

Bureaucracy and Development

Part 3: Management



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"Bureaucrats" © Jan Banning courtesy Galerie Fontana, Amsterdam

Besley et al. (2022)

Towards a broader organizational model

Define performance for agent i at time t as y_{it} .

$$y_{it} = g(\theta_i, e_{it}, v_j)$$

What is it a function of?

- ▶ Agent's type: θ_i
- ▶ Agent's effort: e_{it}
- ▶ Nature of department/unit j : v_j

Besley et al. (2022)

Recap of principal-agent ingredients

$$y_{it} = g(\theta_i, e_{it}, v_j)$$

Under this general setup, we can define

- ▶ Incentive structure: $I(y_{it})$
- ▶ Agent's utility: $U(I(y_{it}), e_{it}, \theta_i)$
- ▶ Incentive compatibility: $e_{it} = \operatorname{argmax}\{U(I(y_{it}), e_{it}, \theta_i)\}$

Besley et al. (2022)

Extensions

Given these basic building blocks

1. $y_{it} = g(\theta_i, e_{it}, v_j)$
2. $U(I(y_{it}), e_{it}, \theta_i)$
3. $e_{it} = \operatorname{argmax}\{U(I(y_{it}), e_{it}, \theta_i)\}$

How would you incorporate...

- ▶ *Multitasking?* Effort e_{it} becomes a vector.
- ▶ *Non-monetary incentives?* A priori, $I(y_{it})$ can be money or something else.
- ▶ *Mission-driven bureaucrats?* Maybe $U(y_{it}, I(y_{it}), e_{it}, \theta_i)$? $\partial U / \partial e > 0$ for some range?

Besley et al. (2022)

Towards bureaucratic systems

What if the performance of agent i depends on all n members in the department?

$$y_{it} = g(\theta_1, \dots, \theta_n, e_{1t}, \dots, e_{nt}, v_j)$$

What would you expect about $\frac{\partial^2 g}{\partial e_{it} \partial e_{jt}}$? Implications?

What about $\frac{\partial^2 g}{\partial \theta_i \partial \theta_j}$?

Adapted from Besley et al. (2022)

Systems of systems

Consider a departmental-level outcome emerging from some form of aggregation:

$$Y_{jt} = f(y_{1t}, \dots, y_{nt})$$

What would you expect about this function $f(\cdot)$? Implications?

Units can be aggregated up, and so on... *What complications does it lead to?*

Coase (1937)

Why do organizations even exist?

Consider a “state of nature” comprised of a multitude of individual traders.

- ▶ Each one exchanges the goods and services they need with the others;
- ▶ Such a market can be efficient without a coordinator. *Why? Under which conditions?*

But, in the presence of frictions, organizations can be more efficient than markets.

- ▶ Frictions: asymmetry of information, transaction costs, monitoring costs, etc.;
- ▶ The internalization of transactions (within an organization) can save costs;
- ▶ The boundaries of the org. are defined by the relative efficiency of internal trades.

Some implications for bureaucracies

Extrapolating this reasoning, we could derive some implications.

- ▶ Caveat: It is not obvious that this extrapolation is appropriate (Moe 1984, p.759)
- ▶ But let's assume it's not a terrible motivation for our purposes.

A. It leads to a discussion about management.

- ▶ In the absence of prices, who decides on the allocation of scarce resources?
- ▶ On what basis do managers have the authority to do so?

B. It suggests some boundaries to the bureaucracy.

- ▶ Which transactions should be outsourced to the market?

Kaldor (1934)

A case for managers: coordination challenges

“You cannot increase the supply of co-ordinating ability available to an enterprise alongside an increase in the supply of other factors, as it is the essence of co-ordination that every single decision should be made in comparison with all other decisions made or likely to be made; it must therefore pass through a single brain.” (p. 68)

What does it mean? Implications?

A case for managers: information-processing limits

Herbert Simon: From optimizing to *satisficing*

- ▶ Actual human behavior is better characterized by *bounded rationality*;
- ▶ Bounded-rational individuals need not optimize, they “satisfice”;
- ▶ Satisficing achieved by routine behavior, heuristics, adaptive strategies.

Implications for organizations

- ▶ The role of managers is to push their teams to a “good enough” routine.

Garicano and Van Zandt (2013)

A case for managers: knowledge-based hierarchies

Decentralization is desirable even if all workers are identical. *How so?*

- ▶ Gains from segmentation: attention is restricted to a subset of the problem.

Even more so if different people are better at different problems.

- ▶ Gains from specialization: better matches between people and tasks;
- ▶ Economies of scale in using acquired skills.

Would complete specialization be desirable?

- ▶ Knowing which knowledge a problem requires is a problem in itself.

Garicano (2000)

A case for managers: specialized problem-solvers

Assume there is a statistical distribution of problems.

- ▶ The organization faces a flow of arriving cases z ,
- ▶ Cases z_i are indexed from most common to most rare;
- ▶ That is, densities $f(z_i)$ are such that $f(z_i) > f(z_{i+1})$ for all i .

Front-line workers will try to solve cases as they arrive.

- ▶ If they can't, they ask the managers above them;
- ▶ If they can't, they ask the managers above them...

Garicano (2000)

A case for managers: specialized problem-solvers

Core trade-off in this model:

- ▶ Consulting someone else has a communication cost;
- ▶ Learning how to solve a problem has a training cost.

Implications:

- ▶ *What is the efficient equilibrium for the organization?*
- ▶ *What happens when communication costs decrease?*
- ▶ *What happens when training costs decrease?*

Muñoz and Otero (2025)

In practice, do managers make a difference?

Context: Public hospitals in Chile.

- ▶ Adoption of competitive recruitment for senior positions in 2003;
- ▶ Combined with higher base wages and performance incentives.

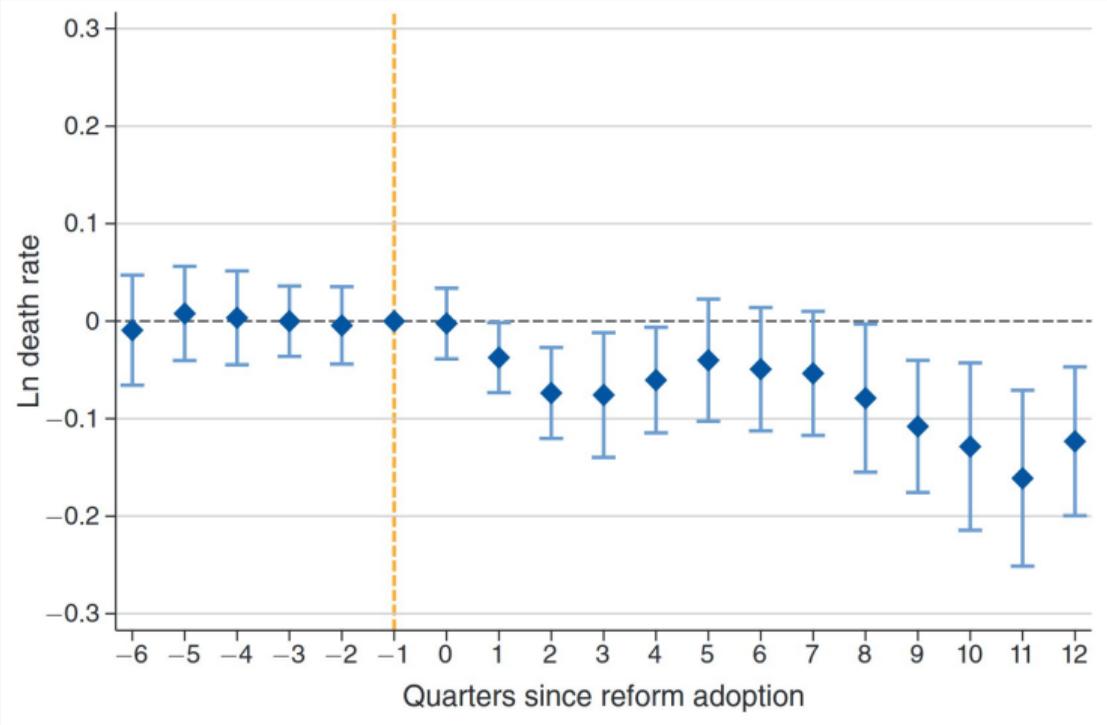
Data:

- ▶ identity, tenure, education, and demographics of CEOs in public hospitals;
- ▶ patient characteristics, diagnoses, type of admission, and condition at discharge.

Identification:

- ▶ Event-study design, given the gradual adoption of the new regime.

Dynamic effects of the reform on hospital quality (Muñoz and Otero 2025)



Heterogeneity by CEO characteristics (Muñoz and Otero 2025)

	Ln death rate				
	(1)	(2)	(3)	(4)	(5)
Reform (1 if reform adopted)	-0.065 (0.033)		-0.069 (0.022)		
Reform × high-quality CEO		-0.124 (0.053)			
Reform × low-quality CEO		-0.038 (0.032)			
Reform × CEO w/ mgmt. studies				-0.092 (0.026)	
Reform × CEO w/o mgmt. studies				-0.029 (0.022)	-0.029 (0.022)
Reform × nondoctor CEO w/ mgmt. studies					-0.085 (0.033)
Reform × doctor CEO w/ mgmt. studies					-0.096 (0.032)
Mean dependent variable	2.30	2.30	2.58	2.58	2.58
Observations	113,212	113,212	203,807	203,807	203,807
<i>p</i> -value high-quality CEO = low-quality CEO	–	0.082	–	–	–
<i>p</i> -value w/ mgmt. studies = w/o mgmt. studies	–	–	–	0.012	–
<i>p</i> -value nondoctor w/ mgmt. = doctor w/ mgmt.	–	–	–	–	0.792

Romero, Sandefur, and Sandholtz (2020)

Outsourcing Education: Experimental Evidence from Liberia

[Student presentation]

Sandholtz (2025)

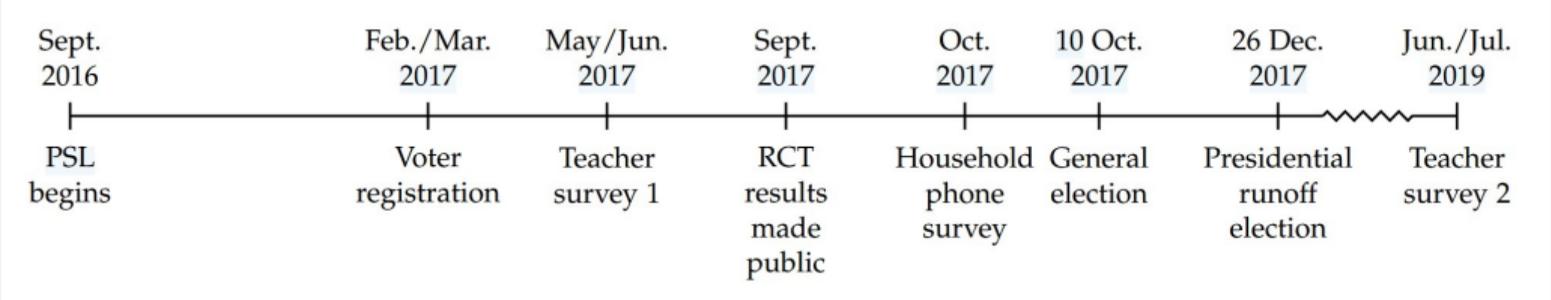
Addendum: The political consequences of the reform

The reform improved school quality on several dimensions.

- ▶ Why wasn't it done before?
- ▶ Should we expect the government to expand it?
- ▶ Is improving service delivery incentive compatible *for politicians*?

Let's examine the effect of the school management outsourcing *on votes*.

Timeline of the implementation and subsequent elections (Sandholtz 2025)



Sandholtz (2025)

Addendum: The political consequences of the reform

Identification:

- ▶ Compare votes at booths near treatment schools vs. those near control schools.

Main results:

- ▶ 5% fewer votes for the presidential candidate from the ruling party;
- ▶ No effect for legislative candidates (not responsible for the reform).

Sandholtz (2025)

What explains the loss of support by the incumbent party?

On the one hand, the general population appears to approve of the reform.

- ▶ The policy won votes in the places where it improved school quality the most.

On the other hand, it antagonized a crucial constituency – the teachers.

- ▶ Reform reduced teachers' job satisfaction by 0.18 s.d.
- ▶ primarily due to frustrations with working hours
- ▶ with negative consequences for their political mobilization.

Implications?

Core Readings



Besley, Timothy, Robin Burgess, Adnan Khan, and Guo Xu. 2022. “Bureaucracy and Development.” *Annual Review of Economics* 14:397–424. <https://doi.org/10.1146/annurev-economics-080521-011950>.



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Further Readings



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<https://doi.org/10.1111/j.1468-0335.1937.tb00002.x>.



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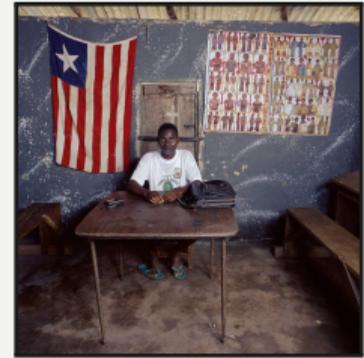
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<https://doi.org/10.2307/2224727>.



Sandholtz, Wayne Aaron. 2025. *The Politics of Public Service Reform*. IZA Discussion Paper 18346. Bonn: Institute of Labor Economics (IZA). <https://www.iza.org/publications/dp18346>.

Warford Weadatu Sr., a former farmer and mail carrier who became county administrator for the Nyenawliken district, River Gee County, Liberia. As of 2006, he had no budget. Monthly salary: about US\$ 20, but he had not received any salary the previous year.

*“Bureaucrats” © Jan Banning courtesy Galerie Fontana, Amsterdam.
An expanded edition of the book will be published in March 2026, see
janbanning.com/product/bureaucrats*



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