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Joint Ventures as a Commitment Device Against Lobbies

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Outline of presentation

- The question – and why it matters
- Our answer in a nutshell
- Our model
- Relevance to developing country infrastructure
- Supporting evidence
- Conclusions

The question – and why it matters

- Why does collaboration on industrial projects between different firms sometimes take the joint venture form instead of
  - Contractual supply of inputs by one firm to another
  - Full merger between the two firms

- Joint ventures involve some known inefficiency due to the divergent objectives of the partners

- Yet they are very frequent: c.40% of EU-notified concentrations

- So what are their offsetting advantages?

Our answer in a nutshell

- Joint ventures can «ring-fence» the revenues from a project that remains (for Coasian reasons) within the firm
- This makes it easier to re-invest these revenues in the project instead of redistributing them to interest groups within or outside the firm –either as revenues or as real or transfer prices
- This will be specially important if the project's profitability it serially correlated – early revenues are a signal of likely later profitability
- Examples include pharmaceuticals and infrastructure, especially in developing countries

Our model – the set-up

- M firms: i=1, … , M.
- At t=1,2 each firm invests $k_i^t \geq 0$, costing $b\left(k_i^t\right) = bk_i^t + d\left(k_i^t\right)^2$
- Output in period 2 is $Q_i^2 = \theta_i^1 k_i^1$ and in period 3 $Q_i^3 = \theta_i^2 \left(k_i^1 + k_i^2\right)$
  where θ_i^1 is an initial productivity shock with an expected value H>1
  and θ_i^2 period 2 correlated productivity shock, i.e. $E\left[\theta_i^2 \mid \theta_i^1\right] = \theta\theta_i^1$
- Firm i maximizes $C = c_i^1 + \beta c_i^2 + \beta\gamma c_i^3$
  subject to BCs: $b\left(k_i^1\right) + c_i^1 = E_i^1$ where E_i^1 is the initial endowment

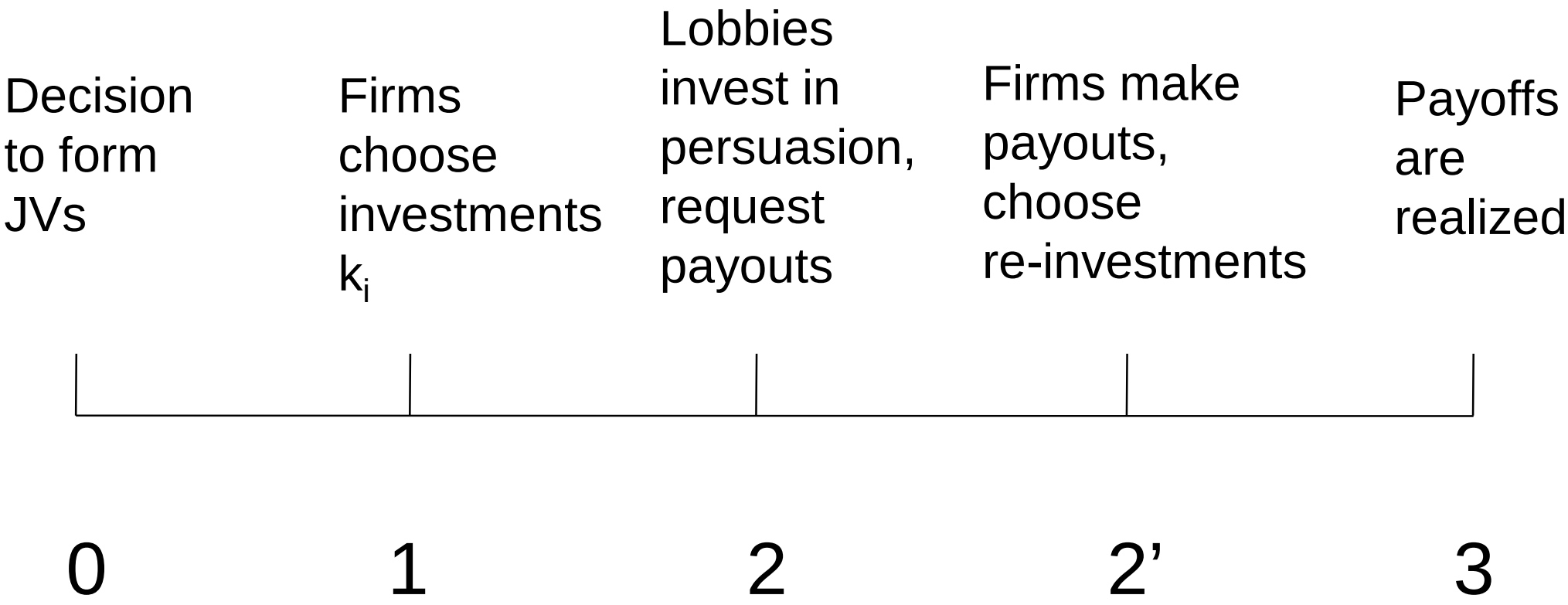
$$b\left(k_i^2\right) + c_i^2 = Q_i^2$$

$$c_i^3 = Q_i^3$$

Our model – the set-up with lobbies

- n_i lobbies: 1, … , n.
- Each lobby can invest resources r_i^n in “persuasion” and ask for a payout p_i^n at period 2.
- Lobbying imposes on firm a cost of refusal $\lambda k_i^2 r_i^n$ where λ represents effectiveness of lobbying
- Firms internalizes a proportion α of the benefits to the lobbies

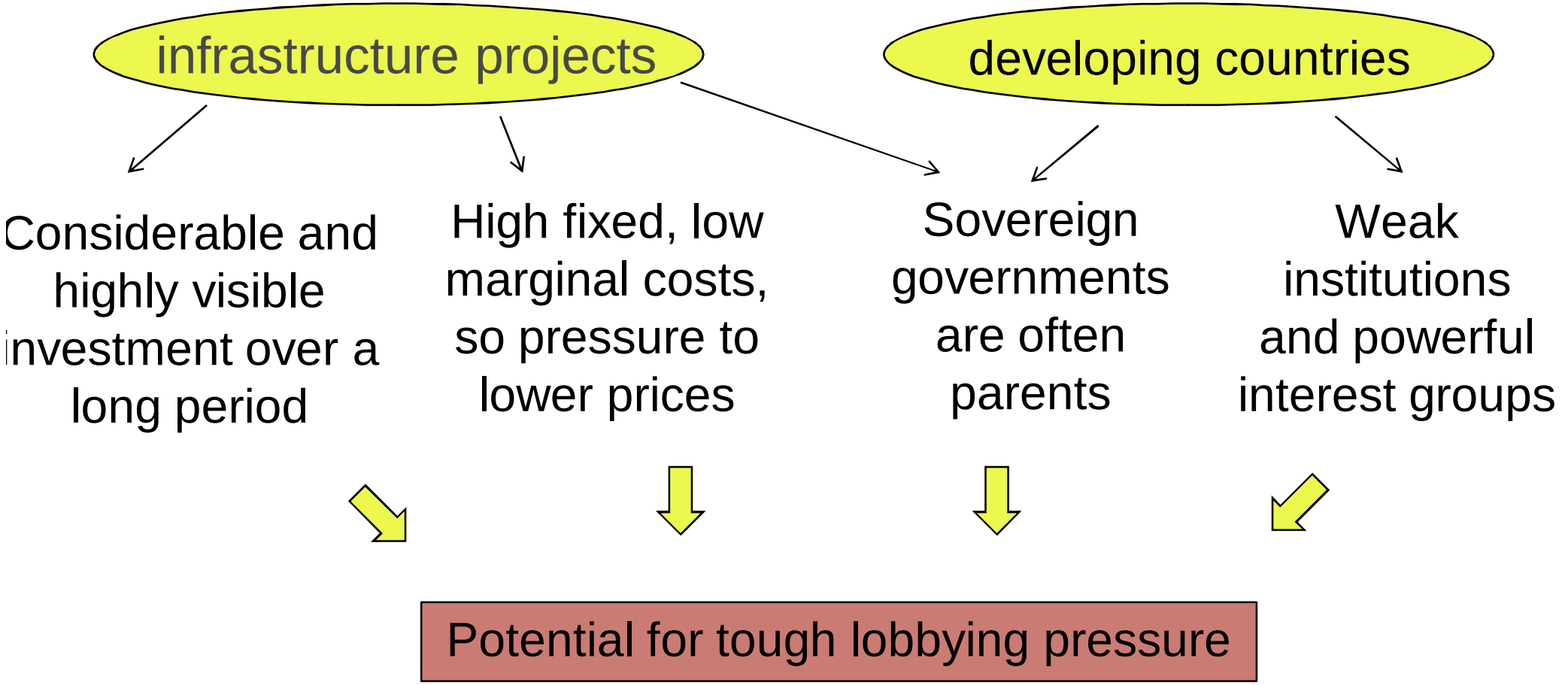
Our model – the timing



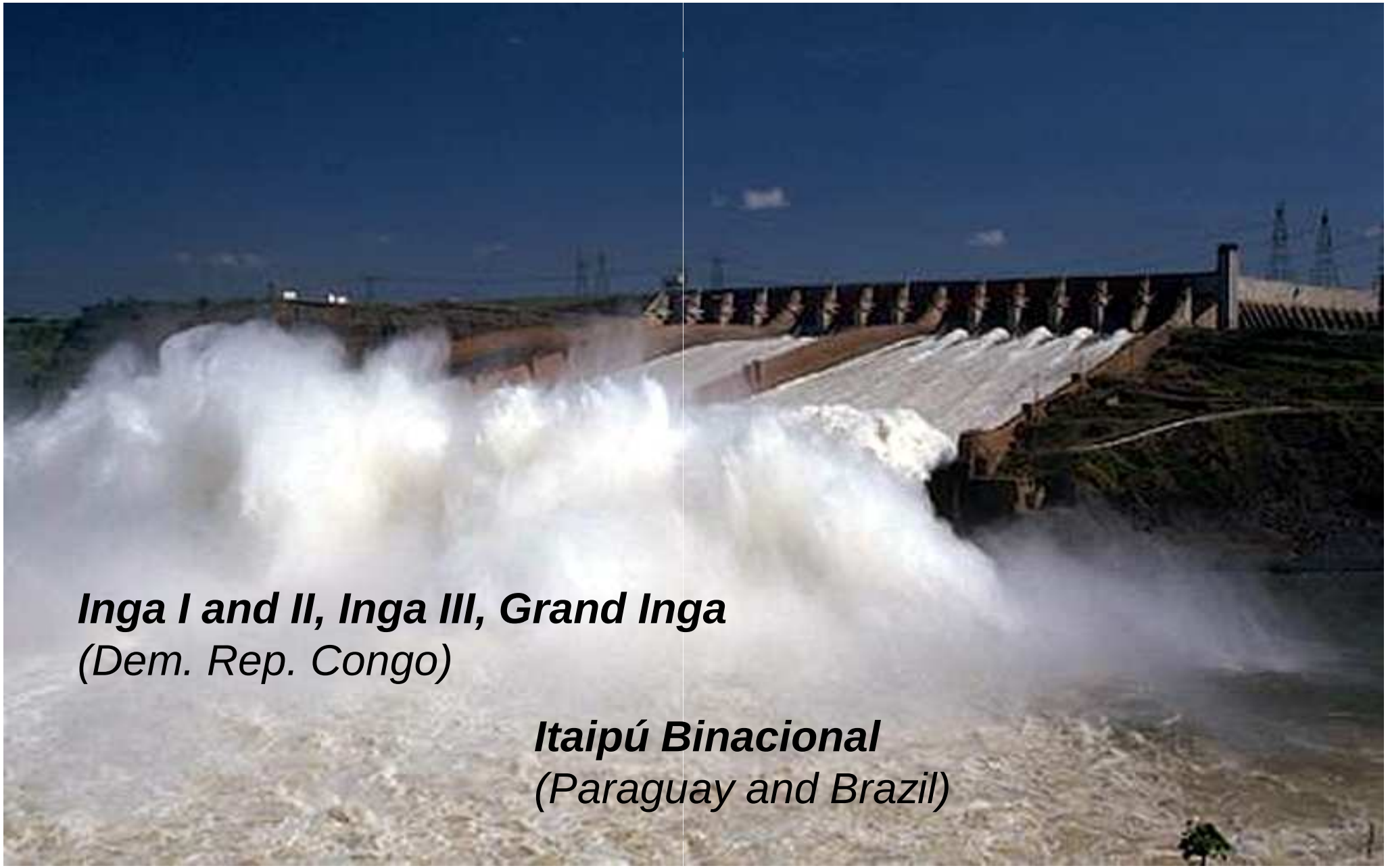
Our model – the results

- Proposition 1 – investment levels without lobbies 
- Proposition 2 – investment levels with lobbies and without JVs 
- Proposition 3 – investment levels with lobbies and with JVs 
- The bottom line: if lobbies are sufficiently «hard to resist», joint ventures increase investment levels by making payouts more expensive to the firm

Relevance to developing country infrastructure



Relevance to developing country infrastructure



Supporting evidence - BEEPS survey

- Corporate governance structure of JV more often chosen by firms that are likely to feel pressure from external or internal interest groups?

- Exploration based on large dataset from BEEPS (Business Environment and Enterprise Performance Surveys):
  - 27 countries
    in CIS, Baltic, Eastern-Central and Southern-Eastern Europe
  - 4 waves (1999, 2002, 2004, and 2005)

Supporting evidence - Results from BEEPS

Firms are more likely to be JVs when exposed to higher:

- **internal pressure**
- **external pressure**

resources reallocation between departments	0.279***	0.301***
	(0.040)	(0.034)
any overdue payments to resolve	0.202***	0.162***
	(0.054)	(0.047)
business association member	0.269***	0.302***
	(0.060)	(0.071)
pay for security	0.072**	0.070**
	(0.032)	(0.031)
court cases as defendant	0.009*	0.006
	(0.005)	(0.006)
country dummies	yes	
region dummies		yes
N	13,690	13,690

Determinants for a JV corporate governance structure

Supporting evidence - Results from BEEPS

Second stage: JV		
resources reallocation between departments	2.056***	
	(0.100)	
any overdue payments to resolve		1.656***
		(0.179)
First stage:	resources reallocation	overdue payments
firm % seeking to influence laws in country	0.290**	0.726***
	(0.124)	(0.263)
sales % from construction sector	-0.000	0.001
	(0.000)	(0.000)
sales % from wholesale, retail sector	-0.000**	-0.001***
	(0.000)	(0.000)
sales % from hotel sector	-0.001***	-0.002***
	(0.000)	(0.000)
2-49 employees	0.079***	0.107***
	(0.014)	(0.013)
50-249 employees	0.268***	0.229***
	(0.022)	(0.021)
250-9999 employees	0.343***	0.297***
	(0.026)	(0.032)

Determinants for a JV corporate governance structure allowing for pressure endogeneity

Conclusions

- If effective internal or external interest groups pressurize owners into paying out early revenues, JV structure may provide a commitment mechanism enabling more efficient levels of investment
- This rationale is especially relevant in the context of infrastructure projects in developing countries
- Empirical evidence support the prediction that firms operating in contexts with higher external or internal pressure are more likely to choose a JV structure

THANKS!

APPENDIX

The results – Proposition 1: absence of lobbying

- Each firm chooses investment levels in periods 1 and 2 given by $k_i^1 = \frac{\beta H(1+\gamma\theta)-b}{d}, k_i^2 = \frac{\gamma\theta\theta_i^1-b}{d}$
- Both investment levels are decreasing in the level and concavity of the cost of investment and increasing in the autocorrelation of productivity shocks as well as in the discount factor γ
- First-period investment is increasing in expected productivity and in the discount factor β while second-period investment is increasing in the realization of the first-period productivity shock

The results – Proposition 2: lobbying

- If $\lambda > \frac{d(1-\alpha)}{\left(\gamma\theta\theta_i^1 - b\right)}$
  the presence of lobbies induces investment in persuasion by each lobby equal to $r_i^n = \frac{\lambda\gamma\theta\theta_i^1 - \lambda b - d(1-\alpha)}{2n\lambda^2}$
  and reduces k_i^2 below the efficient level by an amount

  $$\frac{\lambda\left(\gamma\theta\theta_i^1 - b\right) - d(1-\alpha)}{2d\lambda}$$
- First-period investment is unaffected by lobbies
- Impact of lobbies is independent of their number
- Investment declines in α – it's hard to resist pressure from lobbies you like!

The results – Proposition 3: lobbying and JVs

- When $\lambda \leq \frac{d(1-\alpha)}{\gamma\theta\theta_i^1 - b}$
  investment levels are efficient with or without JV

- When $\frac{d(1-\alpha)}{\gamma\theta\theta_i^1 - b} < \lambda \leq \frac{d(M-\alpha)}{\gamma\theta\theta_i^1 - b}$
  investments are efficient with JV
  but below the efficient levels without JV

- When $\lambda > \frac{d(M-\alpha)}{\gamma\theta\theta_i^1 - b}$
  investment levels with JV are below the efficient level but above those without JV