

Corruption and Population Health

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Motivation: Health

- Health provision heavily relies on incomes, wealth and education (Wilkinson and Marmot 2003)
- Institutional setting and governance matter as well (Cutler et al. 2006; Besley and Kudamatsu 2006)
- There may be a link between corruption and population health (Cicchone et al. 2014)

Motivation: Corruption

- Corrupt practices are costly and hamper a government's ability to operate efficiently, especially when resources are limited
- Corruption may affect public good provision (Shleifer and Vishny 1993; Mauro 1998)
- Health sectors and subsequently population health may suffer through financing, personnel selection and lack of accountability (Besley and Kudamatsu 2006)
- Little empirical evidence; reverse causality

Michalopoulos and Xue (QJE, 2021)

- Corruption is often tolerated or even nurtured in a society
- Deep-rooted in history and culture
- It persists as it is passed on over generations through oral tradition
- First stage: # of corruption related motifs in folklore

Methodology

- Plausibly exogenous historical roots of corruption
- IV-Approach; 2SLS
- Pooled OLS, Hybrid models
- 108 countries, 2010-2018
- Control of Corruption (Freedom House)
- Our controls include democracy, ongoing conflict, GDP per capita, unemployment rate, trade openness, general government expenditure, health expenditure per capita, urban population, population with access to improved water services, and secondary school enrolment

Instrument validity

	GDP	Health	Secondary	Government
# of corr. related motifs	-0.0466 (0.72)	0.0035 (0.07)	-1.2188 (0.83)	-0.7402 (1.13)
Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
R-squared	.883	.966	.870	.204
Observations	108	107	87	108

Note: 2008 only. Full set of controls.

T-statistics in parentheses with standard errors clustered at the regional level

First and second stage

	CoC [1]	CoC [2]	Mortality [3]	Mortality [4]
# of corr. related motifs	-0.0944** (2.41)	-0.1356*** (3.07)	-	-
Predicted CoC	-	-	-0.3239*** (4.02)	-0.3448** (2.27)
Unbiased β	-0.5458	-0.5386	-3.3308	
Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	No	Yes	Yes
R-squared	.771	.786	.645	
Observations	1176	108	922	922

Note: Column 1 Pooled OLS in the first stage. Column 2 the same for 2008 only.
Column 3 Pooled OLS in second stage. Column 4 Hybrid model for second stage.
T-statistics in parentheses with standard errors clustered at the regional level

Other measures of corruption

	Mortality [OLS]	Mortality [Hybrid]	Mortality [OLS]	Mortality [Hybrid]
Rule of Law	-0.3469** (4.73)	-0.3332*** (3.12)	-	-
Government Integrity	-	-	-0.0152*** (15.56)	-0.0147** (2.38)
Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
R-squared	.647		.653	
Observations	922	922	922	922

Note: Column 1 Pooled OLS in the first stage. Column 2 the same for 2008 only.

Column 3 Pooled OLS in second stage. Column 4 Hybrid model for second stage.

T-statistics in parentheses with standard errors clustered at the regional level

Heterogeneity

	Mortality [1]	Mortality [2]	Mortality [3]	Mortality [4]
CoC	-0.3280** (2.34)	-0.4965*** (5.56)	0.1183 (0.74)	0.0911 (0.33)
Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
R-squared	.893	.900	.792	.784
Observations	369	111	211	231

Note: OLS estimations.

T-statistics in parentheses with standard errors clustered at the regional level

Corruption and public goods

	Mortality [OLS]	Mortality [Hybrid]	Mortality [OLS]	Mortality [Hybrid]	Mortality [OLS]	Mortality [Hybrid]
Predicted CoC	-0.3718*** (3.40)	-0.0944** (2.41)	-0.3804** (2.41)	0.0481 (0.22)	-0.2741*** (3.04)	-0.2544 (1.60)
Low CoC X Public Goods (low)	0.1556*** (4.33)	0.1473* (1.86)	0.2066*** (11.51)	0.1467* (1.95)	0.0681* (1.67)	0.1162* (1.76)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.661		.634		.702	
Observations	810	810	499	499	713	713

Note: The cut-off point for public good provision is the median. Public goods are approximated by the length of railways in km, the volume of goods shipped and air traffic.

T-statistics in parentheses with standard errors clustered at the regional level

Supply of health care

	Doctors [OLS]	Doctors [Hybrid]	Nurses [OLS]	Nurses [Hybrid]	Hospitals [OLS]	Hospitals [Hybrid]
Predicted CoC	-0.1025 (0.45)	-0.2315 (0.88)	-0.0822 (0.35)	-0.5448 (1.56)	-0.3919** (2.14)	-0.2538 (0.77)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.899		.833		.692	
Observations	706	706	721	721	681	681

Note: T-statistics in parentheses with standard errors clustered at the regional level

Discussion

- We find strong robust evidence of how corruption can be detrimental to health outcomes
- We use a novel and plausibly exogenous instrument for corruption stemming from folklore and oral tradition
- Countries with higher levels of corruption experience worse health outcomes. This seems to be linked with public good provision
- More corrupt regimes seem to invest in hospitals rather than personnel