

TO WHAT STEADY STATE?

(A macro-level study of corruption's persistence and the role of social capital)

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Overview

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- 3 Hypotheses
- 4 Methodology
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Background & Contribution of study

- Pervasive versus persistent corruption (Mishra, 2006; Rose-Ackerman, 2007; Bissessar, 2009; Cieslik & Goczek, 2015)
- True versus spurious persistence of corruption
True Persistence of corruption: Significance of lagged corruption after controlling for initial conditions problem
- Multiple equilibria of corruption's persistence (Mauro, 2004)
- Role of formal versus informal institutions
Social trust as an informal institution (Rothstein & Uslaner, 2004; Bjornskov, 2003)

Relevant Literature

- Persistence of corruption

Theoretical insights into corruptions persistence (Mauro, 2004; Mishra, 2006)

Empirical evidence of persistence of corruption- True or spurious? (Herzfeld & Weiss, 2007; Bissessar, 2009; Cieslik & Goczek, 2015)

- Why corruption persists

Past dependency (Acemoglu, 1995; Mishra, 2006; Tirole, 1996)

Social capital/ Informal institutions (Dong, Dulleck & Torgler, 2012)

Culture of corruption (Fisman & Miguel, 2007; Barr & Serra, 2010)

Hypotheses

- Past corruption levels significantly affect current corruption levels positively.
- High levels of social trust lead to lower influence of past high corruption on future corruption levels.
- High levels of social trust positively affects the move of a country from a high corruption state to a low corruption state
- Strong formal institutions serve as negative moderating factors between past and future corruption levels.

Methodology-Data

- International Country Risk Guide (ICRG)
- World Values Survey (WVS)/ CANA dataset
- World Development Indicators (WDI)
- World Income Inequality Database (WIID)
- Polity IV database
- Penn World Tables (PWT)

Table: Descriptive Statistics of Data

Variable	Mean	S.D Overall	S.D Within	S.D Between	Observ	No. of Countries	Data Source
Main Variables							
Corruption	2.970	1.345	.742	1.127	3917	144	ICRG
Social Trust	.280	.137	.028	.131	2128	83	WVS/CANA
Control Variables							
Gini	38.101	10.132	5.538	8.853	1539	130	WIID
State Fragility Index	8.74	6.686	1.366	6.531	2416	133	Polity IV
Polity	3.322	6.900	3.212	6.176	3570	136	Polity IV
Bureaucratic Quality	2.162	1.181	.492	1.067	3862	142	ICRG
Democratic Accountability	3.775	1.681	.877	1.432	3862	142	ICRG
Ethnic Tensions	3.976	1.418	.747	1.205	3862	142	ICRG
Real GDP per capita	13252.77	15056.03	3681.029	14445.77	3187	127	WDI
Govt. consumption	16.219	6.241	3.302	5.526891	3253	126	WDI
Trade	78.542	49.628	19.187	45.421	3323	127	WDI
Human capital	2.332	.696	.188	.683	3483	125	PWT
Population (millions)	46.165	147.884	15.977	142.749	3187	127	WDI

Methodology-Empirical Strategy

Dynamic panel regression model (*Wooldridge, 2002; Wooldridge, 2005*) .
The reduced form of the model is;

$$y_{it} = \gamma y_{it-1} + \beta x_{it} + \epsilon_{it} \quad (1)$$

$$\epsilon_{it} = \eta_i + v_{it}$$

The error term ϵ_{it} is assumed to follow an error components structure in which,

$$E(\eta) = 0, \quad E(v_{it}) = 0, \quad E(v_{it}\eta_i) = 0 \quad \text{for } i = 1, \dots, N \quad \text{and } t = 2, \dots, T \quad (2)$$

$$E(v_{it}v_{is}) = 0 \quad \text{for } i = 1, \dots, N \quad \text{and } \forall t \neq s$$

We extend the model to include interaction effects between social capital and our lagged corruption variable. We therefore specify an equation of this nature:

$$y_{it} = \gamma y_{it-1} + \beta_0 x_{it} + \beta_1 y_{it-1} \times \text{soctrust}_{it} + \epsilon_{it} \quad (3)$$

Use of System GMM

The initial conditions problem - Serial correlation (Blundell, 2000).

γ is expected to be positive and significant and $\gamma < 1$ for our hypothesis of true persistence to be valid.

Endogeneity- Using instruments from the levels and orthogonal equations.

Table: Persistence of corruption

	(1)	(2)	(3)	(1a)	(2a)	(3a)
L.Corr	0.944*** (0.013)	0.864*** (0.027)	0.909*** (0.028)	0.961*** (0.004)	0.911*** (0.011)	0.870*** (0.020)
soctrust		0.527*** (0.193)	0.287* (0.151)		0.276*** (0.063)	0.395*** (0.129)
DemoAcc_n		0.005 (0.021)	0.028 (0.022)		0.020* (0.012)	0.048** (0.019)
BurQual_n		0.043 (0.030)	0.047* (0.028)		0.043*** (0.012)	0.065*** (0.023)
EthTens_n		0.022* (0.013)	0.000 (0.017)		0.003 (0.008)	-0.000 (0.016)
Inpop		-0.023 (0.020)	0.010 (0.015)		-0.022*** (0.006)	-0.006 (0.014)
Inrgdpc			-0.013 (0.032)			0.026 (0.030)
SFIInd			-0.002 (0.007)			0.004 (0.006)
Gini			0.002 (0.002)			0.003** (0.001)
Wald Chi squared (pvalue)	0.000	0.000	0.000			
R squared				0.937	0.940	0.931
Hansen statistic (pvalue)	0.281	1.000	1.000			
AR Test of order 3 (pvalue)	0.700	0.878	0.372			
Year dummies	Yes	Yes	Yes	No	No	No
No. of Countries	144	71	67	144	71	67
N	3917	1688	759	3917	1688	759

Table: Pathways of corruption's persistence

	System GMM				RE			
	(1)	(2)	(3)	(4)	(1a)	(2a)	(3a)	(4a)
L.Corr	0.919*** (0.020)	0.499*** (0.106)	0.771*** (0.057)	0.889*** (0.030)	0.919*** (0.012)	0.769*** (0.036)	0.911*** (0.013)	0.892*** (0.011)
soctrust	0.009 (0.146)				0.013 (0.102)			
soctrust_1	0.11*** (0.047)				0.082*** (0.027)			
lnrgdpc		-0.072** (0.029)				-0.034*** (0.012)		
lnrgdpc_1		0.046*** (0.011)				0.019*** (0.004)		
BurQual_n				0.003 (0.030)				0.000 (0.011)
BurQual_n_1				0.017* (0.010)				0.016*** (0.003)
DemoAcc_n			-0.077*** (0.026)				0.001 (0.007)	
DemoAcc_n_1			0.038*** (0.011)				0.008*** (0.002)	
Wald Chi ²	0.000	0.000	0.000	0.000				
R squared					0.940	0.935	0.938	0.939
Hansen stat	1.000	0.987	0.942	0.846				
Year dummies	Yes	Yes	Yes	Yes	No	No	No	No
No. of Ctries	77	127	142	142	77	127	142	142
N	2120	3187	3862	3862	2120	3187	3862	3862

Table: Good and bad persistence of corruption

	Countries with Good Persistence				Countries with Bad Persistence			
	System GMM		RE		System GMM		RE	
	(1)	(2)	(1a)	(2a)	(3)	(4)	(3a)	(4a)
L.Corr	0.979*** (0.035)	1.077*** (0.142)	0.671*** (0.042)	0.151 (0.269)	0.831*** (0.055)	0.779*** (0.100)	0.688*** (0.050)	0.877*** (0.091)
soctrust	0.630*** (0.231)	0.791*** (0.250)	-0.102 (0.242)	0.428** (0.209)	0.300 (0.425)	0.059 (0.167)	-0.142 (0.384)	-0.264 (0.211)
soctrust_1	-0.088* (0.053)		0.160*** (0.052)		-0.046 (0.153)		0.020 (0.128)	
DemoAcc_n	-0.002 (0.034)	0.100 (0.114)	0.010 (0.028)	-0.268 (0.171)	0.020 (0.018)	-0.076 (0.046)	0.021 (0.020)	0.196*** (0.050)
lnrgdpc	0.035 (0.042)	0.087 (0.061)	0.003 (0.028)	0.024 (0.042)	0.015 (0.033)	0.005 (0.017)	0.080** (0.032)	0.045 (0.035)
lnpop	-0.010 (0.021)	0.008 (0.029)	-0.043*** (0.014)	-0.008 (0.026)	-0.009 (0.017)	0.008 (0.008)	-0.039*** (0.014)	0.004 (0.019)
DemoAcc_1		-0.026 (0.027)		0.088* (0.046)		0.040** (0.020)		-0.076*** (0.022)
hc		-0.229*** (0.086)		-0.010 (0.051)	-0.107** (0.056)	-0.056 (0.066)	-0.133**	-0.090
Wald Chi ²	0.000	0.000			0.000	0.000		
R squared			0.857	0.812			0.747	0.727
Hansen stat.	1.000	1.000			1.000	1.000		
Year dummies	Yes	Yes	No	No	Yes	Yes	No	No
No. of Ctries	55	49	55	49	55	55	55	55
N	774	425	774	919	919	687	919	687

- Evidence of true persistence of corruption
Past dependence of corruption (Tirole, 1996), vicious cycle, observed rewards to rent seeking (Andvig & Moene, 1990)
- Social capital re-inforces the persistence of corruption (*Dong et. al, 2012*)
- Propelling effect of formal institutions on corruption in countries with weak institutions
Importance of formal institutions on corruption (Rose-Ackerman, 2007)
- Evidence of good and bad persistence of corruption
Multiple equilibria (Mauro, 2004)
- Social capital re-inforces good persistence while weak institutions re-inforce bad persistence.
Virtuous-vicious cycle, from daily subsistence to social cohesion

Conclusion

Evidence of true persistence; good and bad

Three pathways of corruptions *past dependence* - Economic growth, formal & informal institutions (social trust)

Formal institutions - necessary conditions for reducing bad persistence of corruption,

Dual-institutional arrangements - a sufficient condition for maintaining good persistence of corruption

Thank You!!