Lecture notes on corruption

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Today

Derek Bacon

- Defining corruption
- Corruption and growth
- Driver's licenses in Delhi
- The economic equation
- Judicial systems in Indonesia

http://www.economist.com/node/17361580?story_id=17361580

Linking to earlier topics...

- One strength of microfinance is to
  - Focus on NGOs and the private sector
  - Maintain transparency through public group meetings
  - Have built-in accountability measures (loan repayment rates)
  - Reduce loan officer discretion through fixed interest rates and fees
  - Charge interest rates high enough that loans are not viewed as give-aways.

But there are limits to generalizing

- Subsidizing opens door to inventive problems.
- There may be no clear parallel in, say, education and, in many cases, health.
- How important is corruption?
- How much should we worry?
- What can be done to reduce it?

Defining corruption

The misuse of public office for private gain

- Kickbacks
- Bribery
- Embezzlement
- Misappropriation of government property

The big cases

- Mobuto Sese Seko
  - Looted $5 billion as President of Zaire
- Suharto, Indonesia
- Marcos, Philippines
- Goldenberg scam in Kenya ($1bn)
- Angola oil revenues ($1bn)
- World-wide sum of bribes ≈ $1 trillion (≈ 3% of world GDP)

Corruption in Uganda

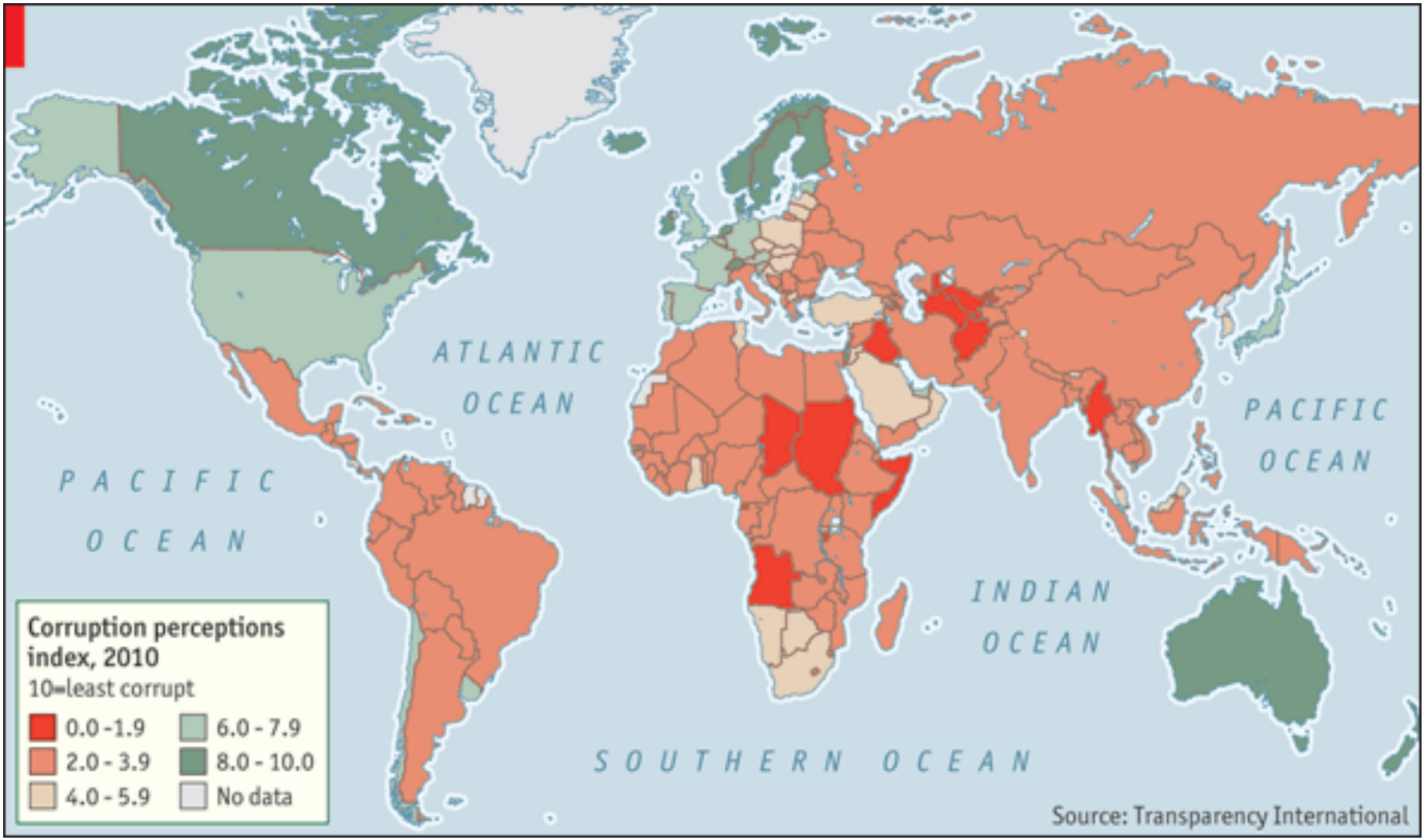
- Over 80% of Ugandan firms report needing to pay bribes.
  - Paying, on avg, 8% of total costs as bribes

- Reinikka and Svensson (2004). Central government transfers income to public schools: per-student grant to cover non-wage expenses.
  - In survey of 250 schools 1991-95, most schools received 0. On avg, received 20%.
  - Most money went to local officials and politicians

More examples in Svensson, 2005, "Eight Questions About Corruption." *Journal of Economic Perspectives* 19 (3): 19-42

Perceptions of Corruption 2010

Transparency International



http://www.economist.com/node/17361580?story_id=17361580

Principal-agent theory

Actors:

- Government (principal)
- Bureaucrats (manager)
- Individual (agent)

Theory 1: Avoiding red tape

Theory: Good but misguided governments make rules that are too rigid. Bureaucrats bend the rules, allowing citizens to avoid red tape. Allocative efficiency improves (Huntington, Leff)

Example: Government mandates 30 hours of driver education over 5 weeks, but the classroom instruction makes no difference to driving skills. Bribes enable people to use their time more effectively.

Theory 2: Mis-targeting

Theory: Good and wise governments make rules that are appropriately rigid. Prices should be kept low for social reasons, with careful targeting. Bureaucrats can bend the rules, reducing red tape. But allocative efficiency worsens (Laffont-Tirole)

Example: Government mandates that everyone who gets a drivers license must pass a driving exam but even good drivers have to spend time passing the exam.

Theory 3: Bureaucrats in power

Theory: Governments make rules that are too lax. Bureaucrats have too much discretion and use it to hijack allocations. Allocative inefficiency (Shleifer-Vishny)

Example: Government sets no rules for getting a drivers license

Theory 4: Creating red tape

Theory: Governments give bureaucrats power such that they're tempted to take bribes and bend rules. Bureaucrats *create* red tape in order to bend rules and get bribes. Red tape and corruption are mutually reinforcing.

Example: Government allows bureaucrats power to determine how to test each driver's license applicant.

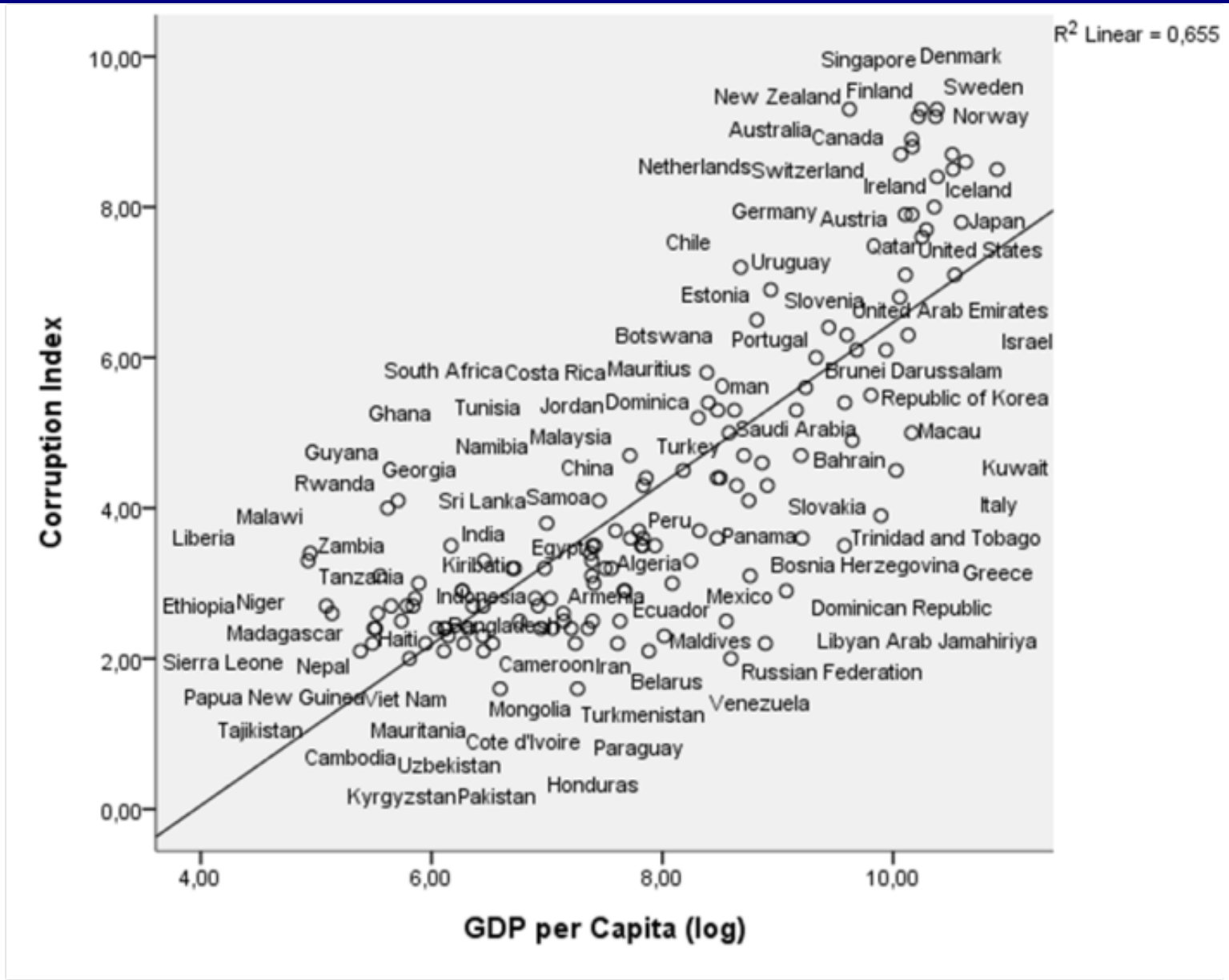
Also…

- "Free entry" by corrupt officials poses problems
  - Just when you think you've paid your bribe, another official appears looking for a payoff.
- Faith in the system erodes

Corruption and growth

- Paulo Mauro. 1995. “Corruption and Growth” Quarterly Journal of Economics 110 (30): 681-712.

Corruption and GDP per capita



http://www.creativeclass.com/creative_class/2010/11/11/corruption-and-the-wealth-of-nations/ data from 2010

Corruption and growth:
No significant relationship in cross-country data

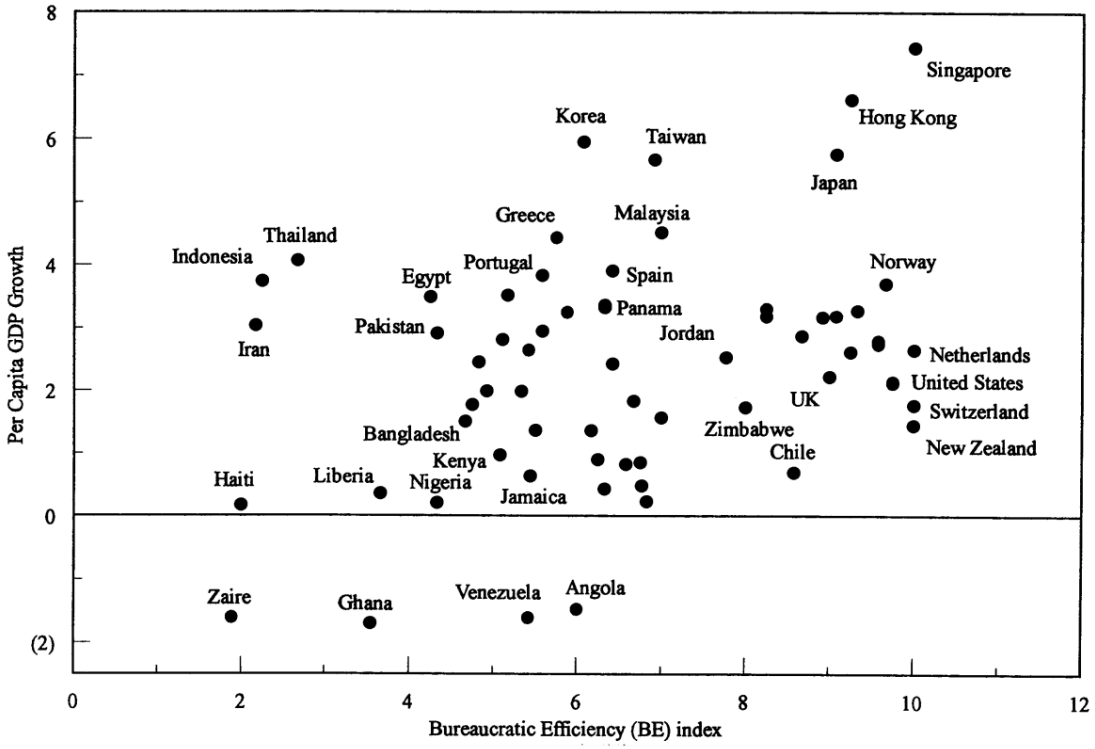


FIGURE III
Growth and Bureaucratic Efficiency

BE index is 1980–1983 average of BI indices of corruption, red tape, and judiciary.

Average GDP per capita growth 1960–1985 from Summers and Heston [1988].

67 countries, $r = 0.32$.

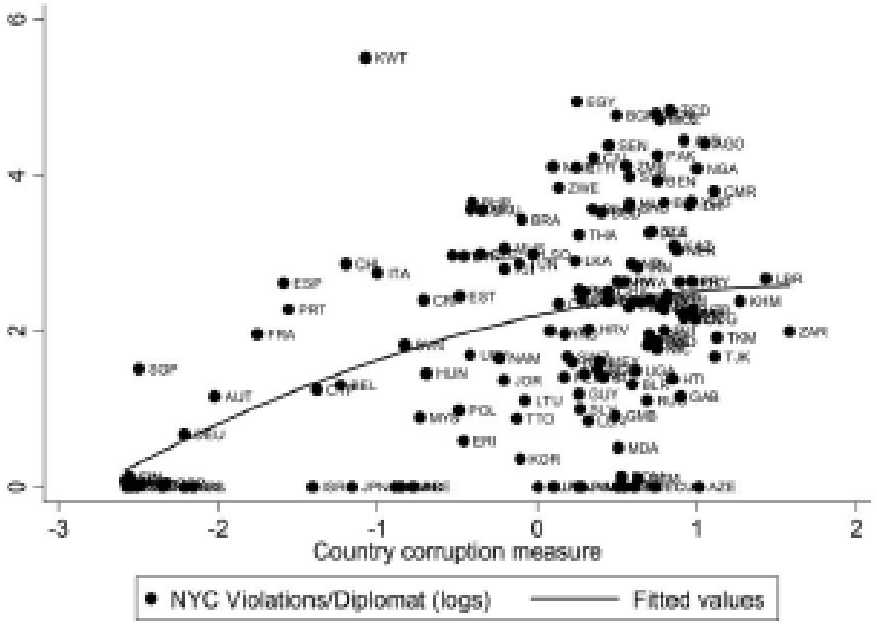
Fisman and Miguel

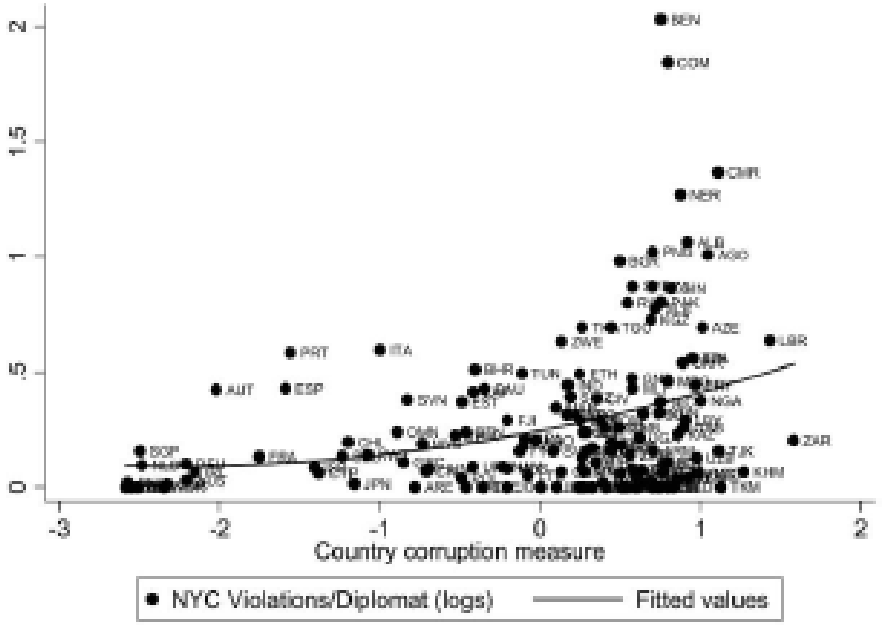
- Study cultural norms and legal enforcement in controlling corruption.
- Key idea: look at a context in which cultural norms of a country are transplanted from its legal environment: do people then continue to behave the same? If so, suggests that overtime law abiding behavior becomes a norm even when legal enforcement isn't present.

Strategy

- Look at UN parking tickets in New York and use a natural experiment: in the pre-period no consequences to parking tickets, but then starting 11/2002 a crackdown. Use home country corruption index to measure cultural norms for corruption.

Pre versus post





Erosion of lawfulness?

TABLE 5
UNPAID PARKING VIOLATIONS AT THE DIPLOMAT LEVEL, NOVEMBER 1997 TO NOVEMBER 2005

	Dependent Variable: Unpaid Parking Violations (Monthly)	
	Negative Binomial (1)	Negative Binomial (2)
Country corruption index, 1998	.150	.390***
	(.120)	(.117)
Log length of time in New York City (in months)	.084***	.090***
	(.005)	(.006)
Log length of time in New York City × country corruption index		−.027***
		(.006)
Month fixed effects	Yes	Yes
Observations (diplomats)	40,929	40,929
	(5,338)	(5,338)
Log pseudolikelihood	−23,788	−23,621

Driver's Licenses in Delhi

Marianne Bertrand, Simeon Djankov, Rema Hanna, and Sendhil Mullainathan. "Does Corruption Produce Unsafe Drivers?", *Quarterly Journal of Economics*, 2007, *122*(4), pp. 1639-76.

Road Accidents

http://timesofindia.indiatimes.com/india/India-leads-world-in-road-deaths-WHO/articleshow/4900415.cms

- Aug 17, 2009. NEW DELHI: In a dubious distinction for the country, the **World Health Organization** has revealed in its first ever Global Status Report on Road Safety that **more people die in road accidents in India than anywhere else in the world**, including the more populous China.

  Calling road fatalities an "epidemic" that will become the world's fifth biggest killer by 2030, the report said while rich nations had been able to lower their death rates, these were sharply on the rise in the third world. It said 90% of deaths on the world's roads occur in low and middle-income countries (21.5 and 19.5 per lakh [100,000] of population, respectively) though they have just 48% of all registered vehicles.

  The statistics for India are chilling. **At least 13 people die every hour in road accidents in the country**, the latest report of the National Crime Records Bureau reveals. In 2007, 1.14 [114,000] lakh people in India lost their lives in road mishaps — that's significantly higher than the 2006 road death figures in China, 89,455.


GOODSCARRIER
MOTOR DRIVING

Questions

- Bribes may serve as “speed money” when there are administrative delays, moving those citizens with the highest willingness-to-pay to the front of the queue. If so, then corruption merely “greases the wheels” of the bureaucracy by cutting through red tape. (Theory 1)
- Or, does it allow the circumvention of the socially useful components of regulation? If so, corruption can be costly to society (Theory 2, 3)

Method

Followed 822 people through the process of getting a license

1. Randomly selected some people to get a **bonus** if they were able to get a license fast (higher willingness to pay).
2. Randomly selected other people to have **free driving lessons** at the beginning (social deservingness).
3. Randomly selected third group as **control.**

Results

- 45% of comparison group obtained license; bonus group 24 percentage points more likely to obtain a license (69%), while lesson group 12 percentage points more likely.
- To get a license, bonus group was less likely to learn how to drive and paid more to get the license.
- Independent road test at the end showed that the bonus group was 18 percentage points more likely to get a license **without knowing how to drive** relative to the comparison group

More results

- Very little recorded bribes; most of extra legal payments to agents
- Agents associated with not taking formal licensing exam, higher payments, high probability of not being able to drive, easier process (speaking to less officials, less trips to get a license, etc)

Drivers' Licenses study: Lessons

- Corruption does "grease the wheels" by being responsive to individual needs.
- But it does so at a potentially large social cost.
- Welfare implications depends on the benefits of corruption versus the costs.

The Economic Equation

- Jean-Jacques Laffont. 2006. "Corruption and Development." in Banerjee, Benabou, Mookherjee. *Understanding Poverty*. Oxford University Press.

Expected **benefit** of bribe-taking

Probability of not getting caught

X

Monetary value of bribe

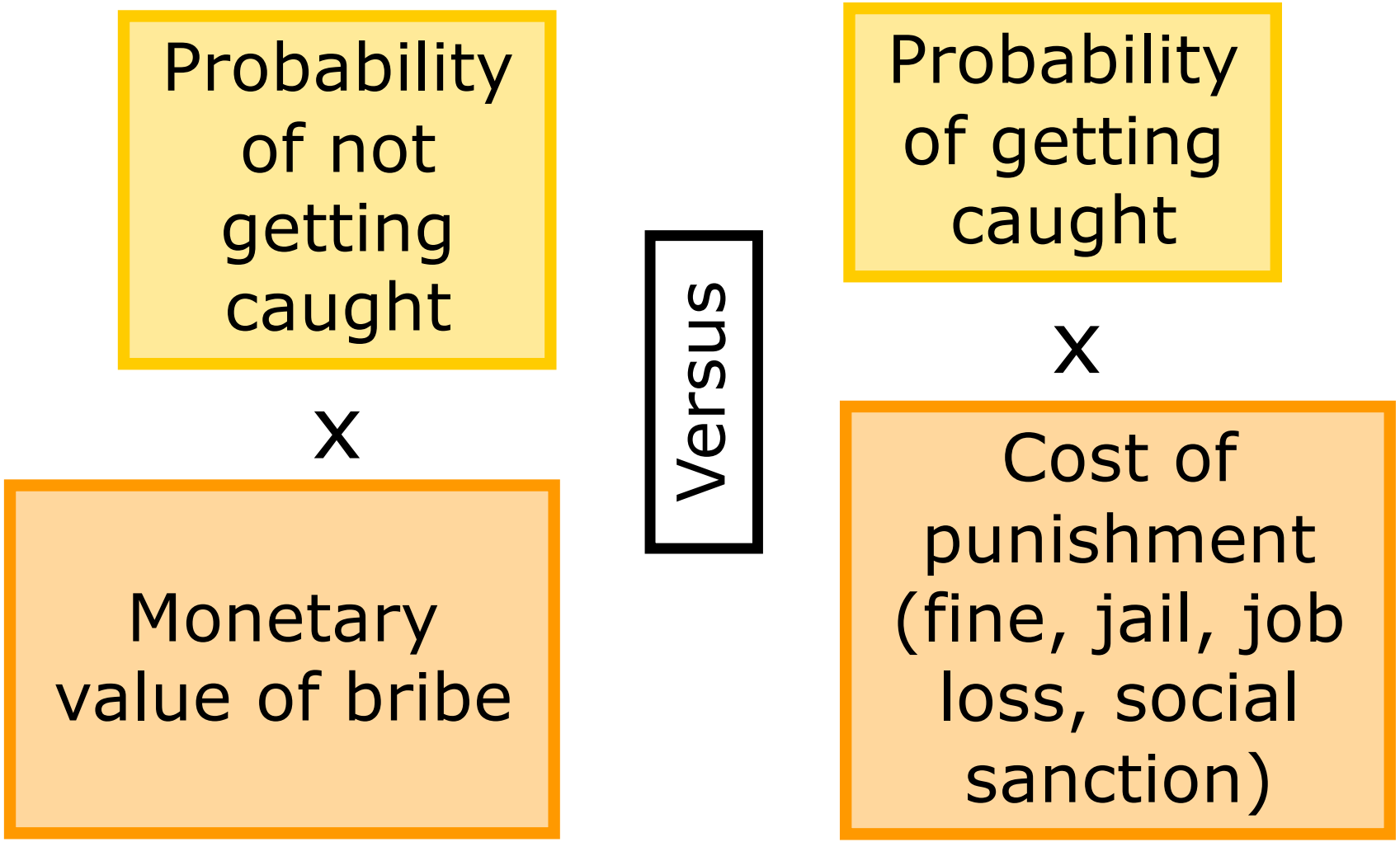
Expected **cost** of bribe-taking

Probability of getting caught

X

Cost of punishment (fine, jail, job loss, social sanction)

Improving the equation



Reducing corruption

- Increase (perceived) chance of getting caught
  - Audits
  - Anonymous tip hotlines
  - High profile prosecutions
  - Rewards for turning in corrupt officials
- Increase punishments
  - Create stronger anti-corruption social norms
  - Increase fines and jail time
- Reduce net benefit of bribe-taking
  - Raise wages
  - Increase competition for bureaucrats' services (give citizens options)
- Get beyond tipping points

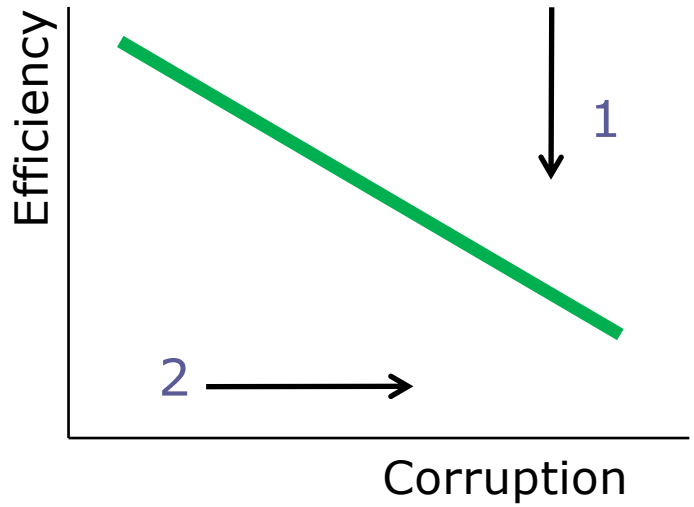
Audit systems in Indonesia

Ben Olken. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia." *Journal of Political Economy 115 (2)*, pp. 200-249, April 2007.

http://indonesiathisday.blogspot.com/2010/10/yudhoyono-failed-to-eradicate.html

Empirical problem

1. Does corruption undermine efficiency?
2. Reverse causation – or does an inefficient govt invite/tolerate corruption?
3. Does monitoring reduce corruption, or are people more inclined to monitor in places with less corruption (general do-goodness)?

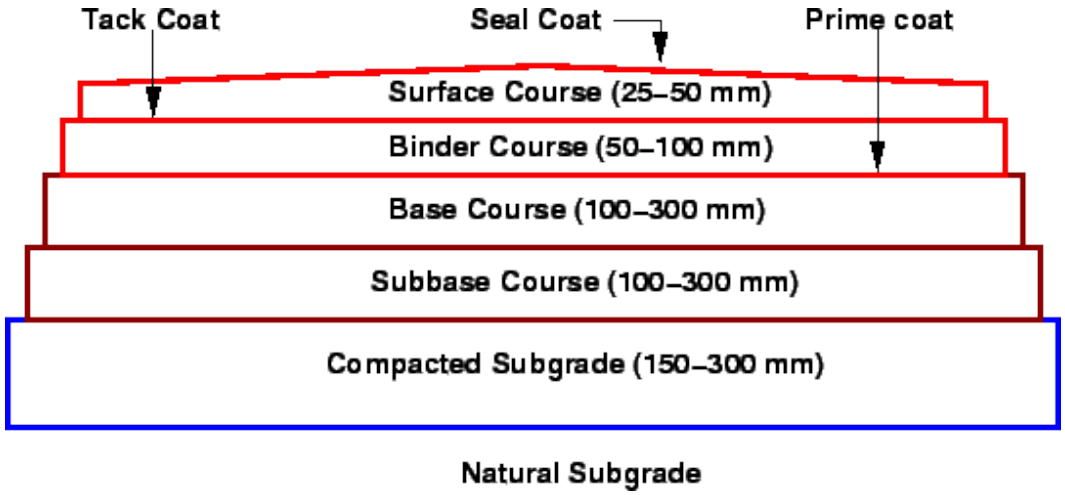


Set-up

- 608 villages, each involved in a road-building project, part of a nationwide infrastructure project.
- In **randomly select** villages:
  - Announce that there will be an audit at the end of the project, with results publicly announced. Possible prosecution.
  - Invite people to get involved in the process, attend public meetings.
  - Give ways for people to privately comment.

What's missing?

- Engineers independently estimate prices and quantities of all inputs used to build each road.
- Engineers' estimates are compared to village officials' estimated expenses.
- **Difference is a measure of stolen funds.**



http://www.civil.iitb.ac.in/tvm/1100_LnTse/105_lntse/plain/plain.html

Big losses

TABLE 3
SUMMARY STATISTICS

	Summary Statistics
Total project size (US$)	8,875 (4,401)
Share of total reported expenses:	
Road project	.766 (.230)
Ancillary projects (culverts, retaining walls, etc.)	.154 (.181)
Other projects (schools, bridges, irrigation, etc.)	.079 (.166)
Share of reported road expenses:	
Sand	.099 (.080)
Rocks	.484 (.143)
Gravel	.116 (.181)
Unskilled labor	.196 (.125)
Other	.105 (.164)
Percent missing:	
Major items in road project	.237 (.343)
Major items in roads and ancillary projects	.247 (.350)
Materials in road project	.203 (.395)
Unskilled labor in road project	.273 (.851)
Observations	538

NOTE.—Statistics shown are means, with standard deviations in parentheses. Data on expenditures are taken from the 538 villages for which percent missing in road and ancillary projects could be calculated. Exchange rate is Rp. 9,000 = US$1.00.

Audits reduce theft

TABLE 4
AUDITS: MAIN THEFT RESULTS

Percent Missing[a]	Control Mean (1)	Treatment Mean: Audits (2)	No Fixed Effects: Audit Effect (3)	No Fixed Effects: p-Value (4)	Engineer Fixed Effects: Audit Effect (5)	Engineer Fixed Effects: p-Value (6)	Stratum Fixed Effects: Audit Effect (7)	Stratum Fixed Effects: p-Value (8)
Major items in roads ($N = 477$)	.277	.192	−.085*	.058	−.076**	.039	−.048	.123
	(.033)	(.029)	(.044)		(.036)		(.031)	
Major items in roads and ancillary projects ($N = 538$)	.291	.199	−.091**	.034	−.086**	.022	−.090***	.008
	(.030)	(.030)	(.043)		(.037)		(.034)	
Breakdown of roads:								
Materials	.240	.162	−.078	.143	−.063	.136	−.034	.372
	(.038)	(.036)	(.053)		(.042)		(.037)	
Unskilled labor	.312	.231	−.077	.477	−.090	.304	−.041	.567
	(.080)	(.072)	(.108)		(.087)		(.072)	

NOTE.—Audit effect, standard errors, and *p*-values are computed by estimating eq. (1), a regression of the dependent variable on a dummy for audit treatment, invitations treatment, and invitations plus comment forms treatments. Robust standard errors are in parentheses, allowing for clustering by subdistrict (to account for clustering of treatment by subdistrict). Each audit effect, standard error, and accompanying *p*-value is taken from a separate regression. Each row shows a different dependent variable, shown at left. All dependent variables are the log of the value reported by the village less the log of the estimated actual value, which is approximately equal to the percent missing. Villages are included in each row only if there was positive reported expenditures for the dependent variable listed in that row.

[a] Percent missing equals log reported value − log actual value.

* Significant at 10 percent.

** Significant at 5 percent.

*** Significant at 1 percent.

Results

- Announcing that there will be an audit with 100% probability reduced missing expenditures by 8 percentage points.
- Audits particularly successful where the village head faces re-election.

Biometric payments

- Murlidharan et al study the effect of biometric smartcard payments on receipts of a wage support program, the National Rural Employment Guarantee Act.
- Prior to intervention, beneficiaries had to spend 2 hours and wait almost 30 days to be paid.
- Treatment required beneficiaries to use biometric smart cards, and also bypassed local intermediaries for payment.

Smart cards

- With smart cards on average 20 minutes and 7 days were saved.
- Also after treatment beneficiaries report increased receipt of payments: + Rs 9.9 vs 127 (official), + Rs 35 vs 146 (survey).
- Fiscal outlays didn't increase.
- Hence, leakage went down.
  - Estimated from 30% to 20%.
- Main cause was not less over-reporting (padding job claims with extra hours).

What about the judiciary?

- Litschig and Zamboni in Brazil
- Use the fact that the judicial seat of a district is the most populous county.
- Idea: compare most populous counties with similar counties that are not most-populous-in-district.
- A reduced form “experiment” on judicial presence.

Findings from Brazil

- Estimates suggest that state judiciary presence reduces the share of inspections with irregularities related to waste or corruption by about 10 percent.
- Estimates suggest that judicial presence reduces rent extraction only when mayors have re-election incentives.

What about democracy?

- This is tricky to evaluate in a cross-country setting. Countries with democracy also tend to be more developed -- many factors involved.
- A test in Brazil: randomized audits were performed on municipalities. Like a randomized treatment.

Brazil audit results

- Find that the release of the audit outcomes had a significant impact on incumbents' electoral performance.
- These effects were more pronounced in municipalities where local radio was present to divulge the information.

Conclusion

- Lots that we do not know about corruption
- Poor data, difficult subject to talk about, etc.
- Creative projects to better measure corruption and study its implications
- More work is needed to understand impacts of corruption on economic development