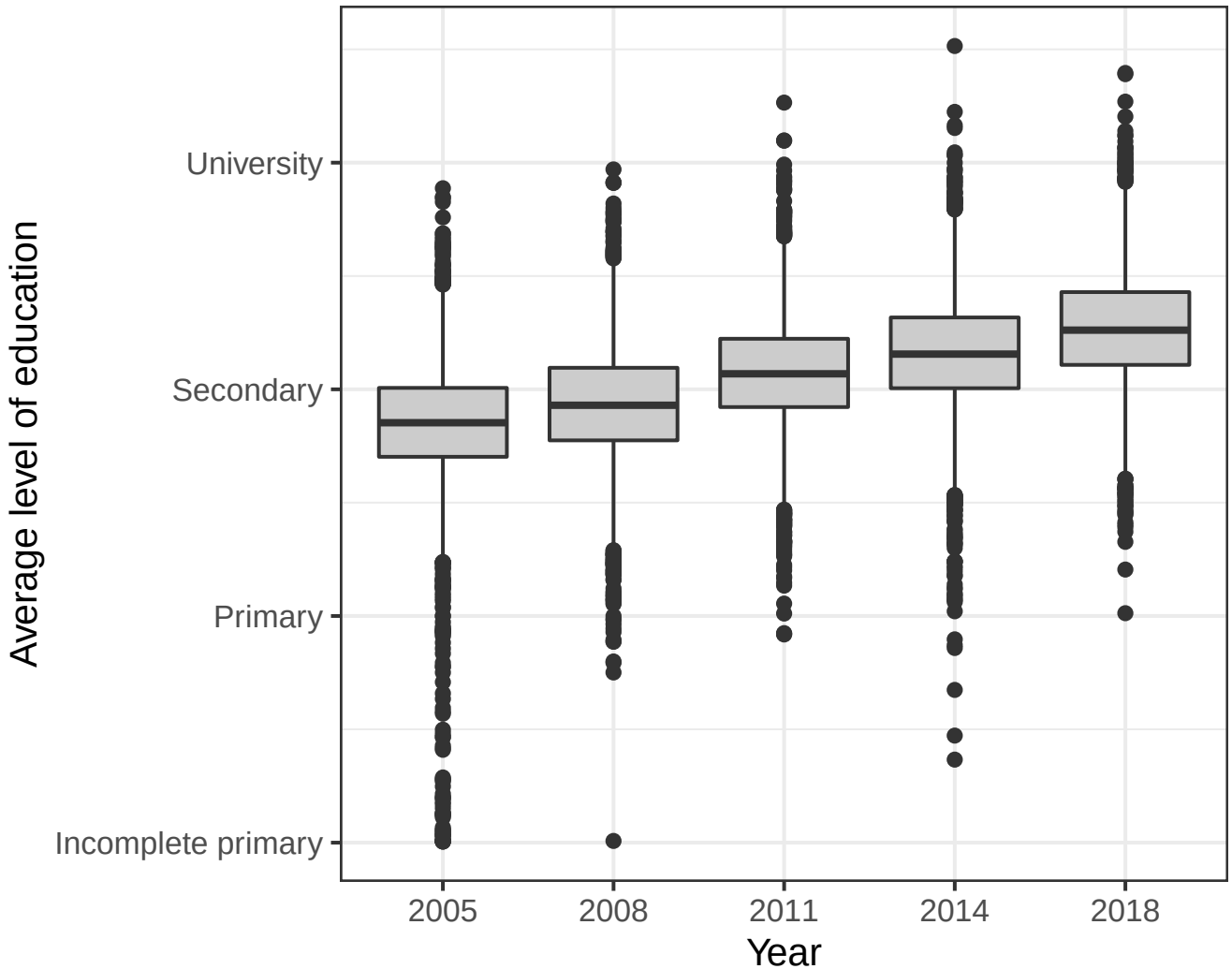


Allocation by type $\overline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 1$	$a_1 = a_2 = 1$
Allocation by type $\underline{\theta}$	$a_1 = a_2 = 0$	$a_1 = a_2 = 0$	$a_1 = a_2 = 1$

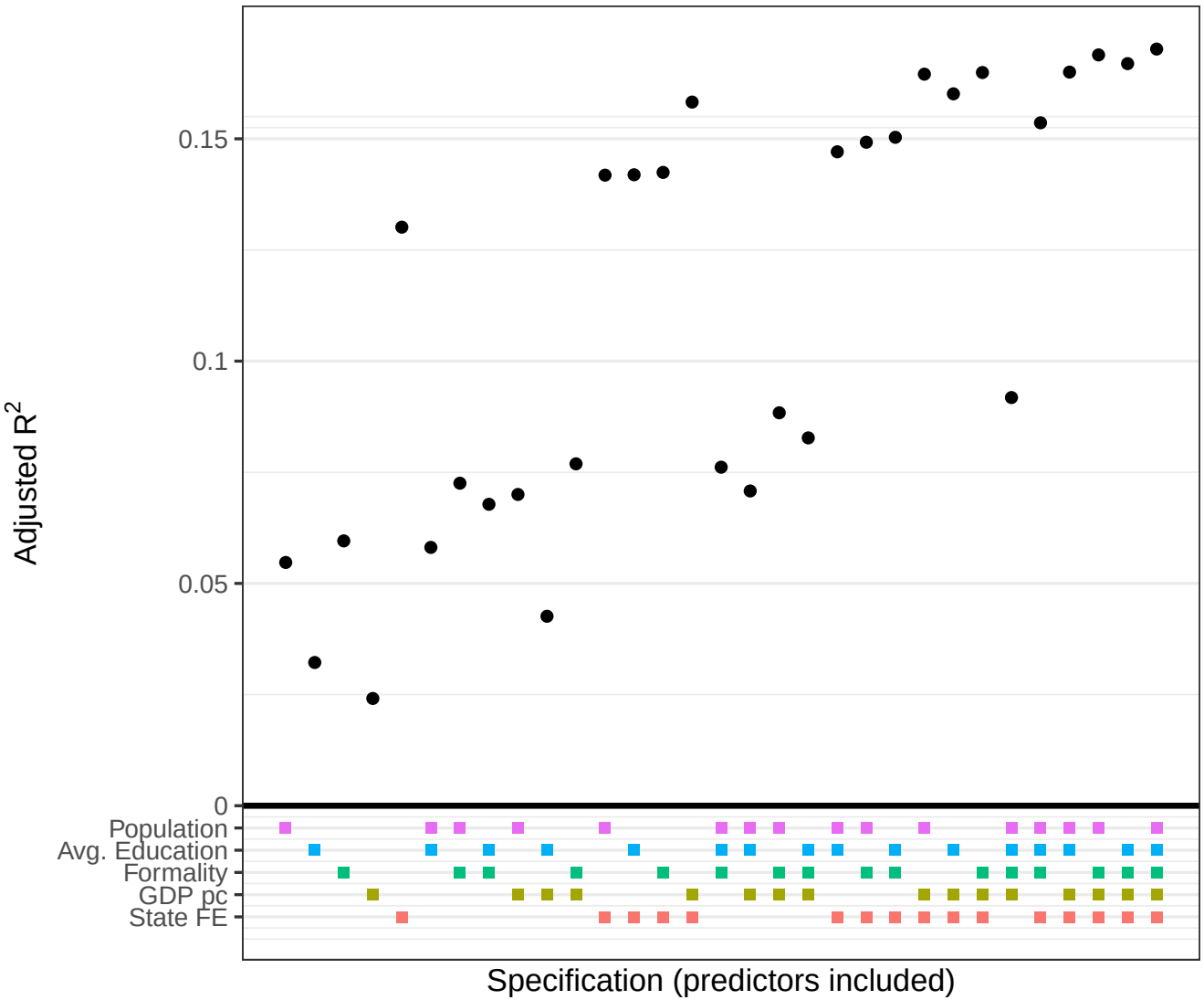
Correlates of Q_m



Distribution of Q_m



Predicting Q_m



Bureaucratic Quality and Politician Competence

Competence based on candidate:	Correlation	Residualized correlation
All Mayoral Candidates		
Education level	0.11 [0.09, 0.13]	0.02 [0.005, 0.02]
Profession	0.08 [0.06, 0.09]	-0.003 [-0.02, 0.02]
Weighted by Vote Share		
Education level	0.08 [0.06, 0.9]	0.02 [0.007, 0.05]
Profession	0.06 [0.03, 0.08]	-0.002 [-0.02, 0.02]

First-difference models

	Δ Bureaucratic Quality					
	2008-2011			2011-2014		
	(1)	(2)	(3)	(4)	(5)	(6)
Change in mayor	−0.011	−0.007	−0.004	0.008	0.009	0.009
	(0.009)	(0.009)	(0.007)	(0.012)	(0.012)	(0.010)
Change in party	0.013	0.003	0.002	−0.017	−0.019*	−0.016*
	(0.009)	(0.009)	(0.008)	(0.011)	(0.011)	(0.009)
Lagged bureaucratic quality			−0.638***			−0.560***
			(0.015)			(0.016)
State FE		✓	✓		✓	✓
DV Mean, no change	0.137	0.137	0.137	0.084	0.084	0.084
DV St. Dev, no change	0.261	0.261	0.261	0.251	0.251	0.251
Adj. R^2	0.000	0.026	0.360	0.000	0.003	0.255
Num. obs.	4932	4932	4932	4719	4719	4719
Election year	2008	2008	2008	2012	2012	2012

	2014-2018			Pooled		
	(7)	(8)	(9)	(10)	(11)	(12)
Change in mayor	−0.014	−0.015	−0.003	−0.014**	−0.011*	0.008
	(0.012)	(0.012)	(0.010)	(0.006)	(0.006)	(0.005)
Change in party	0.003	0.002	−0.001	0.002	−0.002	0.001
	(0.011)	(0.011)	(0.010)	(0.006)	(0.006)	(0.005)
Lagged bureauratic quality			−0.601***			−0.547***
			(0.018)			(0.010)
State FE		✓	✓		✓	✓
DV Mean, no change	0.104	0.104	0.104	0.109	0.109	0.109
DV St. Dev, no change	0.251	0.251	0.251	0.255	0.255	0.255
Adj. R^2	-0.000	0.003	0.319	0.000	0.007	0.293
Num. obs.	4362	4362	4362	14013	14013	14013
N Clusters				5293	5293	5293
Election year	2016	2016	2016	All	All	All

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Implication #1: Regression table

	Share of corrupt spending			Log(Share of corrupt spending + 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
A. Linear bureaucratic quality measure (Z-score)						
Bureaucratic quality	-0.014**	-0.014**	-0.017**	-0.012**	-0.012**	-0.014**
	(0.006)	(0.006)	(0.007)	(0.005)	(0.005)	(0.006)
B. Bureaucratic quality measure terciles (relative to first tercile)						
Bureaucratic Quality, Tercile 2	-0.009	-0.009	-0.009	-0.007	-0.007	-0.007
	(0.012)	(0.012)	(0.012)	(0.010)	(0.010)	(0.010)
Bureaucratic Quality, Tercile 3	-0.027**	-0.026*	-0.036**	-0.023**	-0.022*	-0.029**
	(0.012)	(0.014)	(0.018)	(0.010)	(0.011)	(0.014)
C. Bureaucratic quality measure quartile (relative to first quartile)						
Bureaucratic Quality, Quartile 2	-0.009	-0.003	-0.002	-0.006	-0.001	0.000
	(0.015)	(0.015)	(0.015)	(0.012)	(0.013)	(0.012)
Bureaucratic Quality, Quartile 3	-0.019	-0.021	-0.029*	-0.015	-0.018	-0.024*
	(0.015)	(0.014)	(0.015)	(0.012)	(0.012)	(0.013)
Bureaucratic Quality, Quartile 4	-0.029**	-0.030*	-0.042**	-0.025**	-0.025*	-0.034**
	(0.014)	(0.016)	(0.021)	(0.012)	(0.013)	(0.017)
State FE		✓	✓		✓	✓
Lottery FE		✓	✓		✓	✓
Demographic controls (decile bins)			✓			✓
Community radio indicator			✓			✓
Outcome Range	[0,0.794]	[0,0.794]	[0,0.794]	[0,0.584]	[0,0.584]	[0,0.584]
Outcome Mean	0.062	0.062	0.062	0.056	0.056	0.056
Outcome Std. Dev.	0.10	0.10	0.10	0.085	0.085	0.085
Num. obs.	448	448	448	448	448	448

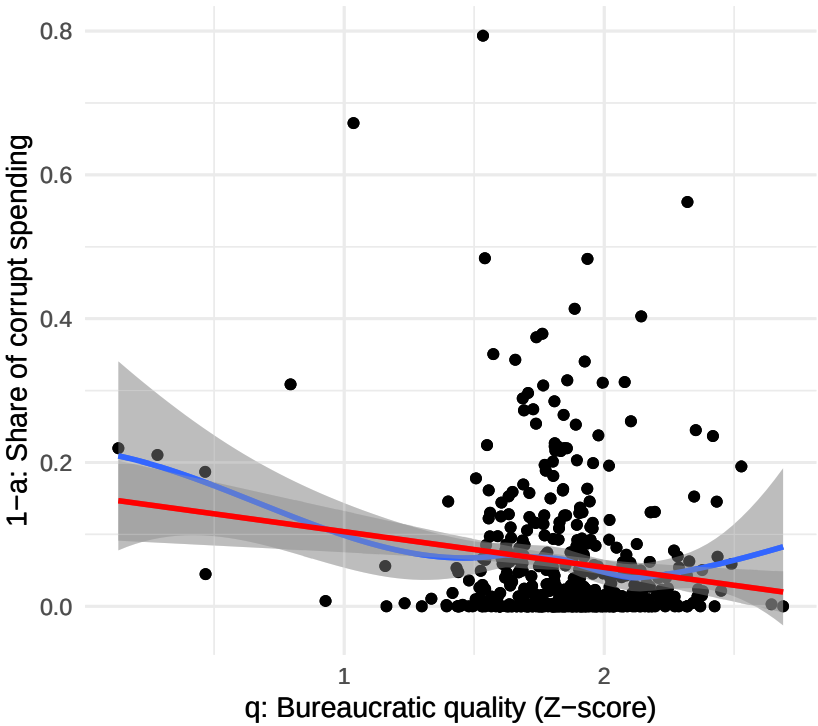
$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

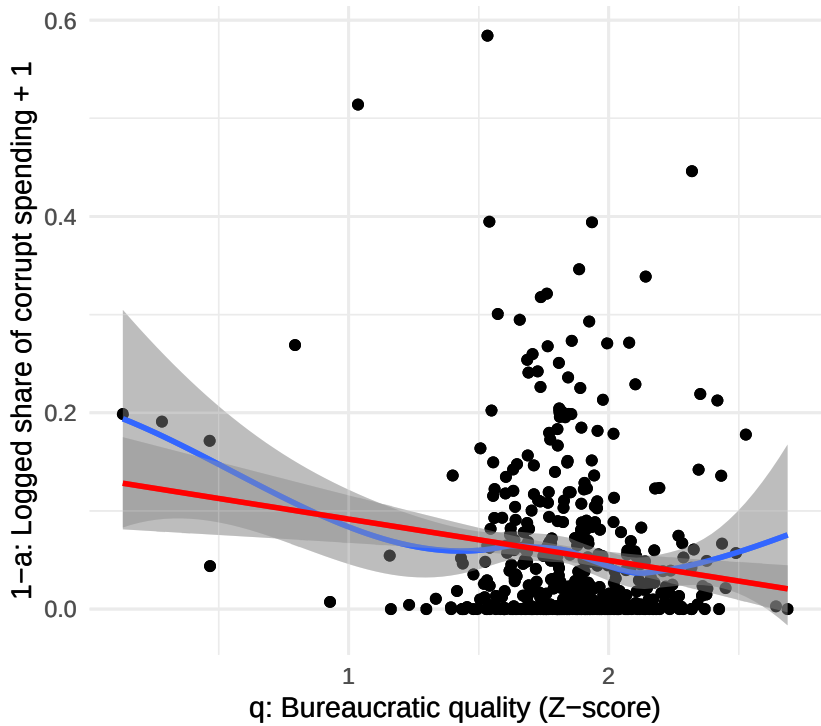
Implication #1: Decomposing sources of rents

	Share of spending								
	Granted to corrupt bids			Misallocated			Spent on overbudget projects		
Bureaucratic quality (Z-score)	−0.008	−0.007	−0.011*	−0.007**	−0.007**	−0.008*	0.001	0.001	0.001
	(0.005)	(0.005)	(0.006)	(0.003)	(0.003)	(0.004)	(0.001)	(0.001)	(0.001)
State FE		✓	✓		✓	✓		✓	✓
Lottery FE		✓	✓		✓	✓		✓	✓
Demographic controls (decile bins)			✓			✓			✓
Community radio indicator			✓			✓			
DV Mean	0.040	0.040	0.040	0.021	0.021	0.021	0.001	0.001	0.001
DV Std. Dev.	0.079	0.079	0.079	0.054	0.054	0.054	0.01	0.01	0.01
Range, DV	[0,0.672]	[0,0.672]	[0,0.672]	[0,0.584]	[0,0.584]	[0,0.584]	[0,0.143]	[0,0.143]	[0,0.143]
Adj. R^2	0.010	0.061	0.074	0.013	0.056	0.059	0.002	0.001	0.009
Num. obs.	448	448	448	448	448	448	448	448	448

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Implication #1: Graphical summary



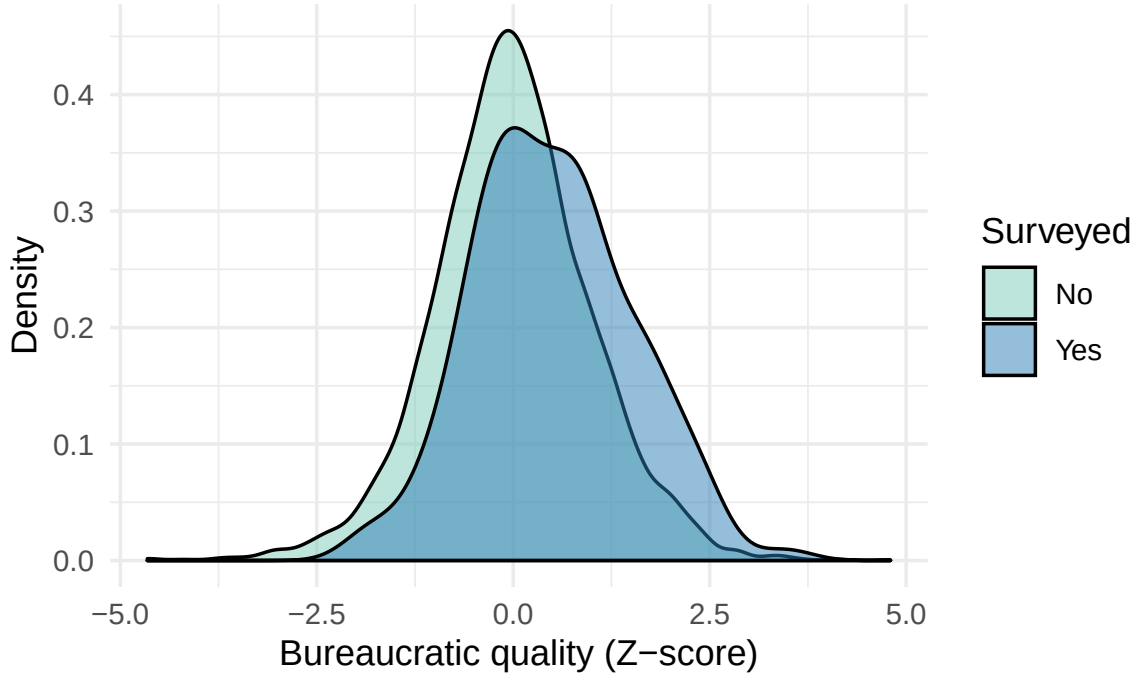


Implication #3: Vignettes

Arm	Vignette Text
Control	"Imagine that you live in a neighborhood similar to your own but in a different city in Brazil. Let's call the mayor of that hypothetical city in which you live Carlos. Imagine that Mayor Carlos is running for reelection. During the four years that he has been mayor, the municipality has experienced a number of improvements, including good economic growth and better health services and transportation." (Weitz-Shapiro and Winters, 2016, p. 266).
Clean	Control text + "Also, it is well known in the city that Mayor Carlos has not accepted any bribes when awarding city contracts."
Corrupt	Control text + "Also, it is well known in the city that Mayor Carlos has accepted bribes when awarding city contracts."

Vignette text for each treatment condition.

Implication #3: Municipal Sampling

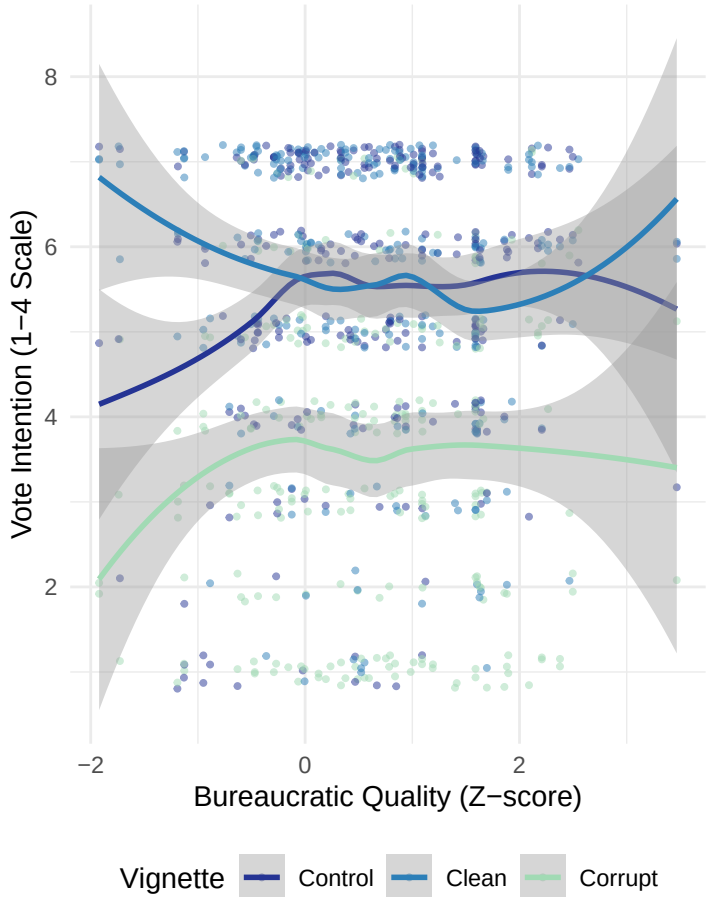


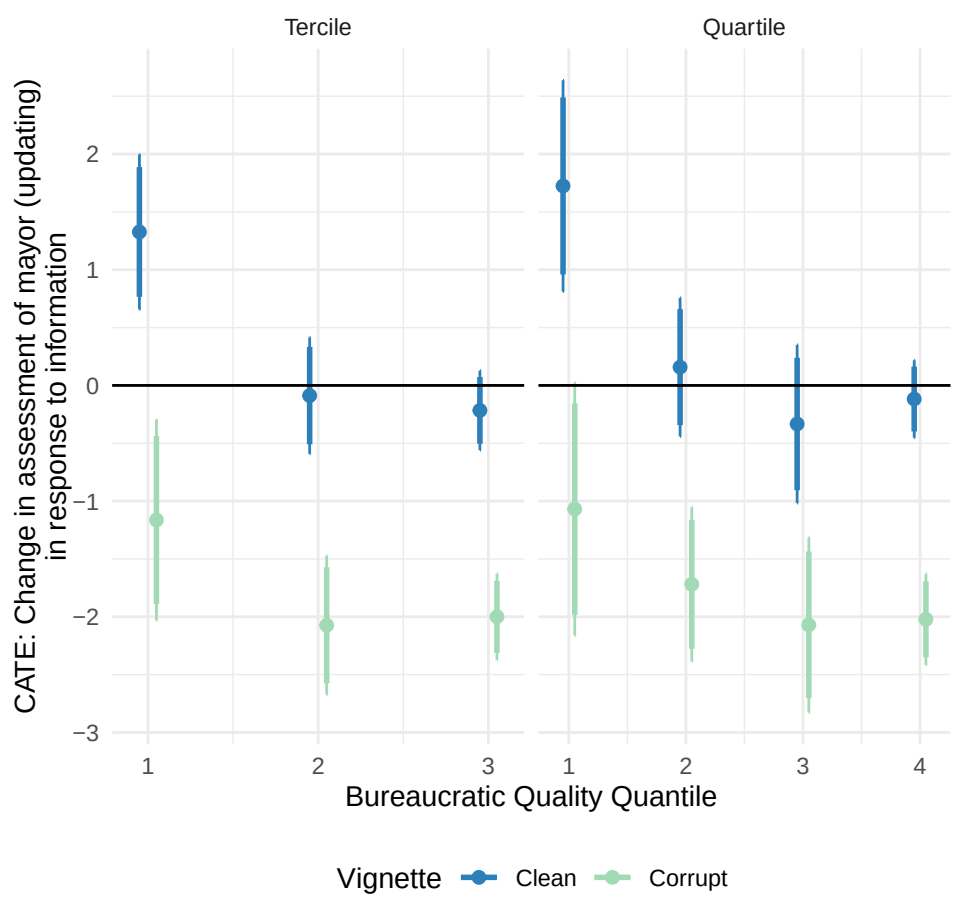
	Municipality surveyed in survey experiment					
	(1)	(2)	(3)	(4)	(5)	(6)
(Intercept)	0.025***			0.025***		
	(0.002)			(0.002)		
Bureaucratic quality (Z-score)	0.012***	0.001	0.001			
	(0.002)	(0.002)	(0.002)			
Bureaucratic quality (Z-scored), imputed				0.012***	0.001	0.001
				(0.002)	(0.002)	(0.002)
Adj. R^2	0.006	0.226	0.222	0.006	0.218	0.214
Num. obs.	5230	5230	5230	5507	5507	5507

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Implication #3: Including Corruption Treatment

At high levels of Q_m (in sample), corrupt behavior is off the equilibrium path and is assumed to be the incompetent type.





Implication #4: Incumbency Disadvantage

1. Politician allocation to private rents is decreasing in bureaucratic quality.

2. Term effects on politician allocation to rents are attenuated to zero at high levels of bureaucratic quality.

3. Voter learning from a "clean" signal is attenuated to zero at high levels of bureaucratic quality.

4. Incumbency disadvantage emerges at low levels of bureaucratic quality (in sample).
    - Extension of Klasnja and Titunik (2017).

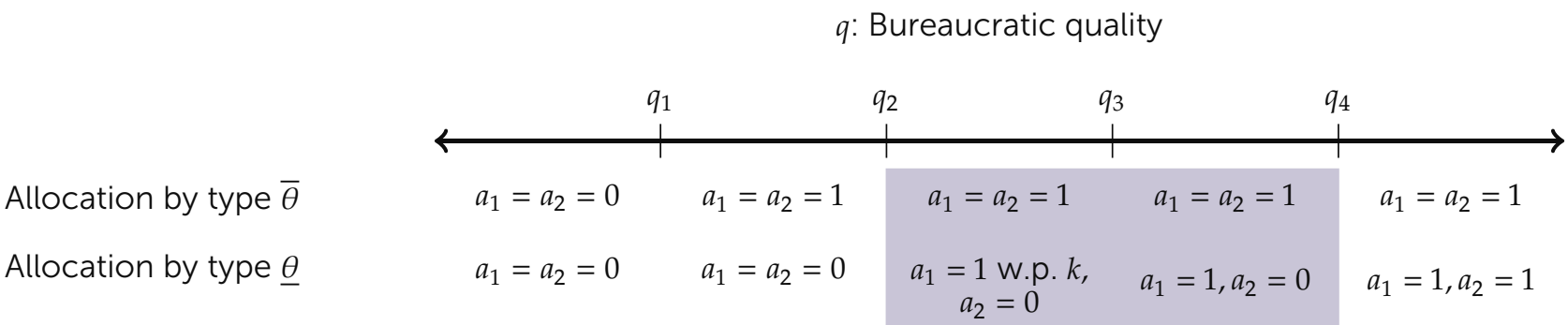
Measuring citizen voting behavior

Administrative electoral data on incumbent re-election.

Focus on one equilibrium implication on voting behavior: variation in incumbency disadvantage across levels of bureaucratic quality

- Documented in Brazilian mayoral races Klasnja and Titunik (2017)
- Measured directly from electoral returns in close election t and election $t+1$.

Incumbency disadvantage in the model: (unconditional) re-election rate <50%.



Prediction #4: Bureaucratic quality and incumbency disadvantage

Prediction: Incumbency disadvantage emerges at low levels of Q_m (in sample).

Purpose: Show that voters' retention decisions anticipate second-term shirking where it is most likely to emerge in equilibrium.

- Neither special cases predicts second-term shirking.

Test #4: Bureaucratic quality and incumbency disadvantage

Test: Conditional LATES on re-election in a close-elections RDD Klasnja and Titiunik (2017).

- For each quantile bin, b, estimand is:

$$\tau_b = E[Y_i(1) - Y_i(0)|X = c, B_i = b] = \lim_{x \downarrow c} E[Y_i|B_i = b] - \lim_{x \uparrow c}[Y_i|B_i = b]$$

- Estimator: Calonico et al. (2017) estimator, fit separately on each bin with optimal bandwidth from pooled sample.
- Prediction: $\tau_1 < 0$, $\tau_1 < \tau_2, \tau_3$ etc.

Issue: Whether a party wins re-election depends on:

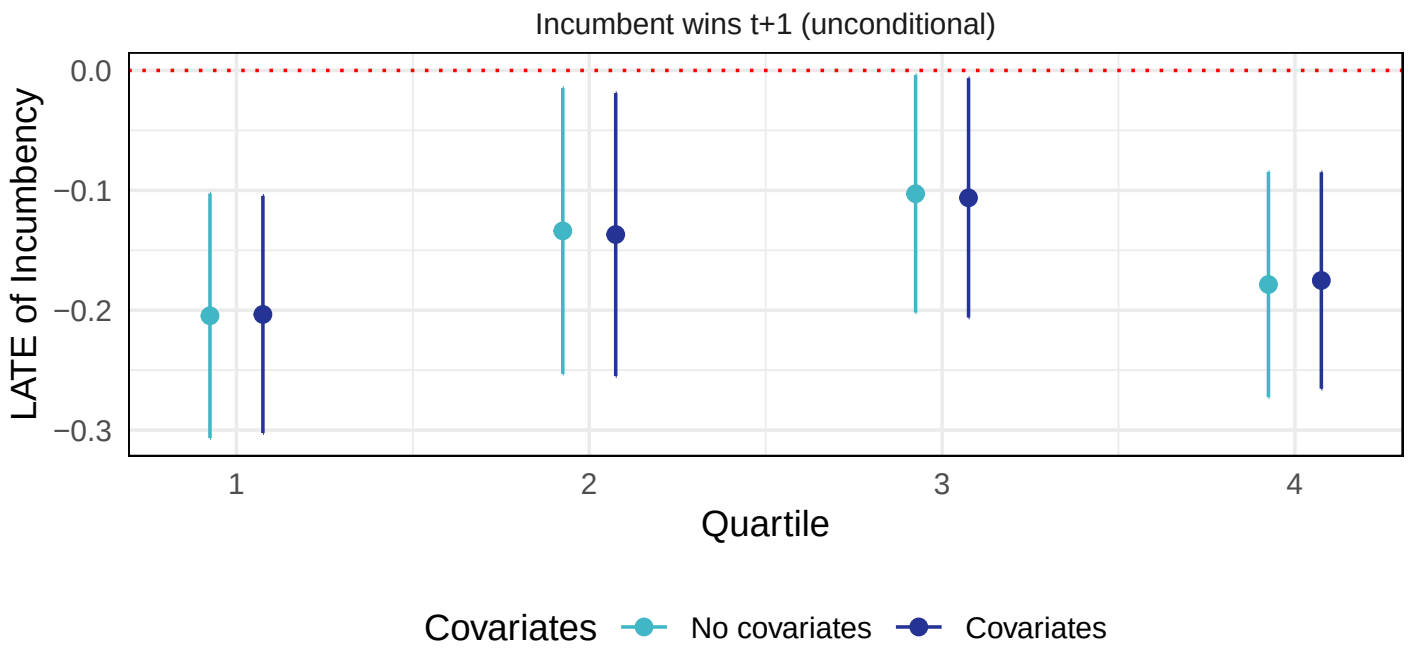
- Parties' decisions to contest next election.
- **Voters' behavior**.

Tradeoff between identification, interpretation guides results presented.

Result #4a: Unconditional incumbency disadvantage

Greatest incumbency disadvantage point estimate in lowest quartile of bureaucratic quality, but...

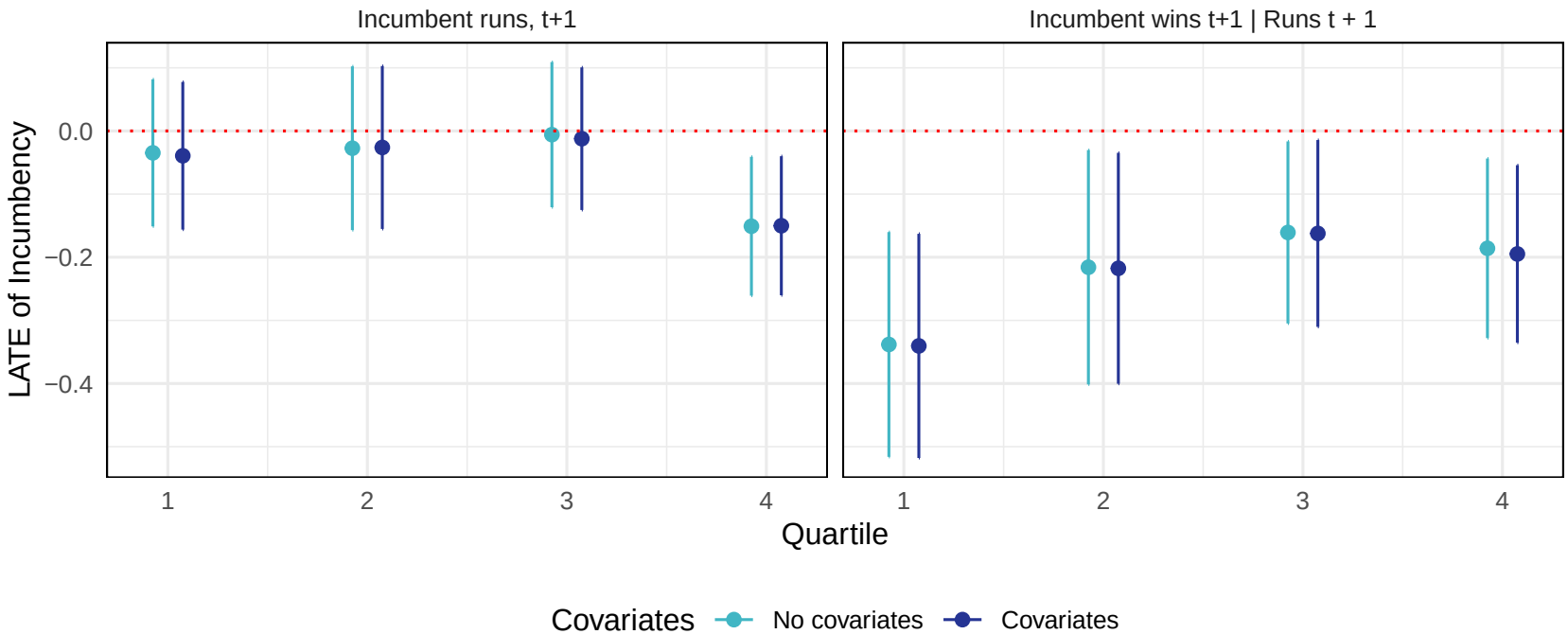
- Results are ambiguous.
- Cannot attribute this as an outcome of **voter** behavior (yet).



Result #4b: Decomposing incumbency disadvantage

Conditional on incumbent running, voters punish incumbents at higher rates.

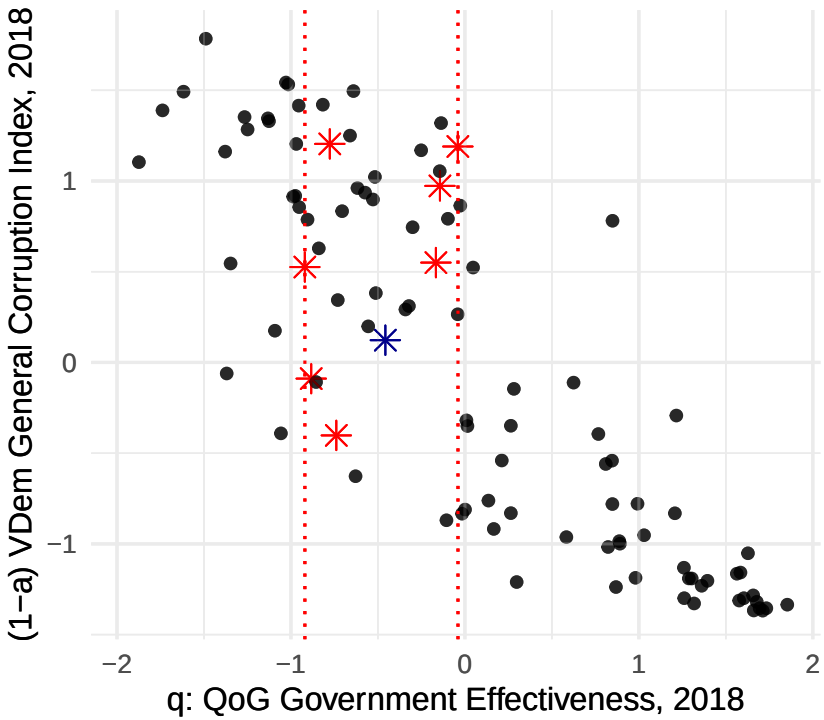
- Consistent with (some degree) of accurate voter anticipation of shirking.
- ... but prevalence of incumbency disadvantage at higher levels of bureaucratic quality inconsistent with general model (and alternatives).

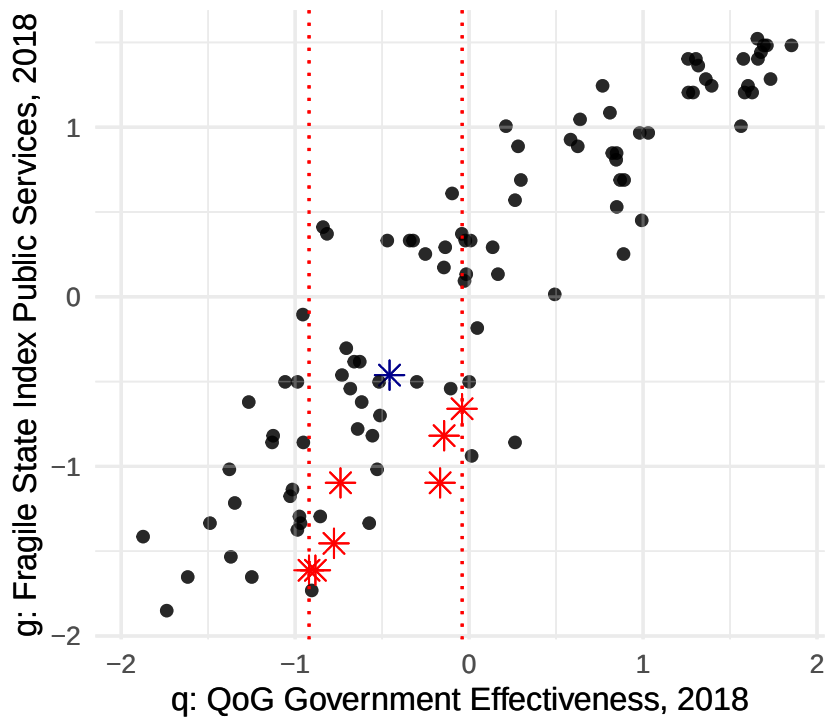


Where do we study information and accountability?

Studies of information and accountability concentrated in:

- Democracies with low-ish levels of bureaucratic quality, high-ish corruption, and low-ish public goods provision





Stars indicate countries with accountability experiments. All variables are standardized.

Cumulated Evidence

Recent null meta-analytic findings from field experiments on information and accountability Dunning et al. (2019), Incerti (2019)

Meta-analyses estimate some weighted average of individual study estimates:

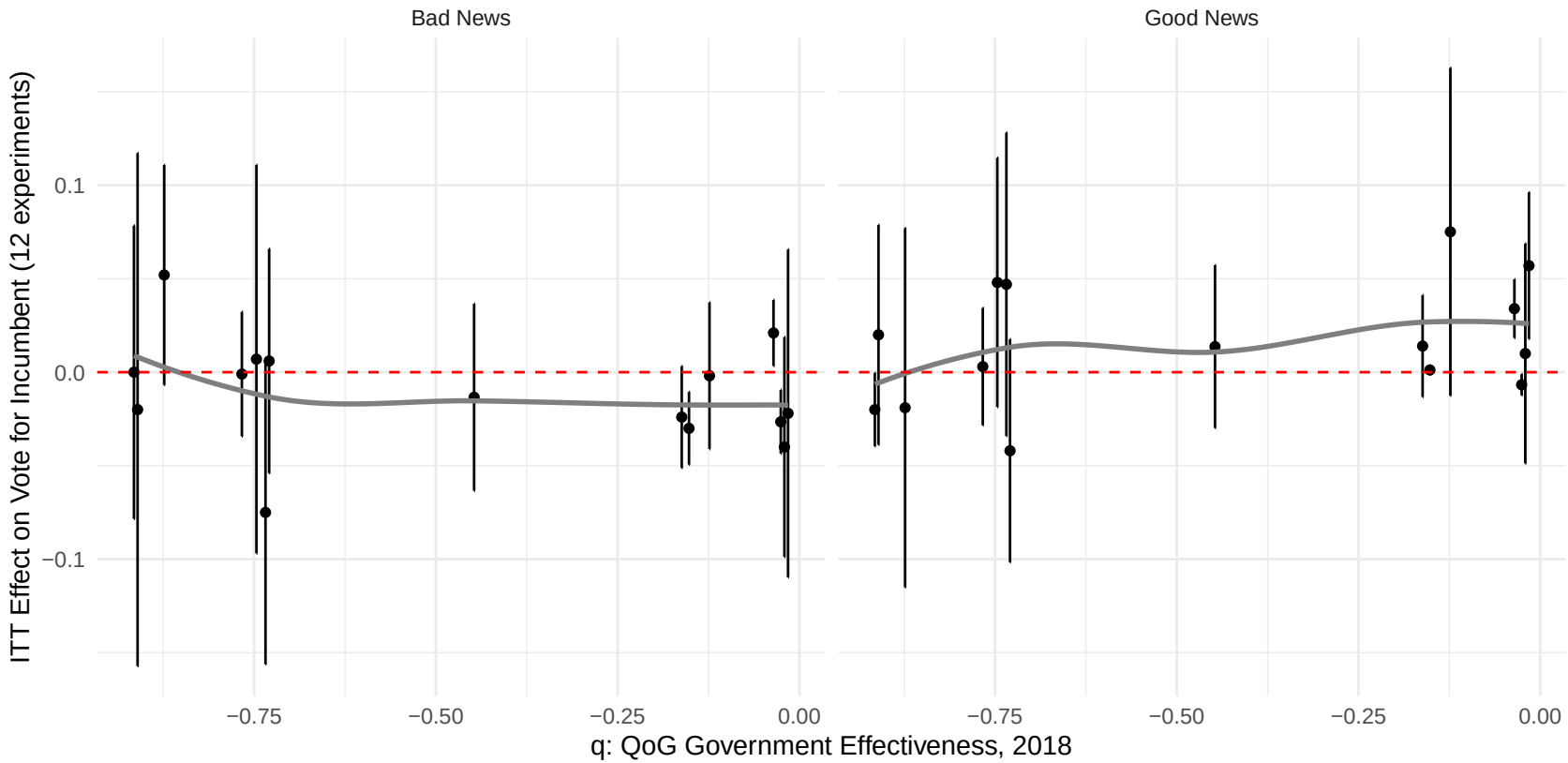
- ... but under this model, the "pooling" of study estimates should attenuate meta-estimates toward 0, even if voters are learning!

Absent better measures of sub-national bureaucratic capacity, we are left with 8 country-level measures.

- Examine 11 experiments, approximating 8 "clusters"

Suggestive evidence

Suggestive evidence of larger effects of information at higher levels of q (in sample).



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ITT estimates of “good” or “bad” news as a function of QoG measure of bureaucratic quality.

Limitations

1. Better measurement of subnational bureaucratic quality important for developing further tests of the argument.

2. Selection (into study) on equilibrium outcomes potentially limits learning from partial equilibrium tests.
    - Hard to know where we are in the parameter space, various observational equivalencies.

3. Role of theory in definition of external validity. Slough and Tyson (2022a, b)

Research agenda

Everyday bureaucratic actions and political outcomes:

- Service provision
- Implementation
- State data production

Theoretical foundations of the reduced-form

- Evidence accumulation of external validity
- Causal mechanisms and reduced-form causal estimands
- Mapping between theoretical models and causal estimands