
Empirical Evidence on Corruption

Slide 1

Esther Duflo

March 6, 2003

GAME PLAN

Themes:

Slide 2

- Measuring Corruption
 - Evaluating the Cost of corruption
 - Fighting corruption
-

MEASURING CORRUPTION

Inherently difficult....

Slide 3

- Asking businessmen about their feeling. Initially, this data was for sale to banks of firms thinking about expanding. Most frequently used by researchers, till recently. Now basis for politics (Millenimum Challenge..) Problems... (subjectivity, very specific angle, confusion, ..).
 - Asking people (or firms) about actual bribes they had to pay: "Citizen Reports Card" (e.g. Public Affair Center in India). Somewhat better.
 - Understanding a system in details: Wade (India) (handout), Bates (Africa).
 - Cross-Validation and technical audit.
 - Estimating the value of political connections.
-
-

CROSS VALIDATION

Slide 4

- Rice Distribution in Indonesia (Olken)
 - Rice distributed. HH survey: number of hh who receive rice * 20 kg (upper bound)
 - Rice allocated to the village: Obtained directly from the district record.
 - Estimate that at least 18% of the rice disappeared
 - School finance in Uganda (Reinikka and Swensson). Estimate that a small proportion of the grant allocated to the school actually reach the school.
-

Missing import in China (Fisman and Wei)

Slide 5

- WITS data base: information on export and import for each country, at a 6 digit harmonized coding system (quantity and value).
- Export reported by Hong Kong
- Import reported by China
- Difference could be measurement error or evasion, but shows that the difference is bigger for goods with a bigger tax rate.

Technical Audit in Indonesia (Olken)

Slide 6

- Focus on one uniform type of road (sand, rock, sand gravel covering)
 - Engineer take 10 measurement of depth and volume of each of the road's layer
 - Obtain price by surveying suppliers in nearby villages
 - Compare to line-item reported expenditures
 - Over 17 villages, average reported - actual is 25%.
-

THE VALUE OF POLITICAL CONNECTIONS–INDONESIA

Fisman (2001) Event study methodology: abnormal reaction of the stock market value of "connected firms" to news.

Indonesia during the last years of the Suharto era. 6 episodes (1995-1997), where there were rumors about Suharto's health. Use an index of "connectedness" to Suharto, constructed by a consulting firm. The index goes from 1 to 5.

Slide 7

5 For groups owned by children of Suharto or Bob Hasan. 1 for groups owned by long term opponents (Julius Tahija).

First run 6 separate regressions for each days.

$$R_{ie} = \alpha + \beta POL + \epsilon_{ie}$$

R_{ie} is the returns during the event window (price end-price beginning divided by price beginning. Can use abnormal returns instead).

Finds negative coefficients on all days.

Then runs a pooled regressions:

$$R_{ie} = \alpha + \rho_1 POL + \rho_2 NR(JCI) + \rho_3 POL * NR(JCI) + \epsilon_{ie}$$

Slide 8

$NR(JCI)$ is the value of the stock market for that day and is a proxy of how bad the news is.

Find positive coefficient of ρ_3 .

Back of the envelope calculation of the value of having Suharto in power: if Suharto had been unexpectedly removed, the most connected firms would have lost 23% on that day.

THE VALUE OF POLITICAL CONNECTIONS–US

Jayachandran (2002). "Jeffords effect".

Same methodology (event study). News is the announcement by Senator Jeffords in May 2001 that he was leaving the Republican party (Event window: May 28-25.)

Slide 9

$$R_{ie} = \alpha + \beta DEM + \gamma REP + \epsilon_{ie}$$

DEM is soft money donation to Democrats. *REP* is soft money donation to Republicans.

An additional \$ 100,000 donated to the Republican party is associated with a decline of 0.25% during the event window. Are firms "buying" political favors? What else could be going on? Circumstantial evidence: coefficient is unchanged if you control for industry donation.

THE COST OF CORRUPTION: MACRO APPROACH

Mauro (1995)

- Take data from Business international, and average three indices (corruption, red tape, judiciary).
 - GDP per capita, investment and growth are negatively correlated with Bureaucratic efficiency.
- Slide 10
- Note that the growth is measured between 60 and 85, and the BI is measured in 80-83.
 - Causal?
 - Use index of ethnolinguistic fractionalization (ELF) as instrument. ELF is the probability that two people taken at random are from the same ethnic group.
 - Results persist
 - Why is that an instrument?
-

MICRO EVIDENCE ON DISTORSIONS

Wade:

- Choice to irrigate not distorted (corruption cost small relative to other cost of producing rice).
 - Uncertainty in water delivery is created to extract bribes
 - No incentive to improve the system if this is going to reduce the control over water.
 - The irrigation department is not credible in its announcements
 - Graft leads to a reduction of quality (desilting is not done properly, contracts are allocated to many small guys, etc...). (also Olken)
 - Politics of project approval: some non-effective projects are started (also Shleifer–Bottling plant).
-

Slide 11

FIGHTING CORRUPTION: AUDITING (1)

Di Tella and Chargino: Crackdown in Buenos Aires.

- After election, city collects data on prices paid for four basic products in hospital
- Slide 12
- Information was collected from 33 hospitals and returned to them
 - No prize or punishment
 - 3 periods: little-more-less crackdown
 - Prices declined by 15% during the crackdown
-

FIGHTING CORRUPTION: AUDITING (2)

Dean Yang: Pre-Shipment inspections. Less optimistic conclusion

- PSI: before leaving the country of export, the shipment must be inspected and valued by a private firm.
- Use the Fisman Methodology (export minus import)
- Philippines introduced PSI in April 1987, for import for three sources (Hong Kong, Japan, Taiwan).
- October 1989: Round 2 countries- March 1992: Round 3 countries
- Figure 1: No impact of PSI (e.g. import capture is not bigger for round 1 country in period 1).
- Why? Evasion to other means: smaller batches, transshipment, bonded warehouses.
- Introduction of PSI may actually *increase* equilibrium level of smuggling if there is a fixed cost to those smuggling method.

Slide 13

FIGHTING CORRUPTION: OTHER WAYS...

- Voice: E.g. Public Affair Center in India and "report cards". No evaluation.
- Change the political process. E.g. Campaign finance (Wade)-Punish politicians rather than firms (Ramalho).

Slide 14