The Effect of Particularism on Corruption: Theory and Empirical Evidence

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Key message

- Determinants of corruption at individual level
- Particularism vs Universalism
- Effect of particularism on corruption

Outline

Definition of Particularism

Parsons and Shils (1951):

- Universalism implies that correct behavior can be defined and always be applied while particularism implies that relationships come ahead of abstract social codes

Outline

Theoretical Model

- Risk neutral agents randomly meet for the provision of a good having the option to engage in bribery
- Equal number of private citizens and public officials (N=1)
- Each agent can be either particularist or universalist.
- Each agent knows his type but does not know the type of the agent with whom he will interact.
- Each agent knows that citizens can be particularists with probability γ and universalists with probability $(1-\gamma)$, while public officials can be particularists with probability π and universalists with probability $(1-\pi)$

- Cost of violating social norm of no corruption:

$$C_c = C_c(\mu, \theta, C) = S_c C = \frac{\mu}{\theta} C \tag{1}$$

$$C_p = C_p(\varepsilon, \theta, C) = S_p C = \frac{\varepsilon}{\theta} C \tag{2}$$

  μ and ε: subjective sensitivity to the social norm, uniformly distributed on $[0, 1]$

  $0 < \theta \leq 1$: perception of corruption

  C: perceived cost imposed by corruption on society.

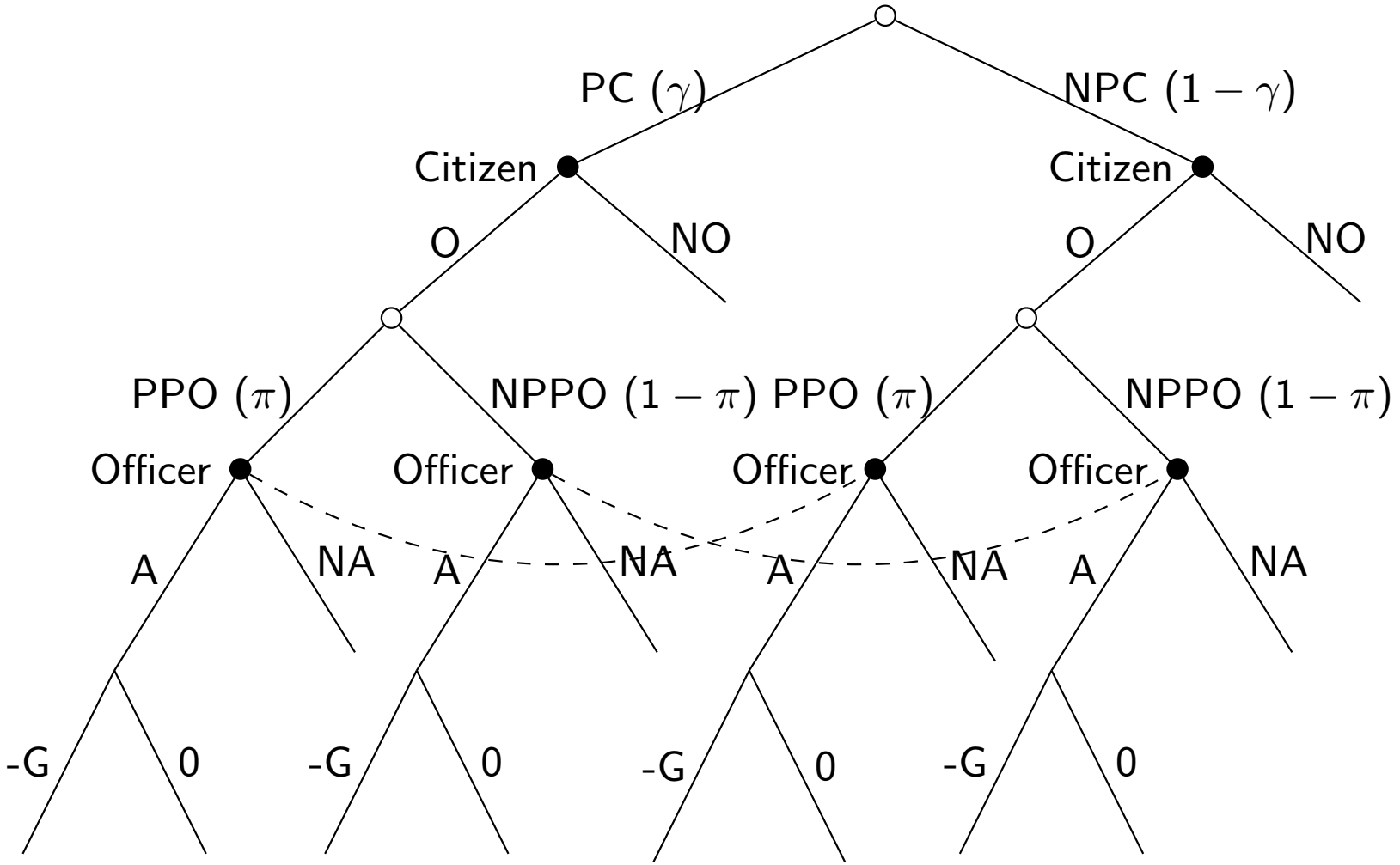
  $C = L$ if particularist (with probability π and γ)

  $C = H$ if universalist (with probability $(1 - \pi)$ and $(1 - \gamma)$), with $H > L$

- Authorities conduct controls, probability of detection (q) and penalty (G) for both agents

The game

Figure: Extensive form corruption game



III: Bargaining over bribe amount

- B is determined by Nash bargaining:

$$\begin{aligned} &\max_{B} [K - B - qG - C_c] [B - qG - C_p] \\ &\text{subject to} \\ &K \geq B + qG + C_c \\ &B \geq qG + C_p \end{aligned} \tag{3}$$

- From (3), equilibrium bribe:

$$B^* = B^*(K, C_p, C_c, \gamma, \pi) = \frac{1}{2} [K - C_c + C_p] \tag{4}$$

II: Public Officials

- Public official corruptible iff net gain from corruption is positive
- Given $C_p(\varepsilon, \theta, C)$ and given the uniform distribution of ε, the probability of accepting bribe:

$$\beta = \int_0^{\varepsilon^*} f(\varepsilon) d\varepsilon = \theta \left[\frac{K - 2qG - C_c}{(1-\pi)H + \pi L} \right] \tag{5}$$

- With: $\frac{\partial \beta}{\partial q} < 0$ or $\frac{\partial \beta}{\partial G} < 0$, $\frac{\partial \beta}{\partial \pi} > 0$, $\frac{\partial \beta}{\partial \theta} > 0$

I: Citizens

- Citizens internalize β and make a decision without knowing size of B
- Collusion occurs iff $0 < \varepsilon < \varepsilon^*$.
- Expected bribe:

$$E(B) = \frac{3}{4}K - \frac{3}{4}C_c - \frac{1}{2}qG \tag{6}$$

- Citizen will offer a bribe if:

$$K - E(B) - qG - \frac{\mu}{\theta}((1-\gamma)H + \gamma L) > 0 \tag{7}$$

- Probability of offering bribe:

$$\alpha = \alpha = \int_0^{\mu^*} f(\mu)d\mu = \theta\left[\frac{K - 2qG}{(1-\gamma)H + \gamma L}\right] \tag{8}$$

With: $\frac{\partial\alpha}{\partial\gamma} > 0$, $\frac{\partial\alpha}{\partial q} < 0$ or $\frac{\partial\alpha}{\partial G} < 0$, $\frac{\partial\alpha}{\partial\theta} > 0$, $\frac{\partial\alpha}{\partial K} > 0$

Reversing the game

Cases where the public official asks the citizen for a bribe

- The probability that the citizen is asked for a bribe is equal to:

$$\alpha = \theta \left[\frac{K - 2qG}{\pi L + (1 - \pi)H} \right] \tag{9}$$

- α depends on the public official's particularism, on the citizen's gross gain from corruption and on the expected sanction. It does not depend on the citizen's particularism.

Predictions

1. Particularism increases probability of offering bribe
2. Perceived corruption increases probability of offering bribe
3. Corruption deterrence decreases probability of offering bribe
4. Particularism does not affect the probability of being asked for a bribe.

Interactions

The effect of individual particularism on the probability to offer a bribe is:

$$\frac{\partial \alpha}{\partial \gamma} = \theta(H - L)\frac{K - 2qG}{[(1-\gamma)H + \gamma L]^2} \tag{10}$$

1. higher when corruption is more widespread (i.e. $\frac{\partial^2 \alpha}{\partial \gamma \partial \theta} > 0$)
2. smaller in countries where deterrence is stronger (i.e. $\frac{\partial^2 \alpha}{\partial \gamma \partial G} < 0$)
3. higher the higher the fraction of particularists in the society (i.e. $\frac{\partial^2 \alpha}{\partial \gamma^2} = -2(L - H)(H - L)\theta\frac{K-2qG}{[(1-\gamma)H+\gamma L]^3} > 0$

Outline

Data Description

- European Social Survey (ESS) edition 3.2 (2/2/2011)
- 26 nations, 49,066 individuals over 2004-2006
- Two key questions on bribery:
  1. How often have offered a bribe in the last 5 years
  2. How often have been asked for a bribe in the last 5 years
- Re-coded into binary outcomes (ever offered or ever been asked for a bribe)
- One key question on bribery justification:
  1. How wrong a public official asking someone for a favor or bribe

Particularism

1. How important to be loyal to friends and devote to close people - how important to follow rules ($>$ median of weighted sample)

   AND

2. Closure towards immigration ($>$ median of weighted sample)

Key variables, summary statistics

Table: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Offered bribe	0.02	0.13	0	1	45503
Was asked for bribe	0.05	0.21	0	1	43074
Bribe wrong	3.65	0.59	1	4	45419
Particularism	0.1	0.3	0	1	46955
Government Efficiency	1.41	0.645	0.02	2.13	46955
Corruption Index	1.4	0.847	-0.33	2.59	46955

Methods

- The Determinants of Bribing
  - Probit
- Accounting for Endogeneity
  - Instrumental Variables
  - Propensity Score Matching
- The Psychological Cost of Bribing
  - Structural Equation Modeling

Outline

Table: Probability of offering a bribe

	Offered bribe
Particularism	0.004**
Corruption Index	-0.006***
Government Efficiency	0.022
Honesty	-0.002***
Trust in the legal system	-0.001*
Trust	-0.000
Trust public officials	-0.003***
Social Meetings	0.000
Friends Support	0.004***
Demographic controls	X
Standard Literature Controls	X
Observations	20409

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Probit estimates (marginal effects)

Table: Probability of being asked for a bribe

	Been asked for bribe
Particularism	0.000
Corruption Index	-0.021***
Govt Efficiency	-0.030
Honesty	-0.005***
Trust in the legal system	-0.002*
Trust	-0.000
Trust public officials	-0.013***
Social Meetings	0.000
Friends Support	0.009***
Demographic controls	X
Standard Literature Controls	X
Observations	20409

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Probit estimates (marginal effects)

Table: Probability of offering a bribe, interactions with particularism

	(1)	(2)	(3)	(4)
Interaction with:	CPI	CoC	Mean Particularism	Corruption Diffusion
	-0.002	-0.006	0.03***	0.002***
	(0.001)	(0.003)	(0.147)	(0.000)

Note: OLS estimates (marginal effects). Dependent variable: binary variable for having offered a bribe. CPI: Corruption Perception Index. CoC: Control of Corruption. Number of observations: 27807. Standard errors (clustered by country) reported in brackets. * denotes significance at 0.10 level (** at 0.05, *** at 0.01).

Addressing Endogeneity: IV (1)

Table: Instrumental Variables estimation results

	Particularism (First stage)	Offered bribe (Second stage)
Particularism (d)		0.013***
Standard Controls	X	X
European Unification	-0.002***	
Important to care for nature	-0.013***	
Observations	26170	26693

Note: IV estimates (marginal effects). Dependent variable: binary variable for having offered a bribe. (d) indicates discrete change of dummy variable from 0 to 1. Standard errors clustered by country. * denotes significance at 0.10 level (** at 0.05, *** at 0.01).

Sargan test: p-value 0.1128

Addressing Endogeneity: Matching (2)

Table: Propensity score matching estimation results

	Nearest Neighbor			Kernel		
	PS 1	PS 2	PS 3	PS 1	PS 2	PS 3
Particularism	0.010***	0.010***	0.010**	0.009**	0.008**	0.009**
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)

Note: propensity score estimates. Dependent variable: binary variable for having offered a bribe. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). Standard errors in brackets.

The Psychological Cost of Bribing

Table: Structural Equation Model

	(1) Particularism	(2) Bribe cost	(3) Offered bribe
Particularism		-.050***	.005***
		(0.018)	(0.003)
Bribe Cost			-.013***
			(0.003)
Standard Controls	X	X	X
Oservations	27427	27427	27427

Note: Structural Equation Model Estimates. * denotes significance at 0.10 level (** at 0.05, *** at 0.01). Standard errors clustered by country reported in brackets.

Conclusions

- Particularism lowers the perceived cost of corruption and has a positive causal effect on the probability of offering bribes.
- Robust to different specifications and statistical techniques
- No effect on probability to be asked for a bribe
- Reducing particularism effective mechanism to reduce corruption

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