Bureaucracy and Development

Introduction

"Bureaucratics" © Jan Banning courtesy Galerie Fontana, Amsterdam

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What do we mean by "bureaucracy"?

In the context of this course, **bureaucracy = workers in the public sector**.

▶ It refers to non-elected public administration;
▶ and civil servants in general (regardless of their contract or tenure).

As such, bureaucrats stand in contrast to

▶ private sector workers;
▶ elected officials;
▶ politicians (in or out of office).

The links between bureaucracy and development

Does economic development require less bureaucracy? More bureaucracy?

How to define a normatively desirable bureaucracy?

Weberian bureaucracy

Max Weber (1864-1920) suggests an *ideal type* of "rational bureaucracy" that can be understood as a body of public servants that:

▶ is hierarchical, rule-bound, disciplined, impersonal, meritocratic;

▶ possesses a specific set of professional competences;

▶ and operates outside the sphere of politics.

An *ideal type* is a model against which one can contrast empirical cases.

▶ Not meant to be a positive description nor a normative prescription;

▶ Yet, it became synonym to "good" bureaucracy in liberal democracies.

Weberian bureaucracy and economic development

Let's take the Weberian rational bureaucracy as a starting point.

► Research question: Does it correlate with economic growth?

► How would you operationalize this concept?

One alternative: ask some local experts.

► Benefits of this strategy? Limitations?

Expert evaluation in the V-Dem dataset

The evaluative indicators in the project Varieties of Democracy (V-Dem) are based on *de facto* state of affairs, as reported by country experts.

► "Country experts are individuals with expertise on topics relating to democracy within a specific country. They are the ones that fill in our annual surveys. To ensure coders' safety and independence, their identities are anonymous. V-Dem never confirms nor denies the identities of Country Experts in any form." (from their FAQ)

Besley et al. (2022)

Measure 1: Meritocratic recruitment

To what extent are appointment decisions in the state administration based on personal and political connections, as opposed to skills and merit? (source)

0 All appointment decisions (...).

1 Most (...).

2 Approximately half (...).

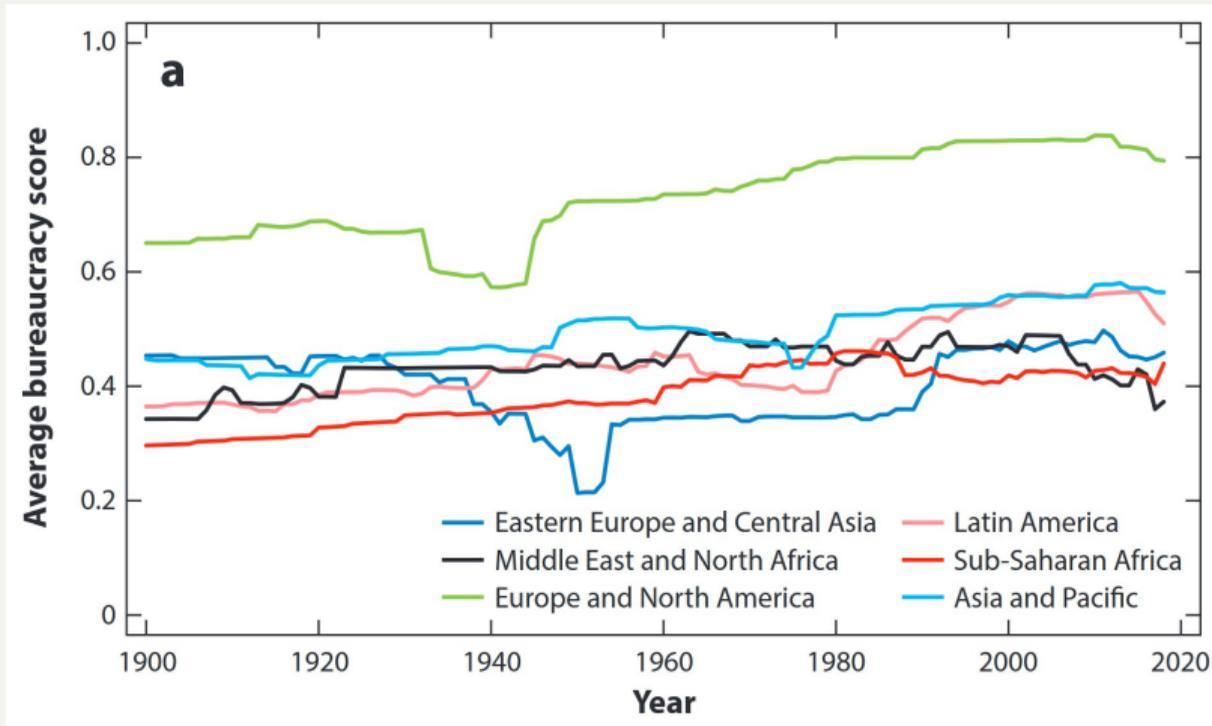**3** Only few (...)

4 None (...).

Besley et al. (2022)
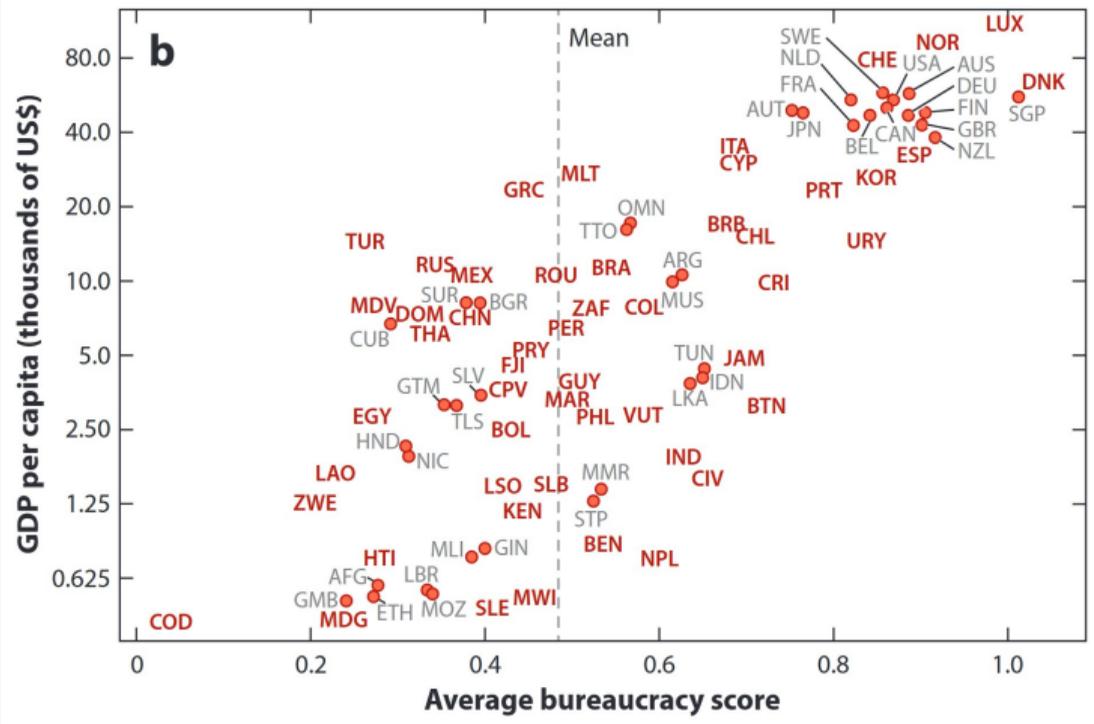
Measure 2: Rigorous, impartial administration

Are public officials rigorous and impartial in the performance of their duties? (source)

0 The law is not respected by public officials (...).

1 The law is weakly respected (...).

2 The law is modestly respected (...).

3 The law is mostly respected (...).

**4** The law is generally fully respected (...).

Development and bureaucratic quality (Besley et al. 2022)

Figure a. Average bureaucracy score by region, 1900–2020.

Legend:
- Eastern Europe and Central Asia
- Middle East and North Africa
- Europe and North America
- Latin America
- Sub-Saharan Africa
- Asia and Pacific

Development and bureaucratic quality (Besley et al. 2022)

Development and bureaucratic quality (Besley et al. 2022)
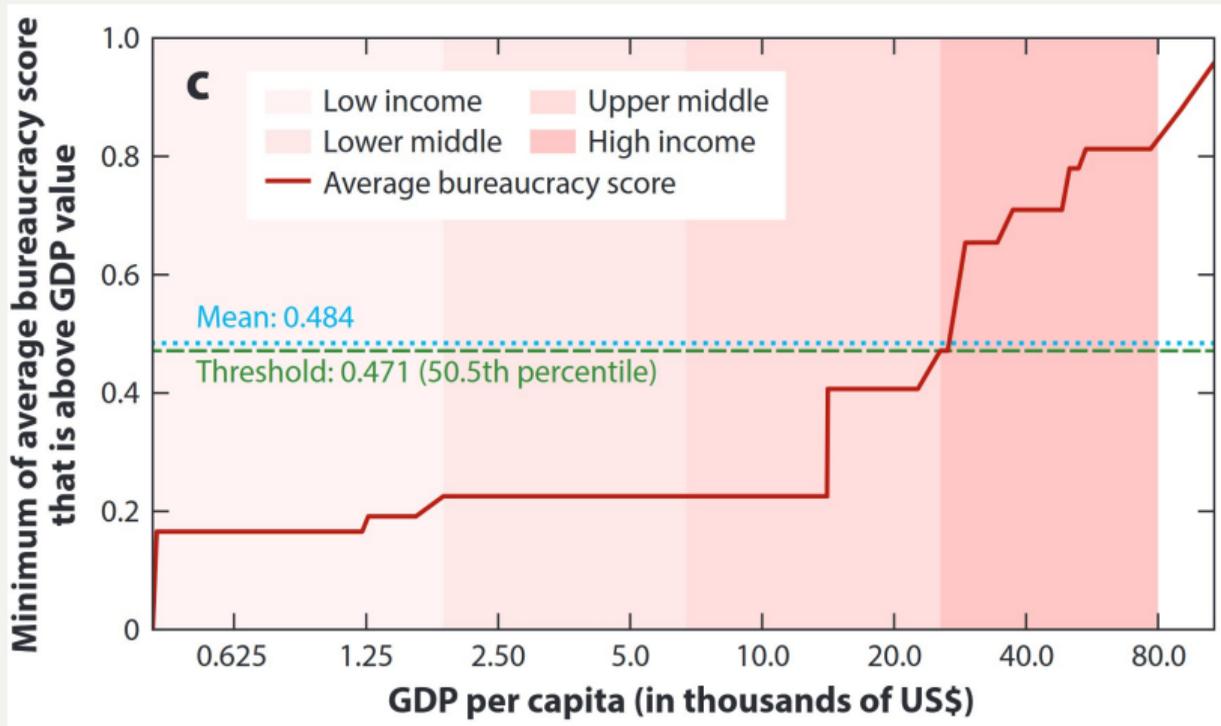
Besley et al. (2022)

Some empirical regularities

Taking stock of these pieces of suggestive evidence:

► Bureaucratic quality is persistent;
► Positive correlation between bureaucratic quality and economic development;
► There are no rich countries that have not built professional bureaucracies.

What can we conclude?

► While causality is not obvious, the topic should be taken seriously;
► Precise mechanisms demand theoretical models and empirical identification.

Economics and organizations

Economic models tend to assume away the complexity inside organizations.

► Firms, bureaus, nations are often taken as atomistic units;
► Their structure collapses into a rational, informed, optimizing decision-maker;
► No scope for information asymmetry, conflicting goals, moral hazard, etc.

Mental models matter even when bureaucracy is not the subject matter.

► Economics tend to focus on *policy design* rather than its *implementation*;
► *Should your research design and/or implications change in a non-atomistic world?*

Overview of the course

Objective: Introduce formal models in organizational economics, review evidence.

Outline: Discussions organized around core topics:

1. How to recruit and select bureaucrats;
2. How to design incentive structures;
3. How to manage and monitor;
4. How much to delegate.

Part 1:
Recruitment

How to attract and select competent bureaucrats?

Two plausible, complementary propositions:

A. Offer well-paid positions;

B. Screen for merit.

Can we improve outcomes in developing countries by improving A and B?

Remuneration in public vs. private sectors

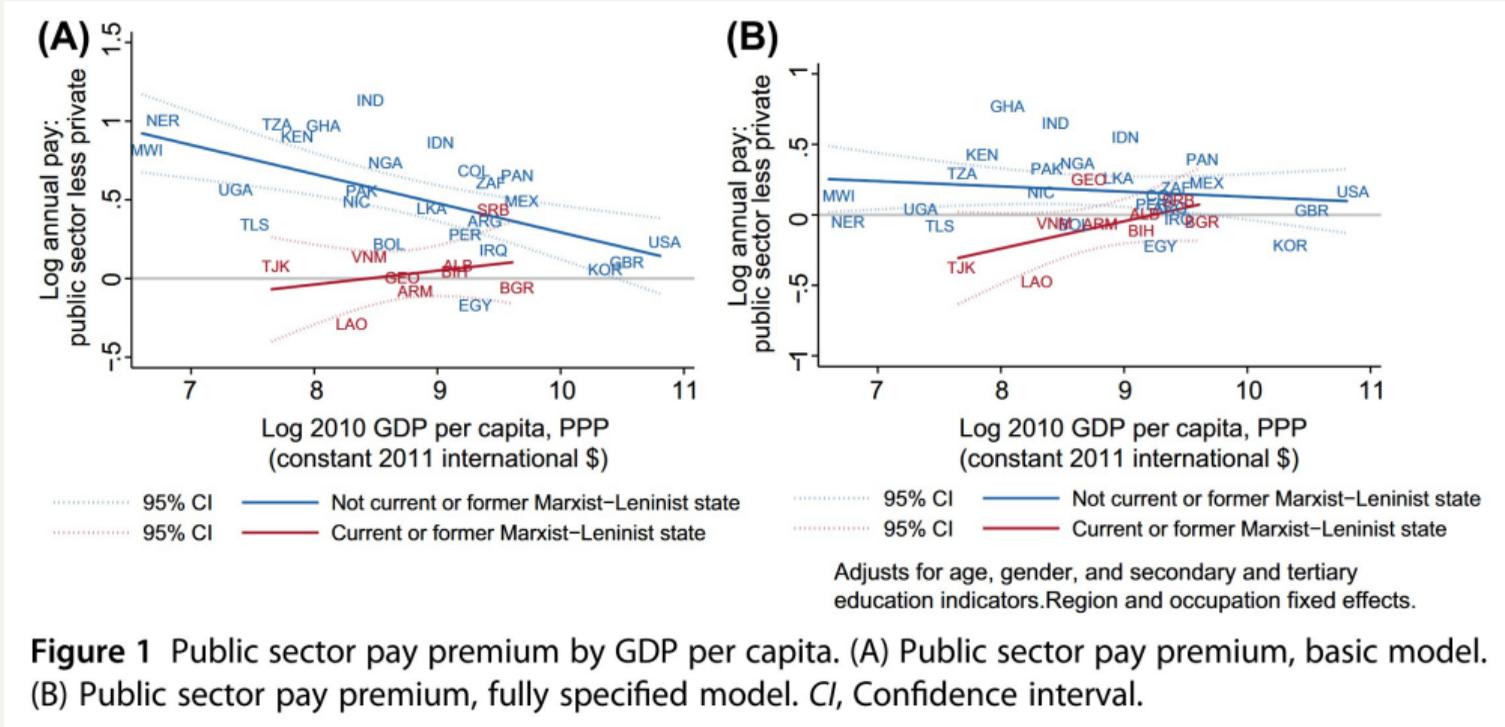**Do public sector workers earn less than workers in the private sector?**

▶ Authors compile household survey microdata from 32 countries.

We begin by estimating the public sector wage premium, separately for each country c, as follows:

$$y_{irc} = \alpha_{rc} + \beta_c Public_{irc} + \gamma_c X_{irc} + \varepsilon_{irc}$$

where i indexes an individual, c indexes a country, r indexes a region within a country, $Public_{irc}$ is a dummy for public sector, and X_{irc} are vector of controls (age, gender, secondary education, tertiary education, and occupation dummies). We begin with log wages as the outcome variable but also consider other aspects of compensation, such as pensions, health benefits, and job tenure. The key coefficient of interest is β_c,

Public sector pay premium by GDP (Finan, Olken, and Pande 2017)

Figure 1 Public sector pay premium by GDP per capita. (A) Public sector pay premium, basic model. (B) Public sector pay premium, fully specified model. CI, Confidence interval.

Finan, Olken, and Pande (2017)

Key statistical regularity

On average, there tend to be a monetary *premium* in the public sector.

► The unadjusted premium is negatively correlated with GDP

► The adjusted premium, not so much. *Why?*

The wage premium for public sector workers compounds with other benefits.

► They are more likely to have health insurance, pension plans;

► and tend to have longer job tenures.

Discussion

At face value, monetary incentives alone do not explain quality gaps in poor countries.

▶ The public sector seems to attract educated workers, who enjoy a wage premium.

Policy implications?

▶ *What are we missing with these measures?*
▶ *Counterfactual? Would performance be better/worse under lower pay?*
▶ *Which research design would you propose to study that?*

Dal Bó, Finan, and Rossi (2013)

Experimental evidence on monetary benefits

To clarify ideas, consider a simple framework where:

- ▶ if higher quality candidates demand higher compensation,
- ▶ higher wages are necessary for attracting *and* hiring them,
- ▶ but might attract candidates with weaker public service motivation.

Challenge: applicant pool, wages, and selection are endogenous.

Dal Bó, Finan, and Rossi (2013)

Experimental evidence on monetary benefits

Context: recruitment drive for public sector jobs in Mexico in 2011.

▶ Different salaries were announced randomly across recruitment sites;

▶ job offers were randomized among eligible applicants.

Screening based on measures of intellectual ability, personality, and motivation.

Dal Bó, Finan, and Rossi (2013)

The recruitment drive

Mexico's Regional Development Program (RDP)

► seeks to increase the presence of the State in marginalized regions;
► based on a network of around 50 coordinators supervising 350 community agents;
► who identify the needs of the community and report to the federal government.

Randomization protocol

► 2 wage levels announced across 106 recruitment sites (3,750 or 5,000 pesos).

Effects of higher wages on applicant profile (Dal Bó, Finan, and Rossi 2013)

|	Observations (1)	Control (2)	Treatment effect (3)	Randomization inference *p*-value (4)	FDR *q*-value (5)
Number of applicants	106	18.093	4.714 [4.430]	.36	n/a
Panel A: Market skills					
Wage in previous job	1,572	3479.667	819.154 [174.703]***	.00	0.00
Previous job was white collar	1,170	0.243	0.069 [0.029]***	.01	0.02
Currently employed	2,225	0.104	0.053 [0.019]***	.01	0.02
Has work experience	2,212	0.459	0.167 [0.048]***	.00	0.00
Years of experience in past 3 spells	2,212	1.185	0.284 [0.171]	.08	0.06
IQ (Raven test)	2,229	8.488	0.506 [0.223]**	.01	0.02
Raven score ≥ 9	2,229	0.572	0.091 [0.039]**	.01	0.02
Chose dominated risk option	2,213	0.431	-0.064 [0.025]**	.01	0.02
Years of schooling	2,198	14.552	0.091 [0.308]	.40	0.14

Effects of higher wages on applicant profile (Dal Bó, Finan, and Rossi 2013)

	Observations (1)	Control (2)	Treatment effect (3)	Randomization inference p-value (4)	FDR q-value (5)
Panel A: PSM traits					
PSM index	2,074	0.000	0.092 [0.046]**	.05	0.09
Attractiveness	2,217	2.803	0.070 [0.041]*	.05	0.14
Commitment	2,170	3.316	0.045 [0.035]	.15	0.18
Social justice	2,180	3.646	0.075 [0.026]***	.01	0.04
Civic duty	2,158	3.924	0.027 [0.033]	.25	0.22
Compassion	2,168	3.001	0.066 [0.031]**	.04	0.14
Self-sacrifice	2,168	3.687	0.039 [0.034]	.15	0.18

# Effects of higher wages on acceptance (Dal Bó, Finan, and Rossi 2013)

	Accepted (1)	Accepted (2)	Rejected (3)	Not reachable (4)
High-wage offer	0.151 [0.054]***	0.160 [0.054]**	−0.017 [0.034]	−0.135 [0.054]***
Characteristics				
Male		−0.080 [0.058]		
Years of schooling		−0.022 [0.008]**		
High IQ		−0.017 [0.053]		
Wage in previous job > 5,000 pesos		−0.007 [0.067]		
Big 5 index		0.042 [0.038]		
PSM index		−0.024 [0.044]		
Mean of dependent variable	0.55	0.55	0.13	0.32
Observations	350	343	350	350
R-squared	0.10	0.12	0.09	0.13

Effects of higher wages on acceptance (Dal Bó, Finan, and Rossi 2013)
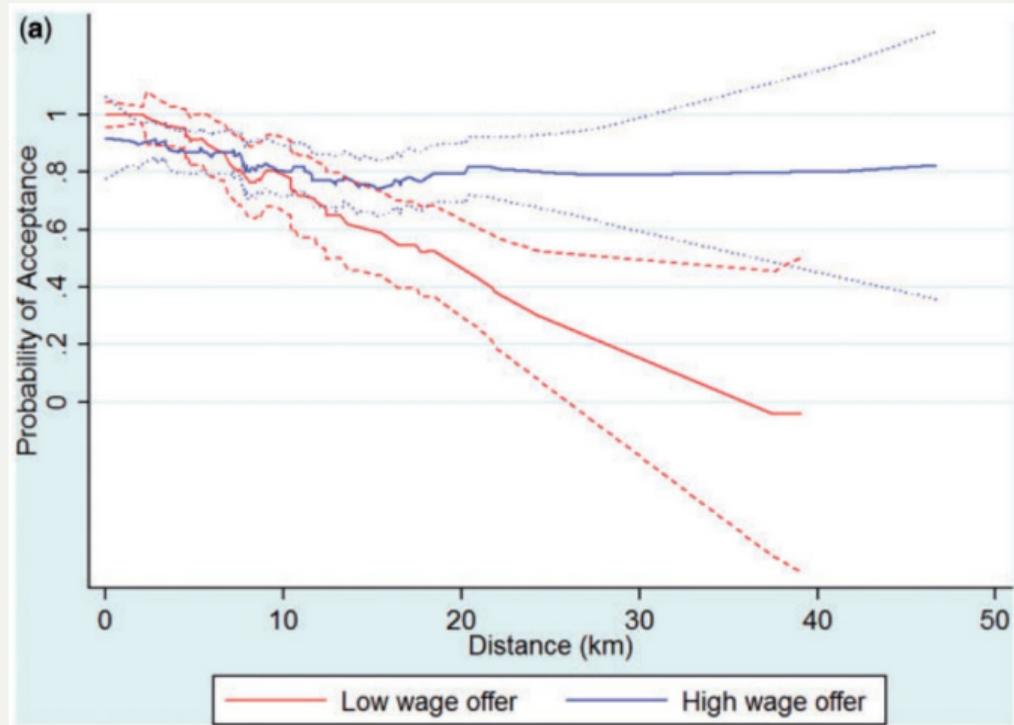
Effects of higher wages on acceptance (Dal Bó, Finan, and Rossi 2013)
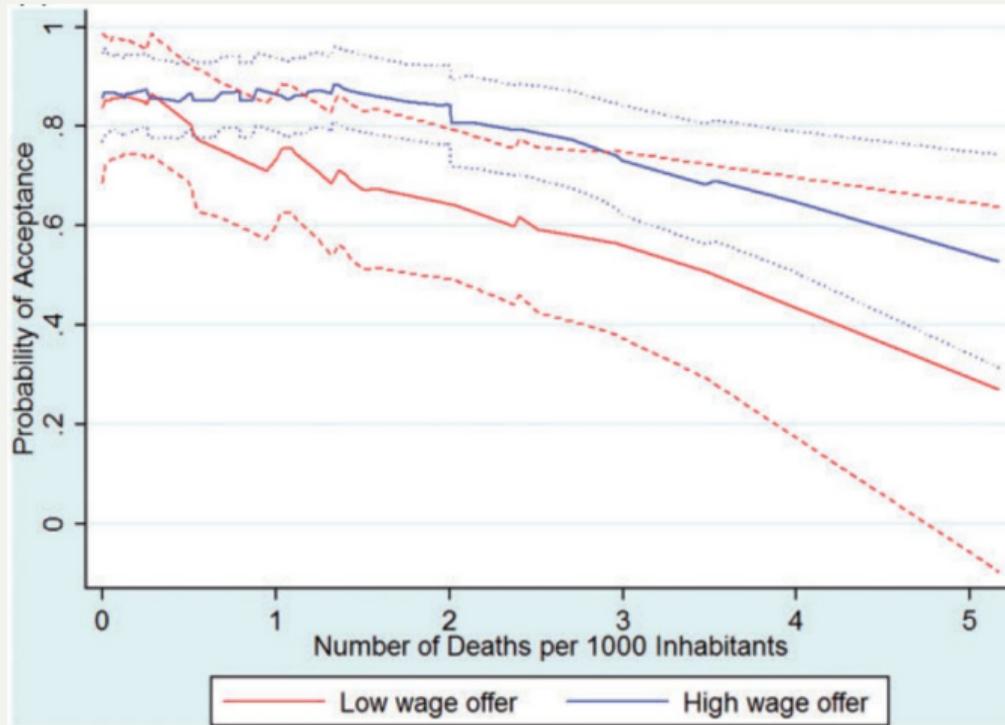
Dal Bó, Finan, and Rossi (2013)

Discussion

A 33% increase in wages led to

▶ 26% increase in applications and 35% increase in the conversion rate.

Higher wages attract better applicants

▶ as measured by their IQ, personality, and proclivity toward public sector work.

Higher wages attract better applicants in unpopular places.

The signals provided by monetary incentives

In the previous paper, the model assumed: more money = unambiguously good news.

Could monetary incentives provide a different signal?

Deserranno (2019)

How do agents interpret monetary incentives?

Context: recruitment of Community Health Promoters (CHP) in Uganda.

- ▶ Job has a **social component** (provide health education to community);
- ▶ and a **business component** (sell household products at a margin);
- ▶ Actual income depends on the business component.

Deserranno (2019)

Information experiment

Researchers introduced random variation in the statistic used to anchor earnings expectations.

► "CHPs earn at least 7,000 Ushs per month".
► "CHPs earn on average 30,000 Ushs per month".
► "CHPs earn up to 200,000 Ushs per month".

Note: 3,400 Ushs = 1 USD

Effects of information on perceptions about the job (Deserranno 2019)

Variables	Job is perceived as a "private goal" (CHPs do the job for the money) more than a "social goal" (CHPs do the job to improve health conditions) (1)	Perceived proportion of time allocated to sales (versus delivery of health services) (2)	Expected number of work hours in a "typical week" (3)	Perceived difficulty in selling products to community (4)	Perceived difficulty in improving people's health behavior (5)	Own perceived ability (6)
Medium-pay treatment	−0.0033	0.0027	−0.0638	−0.0285	−0.0315	0.0286
	(0.02)	(0.01)	(0.34)	(0.04)	(0.05)	(0.13)
High-pay treatment	0.0692	0.0450	0.1665	0.0008	−0.0236	0.1144
	(0.02)	(0.01)	(0.35)	(0.04)	(0.05)	(0.14)
Mean dep. var. in low-pay treat.	0.403	0.461	14.081	1.827	2.536	6.004
Observations (number of respondents)	3,067	3,014	2,769	3,055	3,056	2,901
R^2	0.282	0.293	0.384	0.266	0.217	0.259
p-value Med = High	0.002	0.000	0.544	0.444	0.867	0.483
p-value Low = Med = High	0.004	0.000	0.822	0.698	0.789	0.673

Effects of information on applicants pool (Deserranno 2019)

	Dependent variable = 1 if the potential candidate applies for the CHP position, = 0 if the potential candidate does not apply							
	Pro-social preferences		Interest in sales		Pro-social preferences		Interest in sales	
	Has ever volunteered in the health sector	Community driven	Owns a shop	Has ever sold health-related products	Has ever volunteered in the health sector	Community driven	Owns a shop	Has ever sold health-related products
TRAIT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TRAIT	0.2812	0.0865	0.0271	0.0503	0.2749	0.0703	0.0302	0.0834
	(0.05)	(0.02)	(0.03)	(0.04)	(0.04)	(0.02)	(0.03)	(0.04)
TRAIT × Medium-pay treatment	−0.0017	−0.0441	0.0233	0.1156	−0.0121	−0.0073	0.0188	0.0710
	(0.06)	(0.03)	(0.04)	(0.06)	(0.06)	(0.02)	(0.04)	(0.06)
TRAIT × High-pay treatment	−0.1621	−0.0882	0.0566	0.1587	−0.1078	−0.0139	0.0738	0.1318
	(0.06)	(0.03)	(0.05)	(0.06)	(0.06)	(0.02)	(0.04)	(0.06)
NOT_TRAIT × Medium-pay treatment					0.0197	0.0326	0.0167	0.0114
					(0.01)	(0.02)	(0.02)	(0.01)
NOT_TRAIT × High-pay treatment					0.0550	0.0768	0.0320	0.0303
					(0.02)	(0.02)	(0.02)	(0.02)
Fixed effects	Group	Group	Group	Group	Branch	Branch	Branch	Branch
Mean dependent variable in low-pay treatment	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144
Mean TRAIT in low-pay treatment	0.079	0.427	0.166	0.081	0.079	0.427	0.166	0.081

Effects of information on job performance (Deserranno 2019)

| Dependent variable | Dropout | | | Performance | | | | | |
| | CHP has dropped out within two years of recruitment | | | Monthly sales profits | | | Number of households visited per month | | |
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Medium-pay treatment	0.0818	0.0391	0.0827	−3.2843	−1.2695	−1.4013	−2.4506	0.6103	−1.1416
	−0.06	(0.06)	(0.07)	(2.53)	(2.49)	(2.85)	(3.51)	(3.56)	(3.65)
High-pay treatment	0.1359	0.0901	0.0953	−4.8243	−2.6637	−2.9253	−8.0721	−4.7896	−4.0527
	(0.06)	(0.06)	(0.07)	(2.97)	(2.97)	(3.04)	(3.55)	(3.53)	(3.65)
Amount donated		−0.1782	−0.1353		8.3973	8.4848		12.7578	10.9888
		(0.05)	(0.06)		(2.79)	(2.91)		(3.69)	(4.02)
Ever volunteered in the health sector			−0.1299			4.0673			4.0498
			(0.06)			(2.63)			(3.47)
Community driven			0.0460			−3.0813			−1.0483
			(0.06)			(2.68)			(3.44)
Owns a shop			0.0610			4.0161			6.3491
			(0.07)			(4.10)			(4.19)
Ever sold health-related products			−0.2300			0.8803			5.1064
			(0.07)			(4.32)			(3.89)
Controls	No	No	Yes	No	No	Yes	No	No	Yes
Mean of dependent variable in low-pay treat.	0.189	0.189	0.189	38.396	38.396	38.396	52.807	52.807	52.807

Deserranno (2019)

Results

The "high-pay" version of the job was perceived as less "social."

▶ When informed about maximum pay, people were more likely to see the job as a business, instead of something that improves the community.

Is this an undesirable feature?

▶ When hired, they tended to visit fewer households, drop out sooner.

Implications? Caveats?

Discussion

Taking stock: effects of compensation on the applicant pool.

▶ Public sector positions seem to offer a pay premium, on average;

▶ Experimental evidence that better-paid positions attract better candidates;

▶ Candidates might see high compensation as a signal of a "less social" job.

Taking the pool of applicants as given, how should governments screen?

"Reviewing the Examination Results", attributed to Qiu Ying (National Palace Museum)

Examining the examinations

A long history of selective public examinations.

- ▶ **China:** recruitment via written exams as early as 6th century;
- ▶ **UK:** Northcote-Trevelyan report in 1854;
- ▶ **US:** Pendleton Act in 1883.

Judging by its history, the least controversial of all questions we will discuss.

- ▶ *What can go wrong with merit-based selection?*

Busso et al. (2024)

The effects of hiring teachers with competitive exams

Teachers are arguably a key input in the human capital production function.

- ▶ In an attempt to improve teacher quality, countries implemented merit-based hiring;
- ▶ Idea is to select new teachers based on a common qualification ranking;
- ▶ Heavy weights on licensing requirements, diplomas, and standardized tests.

How much does it help in terms of student performance?

Busso et al. (2024)

Implementing merit-based hiring

Context: Large-scale reform in Colombia

▶ The reform raised teacher salaries;

▶ and imposed hiring based on scores from a national exam.

Objective was to replace a decentralized system subject to personal influence.

▶ Within 10 years, half of the teachers in the system were merit-based hires;

▶ Many contract teachers without tenure were replaced by new hires.
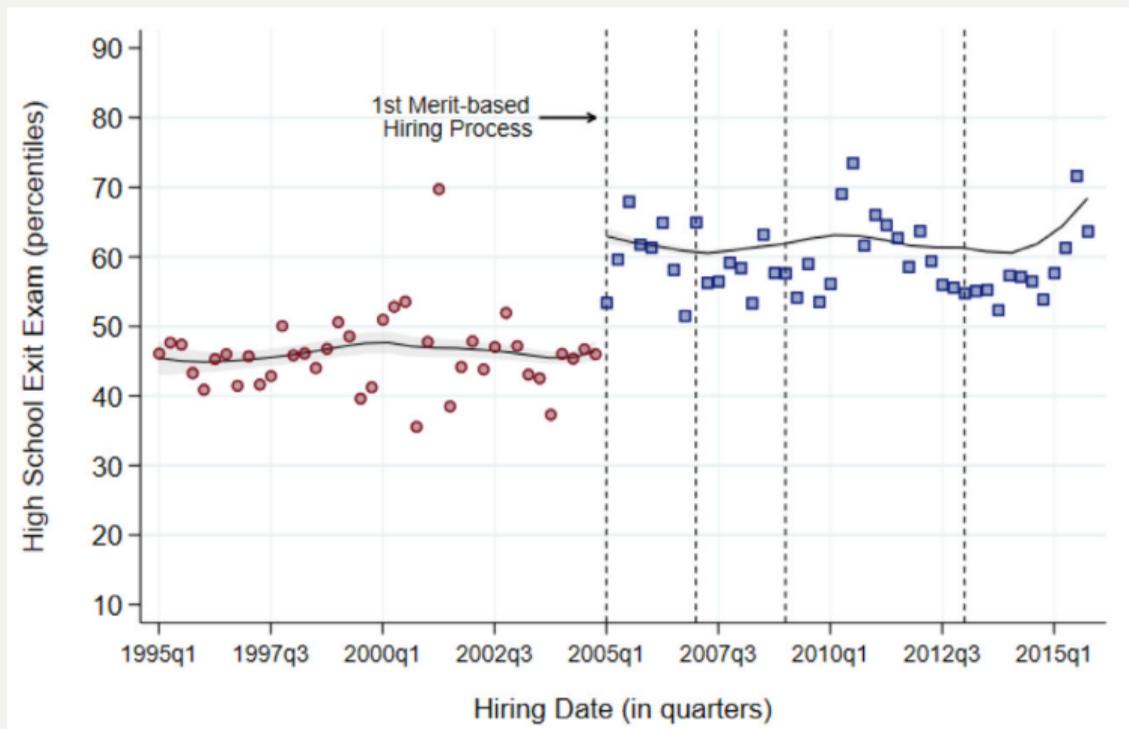
Busso et al. (2024)

Evaluating the policy

How could you evaluate the results of such a reform?

The new system applied only to new hires in public schools.

► Differences-in-differences: before-after gap for public and private.
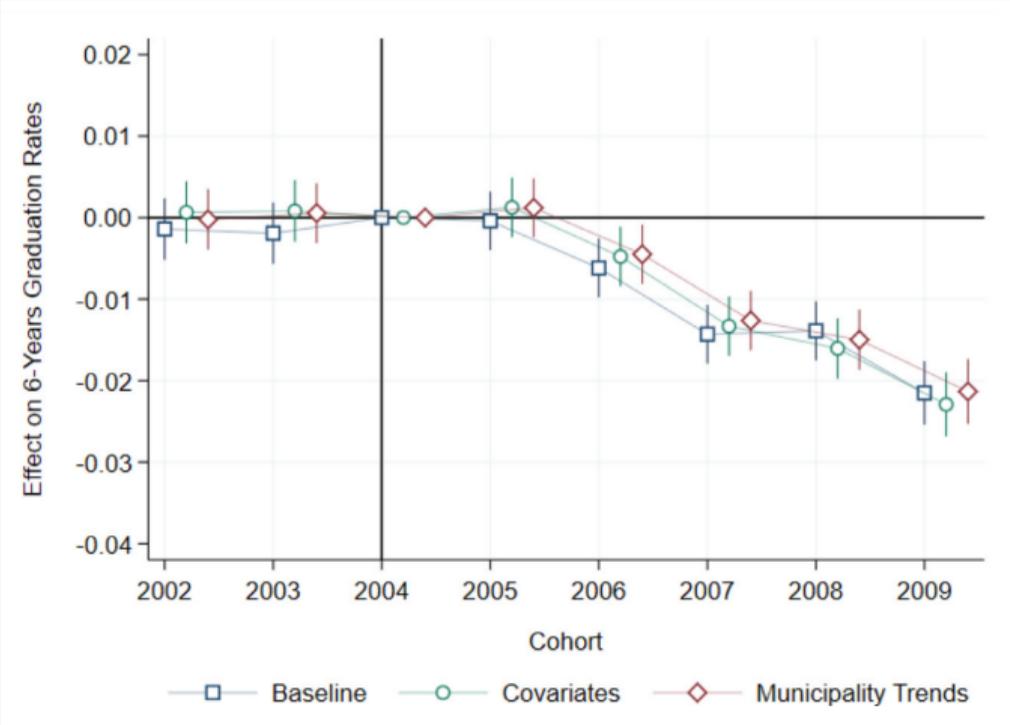
Assumptions?

Teachers' test scores by hiring date (Busso et al. 2024)

Effects on students' performance (high school exit exam) (Busso et al. 2024)
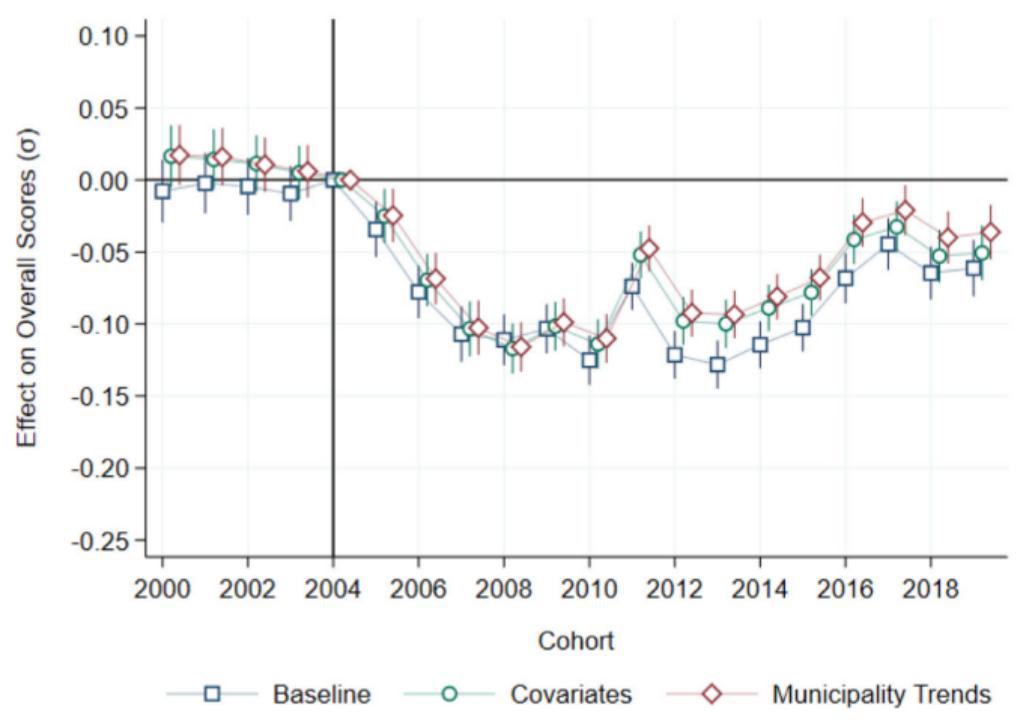
Effects on students' performance (college graduation) (Busso et al. 2024)
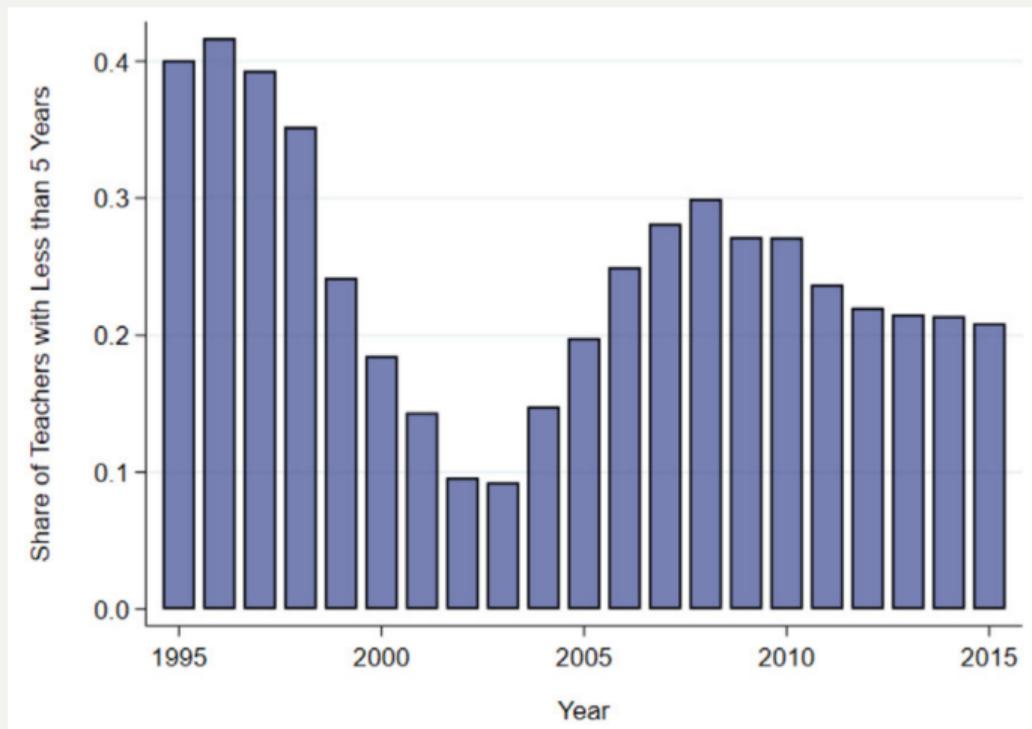
Busso et al. (2024)

Unintended consequences

What happened?

The focus on the national test appears to have overshadowed teaching experience.

- ▶ A policy informed by good intentions and small-scale interventions;
- ▶ But with negative consequences at scale.

Share of novice teachers in public schools (Busso et al. 2024)

Discussion

The introduction of a particular form of merit hiring ultimately hurt students.

▶ *Implications?*

Assume now that, instead, we found a small improvement in grades.

▶ *Would that be enough to justify the policy? Why/Why not?*

Examining the examinations, continued

Public sector jobs are highly demanded in poor countries.
- ▶ It is not uncommon for open positions to attract thousands of applicants;
- ▶ Selection rates under 1% in India, China, Brazil, and Southern Europe.

Good news: bureaucracies appear to be able to select from a wide pool.
- ▶ *What are the costs associated with (highly) competitive examinations?*

Applicants often spend years studying full-time to be competitive.
- ▶ *How can we estimate the net effect of the exam process on candidates?*
- ▶ *Which research design would you implement? Which outcomes would you track?*

The long-run costs of competitive exams

Context: Tamil Nadu (India)

► The government implemented a partial hiring freeze between 2001-06;

► 86% drop in vacancies in the affected sectors.

Data sources

► household surveys,

► government reports digitized by the author,

► administrative data from the Tamil Nadu Public Service Commission (TNPSC)
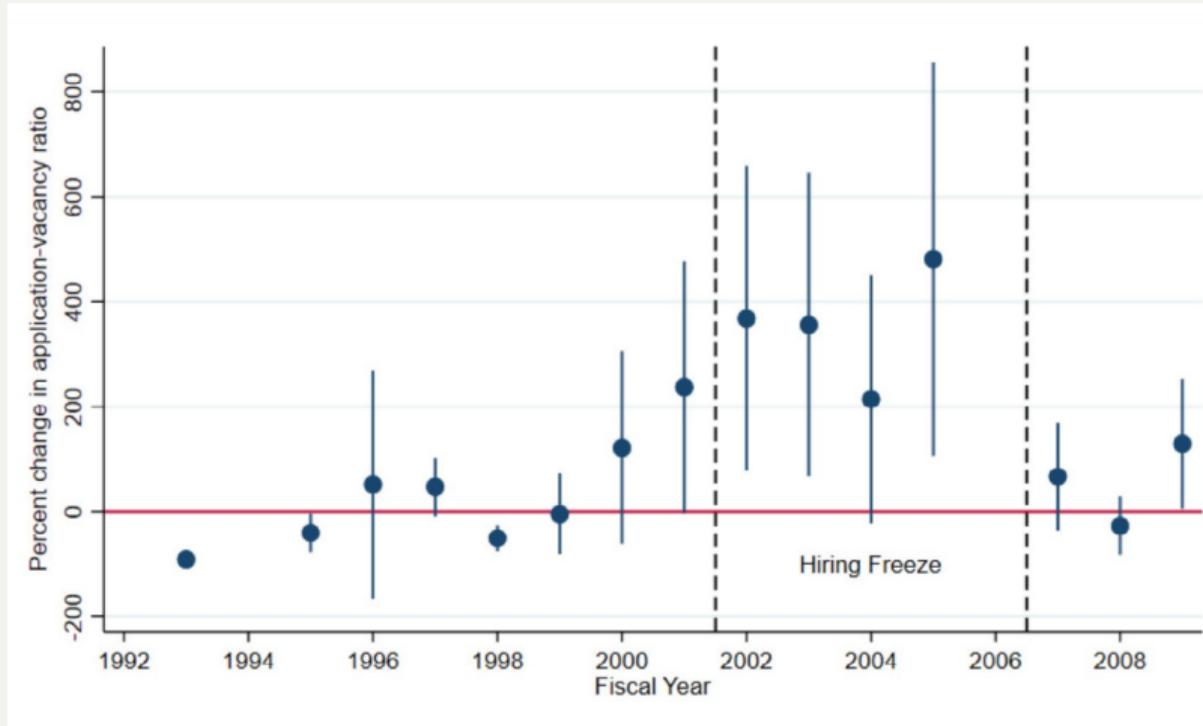
The hiring freeze

Freeze triggered by a crisis associated with pay raises for bureaucrats in the 1990s.

▶ The announcement was unexpected, and did not mention how long it would last.

Recruitment suspended for "non-essential posts" (except doctors, police, teachers).

▶ On average, 2.109 vacancies notified per year before the freeze, 302 during it.
▶ Typically unspecialized administrative posts ("section officer", "junior assistant");
▶ Usually recruited in large batches (many vacancies filled through a single exam);
▶ Represented about 80% of all vacancies and about 93% of all applications.

The immediate effects of the hiring freeze on competition (Mangal 2024)

How young workers responded to the hiring freeze (Mangal 2024)

	(1) Employed	(2) Unemployed	Out of the labor force (3) Education	(4) Other
Panel A: Variation in eligibility				
TN × Freeze × Eligible (β_1)	−0.082***	0.029	0.023	0.004
	(0.030)	(0.047)	(0.034)	(0.007)
TN × Freeze × Ineligible (β_2)	0.010	−0.008	−0.004	0.003
	(0.012)	(0.008)	(0.003)	(0.006)
$\beta_1 = \beta_2$ *p*-value	0.000	0.451	0.435	0.953
Mean, TN before Freeze	0.855	0.063	0.056	0.026
Observations	115,093	115,093	115,093	115,093
Panel B: Variation in exposure by cohort				
TN × Freeze × High Exposure Cohort (β_1)	−0.104***	0.055	0.036	−0.003
	(0.038)	(0.036)	(0.028)	(0.008)
TN × Freeze × Low Exposure Cohort (β_2)	−0.019	0.036	−0.035	−0.000
	(0.049)	(0.035)	(0.045)	(0.007)
$\beta_1 = \beta_2$ *p*-value	0.068	0.704	0.143	0.792
Mean, TN before Freeze	0.556	0.185	0.246	0.012
Observations	27,546	27,546	27,546	27,546

Notes: The table presents estimates of the heterogeneity of the treatment effect along two distinct axes of exposure to the hiring freeze. Panel A compares impacts on individuals with a college degree (Eligible) against those with less than a high school degree (Ineligible), using the specification outlined in Eq. (7). Panel B compares individuals in younger, higher exposure cohorts (i.e. who were between the ages of 17–21 in 2001) with older, lower exposure cohorts (i.e. who were between the ages of 22–26 in 2001), using the specification from Eq. (8). Coefficients are

Estimating long-term effects on candidates

▶ **High exposure:** cohorts aged 17–21 in 2001 and **low exposure:** 22–26;

▶ **Comparison group:** cohorts aged 30–35 in 2001.

$$y_{it} = \beta_1 \left[TN_{s(it)} \times \text{HighExposure}_{c(it)} \right] + \beta_2 \left[TN_{s(it)} \times \text{LowExposure}_{c(it)} \right] +$$
$$\delta_1 \left[\text{HighExposure}_{c(it)} \right] + \delta_2 \left[\text{LowExposure}_{c(it)} \right]$$
$$+ \zeta_{s(it)} + \gamma_{c(it)} + \nu_{g(it)} + \epsilon_i \tag{10}$$

Here, y_{it} refers to the outcome for individual i measured in month t. As before, $s(it)$ is an indicator for states, and $c(it)$ is an indicator for cohorts. This specification is estimated using the synthetic difference-in-difference estimator (Arkhangelsky et al., 2021). Standard errors are clustered at the state $\times$ cohort level.[36]

Long-term effects on candidates (Mangal 2024)

Data Source: Consumer Pyramids Household Survey, 2014–2019.

	TN × High Exposure (β_1)	TN × Low Exposure (β_2)	p-value $\beta_1 = \beta_2$	Mean	Individuals	Obs.
Panel C: Income and expenditure						
Log labor income	0.021	0.039	0.577	9.825	28,134	940,270
	(0.033)	(0.031)				
Log total HH expenditure	−0.061***	−0.000	0.000	9.434	37,520	1,434,193
	(0.019)	(0.016)				
Log expenditure per earning member	−0.096**	−0.041	0.032	9.167	37,429	1,418,208
	(0.047)	(0.051)				
Panel D: Household labor supply						
# other adults in HH	0.360***	0.323*	0.804	3.097	23,449	229,106
	(0.131)	(0.171)				
# other employed HH members	0.147***	0.054	0.081	0.299	18,607	143,385
	(0.042)	(0.051)				
Fraction other adults employed	0.033*	0.007	0.101	0.110	18,557	142,688
	(0.018)	(0.018)				
Fraction HH members 55+ employed	0.070***	0.030	0.078	0.025	8,198	53,322
	(0.019)	(0.019)				
Panel E: Household formation						
Head of Household	−0.113**	−0.056	0.424	0.813	23,449	229,106
	(0.045)	(0.060)				
Married	−0.087***	−0.024	0.068	0.955	23,237	226,339
	(0.020)	(0.029)				

Discussion

Public sector exams appear to induce unproductive investment.

- ▶ Preparation does not translate into generally productive skill;
- ▶ **Scarring:** long-lasting negative effects from shocks at a crucial age;
- ▶ **Detrimental aspirations:** negative outcomes linked to perseverance.

Implications? Limitations?

Why do we need exams in the first place?

The issue of patronage

Centralized, blind exams are an alternative to patronage.

- ► Technically, it designates the discretionary appointment of bureaucrats;
- ► Often used in reference to *normatively undesirable* appointments by politicians.

There is empirical support for the idea that discretion hurts bureaucratic quality.

- ► Discretion leads to the appointment of unqualified workers, reduces effort (Xu 2018);
- ► In Besley et al. (2022), bad bureaucracy is essentially *measured* as patronage.

Could patronage improve service delivery?

On bureaucratic "embeddedness"

"Embeddedness" refers to bureaucrats' links to the communities it serves.

▶ Strong connections may foster the quality of public service delivery;

▶ E.g., a police force whose officers have ties to the community.

Contrast to Weber's rational bureaucracy?

Patronage as "upward embeddedness"

Hypothesis: political appointments provide *desirable* connections

- ▶ Increases access to material and nonmaterial resources;
- ▶ Facilitates monitoring;
- ▶ Enables sanctions and rewards;
- ▶ Aligns priorities and incentives;
- ▶ Increases mutual trust.

If so, "upward embeddedness" improves both accountability and effectiveness.

- ▶ **Accountability:** responsiveness to the demands of their bosses;
- ▶ **Effectiveness:** success at delivering services.

Toral (2024)

Patronage in practice

Context: municipal governments in Brazil

- ▶ Over 200 million people across 5,570 municipalities;
- ▶ On average, 5% of the local population are public sector workers.

Analytical focus on school headmasters

- ▶ can be appointed by the mayor, elected, or deployed through the civil service;
- ▶ are assigned a performance metric based on student test scores.

Toral (2024)

Patronage in practice

Appointed school headmasters are more likely

- ▶ to be less educated,
- ▶ to live in the municipality where they work,
- ▶ to have worked for a local electoral campaign,
- ▶ to be in smaller and poorer municipalities;
- ▶ to be in schools serving students of lower socioeconomic status.

What can we conclude? How would we isolate the causal effects of patronage?

Method 1: Differences-in-Discontinuities

What happens when an appointed headmaster loses their connection?
► For appointed bureaucrats, mayoral turnover means a political connection loss
► Access level of non-appointed headmasters is likely unaffected (reference group).

Estimation design combines difference-in-differences...
► performance of appointed vs. non-appointed bureaucrats, before vs. after the election.

... with close-races regression discontinuity
► mayor nearly lost bid to reelection vs. nearly reelected.

Assumptions?

School quality, patronage, and political turnover (Toral 2024)
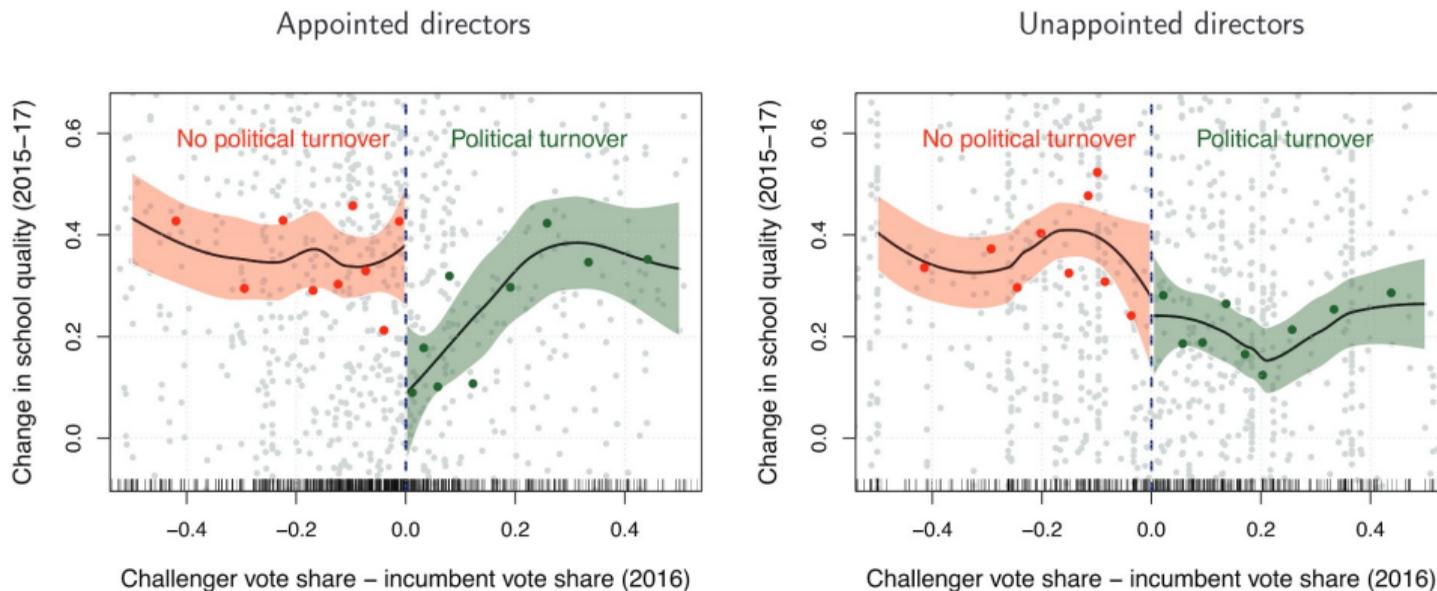
Notes: Colored dots are local averages for equally-sized bins. Lines are loess regression lines estimated at both sides of the threshold with no controls. Shaded regions denote 95% confidence intervals.

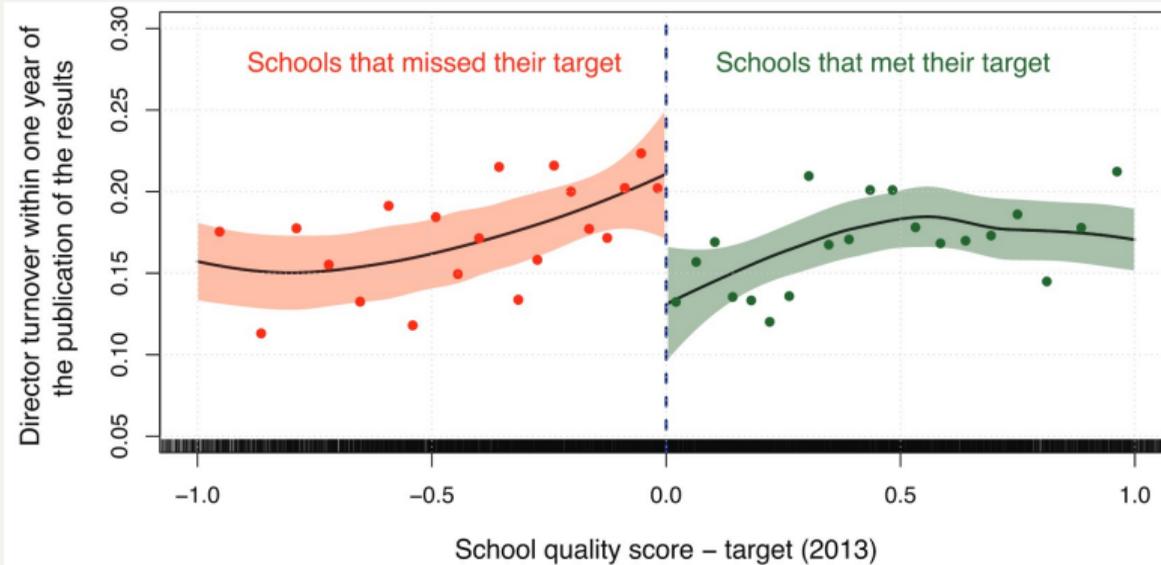Toral (2024)

Method 2: Regression Discontinuity Design

Who is more likely to be replaced when failing to meet their goals?

► Appointed vs. non-appointed headmaster turnover, below and above targets.

(Civil servant) bureaucrat turnover as function of goals met (Toral 2024)
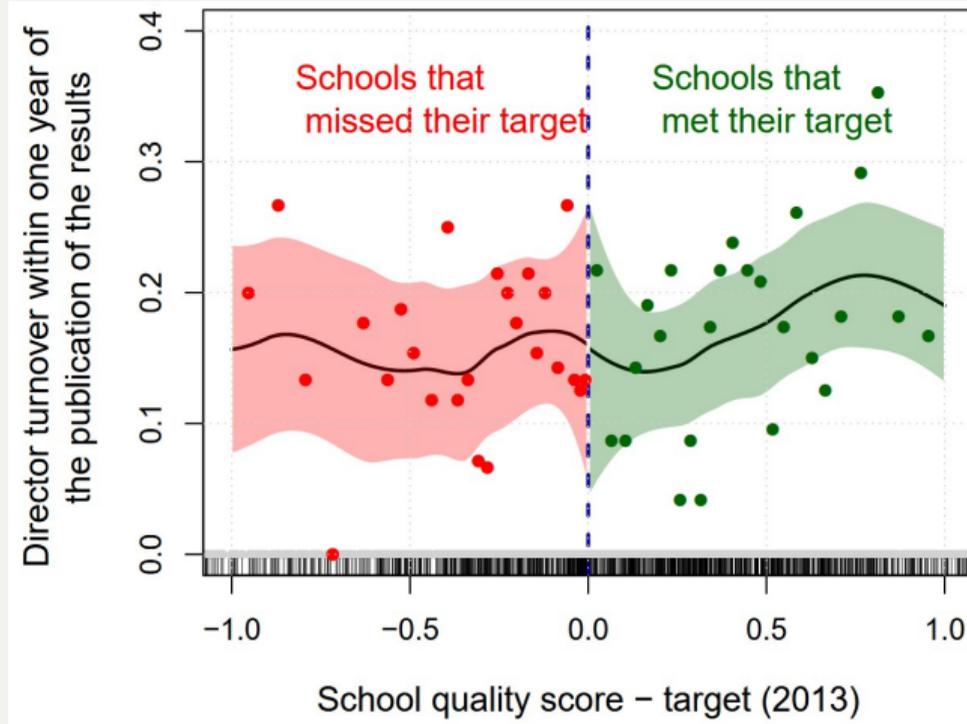
(Appointed) bureaucrat turnover as function of goals met (Toral 2024)

Notes: Colored dots are local averages for equally-sized bins. Lines are loess regression lines estimated at both sides of the threshold with no controls. Shaded regions denote 95% confidence intervals.

Method 3: Surveys with bureaucrats

Mechanisms behind the suggested effects

▶ What explains the suggested improvements in accountability and effectiveness?

Face-to-face surveys with 926 middle-level managers in 150 municipalities

▶ School headmaster, health clinic managers, and social assistance center coordinators.

Survey included a conjoint experiment

▶ assessment with pairs of hypothetical bureaucrats with randomized attributes.

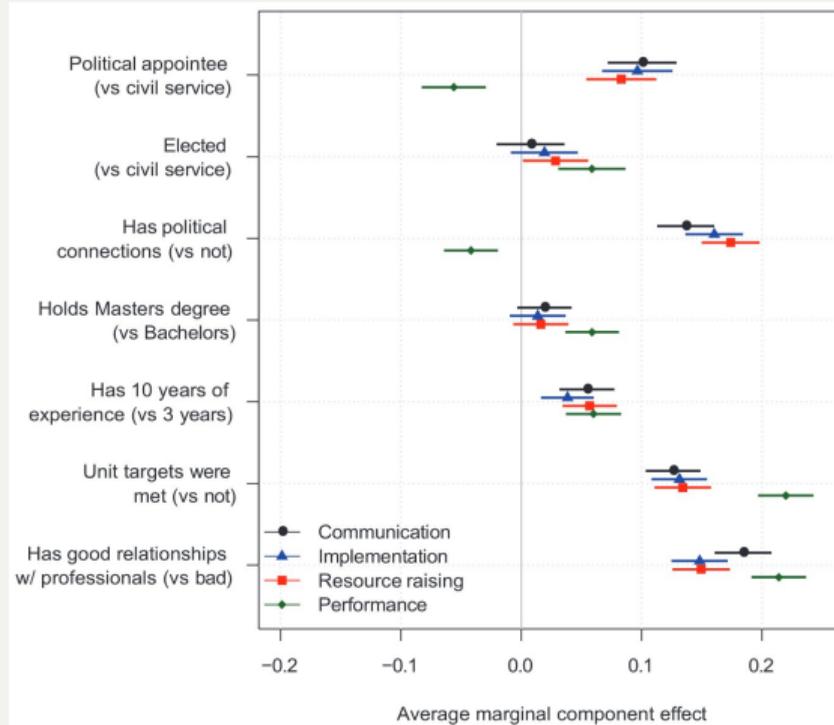## Access to stakeholders, trust, and alignment (Toral 2024)
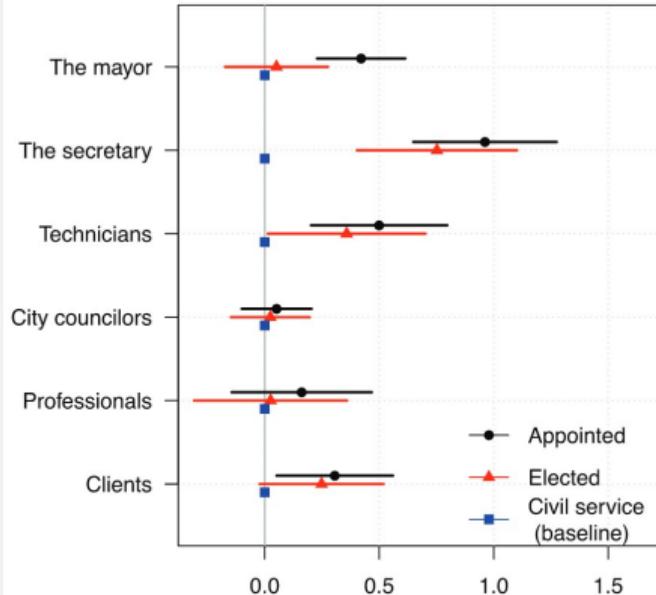
Which manager would do better in... (Toral 2024)

Toral (2024)

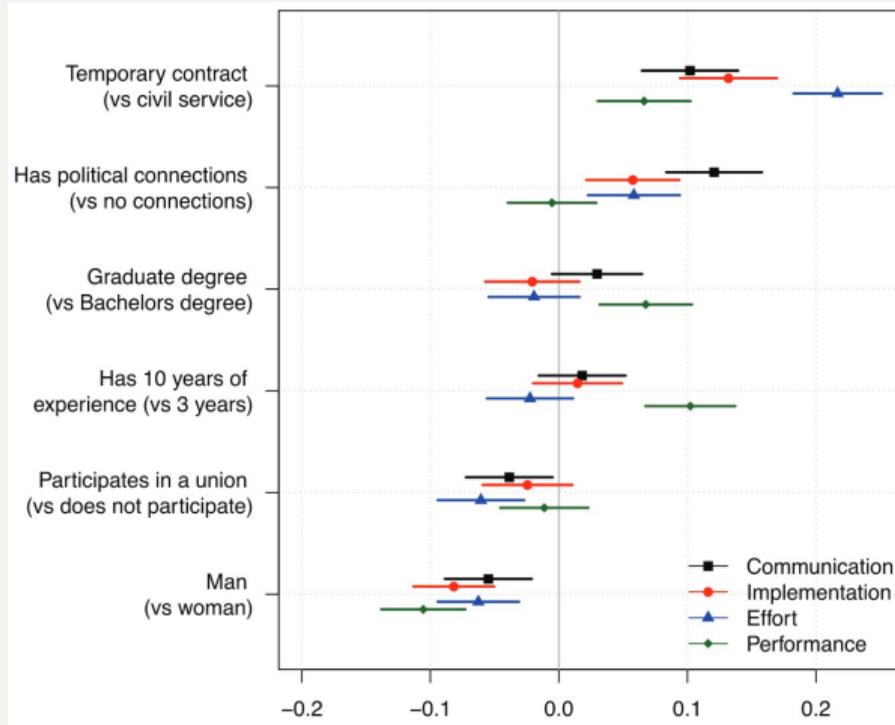## Method 4: Surveys with politicians

Online surveys with 455 politicians from 142 municipalities

► 50 mayors and 405 secretaries.

Survey included a conjoint experiment

► assessment with pairs of hypothetical bureaucrats with randomized attributes.

Which type of bureaucrat would do better in... (Toral 2024)

Toral (2024)

Discussion

"There is (…) an inherent ambivalence in upward embeddedness. On the one hand, it can make political machines more effective at extracting rents. On the other hand, it can help governments deliver public services more effectively because service delivery also depends on the coordination and accountability of bureaucrats." (p. 800)

Discussion

"The advantages of patronage will be more relevant in contexts where there are no easy substitutes for the governance advantages it provides. This is true in developing contexts, and particularly for local governments outside large metropolitan areas, where financial constraints are more dire and human capital is scarcer. This reduces governments' ability to use higher wages or performance pay to improve bureaucratic selection and performance. In these challenging environments, the counterfactual to a political appointee is not necessarily the highly capable, autonomous, and driven bureaucrat that Weberian theories presume." (p. 800)

Do you agree?

Core Readings

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Further Readings (1/2)

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Hanna, Rema, and Shing-Yi Wang. 2017. "Dishonesty and Selection into Public Service: Evidence from India." *American Economic Journal: Economic Policy* 9 (3): 262–290. https://doi.org/10.1257/pol.20150029.

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Xu, Guo. 2023. "Bureaucratic Representation and State Responsiveness during Times of Crisis: The 1918 Pandemic in India." *The Review of Economics and Statistics* 105 (2): 482–491. https://doi.org/10.1162/rest_a_01060.

Sushma Prasad, assistant clerk at the Cabinet Secretariat of the State of Bihar, India, in 2003. She was hired "on compassionate grounds" after the death of her husband, who worked in the same department. Monthly salary: about US$ 110.

"Bureaucratics" © Jan Banning courtesy Galerie Fontana, Amsterdam. An expanded edition of the book will be published in March 2026, see janbanning.com/product/bureaucratics