CORRUPTION AND DEVELOPMENT

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INTRODUCTION

♣ Corruption is the misuse by *public* representatives of their discretionary power for private gains.

♣ Corruption is hard to measure because it is illegal.

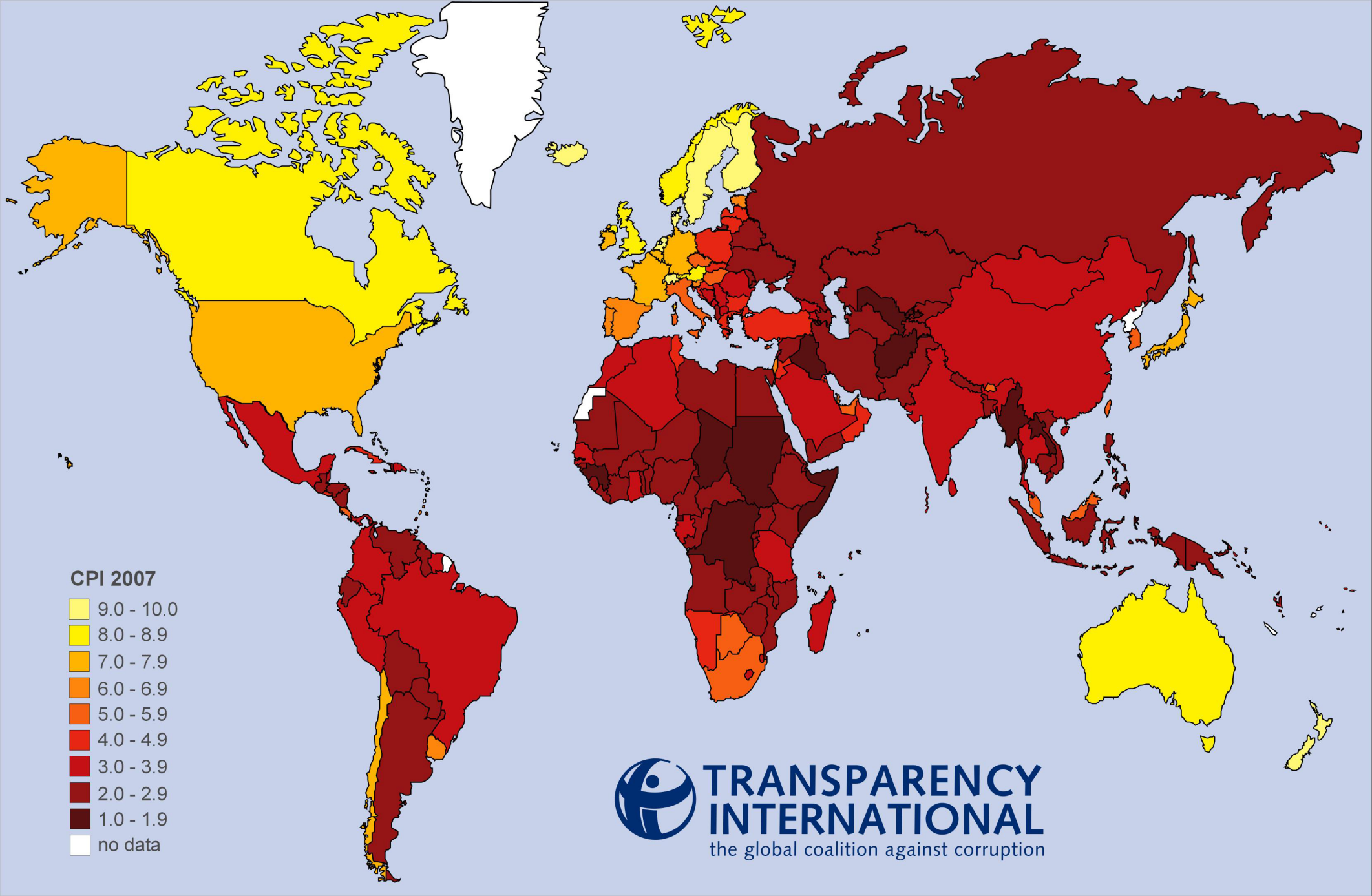
⇒ Indexes of corruption are based on *perceived* levels of corruption.

♣ Corruption indexes varies widely across countries.

⇒ There is a statistical correlation between poverty and corruption level.

Country	2007 CIP score	Country	2007 CIP score	Country	2007 CIP score	Country	2007 CIP score
Denmark	9.4	Finland	9.4	New Zeland	9.4	Singapore	9.3
Sweden	9.3	Iceland	9.2	Netherlands	9.0	Switzerland	9.0
Canada	8.7	Norway	8.7	Australia	8.6	Luxembourg	8.4
United Kindgdom	8.4	Hong Kong	8.3	Austria	8.1	Germany	7.8
Ireland	7.5	Japan	7.5	France	7.3	USA	7.2
Belgium	7.1	Chile	7.0	Barbados	6.9	Saint Lucia	6.8
Spain	6.7	Uruguay	6.7	Slovenia	6.6	Estonia	6.5
Portugal	6.5	Israel	6.1	Saint Vincent & the Grenadines	6.1	Qatar	6.0
Qatar	6.0	Malta	5.8	Macao	5.7	Taiwan	5.7
United Arab Emirates	5.7	Dominica	5.6	Botswana	5.4	Cyprus	5.3
Hungary	5.3	Czecq Republik	5.2	Italy	5.2	Malaysia	5.1
South Africa	5.1	South Korea	5.1	Bahrain	5.0	Bhutan	5.0
Costa Rica	5.0	Cape Verde	4.9	Slovakia	4.9	Latvia	4.8
Lithuania	4.8	Jordan	4.7	Mauritius	4.7	Oman	4.7
Greece	4.6	Namibia	4.5	Samoa	4.5	Seychelles	4.5
Kuweit	4.3	Cuba	4.2	Poland	4.2	Tunisia	4.2
Bulgaria	4.1	Croatia	4.1	Turkey	4.1	El Salvador	4.0
Colombia	3.8	Ghana	3.7	Romania	3.7	Senegal	3.6
Brazil	3.5	China	3.5	India	3.5	Mexico	3.5
Morocco	3.5	Peru	3.5	Suriname	3.5	Georgia	3.4
Grenada	3.4	Saudi Arabia	3.4	Serbia	3.4	Trinidad & Tobago	3.4
Bosnia & Herzegovina	3.3	Gabon	3.3	Jamaica	3.3	Kiribati	3.3
Lesotho	3.3	FYR Macedonia	3.3	Maldives	3.3	Montenegro	3.3
Swaziland	3.3	Thailand	3.3	Madagascar	3.2	Panama	3.2
Panama	3.2	Sri Lanka	3.2	Tanzania	3.2	Vanuatu	3.1
Algeria	3.0	Armenia	3.0	Belize	3.0	Dominican Republic	3.0
Lebanon	3.0	Mongolia	3.0	Albania	2.9	Argentina	2.9
Bolivia	2.9	Burkina Faso	2.9	Djibouti	2.9	Egypt	2.9
Eritrea	2.8	Guatemala	2.8	Moldovaa	2.8	Mozambique	2.8

Country	2007 CIP score	Country	2007 CIP score	Country	2007 CIP score	Country	2007 CIP score
Rwanda	2.8	Solomon Islands	2.8	Uganda	2.8	Benin	2.7
Malawi	2.7	Mali	2.7	Sao Tome & Principe	2.7	Ukraine	2.7
Comoros	2.6	Guyana	2.6	Mauritania	2.6	Nicaragua	2.6
Niger	2.6	Timor-leste	2.6	Viet Nam	2.6	Zambia	2.6
Burundi	2.5	Honduras	2.5	Iran	2.5	Libya	2.5
Nepal	2.5	Philippines	2.5	Yemen	2.5	Cameroon	2.4
Ethiopia	2.4	Pakistan	2.4	Paraguay	2.4	Syria	2.4
Gambia	2.3	Indonesia	2.3	Russia	2.3	Togo	2.3
Angola	2.2	Guinea-Bissau	2.2	Nigeria	2.2	Azerbaijan	2.1
Belarus	2.1	Congo Republic	2.1	Cote d'Ivoire	2.1	Ecuador	2.1
Kazakhastan	2.1	Kenya	2.1	Kyrgyzstan	2.1	Liberia	2.1
Sierra Leone	2.1	Tajikistan	2.1	Zimbabwe	2.1	Bangladesh	2.0
Cambodia	2.0	Central African Republic	2.0	Papua New Guinea	2.0	Turkmenistan	2.0
Venezuela	2.0	Congo Democratic Republic	1.9	Equatorial Guinea	1.9	Guinea	1.9
Laos	1.9	Afghanistan	1.8	Chad	1.8	Sudan	1.8
Tonga	1.7	Uzbekistan	1.7	Haiti	1.6	Iraq	1.5
Myanmar	1.4	Somalia	1.4				


CPI 2007
9.0 - 10.0
8.0 - 8.9
7.0 - 7.9
6.0 - 6.9
5.0 - 5.9
4.0 - 4.9
3.0 - 3.9
2.0 - 2.9
1.0 - 1.9
no data
TRANSPARENCY INTERNATIONAL
the global coalition against corruption

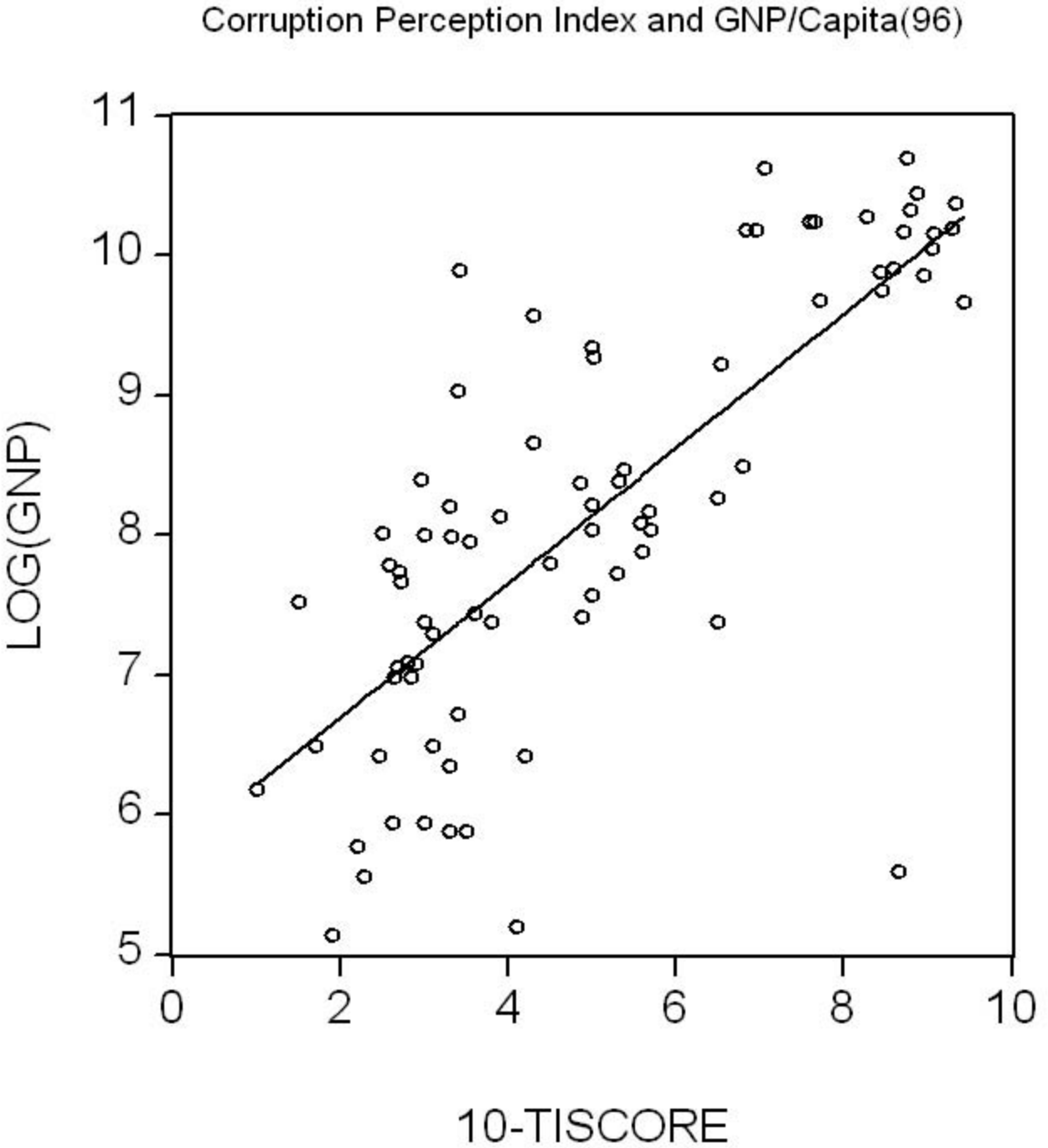

Corruption Perception Index and GNP/Capita(96)
LOG(GNP)
11
10
9
8
7
6
5
0
2
4
6
8
10
10-TISCORE

Table 3: Determinants of Perceived Corruption (OLS Unweighted)

	1996 (TI)					1997 (TI)					1998 (TI)				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Common	-1.34	.28	.34	.16	-.43	1.19*	.64	.81	.98*	.92	-.36	-.01	-.07	-.08	-.00
Law system	(1.07)	(.54)	(.46)	(.53)	(.92)	(.69)	(.43)	(.50)	(.51)	(.91)	(.95)	(.61)	(.60)	(.67)	(.94)
Former British	-.38	-1.36**	-1.27***	-1.01*	-.34	-3.55***	-2.18***	-2.14***	-2.31***	-2.15**	-1.25	-1.08*	-.98*	-.82	-1.06
colony or UK	(1.01)	(.50)	(.46)	(.50)	(.87)	(.85)	(.52)	(.62)	(.59)	(.90)	(.81)	(.54)	(.53)	(.58)	(.96)
Never a	-.24	.16	.30	.33	.20	-.97*	-.25	-.16	-.27	-.42	-1.54**	-.12	-.02	-.14	-.33
colony	(.65)	(.47)	(.42)	(.42)	(.38)	(.57)	(.45)	(.47)	(.47)	(.59)	(.63)	(.43)	(.43)	(.44)	(.46)
Percent	-.05***	-.03***	-.02**	-.02**	-.02*	-.05***	-.03***	-.02***	-.03***	-.02*	-.04***	-.03***	-.03***	-.03***	-.02**
Protestant 1980	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Ethnolinguistic	.03***	-.00	-.01	-.01	.00	.03***	.01	.00	.01	.00	.02**	-.00	-.00	-.00	-.00
division	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Fuel, metal, +	.03**	.01	.01	.00	-.00	.03***	.01	.01	.01	-.00	.02**	.01*	.01	.01	.00
minerals exports	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Log GDP		-4.59***	-4.84***	-4.63***	-4.35***		-4.07***	-4.01***	-3.63***	-4.08***		-3.94***	-3.83***	-3.64***	-4.56***
per capita		(.65)	(.60)	(.63)	(.84)		(.65)	(.63)	(.66)	(1.00)		(.45)	(.51)	(.49)	(1.12)
Federal			1.17***	1.07***	.52			.82**	.66**	.59			.82**	.69**	.56
			(.35)	(.37)	(.40)			(.30)	(.29)	(.39)			(.32)	(.33)	(.40)
Uninterrupted dem-			-.74	-.65	-.77			-.90*	-.81*	-.55			-.92**	-1.01**	-.45
ocracy 1950-95			(.58)	(.55)	(.54)			(.49)	(.47)	(.70)			(.45)	(.46)	(.75)
Imports/GNP (%)				-.01**	-.01				-.01**	-.01				-.01	-.01
				(.00)	(.01)				(.01)	(.01)				(.01)	(.01)
State inter-					-.74**					-.52					-.58*
vention					(.35)					(.37)					(.32)
Govern-					-.15					-.06					-.07
ment wage					(.24)					(.30)					(.32)
Government					1.43					.95					1.14
turnover					(1.67)					(1.28)					(1.39)
Constant	4.21***	22.8***	23.8***	23.2***	24.8***	4.48***	20.7***	20.56***	19.5***	22.9***	5.29***	20.28***	20.0***	19.7***	25.2***
	(.60)	(2.65)	(2.38)	(2.38)	(3.66)	(.49)	(2.74)	(2.56)	(2.57)	(4.05)	(.49)	(1.79)	(1.96)	(1.85)	(4.82)
R^2	.6170	.8323	.8725	.8872	.8986	.7062	.8546	.8847	.8987	.8955	.5515	.8200	.8451	.8497	.8855
N	47	47	47	45	36	44	44	44	42	34	64	64	64	62	36

Note: Log GDP per capita 1990 for 1996, 97, 98; log GDP 1980 for 1980s. Fuel, metal and minerals exports = share of total exports, 1993 for 1996, 97, 98; 1978 for 1980s. Imports 1994 as % of GDP 1994 for 1996, 97, 98; imports 1980 as % GDP 1980 for 1980s. White heteroskedasticity-corrected standard errors in parentheses. * p <.10; ** p < .05; *** p < .01.

The table is from Auriol and Gary-Bobo (2008)

Dependent Variable: TISCORE (estimation by OLS)				
	(1)	(2)	(3)	(4)
Constant	14.94	13.69	13.82	12.17
	(13.28)***	(11.31)***	(10.14)***	(10.21)***
n	0.0018	0.0017	0.002	0.0023
	(2.61)**	(2.07)**	(1.93)*	(3.51)***
COMLAW	-0.18	-0.17	-0.12	
	(-0.45)	(-0.46)	(-0.32)	
FORMBRITCOL	-0.72	-0.56	-0.64	
	(-1.61)	(-1.28)	(-1.46)	
PERCENTPROT	-0.026	-0.014	-0.01	-0.01
	(-3.85)***	(-2.15)**	(-1.77)*	(-3.22)***
ELF	-0.24	-0.2	-0.42	
	(-0.33)	(-0.31)	(-0.57)	
RAWMAT	-0.008	-0.013	-0.01	
	(-0.69)	(-1.19)	(-1.16)	
log(GNP)	-1.29	-1.02	-1.03	-0.81
	(-9.24)***	(-6.8)***	(-5.85)***	(-5.08)***
FEDERAL		0.95	0.93	
		(2.35)**	(2.06)**	
DEM46		-1.53	-1.72	-1.63
		(-3.34)***	(-3.57)***	(-4.73)***
FREEOP			0.3	
			(0.13)	
AFRICA				-1.12
				(-2.81)***
OECD				-0.76
				(-1.95)*
DENSITY				-0.0005
				(-4.73)***
No. Obs.	69	69	56	79
R^2	0.70	0.75	0.76	0.77

t-statistics are in parentheses. Significance is denoted by *** (1%); ** (5%); * (10%).

♣ Correlation is not causality

⇒ Theory is needed to understand the relationship between corruption and poverty.

Corruption and Growth

♣ Leff (1964) and Huntington (1968) argue that corruption, by greasing the wheels of cumbersome bureaucracy, can improve economic performance

⇒ Short term (static effect).

♣ Rose-Ackerman (1978), Murphy, Shleifer, and Vishny (1991, 1993), and Shleifer and Vishny (1993) argue that corruption deteriorates economic growth through the misallocation of talent and other resources

⇒ Long term (dynamic effect).

Empirical Evidences

♣ Mauro (1995), examines empirically the relationship between two measures of corruption and investment and economic growth. His results suggest that corruption has a negative impact on investment and economic growth.

♣ New estimations by Shaw, Katsaiti and Jurgilas (2006), dealing more carefully with the endogeneity of corruption, can not rule out the possibility of no effect of corruption on economic growth or investment.

♣ Auriol, Flochel and Straub (2008) exploit a rich dataset on public procurement in Paraguay to analyse how corruption act on the misallocation of ressources and talent.

♣ Kim and Hooper (2007) find in some cases that international capital flows increase when opacity relating to specific business climate increases - accounting and regulations for FDI flows, corruption and regulation for portfolio flows, and corruption and economic opacities for international lending flows.

♣ Countries with higher corruption levels attract more private investment in infrastructure than countries with lower levels Ghosh Banerjee, Oetzel and Ranganathan (2006).

$\Rightarrow$ There are rents to be made (Auriol and Blanc 2008)

CONCLUSION: Although it is intuitive that corruption is bad for development, theoretical and empirical results are not totally conclusive.

Corruption is complex

♣ Not only the level of corruption varies across countries, but the *nature* also varies.

⇒ In advanced economies corruption is rare and tends to take the form of capture.

⇒ In developing countries, corruption is endemic and, in addition to capture, tends to take the form of extortion.

♣ TI Global Corruption Barometer 2006 shows that

- Perception of grand corruption is global: the political life is seen everywhere in the world as the area being most compromised by corruption.
- The percentage of respondents who claim that corruption affects their personal/family life varies greatly among world's regions: They are 22 percent of Europeans to feel personally affected to a great extent, while they are 70 percent in Africa.

♣ A survey in Bangalore (India) by Public Affair Center in 1993 revealed that 14% of the interviewees paid bribes: 50% were overtly and 33% implicitly extortionary.

There are two types of corruption:

- *Capture*: Bribe is paid to divert public representative away from her job prescription (e.g., winning a public auction).

  $\Rightarrow$ Capture is difficult to fight because it is favorable to the person who pays the bribe.

- *Extortion*: Bribe is paid to keep public representative into her job prescription (e.g., you want your passport to be renewed, you pay a bribe or wait forever).

  $\Rightarrow$ Extortion is easy to fight because it is against the person who pays the bribe: it is easy to collect complains.

GOAL: Explain why there is both a difference in nature and in level of corruption across countries.

THE INGREDIENTS

♣ Capture is difficult to fight but extortion is easy.

⇒ If extortion runs high in developing countries, it is because it is not fought against.

WHY?

♣ Cultural explanation (social norms are different in different countries).

♣ "Liberal" explanation (government corrupts the market by its regulation).

♣ Public finance explanation: The main characteristic of a poor country is that it is *poor*.

e.g. The average current revenue of central government in 1995 was (world bank 1998):
- 9.9% of GDP for low incomes countries
- 20% of GDP for middle incomes countries
- 28% of GDP for high incomes countries

⇒ Developing countries governments have very limited resources.

RESULT

A government that does not have enough resources to finance its basic services, will rather have them partly "privatized" than simply canceled.

$\Rightarrow$ Discretion becomes the implicit compensation for a low income.

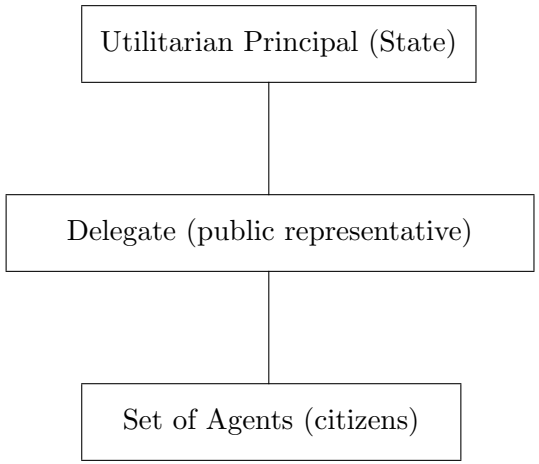
The Case of Uganda (Chew 1990)

♣ Drastic fall of the real salaries during 1975-88: Starting from a base 100 in January 1975 they fall to 3 for highest secretary grades in September 1988.

⇒ Internal adjustments: regrading and promotion, reduction of hour worked, corruption.

"However, while corruption cannot be condoned, one should understand that dismally low pay can impel government employees into corruption through need rather than greed." (Chew 1990).

THE MODEL



hidden $k \in \{A, B\}$

A1 $$Prob(k = A) = \nu.$$

♣ There are two types of decisions $D_k \in \{D_A, D_B\}$.

♣ The agents prefer unanimously D_A to D_B:

$$\Pi_k(D_A) > \Pi_k(D_B) \qquad \forall k = A, B$$

A2 $$\Pi_k(D_A) - \Pi_k(D_B) = M$$

♣ The Principal prefers D_k to reward type $k \in \{A, B\}$. let $V_k(D) = S_k(D) + \Pi_k(D)$.

A3 $\quad V_k(D_k) > V_k(D_{k'}) \quad \forall k \neq k'$.

♣ It is always worth taking a decision:

$$V_k(D_{k'}) > 0 \qquad \forall k \neq k'.$$

♣ The Principal has a budget constraint: the opportunity cost of the public funds is $\lambda + 1 \geq 1$.

Delegate

♣ Her duty is to exert an effort e to find out $k \in \{A, B\}$ and implement D_k. Exerting effort is costly.

A4 $\psi(e)$ is an increasing, convex function.

♣ Effort produce a signal σ, which is private information (adverse selection). $\sigma = k$ is hard evidence.

$$\sigma \in \{k, \emptyset\} \quad \text{with} \quad \mu(e) = Prob(\sigma = k).$$

A5 $\mu(e)$ is an increasing, concave function.

♣ The delegate utility :

$$U_{\hat{\sigma}} = w_{\hat{\sigma}} + \frac{b_{\hat{\sigma}}}{1+\delta} - \psi(e)$$

$\Rightarrow$ w wage, b bribe, $\delta \in [0, +\infty)$ discount factor for illegal revenue.

$\Rightarrow$ Effort e is not observable (moral hazard).

$\Rightarrow$ The delegate reservation utility is normalized to 0: $EU \geq 0$.

THE TIMING

$t = 1$ The principal announces $\{(D_{\hat{\sigma}}, w_{\hat{\sigma}})\}$.

$t = 2$ Nature chooses $k \in \{A, B\}$.

$t = 3$ The delegate produces effort e upon which she obtains an information $\sigma \in \{\emptyset, k\}$.

$t = 3$ The delegate meets with the agent, side contracting occurs.

$t = 4$ The delegate announces $\hat{\sigma} \in \{\emptyset, k\}$; D_A or D_B is chosen according to Principal rule; transfer is paid.

FIRST BEST OPTIMUM

♣ The Principal monitors effort e, checks signal σ and collects taxes efficiently (λ is close to 0).

$$\Rightarrow b = 0 \text{ and } U = w - \psi(e)$$

Let $EV_k(D_k) = \nu V_A(D_A) + (1-\nu)V_B(D_B)$.

$$EV_k(D_\emptyset) = \nu V_A(D_\emptyset) + (1-\nu)V_B(D_\emptyset)$$

$$\Delta V = EV_k(D_k) - EV_k(D_\emptyset)$$

The Principal solves for $(e, D_\emptyset)$:

$$\text{Max}\, W = EV_k(D_\emptyset) + \mu(e)\Delta V + U - w(1+\lambda)$$

$$\text{s.t.} \quad U = w - \psi(e) \geq 0$$

Lemma 1 *Since transfers are costly, the delegate is always put at her individual rationality level:* $U = 0$.

The Principal solves:

$$\text{Max}\, W(D_\emptyset, e) = EV_k(D_\emptyset) + \mu(e)\Delta V - (1+\lambda)\psi(e)$$

$\Rightarrow$ The optimal effort level: $e^* = e(\frac{\Delta V}{1+\lambda})$

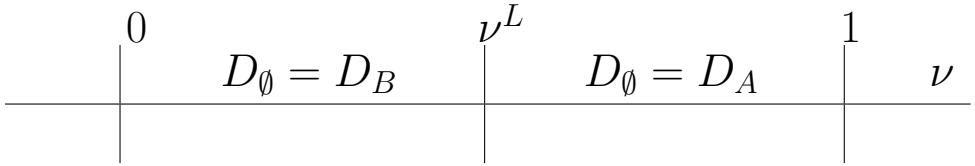
$$\mu'(e)\Delta V = (1+\lambda)\psi'(e)$$

$\Rightarrow$ The optimal decision: $D_\emptyset = arg\ \text{max}\ EV_k(D_\emptyset)$.

Let ν^l be such that: $EV_k(D_A) = EV_k(D_B)$.

$$\Rightarrow \quad \nu^l = \frac{V_B(D_B) - V_B(D_A)}{[V_A(D_A) - V_A(D_B)] + [V_B(D_B) - V_B(D_A)]}.$$

Proposition 1 *The first best policy consist of choosing the effort level* $e^* = e(\frac{\Delta V}{1+\lambda})$ *with* $D_\emptyset = D_A$ *if* $\nu \geq \nu^l$, *and* $D_\emptyset = D_B$ *if* $\nu < \nu^l$.



Definition: There are two discretion regimes

Presumption of innocence Someone is innocent unless he/she is proven guilty: $D_\emptyset = D_A$.

Burden of the proof Someone is guilty unless he/she is proven innocent: $D_\emptyset = D_B$.

SECOND BEST OPTIMUM

♣ The Principal cannot monitors effort, nor check signal: moral hazard + adverse selection (corruption).

♣ The Principal has a budget constraint ($\lambda > 0$).

$\Rightarrow$ The discretion regime influence the nature of corruption:

♣ Presumption of innocence ⇒ Capture

+ When $D_\emptyset = D_A$ and $\sigma = B$ the delegate can claim $\hat{\sigma} = \emptyset$ in exchange of $b = M$.

♣ Burden of the proof ⇒ Extortion

+ When $D_\emptyset = D_B$ and $\sigma = A$ the delegate can threat to announce $\hat{\sigma} = \emptyset$ unless she get: $b = M$.

♣ Corruption-proofness contracts:

+ extortion-proofness contract: $w_A > w_\emptyset$ when $D_\emptyset = D_B$

+ capture-proofness contract: $w_B > w_\emptyset + \frac{M}{1+\delta}$ when $D_\emptyset = D_A$

$\Rightarrow$ It is very easy to fight extortion.

Definition:

+ extortion regime: : $D_\emptyset = D_B$ and $w_A \leq w_\emptyset$.

+ capture regime: $D_\emptyset = D_A$ and $w_B \leq w_\emptyset + \frac{M}{1+\delta}$.

♣ The delegate expected utility under asymmetric information:

$$EU = w_{\emptyset} + \mu(e)[E\Delta w + \tfrac{Eb}{1+\delta}] - \psi(e) \geq 0.$$

$\Rightarrow$ The delegate effort level:

(IC) $$\mu'(e)[E\Delta w + \tfrac{Eb}{1+\delta}] = \psi'(e)$$

♣ The principal objective function is to maximize w.r.t $(D_\emptyset, e, \mathbb{1}^{ext}, \mathbb{1}^{cap})$:

$$W = EV_k(D_\emptyset) + \mu(e)\Delta V - (1+\lambda)\psi(e) + \mathbb{1}^{ext}(\lambda - \delta)\mu(e)\nu\frac{M}{1+\delta} + \mathbb{1}^{cap}\mu(e)\Big\{(1-\nu)(\lambda-\delta)\frac{M}{1+\delta} - \Delta V\Big\}$$

s.t. (IC)

$\Rightarrow$ 3 regimes:

- λ small ($\lambda \leq \delta$) $\Rightarrow$ corruption-free
- λ intermediate ($\delta < \lambda \leq \Lambda(\delta)$) $\Rightarrow$ extortion occurs, capture not.
- λ large ($\lambda > \Lambda(\delta)$) $\Rightarrow$ predation, looting

Corruption-Free Regime
$\lambda \leq \delta$

♣ $D_\emptyset = D_A \Rightarrow$ capture-proof contract

♣ $D_\emptyset = D_B \Rightarrow$ extortion-proof contract

♣ First-best rule: $e^* = e(\frac{\Delta V}{1+\lambda})$ and $D_\emptyset = D_\emptyset^*$

Extortion Regime
$\delta \leq \lambda \leq \Lambda(\delta)$

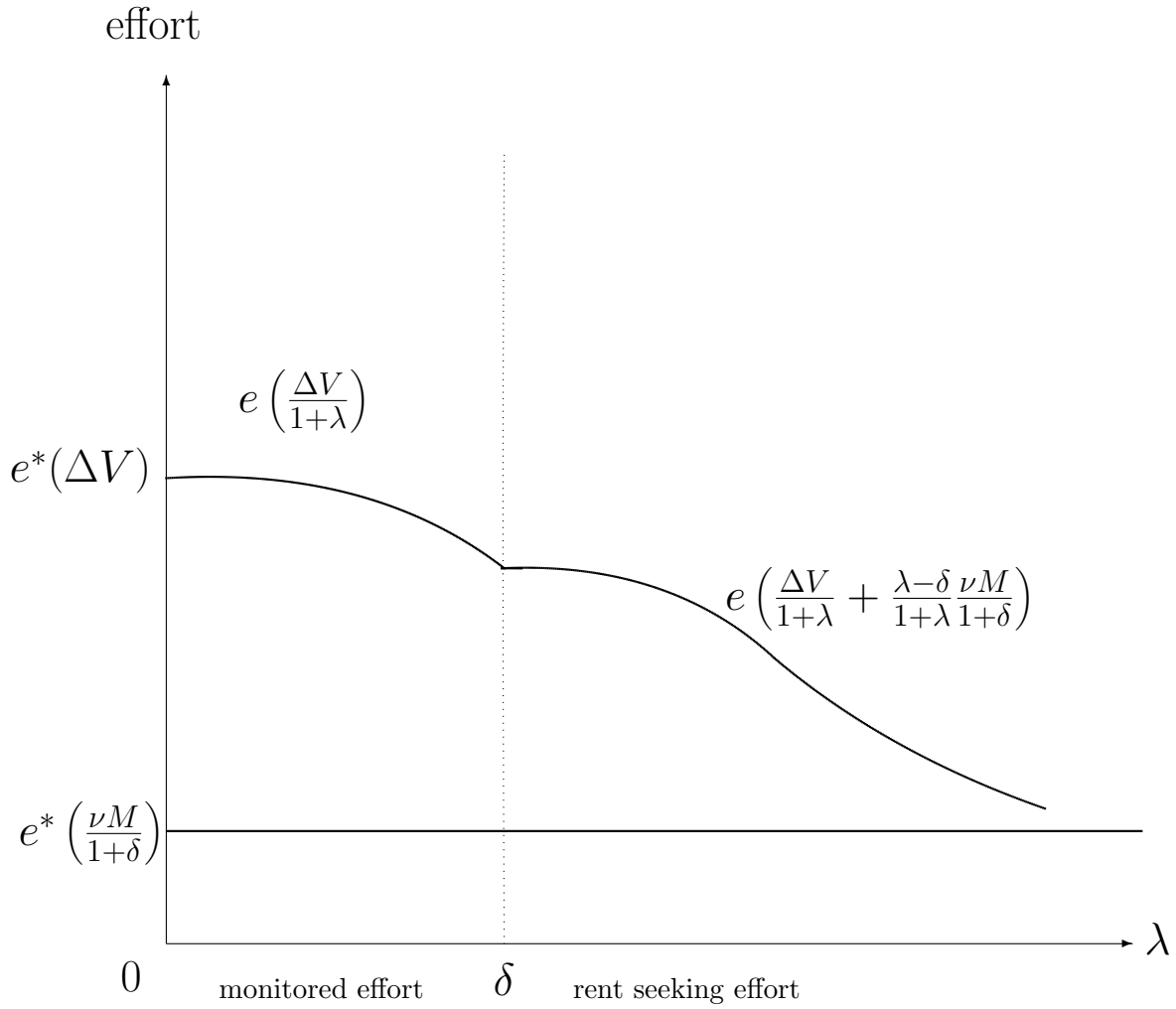
♣ $D_\emptyset = D_B$ and $\lambda \geq \delta \Rightarrow \mathbb{1}^{ext} = 1$

♣ The principal maximizes under incentive constraint:

$$W = EV_k(D_B) + \mu(e)\Delta V - (1+\lambda)\psi(e) \; + \; \mu(e)(\lambda - \delta)\frac{\nu M}{1+\delta}$$

$\Rightarrow$ The optimal effort under extortion:

$$\mu'(e)[\Delta V + (\lambda - \delta)\tfrac{\nu M}{1+\delta}] = (1+\lambda)\psi'(e)$$



Optimal effort under the burden of the proof regime ($D_\emptyset = D_B$)

Capture Regime
$\lambda > \Lambda(\delta)$

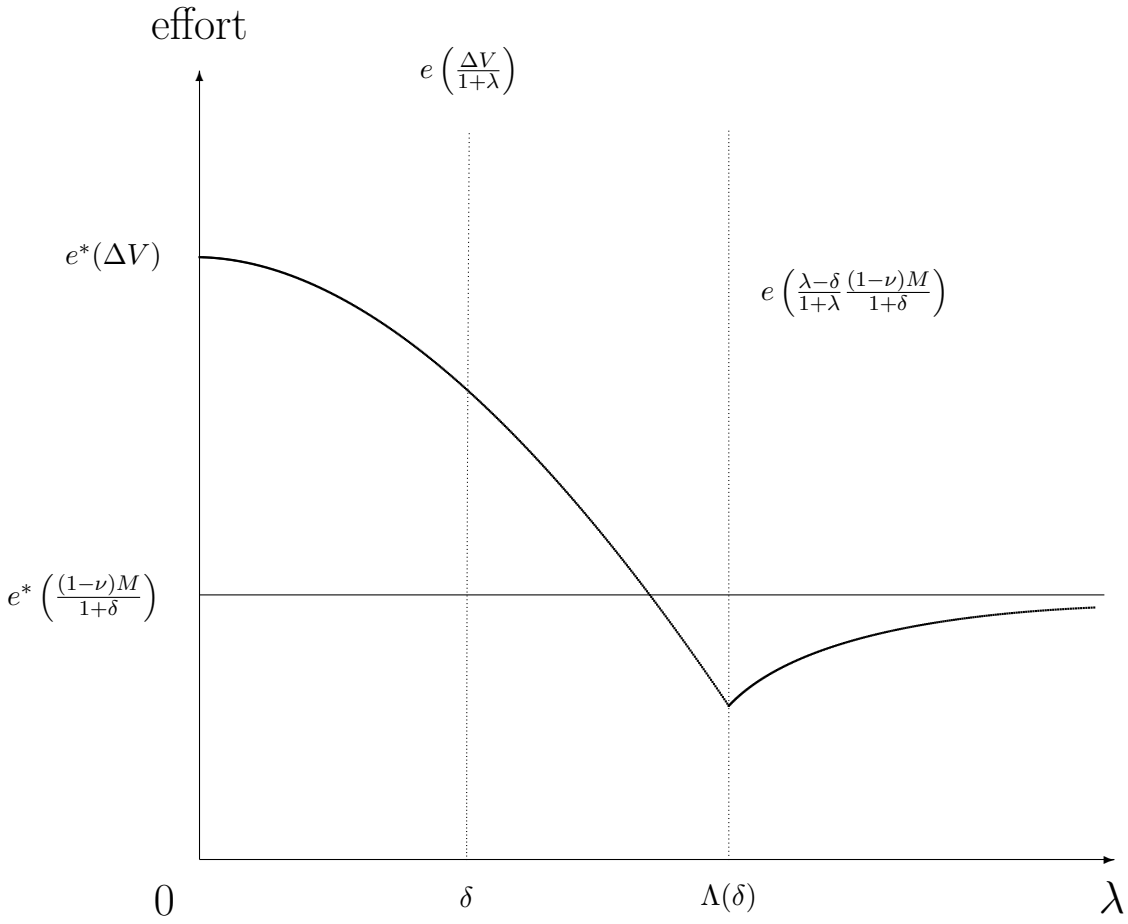
♣ $D_\emptyset = D_A$ and $\lambda > \Lambda(\delta) \Rightarrow \mathbb{1}^{cap} = 1$

♣ The principal maximizes under incentive constraint:

$$W = EV_k(D_A) - (1+\lambda)\psi(e) + \mu(e)(1-\nu)(\lambda-\delta)\tfrac{M}{1+\delta}$$

$\Rightarrow$ The optimal effort under capture:

$$\mu'(e)\frac{(\lambda-\delta)}{1+\lambda}\frac{(1-\nu)M}{1+\delta} = \psi'(e)$$



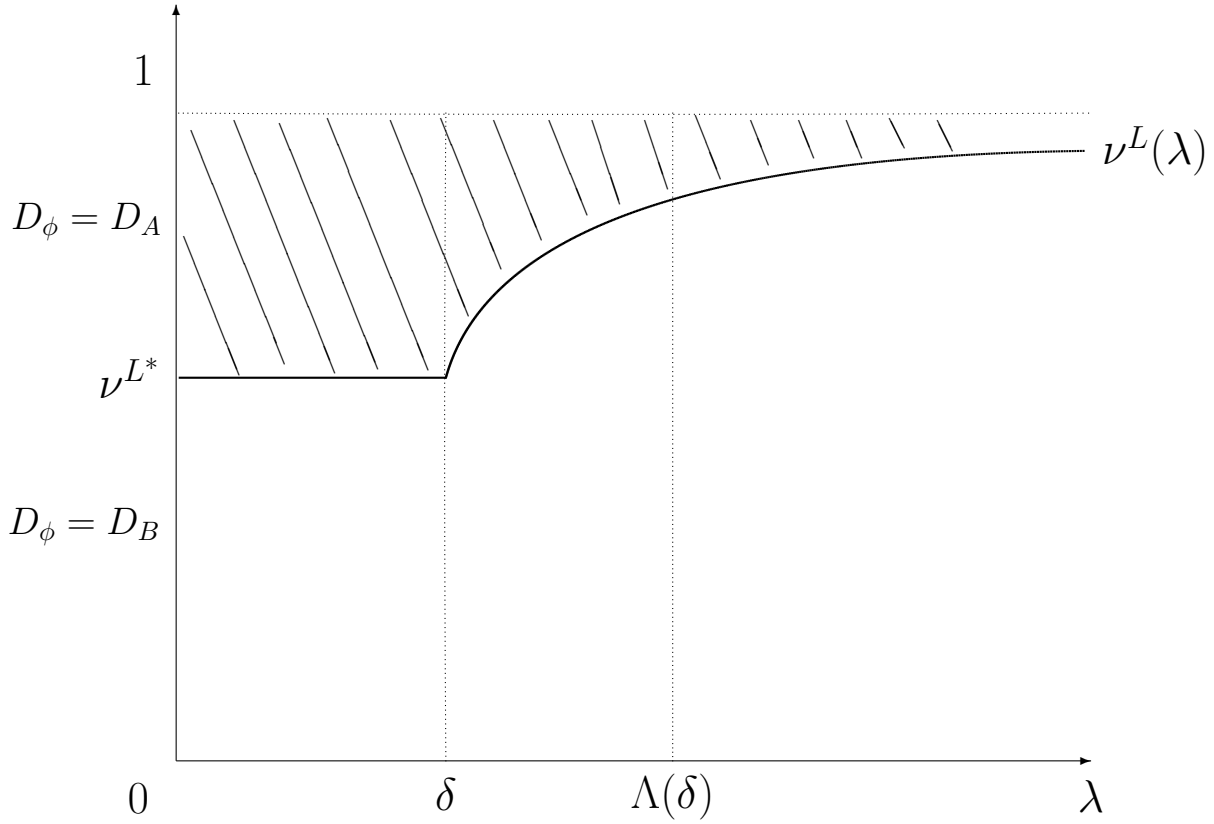
Effort under the presumption of innocence regime ($D_\emptyset = D_A$)

Proposition 2 *The optimal policy distinguishes three regimes to be implemented in function of λ:*

+ $\lambda \leq \delta$: corruption is fought against and efforts are monitored.

+ $\delta < \lambda \leq \Lambda(\delta)$: capture is fought against and effort is monitored; extortion is not fought against and the effort is rent seeking

+ $\Lambda(\delta) < \lambda$: corruption is not fought against, efforts are rent seeking.



Optimal Discretion Regime Under Asymmetric Information

CONCLUSION

♣ Scarcity of public funds leads to corruption.

♣ In poor countries extortion runs high: tacit collusion between the government and its agents.

♣ Fighting retail corruption is relatively easy: reduce the number of civil servants, give them incentive wages, collect complain by users, prosecute guilty agents.

♣ Fighting capture is an entirely different story. It is difficult because it goes against the interest of the ruling elite.