

# Do Corruption Indices Measure Corruption?

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## INTRODUCTION

Compare corruption *perception* indices  
of the World Bank (*WB*), Transparency International,  
Political Risk Services

to *experience* based measures  
from the International Crime Victimization Survey, and the  
World Business Environment Survey

in order to:

- interpret results in literature
- guide research: perceptions may matter  
*“Of almost equal concern as the danger of actual quid pro quo  
arrangements is the impact of the appearance of corruption.”* (US  
Supreme Court, 1976)
- understand policy implications

## Findings:

Factors commonly argued to “cause” corruption systematically bias perceptions away from experience.

Corruption experience has a negligible effect on the perception indices, especially at high levels of corruption.

## LITERATURE

Emerging literature using objective measures of corruption

- Surveys: Seligson (2002) in Latin America, Svensson (2003) in Uganda, Clarke and Xu (2004) in Eastern Europe
- Convictions: Glaeser and Saks (2006) in US
- Cost estimates: Olken (2006) in Indonesia  
finds that perceptions differ from reality

Specific sector / geographic area – not directly comparable to aggregate corruption indices.

## BIASED PERCEPTIONS?

Imagine we run the cross-country regression

$$WB = \alpha Experience + \beta CountryCharacteristics + u$$

Ideally, we would like  $\alpha$  to be large and  $\beta$ -s to be insignificant.

Several reasons this might not be so.

(1) Bayesian individuals' prior determined by *CountryCharacteristics*, while *Experience* is signal of underlying corruption. If *WB* reflects posteriors: a weighted average of signal + prior.

(2) *WB* may be a non-linear function of *Experience*.

(3) Attitudes matter: affected by *CountryCharacteristics*.

Note two assumptions:

(1) Corruption can be represented with a single number

- assumed by construction: different surveys aggregated  
*"In your industry, how commonly would you estimate that firms make undocumented extra payments or bribes connected with public utilities?"*  
*"Have you heard of acts of corruption?" (household survey)*
- assumed by the literature: indices measure a variety of phenomena  
government rent extraction (Mauro, 1998), cost of FDI (Wei, 2000), lobby influence in government (Fredriksson and Svensson, 2003), culture of corruption (Fisman and Miguel, 2008)

(2) We assume that surveys measure what they intend to measure

## DATA

### International Crime Victims Survey

UNICRI's standardized cross-country survey on crime experiences (burglary, bicycle thefts, sexual assault, etc.) in general population

*“During [the past year] has any government official, for instance a customs officer, police officer or inspector in your own country, asked you or expected you to pay a bribe for his services?”*

0 % (Switzerland) to 36 % (Uganda). Mean: 11 %, std. dev.: 11 %

Correlation with perception indices: 0.6 – 0.7

Also includes perception question: Is corruption likely or unlikely for specific types of official – individual level comparisons possible.



## World Business Environment Survey

World Bank's standardized cross-country survey of business executives.

*“On average, what percent of revenues do firms like yours typically pay per annum in unofficial payments to public officials?”*

0 % (Sweden) to 7.9 % (Georgia). Mean: 2.8 %, std. dev.: 2.1 %  
Correlation with ICVS: 0.55

### Other data

Potential causes of corruption studied by Treisman (2003)

legal origins, colonial past, percent Protestant, ethno-linguistic fractionalization, natural resources, GDP, democratic institutions, federal government

# RESULTS

## Experience and perceptions: ICVS

Dep. Var:	<i>WB</i> (1)	<i>WB</i> (2)	<i>WB</i> (3)	<i>WB</i> (4)
<i>ICVS</i>	7.011 (0.804)***	4.288 (1.116)***	0.218 (0.741)	0.800 (0.910)
<i>LEGOR_UK</i>		-0.202 (0.212)	-0.288 (0.155)*	-0.258 (0.138)*
<i>NEVERCOLONY</i>		-0.566 (0.228)**	-0.302 (0.206)	-0.235 (0.217)
<i>PROTESTANT</i>		-0.010 (0.003)***	-0.009 (0.002)***	-0.006 (0.002)**
<i>ETHLINGFRAC</i>		0.002 (0.004)	-0.002 (0.003)	-0.003 (0.004)
<i>FUEL/OM</i>		0.007 (0.004)	0.007 (0.003)**	0.006 (0.003)**
<i>LGDPPC</i>			-0.426 (0.068)***	-0.333 (0.097)***
<i>DEMOCRATIC</i>				-0.558 (0.252)**
<i>FEDERAL</i>				0.229 (0.211)
Observations	44	44	44	44
R-squared	0.61	0.76	0.87	0.90

*Notes.* Robust standard errors in parentheses. All regressions include a constant. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Look at some discrepancies:

	<i>ICVS</i>	<i>WB</i>	<i>PROTESTANT</i>
Finland	0.2 %	-1.76	93.1 %
Belgium	0.3 %	-0.73	0.4 %

	<i>ICVS</i>	<i>WB</i>	<i>LOR_UK</i>	<i>PROTESTANT</i>	<i>LGDP</i>	<i>PPC</i>	<i>DEMOCR</i>
Canada	0.4 %	-1.56	1	29.6 %	10.05		1
Poland	1.8 %	0.04	0	0.1 %	8.37		0
impact			0.3	0.1	0.5		0.6

Argentina and Colombia are similar in terms of most controls. Have similar *WB* indices. Yet, score 5.9 % vs. 32 % on *ICVS*.

## Experience and perceptions: WBES

Dep. Var:	<i>WB</i> (1)	<i>WB</i> (2)	<i>WB</i> (3)	<i>WB</i> (4)
<i>BRIBES%</i>	0.339 (0.048) <sup>***</sup>	0.228 (0.053) <sup>***</sup>	0.045 (0.042)	0.042 (0.040)
<i>LEGOR_UK</i>		-0.591 (0.297) <sup>*</sup>	-0.360 (0.160) <sup>**</sup>	-0.389 (0.180) <sup>**</sup>
<i>NEVERCOLONY</i>		-0.397 (0.239)	-0.011 (0.200)	0.034 (0.217)
<i>PROTESTANT</i>		-0.023 (0.005) <sup>***</sup>	-0.011 (0.004) <sup>***</sup>	-0.009 (0.003) <sup>**</sup>
<i>ETHLINGFRAC</i>		0.006 (0.005)	0.003 (0.003)	0.001 (0.003)
<i>FUEL/OM</i>		0.004 (0.004)	0.006 (0.003) <sup>**</sup>	0.005 (0.003) <sup>*</sup>
<i>LGDPFC</i>			-0.523 (0.084) <sup>***</sup>	-0.552 (0.078) <sup>***</sup>
<i>DEMOCRATIC</i>				-0.256 (0.265)
<i>FEDERAL</i>				0.395 (0.178) <sup>**</sup>
Observations	56	56	56	56
R-squared	0.47	0.69	0.83	0.85

*Notes.* Robust standard errors in parentheses. All regressions include a constant. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

## Diminishing sensitivity, absolute corruption

Dep. Var:	<i>WB</i> (1)	<i>WB</i> (2)	<i>WB</i> (3)	<i>WB</i> (4)
<i>ICVS</i>	17.868 (2.328) <sup>***</sup>	17.651 (2.260) <sup>***</sup>	6.057 (2.572) <sup>**</sup>	6.431 (2.120) <sup>***</sup>
<i>ICVS</i> <sup>2</sup>	-37.205 (7.682) <sup>***</sup>	-42.680 (8.230) <sup>***</sup>	-15.269 (7.494) <sup>**</sup>	-20.588 (6.438) <sup>***</sup>
<i>ICVS</i> × <i>POP</i>		1.183 (0.463) <sup>**</sup>		0.973 (0.250) <sup>***</sup>
( <i>ICVS</i> × <i>POP</i> ) <sup>2</sup>		-0.263 (0.118) <sup>**</sup>		-0.222 (0.065) <sup>***</sup>
<i>LEGOR_UK</i>			-0.191 (0.141)	-0.122 (0.134)
<i>NEVERCOLONY</i>			-0.148 (0.187)	-0.246 (0.156)
<i>PROTESTANT</i>			-0.007 (0.002) <sup>***</sup>	-0.006 (0.002) <sup>***</sup>
<i>ETHLINGFRAC</i>			-0.000 (0.003)	0.001 (0.003)
<i>FUEL/OM</i>			0.005 (0.003) <sup>*</sup>	0.005 (0.003)
<i>LGDPPC</i>			-0.275 (0.101) <sup>**</sup>	-0.245 (0.077) <sup>***</sup>
<i>DEMOCRATIC</i>			-0.447 (0.239) <sup>*</sup>	-0.380 (0.200) <sup>*</sup>
<i>FEDERAL</i>			0.186 (0.193)	0.032 (0.202)
Observations	44	44	44	44
R-squared	0.74	0.79	0.91	0.93

*Notes.* Robust standard errors in parentheses. All regressions include a constant. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

## Explaining experience?

Dependent variable:	<i>ICVS</i> (2)	<i>BRIBES%</i> (3)	<i>WB</i> (5)	<i>WB</i> (6)
<i>LEGOR_UK</i>	-0.033 (0.024)	-0.165 (0.506)	-0.284 (0.135)**	-0.396 (0.178)**
<i>NEVER COLONY</i>	-0.005 (0.019)	0.307 (0.533)	-0.239 (0.220)	0.047 (0.230)
<i>PROTESTANT</i>	-0.001 (0.000)*	0.009 (0.009)	-0.006 (0.002)***	-0.008 (0.003)**
<i>ETHLINGFRAC</i>	-0.000 (0.001)	0.014 (0.012)	-0.003 (0.004)	0.001 (0.003)
<i>FUEL/OM</i>	0.001 (0.001)	0.012 (0.009)	0.006 (0.002)**	0.006 (0.003)**
<i>LGDPPC</i>	-0.062 (0.011)***	-1.256 (0.212)***	-0.383 (0.081)***	-0.605 (0.076)***
<i>FEDERAL</i>	-0.004 (0.030)	0.284 (0.424)	0.226 (0.207)	0.407 (0.183)**
<i>DEMOCRATIC</i>	0.052 (0.024)**	0.522 (0.603)	-0.517 (0.248)**	-0.235 (0.276)
Observations	44	56	44	56
R-squared	0.73	0.57	0.89	0.85

*Notes.* Robust standard errors in parentheses. All regressions include a constant.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

## Individual determinants of perceptions

Dependent var.:	<i>LIKELY</i>	<i>LIKELY</i>
<i>VICTIM</i>	0.931 (0.663)	0.948 (0.094)***
<i>INCOME TOP75%</i>	1.612 (1.195)	0.199 (0.122)
<i>INCOME TOP50%</i>	1.343 (1.162)	0.152 (0.124)
<i>INCOME TOP25%</i>	1.058 (1.090)	0.252 (0.128)**
<i>EDUC PRIMARY</i>	1.165 (0.391)***	0.292 (0.227)
<i>EDUC SECOND</i>	2.261 (0.543)***	0.513 (0.212)**
<i>EDUC HIGHER</i>	3.092 (0.575)***	0.517 (0.219)**
<i>AGE</i> × 10 <sup>-1</sup>	1.206 (0.569)**	0.441 (0.151)***
<i>AGE</i> <sup>2</sup> × 10 <sup>-2</sup>	-0.118 (0.047)**	-0.067 (0.016)***
<i>MALE</i>	0.081 (0.208)	-0.065 (0.080)
<i>MARRIED</i>	0.038 (0.399)	0.014 (0.092)
<i>WORKING</i>	0.368 (0.306)	0.232 (0.093)**
<i>STUDENT</i>	2.494 (1.027)**	0.799 (0.157)***
<i>CITY: URBAN</i>	2.281 (1.830)	-0.525 (0.231)**
Co. fixed effects	No	Yes
Observations	11380	11380
R-squared	0.10	0.39

*Notes.* Countries in the sample are Azerbaijan, Belarus, Bulgaria, Cambodia, Colombia, Croatia, Czech Republic, Georgia, Hungary, Latvia, Lithuania, Mongolia, Mozambique, Panama, Philippines, Poland, Romania, Russia, South Korea, Uganda, Ukraine. Robust standard errors reported in parentheses, clustered by country in (1). All regressions include a constant.

## CONCLUSION

Experience is a weak predictor of the perception indices, especially at high levels of corruption.

Factors commonly argued to “cause” corruption bias perceptions away from experience (e.g., GDP, democracy, legal origins, Protestantism)

Implications:

- Results in the literature: effect of experience or effect of perceptions?
- Policy implications: anti-corruption policies or change perceptions?