

Local Agency Costs of Political Centralization

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"The major problem is that responding to the villagers is at the bottom of everyone's priorities, for the simple reason that no one is accountable to the villagers."

Louise Fortmann, Report to Botswana Ministry of Local Government (1983).

http://pdf.usaid.gov/pdf_docs/PNAAT392.pdf

<http://home.uchicago.edu/~rmyerson/research/localagency.pdf>

http://home.uchicago.edu/~rmyerson/research/localagency_notes.pdf

Undervalued benefits of democratic decentralization?

Local governments can fit public policies to local conditions (Oates 2005); with centralization, a regional coalition can abuse regional differentiation. Centralized government can take account of interregional externalities; with decentralization, soft budget constraints may be abused (Treisman '07).

But national leaders have an interest in centralizing power, and so decentralization may often be undervalued and undersupplied.

We should consider more potential benefits of political decentralization:

- Autonomous local governments reduce entry barriers in national politics, as successful local leaders can become strong competitive candidates for higher office (*QJPS 2006*).
- Decentralization gives local leaders a stake to defend the state (*Prism 2011*).
- Efficient local public investment requires local accountability (*this paper*).

This paper considers a model of moral hazard in local public services which has an efficient solution which is feasible only when officials are accountable to local voters. (Seabright 1996.)

Local empowerment for economic development

Many have argued that political decentralization and community empowerment may be essential for successful development.

(Banfield 1958, Fortmann 1983, Ostrom 1990, Mansuri Rao 2013, Faguet 2012, Martinez-Bravo Padro-i-Miquel Qian Yao 2017, Ponce-Rodriguez et al. 2018, ... UCLG *GOLD* 2007.)

When the quality of local public services can be observed only by local residents, responsible officials cannot be held accountable for this quality unless local residents have some effective power over their careers.

Political decentralization means constitutionally guaranteeing local residents' power to dismiss local government officials.

Central moral hazard: Without such guarantees, local officials' careers may depend on national political contributions more than local public services.

Failure to ensure good public services can deter private investments.

A simple model of moral hazard in local public services

Consider a remote town with n residents.

Each year, each resident can invest k in a (formal) enterprise in the town.

Each year, each resident's enterprise may return $S > 0$ (success) or 0.

In any year when g is per-capita spending on local public services, each resident will have **independent probability of success $\pi(g)$** .

$\pi(\bullet)$ is increasing concave differentiable, $\pi(0)=0$, $0 \leq \pi(g) < 1 \quad \forall g \geq 0$.

All are risk neutral, discount future with annual discount factor $0 < \beta < 1$.

The budget bn for local public services is managed by a local official who **can divert any part to personal consumption** $(b-g)n$, can flee abroad.

The official prefers to retain office with annual salary ρ per resident rather than fleeing with annual budget b per resident iff $\rho / (1-\beta) \geq b$.

So to spend a budget of $b=g$ per resident, the official must expect salary $\rho \geq r(g) = (1-\beta)g$ per resident per year (*moral-hazard rents*).

The fraction of residents with successes has expected value $\pi(g)$ and standard deviation $[\pi(g)(1-\pi(g))/n]^{0.5} \leq 0.5/n^{0.5} \rightarrow 0$ as $n \rightarrow \infty$.

With local political accountability, the official's retention and salary may depend on approval by some fraction θ of residents.

Optimal solution for residents with local accountability

A resident's expected annual benefit is $U(g) = \pi(g)S - k - g - r(g)$.

With $r(g) = (1 - \beta)g$, $U(g)$ is maximized by g_1 so that $\pi'(g_1) = (2 - \beta) / S$.

To avoid a trivial solution, assume $U(g_1) > 0$, that is $g_1 + r(g_1) + k < \pi(g_1)S$.

Proposition 1: Consider a local-accountability system where the required fraction of successes for retaining the official is $\theta = \pi(g_1)$. Suppose that the official's per-capita budget b and salary ρ satisfy $b > g_1$, $\rho > r(b)$, and $b + \rho + k < \pi(g_1)S$. Then, when n is sufficiently large, there exists a stationary equilibrium in which the official chooses per-capita public spending g to satisfy $g > g_1$, and all residents make the private investment k and pay the tax $\tau = b + \rho$.

Residents **strictly prefer honest voting in a perturbed game** as follows:

In each year, introduce a very small independent probability $\delta > 0$ that, if the official is retained, then next year the official will be unable to change from this year's local public spending, and the outcome for each resident (success or failure) will be the same as this year.

So after failure, retention offers $(1 - \delta)\pi(g_1)S - k - g_1 - r(g_1) < U(g_1)$.

After success, retention offers $[(1 - \delta)\pi(g_1) + \delta]S - k - g_1 - r(g_1) > U(g_1)$.

Proposition 1 still holds with the condition $b + \rho + k < (1 - \delta)\pi(g_1)S$.

Other equilibria, distrust and instability in local politics

(In the unperturbed game, the town could use majority voting even with $\pi(g_1) \neq 1/2$, if some voters on the expected long side would abstain or cross-vote, as in Feddersen-Pesendorfer 1996.)

But there are other equilibria:

Distrustful equilibrium: Voters would prefer to replace the official if they expect her to steal all budgeted funds in the future; and the official would prefer to steal all budgeted funds if she expected voters to replace her.

Alternative equilibria could have random public "scandals" switching to such distrust against the incumbent in any period with some probability.

Publicly trusted leadership depends on mutual expectations of both the leader and the community.

A candidate would pay up to g per resident to be a local official getting $r(g)$.

With prepayments, $g + U(g) / (1 - \beta)$ would be residents' ex-ante NPV.

Notice, $g_2 = \operatorname{argmax}_{g \geq 0} g + U(g) / (1 - \beta) > \operatorname{argmax}_{g \geq 0} U(g) = g_1$.

But such prepayments would create incentives for dismissing the official to re-sell the office, thus inducing the distrustful equilibrium.

Prop 1 holds even if residents can't communicate & non-investors avoid tax.

Centralized control by an autocratic ruler

Suppose an autocratic national ruler has power to appoint and dismiss any local official; residents can have no local gov't without ruler's approval.

An autocratic ruler who can regulate and suppress political expression would prefer to block any public communication of bad news that could reduce residents' investments in the ruler's tax base.

So in a centralized autocracy, each resident's decision to invest can depend on g only through the resident's noisy private signal of success or failure.

In our model, the "ruler" may be a ruling party that maximizes its resources for paying its national party leadership, and so it would prefer local agents who provide more tax revenue and political contributions to the center.

Political incentives for national leaders to centralize:

Centralized power to appoint local officials enables the ruler to use their moral-hazard rents as rewards for national political supporters
(*with courtiers monitoring to deter dismissals for re-selling an office*).

With political autonomy, successful local officials could build reputations for public service and patronage to become contenders for national power.

A model of centralized autocratic control of local offices

Let \mathbf{b} denote the given annual per-capita budget available to local official. Ruler sets $\tau \geq 0$ tax on residents' investment, $\rho \geq 0$ official's salary-if-retained.

Each year, each resident decides whether to invest \mathbf{k} and pay tax τ , then observes own $\pi(\mathbf{g})$ -probability success or failure (even if not invest).

Assume residents report success honestly if incentive compatible, untaxed.

The local official can flee with \mathbf{b} , or else chooses local public spending $\mathbf{g} \geq 0$, national political contribution $\mathbf{h}(\omega) \geq 0$ depending on success fraction ω , and consumes $(\mathbf{b} - \mathbf{g} - \mathbf{h}(\omega)) + \rho$.

The ruler observes $\mathbf{h}(\omega)$ and the fraction ϕ of residents who invested, can ask residents to report success or failure (ω), then can decide to retain or replace the local official, gets net payoff $\phi\tau + \mathbf{h}(\omega) - \mathbf{b} - \rho$ per resident.

(The ruler might dismiss after high \mathbf{h} if it induced low distrustful expectations.)

Suppose that, when a local official has been retained from last year, there is a small probability $\delta > 0$ that the official will be unable to change from last year's (\mathbf{g}, \mathbf{h}) choices and will yield the same successes and failures.

Consider stationary equilibria, where the ruler, official (if free), and residents use constant strategies each year. ($\delta \Rightarrow$ ruler, residents react retrospectively)

Stationarity implies that the ruler is never punished for past behavior.

Failure of local public services in a centralized autocracy

For any h between 0 and βb , there is a stationary equilibrium in which the official always contributes h to ruler, spends nothing on local public services ($g=0$), diverts all other resources $\rho+b-h$ to personal consumption, and is always retained by the ruler.

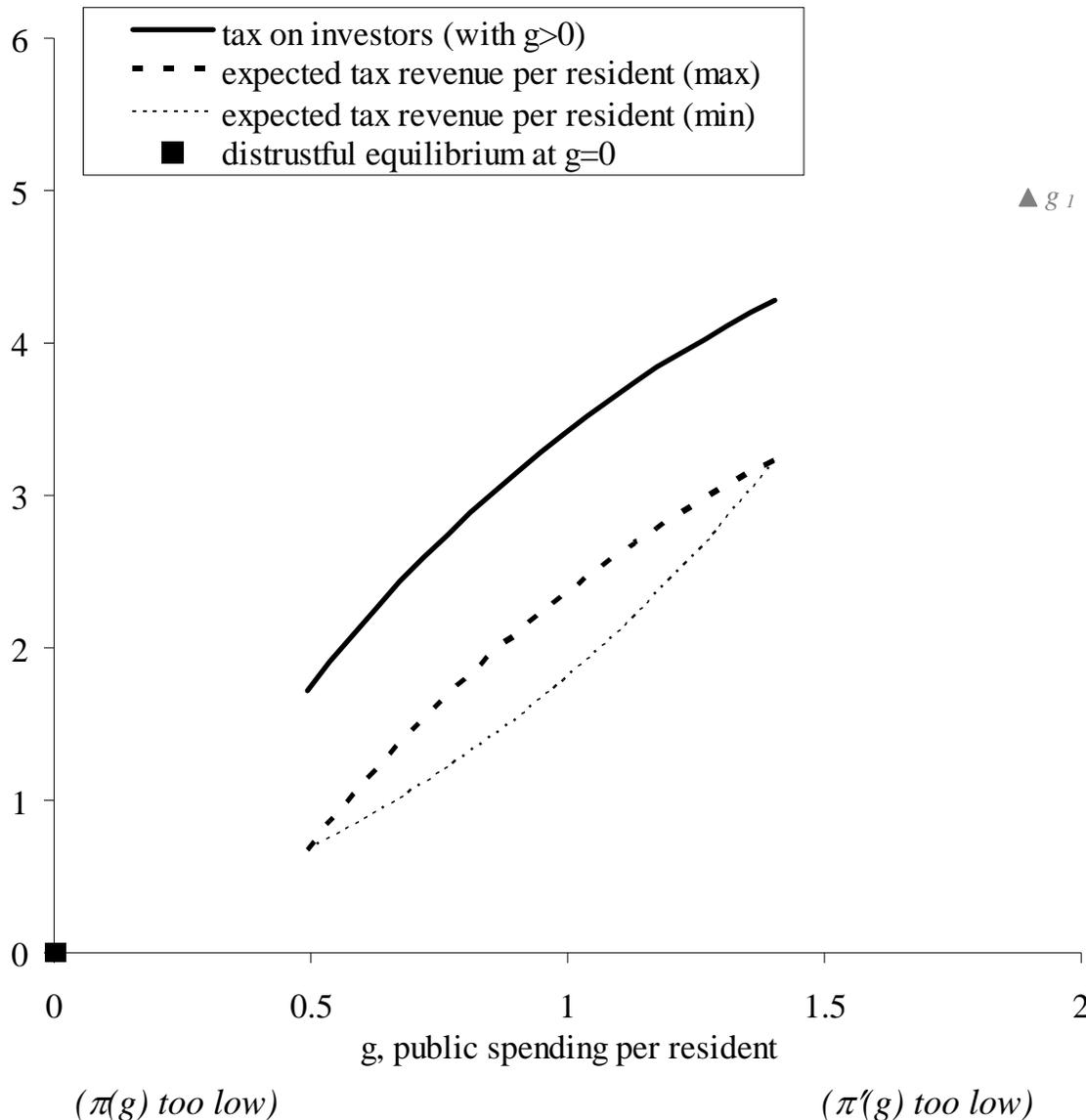
Residents should not invest in such equilibria, because $\pi(0)S-k-\tau < 0$.

Proposition 2: In any stationary equilibrium of the centralized autocracy, it is optimal for residents to not invest after failure, so $\pi(g)S-k-\tau \leq \delta\pi(g)S$. A stationary equilibrium can have positive local public spending $g>0$ only if $[(1-\delta)\pi(g)+\delta]S-k \geq \tau \geq 1/(\beta\pi'(g))$, and in such an equilibrium the expected fraction $1-\varphi$ of residents who do not invest must satisfy $1-\varphi \geq (1-\pi(g))/(\beta\pi'(g)\tau) > 0$.

Such a feasible g must be strictly less than the residents' ideal g_1 .

When σ_0 [σ_1] is the probability of resident investing after failure [success], a transfer from g to h could benefit the ruler unless $\pi'(g)(\sigma_1-\sigma_0)\beta\tau \geq 1$. This implies $\pi'(g)[(1-\varphi)/(1-\pi(g))]\beta\tau \geq 1$ and the lower bound on $1-\varphi$. We get $g < g_1$ from $\pi'(g) \geq 1/(\beta\tau) > 1/(\beta(S-k)) > (2-\beta)/S = \pi'(g_1)$.

Figure 1. Possible equilibrium levels of public spending g , with the corresponding tax τ on investors, and the maximal expected tax revenue $\tau\phi$ per resident, in centralized autocracy, for an example with $\pi(g)=1-e^{-g}$, $S=7$, $k=1$, $\beta=0.95$, $\delta=0$; compared to the ideal g_1 in local democracy.



With $\delta=0$, equilibria with $g>0$ exist only for $0.49 \leq g \leq 1.40$ (to satisfy $[\pi(g)S-k]\pi'(g)\beta \geq 1$), with $\tau = \pi(g)S-k$, $0.39 \leq \phi \leq 0.75$.

The ruler's incentive to promote local public spending requires that probabilities of investing for previously successful and unsuccessful residents must differ by $1/(\beta\pi'(g)\tau)$.

In the best equilibrium under centralized autocracy, the annual per-resident benefits for the ruler and official sum to only $\tau\phi-g = 1.82$, although the residents would be willing to pay strictly more for local democratic accountability $U(g_1)+r(g_1) = 3.05$.

With $S=6$, else same, we get only a distrustful equilibrium, but $g_1=1.7$ yields $U(g_1)=2.1$.

Local accountability requires political decentralization

In a centralized autocracy, the local residents have no political power.

They only have a dispersed economic power to disinvest from the tax base, which is credible only for individuals whose expected profit would be 0.

If good public services made all residents strictly prefer to invest, then a small reduction of public services would not affect the tax base, and so the ruler would have no incentive to punish officials who diverted some resources from local public services to national political contributions.

So without political decentralization, residents must be willing to not invest, and their expected profits from investing must be small (of order δ).

The autocratic ruler would suppress public communication of bad news that would reduce investment in the tax base, and so each resident's decision to disinvest must be based only on own private success or failure.

So the positive rate of bad results for individuals ($\pi(g) < 1$) implies that there must be an inefficient positive rate of disinvestment.

A credible promise of good public services for efficient investments that benefit local residents requires political decentralization, to let residents punish officials who serve them badly even while serving the ruler well.

Other assumptions about taxation

In countries where governments lack ability to audit many transactions in the largely-informal economy, individuals' tax liabilities could depend primarily on their decisions about whether to undertake a taxable formal enterprise at all.

Then our assumption of tax τ being on discrete (formal/informal) investment decision may be a realistic simplification of reality.

If government could observe and impose tax λ on success of enterprises, then public spending would affect revenue through current productivity, not just through residents' elasticity of future investment.

One extreme plan would be to nationalize enterprises, with $\tau = -k$ & $\lambda = S$.

But any positive tax λ on income from enterprises could create other costly moral-hazard problems in a slightly more complicated model where the amount that an individual invests k is a private decision variable.

Residents' choice of k to maximize $\pi(g,k)(S-\lambda)-k-\tau$ could be inefficiently reduced by any $\lambda > 0$.

Nonstationary equilibria can implement constitutional constraints

When residents have powers of *speech & assembly*, they can get positive expected profits from investment in some *non-stationary equilibria*

For example, if the ruler ever failed to dismiss an official who got approvals from less than a $\pi(g_1)$ fraction of local residents, then the subgame equilibrium could shift against the ruler, to some lower contribution h .

But such threats are effectively *constitutional constraints* on the ruler.

Furthermore, they would depend on local residents' power to express public disapproval of appointed government officials.

Autocratic elites are more likely to react against officials getting less than expected, which could cause a loss of trust in the ruler's promises.

The ruler's ability to re-sell vacant offices can create an incentive to dismiss powerful officials even when they have behaved appropriately.

*This incentive must be countered by **courtiers' defense of elite privileges** (APSR 2008).*

Such pressure could also deter the ruler from dismissing an official who made larger-than-normal political contributions to the national elite.

This property characterizes the equilibria of centralized autocracy here.

Extensions to the case of centralized democracy

If local accountability yields better public services, can democracy induce leaders to promise it (when it is not constitutionally required)?

All else equal, voters should prefer a national leader who promises better local public services by implementing local accountability.

But it is hard to find evidence of such spontaneous decentralization in centralized democracies.

National leaders have political incentives to centralize in democracy too:

Democratic national leaders value the power to distribute valuable local offices as patronage rewards for political supporters.

Democratic national leaders worry about autonomous local officials who govern well becoming competitive rivals for national power. (*Pakistan*)

But federal decentralization becomes stable once introduced, as locally elected mayors and governors become power-brokers in national politics.

Conclusions

We analyzed a model of moral hazard in local public investments which can be efficiently managed with local accountability.

When local public services can be observed only by residents, officials can be held accountable only if their careers depend on residents' approval.

Political decentralization means guaranteeing such local power.

A centralized nation's leader can use local offices as valuable rewards, trading moral-hazard rents for prior political service.

But if residents have no political power and would always invest in the tax base, then an autocratic ruler would have no incentive to punish officials who divert resources from public services to political contributions that actually benefit the ruler.

So a credible commitment to local public services that efficiently benefit the residents requires some political decentralization.

In a centralized government, local officials' positions may depend on national political contributions instead of local public services.