The Effect of Particularism on Corruption: Micro-level Evidence from European Countries

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Outline

Key message

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

Outline

Motivation

- Corruption detrimental for economic and social development (Spector, 2005)
- Only few studies investigate micro-level determinants of corruption (Dong et al., 2012)
- Cultural economics: importance of cultural traits and personal values for economic outcomes (i.e. Alesina and Giuliano, 2007, 2009; Guiso et al., 2006, 2009; Tabellini, 2008)
- Harris (2007): indicators of strong ties, family orientations and particularized trust are associated with significantly higher corruption.

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.

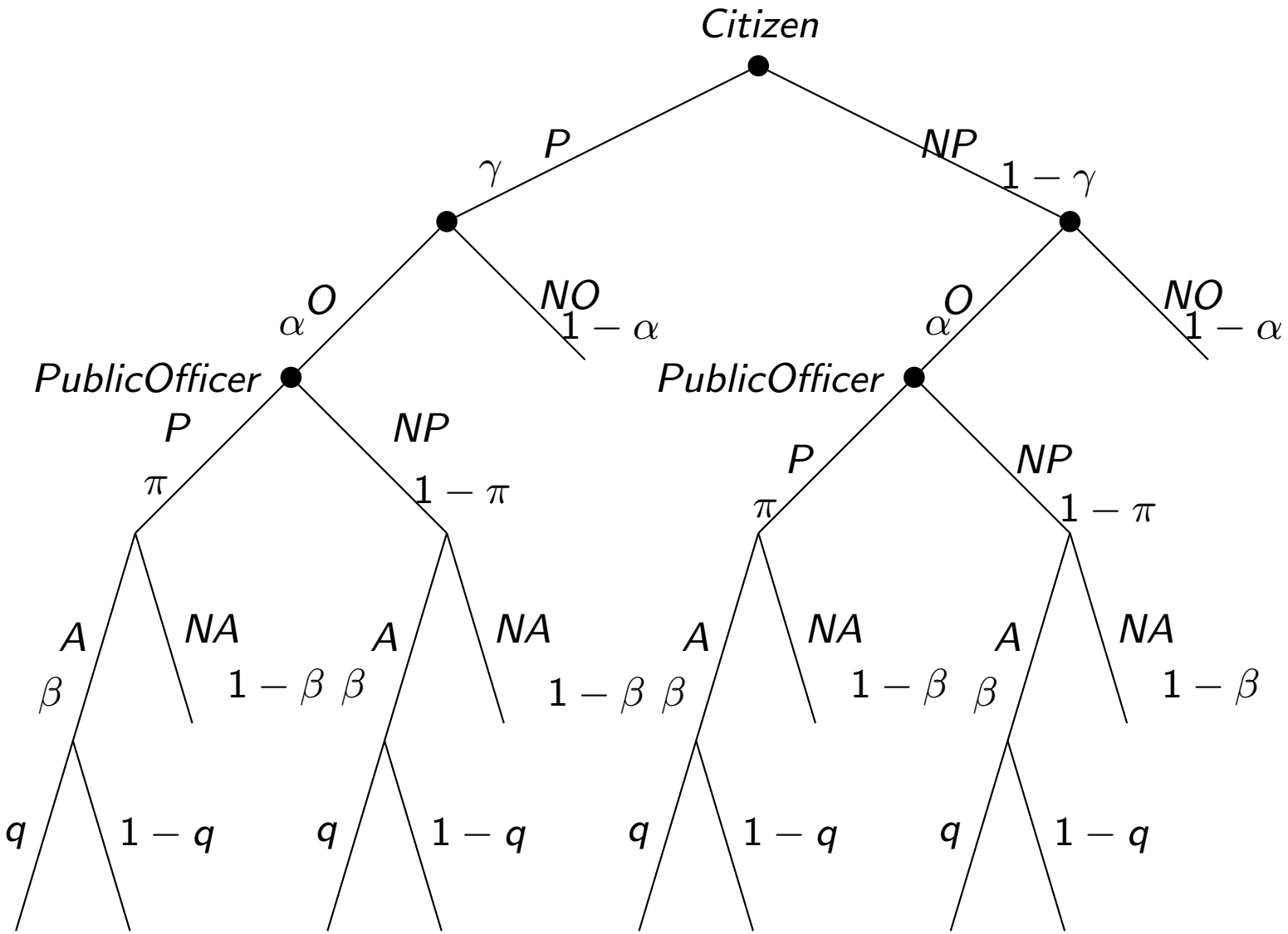
  $C = L$ if particularist (with probability π and γ)

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

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

The game

Figure: Extensive Form Game



III: Bargaining over bribe size

- 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:

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

- With $\frac{\delta B^*}{\delta C_p} > 0$, $\frac{\delta B^*}{\delta K} > 0$, and $\frac{\delta B^*}{\delta C_c} < 0$
- $\frac{\delta B^*}{\delta \pi} < 0$ and $\frac{\delta B^*}{\delta \gamma} > 0$

II: Public Officials

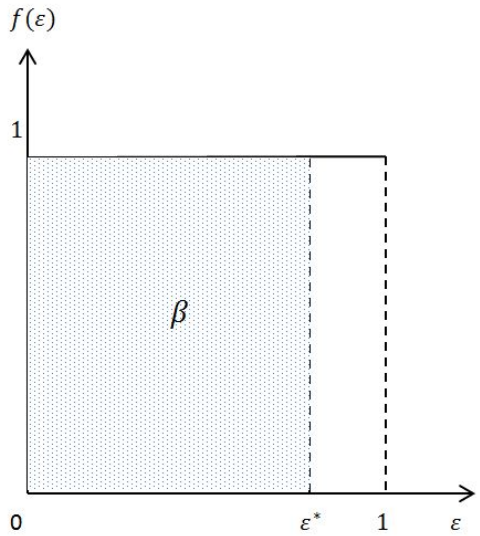
- Public official corruptible if positive net gain from corruption
- Given $C_p(\varepsilon, \theta, C)$, public officials with lower value of ε accept bribes
- Critical ε^* which makes public official indifferent:

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

II: Public Officials

- Given uniform distribution of ε, probability of accepting bribe:

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



$$\frac{\delta\beta}{\delta q} < 0$$
$$\frac{\delta\beta}{\delta S_c} < 0$$
$$\frac{\delta\beta}{\delta K} > 0$$
$$\frac{\delta\beta}{\delta \pi} > 0$$
$$\frac{\delta\beta}{\delta \theta} > 0$$
$$\frac{\delta\beta}{\delta \gamma} > 0$$

I: Citizens

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

$$E(B) = \frac{1}{2}\left[K + C_c + \frac{1}{\theta}E(\varepsilon|0 < \varepsilon < \varepsilon^*)((1-\pi)H + \pi L)\right] \tag{6}$$

where $E(\varepsilon|0 < \varepsilon < \varepsilon^*) = \frac{\varepsilon^*}{2}$

I: Citizens

- Expected bribe:

$$E(B) = \frac{3}{4}K - \frac{3}{4}C_c - \frac{1}{2}qG \tag{7}$$

- Citizen will offer a bribe if:

$$K - E(B) - qG - \frac{\mu}{\theta}((1-\gamma)H + \gamma L) > 0 \tag{8}$$

- Using (7) in (8), we obtain μ^*
- Probability of offering bribe:

$$\alpha = \int_0^{\mu^*} f(\mu)d\mu = \mu^* = \theta\left[\frac{K - 2qG}{(1-\gamma)H + \gamma L}\right] \tag{9}$$

With $\frac{\delta\alpha}{\delta\gamma} > 0$, $\frac{\delta\alpha}{\delta q} < 0$, $\frac{\delta\alpha}{\delta G} < 0$, $\frac{\delta\alpha}{\delta\theta} > 0$ and $\frac{\delta\alpha}{\delta K} > 0$

Testable 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. Note that, if we reverse the game, particularism does not affect the probability of being asked for a bribe.

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)

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	0.017	0.128	0	1	45503
Being Asked	0.046	0.21	0	1	43074
Particularism	0.503	0.497	0	1	41750
Government Efficiency	1.41	0.645	0.02	2.13	46955
Corruption Index	1.4	0.847	-0.33	2.59	46955

Methods

- Probit
- IV
- Matching

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 offering a bribe: robustness

	(1)	(2)	(3)	(4)
Particularism	0.003**	0.003**	0.003**	0.004**
Standard Controls	X	X	X	X
Trust Variables	X	X	X	X
Personal Values		X	X	X
Political Participation			X	X
Social Capital			X	X
Country dummies	X	X	X	
Govt Eff. and CI				X
Observations	25438	25137	20014	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 being asked for a bribe: robustness

	(1)	(2)	(3)	(4)
Particularism	-0.001	-0.001	-0.001	0.000
Standard Controls	X	X	X	X
Trust Variables	X	X	X	X
Personal Values		X	X	X
Political Participation			X	X
Social Capital			X	X
Country dummies	X	X	X	
Govt Eff. and CI				X
Observations	25438	25137	20014	20409

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

Addressing Causality: IV (1)

Table: Instrumental Variable Regression

	(1) Offered
First Stage	
Particularism	
Important to care for nature	-0.000367 ***
Standard Controls	X
Second Stage	
Offered	
Particularism (d)	0.005 *
Standard Controls	X
Observations	20567

Marginal effects;

(d) for discrete change of dummy variable from 0 to 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Addressing Causality: IV (2)

Table: Instrumental Variable Regression

	(1) Offered
First Stage	
Particularism	
Modern science to solve environmental problems	-0.000138 ***
Important to care for nature	-0.000363 ***
Standard Controls	X
Second Stage	
Offered	
Particularism (d)	0.005 **
Standard Controls	X
Observations	20567

Marginal effects;

(d) for discrete change of dummy variable from 0 to 1

Addressing Causality: Matching

Table: Matching

	Nearest Neighbor	Kernel
Propensity Score 1	0.003**	0.003***
Propensity Score 2	0.003*	0.003***
Propensity Score 3	0.002*	0.003*
Propensity Score 4	0.002*	0.003*

Conclusions

- Positive and significant effect of particularism on probability to offer a bribe
- Robust to different specifications and statistical techniques
- No effect on probability to be asked for a bribe
- Reducing particularism effective mechanism to reduce corruption