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Cognitive Ability and Corruption: Rule of Law (still) Matters

Mohammad Reza Farzanegan*
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Abstract

This study shows that the "longer time horizon" argument proposed by Potrafke (2012) with regard to the negative effect of a higher national average cognitive ability on corruption holds only in countries with a relatively high quality of rule of law.

Keywords: corruption, intelligence, cognitive, rule of law

1. Introduction

The costs of corruption are substantial. In a recent study by Fiscal Affairs and the Legal Departments of the IMF (2016), the annual costs of bribery alone were estimated to be between 1.5 and 2 trillion dollars (approximately 2% of world GDP in 2016). These costs are higher when we also consider the political (Farzanegan and Witthuhn, 2017) and mental costs (Welsch, 2008) of high corruption. Several studies have tried to identify the causes of corruption and their role in explaining the cross-country differences in corruption. Dimant and Tosato (2018) provide a comprehensive survey of the existing literature on the causes and effects of corruption. Potrafke (2012) offers an interesting explanation for different levels of corruption across countries. He argues that populations with high-intelligence (IQ)[1] enjoy less corruption since such communities place greater weight on the long-term benefits of lower corruption. High-IQ populations can internalize the negative future effects of corruption due to the longer time horizons that they enjoy. Corruption is higher in societies in which the average population has a short time horizon in their economic and social interactions. Potrafke then uses a cross-country dataset and tests the negative effect of intelligence on corruption, controlling for other

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[1] In this study, we use the terms "cognitive ability" and "intelligence" interchangeably.

drivers of corruption. He provides empirical support for a linear and negative effect of a higher IQ on corruption.

We reexamine the study of Potrafke (2012) and take into account the moderating role of rule of law in the final effect of cognitive abilities on corruption. Using a sample of 96 countries, our Ordinary Least Squares (OLS) and Instrumental Variable (IV) estimations show that higher intelligence within the population does not automatically lead to a longer time horizon in economic and social interactions. A well-functioning judiciary and regulatory system is an important factor in constraining the rent-seeking activities (e.g., corporate tax avoidance or profit shifting) which has become more complex due to globalization and increased sophistication of information technology (Collier, 2014). Litan and Hathaway (2017) examine the pheromone of "unproductive" *entrepreneurs* in America who "*exploit special relationships with the government to construct regulatory moats, secure public spending for their own benefit, or bend specific rules to their will, in the process stifling competition to create advantage for their firms*" (i.e., rent-seeking behavior). The "longer time horizon" hypothesis in high-IQ communities in dealing with corruption is valid only where the rule of law is relatively strong. We extend the study of Potrafke (2012) by providing a robust evidence on the critical role of rule of law in conditional effect of cognitive abilities on corruption.

2. Data and methodology

Our main hypothesis is that the higher cognitive abilities can reduce corruption if a certain level of law and order has been achieved. Our main specification to test this hypothesis is as follows:

$$corruption_i = cons + \beta_1 . cca_i + \beta_2 . Law_i + \beta_3 . (cca_i . Law_i) + \beta_4 . controls_i + u_i \quad (1)$$

According to Potrafke (2012), $\beta_1 < 0$ (societies with higher cognitive abilities, on average, enjoy less corruption). Our hypothesis implies a conditional effect of CCA on corruption, and we expect that the "longer time horizon" hypothesis in high-CCA populations works only when there is a relatively strong rule of law. The expected sign of β_3 is *negative*. We also control for other determinants of corruption discussed in Potrafke (2012) and other studies such as legal origins, democracy, economic globalization, income per capital, and regional dummies. The variables on the right-hand side (except for the regional dummies and legal origins) are the average scores between 2008 and 2012. We therefore reduce the possible reverse feedback in our estimations. We use the ordinary least squares (OLS) and two stages least squares (2SLS) methods and robust standard errors in our estimation.

Dependent variable

To measure corruption as a dependent variable, we use the average control of corruption index of World Governance Indicators (WGI) between 2013 and 2016.[2] The corruption index of the WGI captures both petty and grand forms of corruption, as well as the "capture" of the state by elites and private interests. The WGI aggregated index, which ranges from -2.5 (most corrupt) to 2.5 (least corrupt), reflects the views of a large number of enterprise, citizen and expert survey respondents from around the world. To stimulate the reading of results, we have reversed the control of corruption of WGI by multiplying it by -1.

Independent variables

We use the general complex cognitive ability (CCA) index used by León and Burga-León (2015) as our key explanatory variable. According to Rindermann (2007), the CCA explains approximately 95% of variance in standardized student evaluations and intelligence tests across countries. The CCA is based on extracted information on average intelligence scores (IQ) from Lynn and Vanhanen (2012) collection which is mainly based on various forms of the Progressive Matrices Test and the Wechsler Intelligence Scale for Children. Other components of CCA are scores from various PISA (Program for International Student Assessment), TIMSS (Trends in International Mathematics and Science Study), and PIRLS (Progress in International Reading Literacy Study) rounds of student assessments involving mathematics, reading, and science tasks. Using these components and adjusting for participation rates, age of participants and year of data collection, Rindermann produced standardized CCA scores per country in IQ metrics.

Our second key independent variable is the quality of rule of law. We use the International Country Risk Guide (ICRG) law and order index. In the ICRG index, the "law" element examines the strength and impartiality of the legal system, while the "order" part assesses the popular observance of the law. The score ranges from 0 (lowest level of law and order) to 6 (highest level of law and order).[3] Our key hypothesis implies that the final effect of CCA on corruption depends on the quality of rule of law. In societies with low quality of law enforcement, higher intelligence and cognitive abilities may even stimulate the rent-seeking and corruption attitudes and behavior.

[2] The results are robust if we use Transparency International Index of corruption. In our sample, the correlation between these two sources of corruption is more than 0.95.

[3] We also found similar results on negative interaction of CCA and rule of law using WGI index of rule of law. There is a high correlation (0.80) between the ICRG & WGI indicators of law and order.

Endogeneity issue

There is a possibility that both CCA and rule of law for different reasons suffer from endogeneity problem. One source of concern is reverse feedback from corruption on rule of law. Although we are using the average of corruption index between 2013-2016 and earlier period average of the right hand side variables, the issue of simultaneously might still exist. In addition, the CCA may measure the intelligence with error and the level of cognitive abilities may also get affected by institutional conditions such as extension of corruption (e.g., by distorting spending public spending on education and health). To identify the model, we use instrumental variable for CCA, rule of law and their interaction term. We need exogenous instruments which have relatively strong correlation with our three key variables and at the same are not correlated with error terms. One possible instrument for CCA is degree of Ultraviolet (UV) radiation. According to the UV radiation theory, lower UV radiation, by reducing cell oxidative stress and fatigue, increases industriousness and improves nations' wealth, thus generating favorable conditions for children's intellectual growth. This hypothesis has been empirically tested and verified (among other works see León, 2018). Besides UV radiation, we also use Scandinavian legal origin, continental dummies for America and Asia (or Africa) and oil production per capita in 2000 as other instruments. This set of instruments proved to meet both relevance and validity conditions based on F statistic and Hansen's J statistic. Tables A1-A3 in Appendix A present data description, sources, summary statistics and list of 96 countries included in the main estimation.

3. Results

Table 1 shows the main results, using the reversed of control of corruption index of WGI (higher scores mean more corruption) as dependent variable. Model 1 includes only three explanatory variable: complex cognitive abilities (CCA), rule of law and income per capitate results are in line with our theoretical expectation in which higher income and rule of law are associated with lower corruption. Interesting that we do not observe a significant negative effect of CCA on corruption (as was presented by Potrafke, 2012). Model 2 adds a set of other explanatory variables which were discussed in corruption literature. Higher levels of economic globalization reduces corruption while more dependency on resource rents encourage corruption and rent-seeking as also discussed in resource curse literature. Controlling additional variables in Model 2 does not change the main results of Model 1. In Model 3, we begin to examine the moderating

role of rule of law in corruption-CCA nexus. This conditional effect which was missing in earlier studies is a significant player in final effect of CCA on corruption. Model 3 shows that while main effect of CCA on corruption is positive and marginally significant, but its final effect reduces at higher levels of rule of law. The effect of other variables does not change. Model 3 performs better in term of risk of mis-specification as is shown by p-value of Ramsey test. Model 4 is removing statistically insignificant drivers of corruption in Model 3, increasing sample size to 97 countries. As we discussed earlier, it is likely that our rule of law measure is endogenous due to possible reverse feedback and/or measurement error. While we can argue more about exogenous nature of CCA due to confirmed polygenic nature (Sniekers et al, 2017), one can also assume the effect of economic, health or overall institutional conditions on it (Jones and Potrafke, 2014). We instrument CCA, rule of law and their interaction term, estimating the model through 2SLS method. Our instruments (mentioned before) are both relevant and valid (judged by F statistics and Hansen J statistic). Using 2SLS method does not change the direction of CCA and interaction term. The effect becomes even stronger on corruption. We found out that among controls in 2SLS models, the most significant variable is resource rents.

What is the final effect of CCA on corruption? Because of interaction term, we answer this question by estimating the marginal effect of CCA at different level of rule of law. Figure 1 shows the marginal effects based on Model 5. The final effect of CCA on corruption is positive in countries where rule of law is lower than score of 3 (from 1(worst) to 6 (best)). In countries where rule of law is stronger than score of 4, higher CCA may indeed works against corruption (as is discussed by Potrafke, 2012). In our sample, we have countries such as Argentina, Bulgaria, Thailand, Trinidad and Tobago and Uruguay which records higher than sample average of 88 in their CCA (from minimum of 61 to maximum of 107) but suffers from low quality of law (below score of 3). From total number of 97 countries, 42 countries have lower than score of 3 in their rule of law. In such countries, higher CCA may not dampen the corruption through the "longer time horizon" channel as long as their rule of law institutions remain weak. Appendix B present different set of sensitivity checks which show that the identified moderating role of rule of law in corruption-cognitive abilities nexus in the main results is robust to alternative measures of corruption, rule of law and cognitive variables.

--Table 1 about here—

--Figure 1 about here—

4. Conclusion

This study shows that higher-cognitive able nations do not automatically enjoy less corruption. The "longer time horizon" effect among higher- intelligence populations (Potrafke, 2012) works under a well-functioning law and order system. We calculate the threshold level of law and order below which increases in cognitive abilities may not lead to lower corruption.

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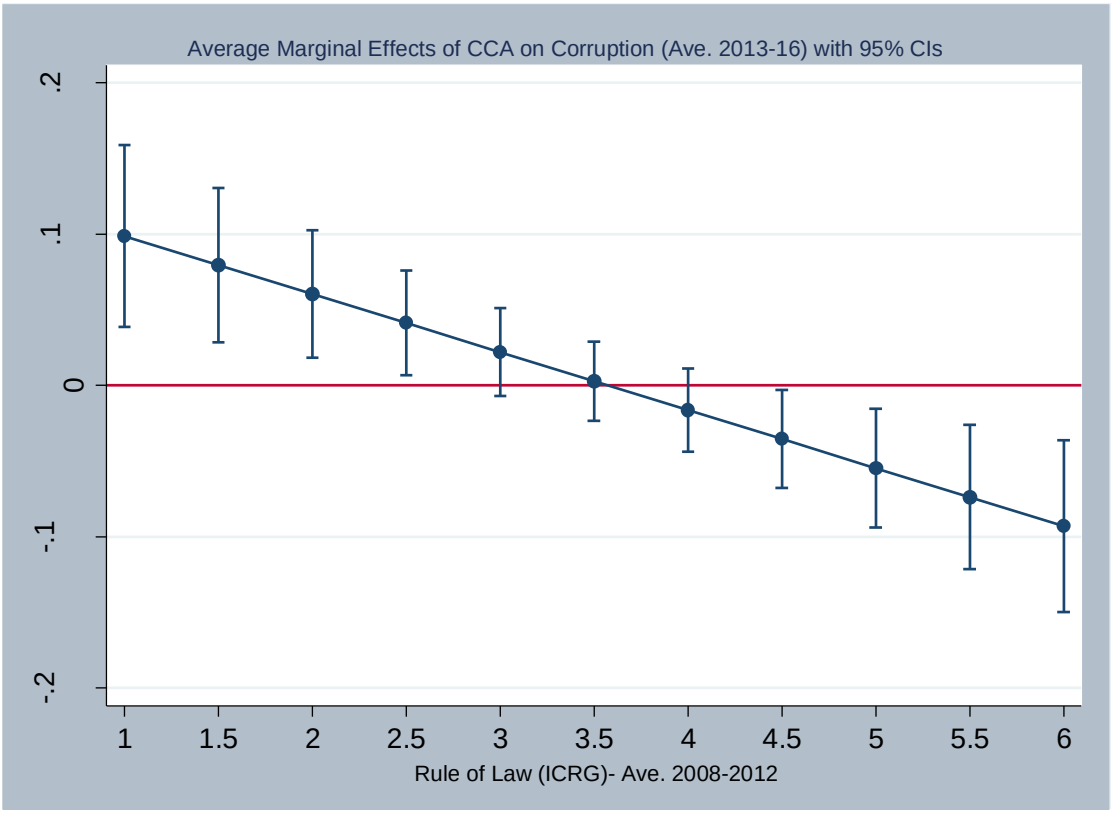
Table 1. Cognitive abilities and corruption: role of rule of law

	(1)	(2)	(3)	(4)	(5)	(6)
	Corruption (WGI, reversed, 2013-2016)					
	OLS				2SLS	
CCA	-0.002	-0.005	0.027*	0.034**	0.137***	0.116***
	(-0.28)	(-0.60)	(1.68)	(2.14)	(3.37)	(4.26)
log GDP pc	-0.372***	-0.320***	-0.284***	-0.288***	-0.343***	-0.445***
	(-5.95)	(-5.61)	(-4.53)	(-4.31)	(-3.68)	(-5.33)
Law (ICRG)	-0.355***	-0.301***	0.416	0.499	3.146***	2.082***
	(-6.75)	(-4.89)	(1.22)	(1.48)	(3.16)	(3.19)
CCA*Law			-0.009**	-0.010**	-0.038***	-0.027***
			(-2.13)	(-2.41)	(-3.58)	(-3.91)
Democracy		-0.212	-0.177			
		(-1.53)	(-1.34)			
Econ Globalization		-0.013**	-0.012**	-0.010**		
		(-2.61)	(-2.38)	(-2.44)		
Rents % GDP		0.014**	0.014**	0.015***		0.021**
		(2.36)	(2.52)	(3.44)		(2.59)
America		-0.413**	-0.377**	-0.351**		
		(-2.48)	(-2.15)	(-2.39)		
Asia		-0.266	-0.186			
		(-1.38)	(-0.93)			
Africa		-0.735***	-0.552**	-0.400*		
		(-3.22)	(-2.16)	(-1.96)		
Europe		0.051	0.124			
		(0.32)	(0.75)			
Legal (UK)		-0.105	-0.095			
		(-0.78)	(-0.77)			
Legal (Scandinavian)		-0.748***	-0.578***	-0.409***		
		(-5.79)	(-4.48)	(-3.24)		
Legal (Germany)		-0.062	-0.061			
		(-0.37)	(-0.37)			
Obs.	98	94	94	97	96	96
R-sq	0.78	0.85	0.86	0.85	0.70	0.78
Kleibergen-Paap rk Wald F statistic					12.02	8.65
Hansen J statistic (P-value)					0.91	0.43

Robust t statistics are in (); ***, **, and * represent significance at the 1, 5, and 10% levels, respectively. Non-dummy RHS variables are averaged values from 2008-2012.

Fig. 1. Marginal effect of CCA on corruption



Appendix A

Table A1. Data description

Variable	Description
Corruption	Reverse of WGI index of control of corruption. info.worldbank.org/governance/wgi/
CCA	Complex cognitive ability (CCA): it is measured by intelligence tests and/or student assessments in reading, math, and/or science. León and Burga-León (2015)
Law	Law and Order index of ICRG. To assess the "Law" element, the strength and impartiality of the legal system are considered, while the "Order" element is an assessment of popular observance of the law. https://www.prsgroup.com/
GDP pc	Log of GDP per capita (constant 2000 USD). WDI (2018)
Econ. Globalization	KOF index of economic globalization. Dreher (2006).
Polity	Polity2 index: it measures quality of political institutions (-10 to 10). We use a dummy variable (1 if a country was democracy, Polity>=6, for all years of 2008-12). http://www.systemicpeace.org/inscr/p4manualv2016.pdf
Rents % GDP	Total natural resource rents % of GDP: WDI (2018)
Oil production per capita	Alesina et al. (2013)
Ultraviolet (UV) radiation	León (2018). Originally UV radiation measurements were obtained by Andersen (University of Southern Denmark), Dalgaard (University of Copenhagen), and Selaya (Harvard University), who calculated 1990 and 2000 radiation levels per country using NASA's satellite-based UV Index values per geographic grid of 1 degree latitude × 1 degree longitude and offered an average of the two years.

Table A2. Summary statistics (based on Model 5 in Table1)

Variable	Obs.	Mean	Std. Dev.	Min	Max
Corruption (WGI, reversed, 2013-16)	96	-0.21	1.07	-2.29	1.49
CCA	96	88.15	12.40	61.00	107.00
log GDP per capita (2008-12)	96	9.03	1.47	5.83	11.56
Law (ICRG, 2008-12)	96	3.91	1.33	1.21	6
Econ. Globalization (2008-12)	96	60.80	16.42	21.66	93.03
Rents % GDP (2008-12)	96	7.18	10.27	0	52.39

Table A3. List of 96 countries included in estimation of Model 5 in Table 1

Albania	Denmark	Israel	New Zealand	Sweden
Argentina	Dominican Republic	Italy	Nigeria	Switzerland
Armenia	Ecuador	Jamaica	Norway	Tanzania
Australia	Egypt	Japan	Pakistan	Thailand
Austria	Estonia	Jordan	Paraguay	Trinidad and Tobago
Bahrain	Ethiopia	Kenya	Peru	Tunisia
Belgium	Finland	Korea	Philippines	Turkey
Bolivia	France	Kuwait	Poland	Uganda
Botswana	Germany	Latvia	Portugal	United Kingdom
Brazil	Ghana	Lebanon	Qatar	United States
Bulgaria	Greece	Lithuania	Russian Federation	Uruguay
Cameroon	Guatemala	Luxembourg	Saudi Arabia	Venezuela
Canada	Guinea	Madagascar	Sierra Leone	Vietnam
Chile	Honduras	Malaysia	Singapore	Yemen
China	Hungary	Malta	Slovak Republic	Zambia
Colombia	Iceland	Mexico	Slovenia	Zimbabwe
Congo Rep.	India	Moldova	South Africa	
Croatia	Indonesia	Morocco	Spain	
Cyprus	Iran	Mozambique	Sri Lanka	
Czech Republic	Ireland	Netherlands	Suriname	

Appendix B: Sensitivity tests

Table B1. Using IQ 2012 (see Lynn and Vanhanen 2002, 2006, 2012) index instead of CCA

	(1)	(2)	(3)	(4)	(5)	(6)
	Corruption (Reversed, WGI, 2013-16)					
	OLS				2SLS	
IQ 2012	-0.001	-0.005	0.040**	0.047***	0.178***	0.131***
	(-0.20)	(-0.56)	(2.50)	(2.85)	(4.02)	(3.93)
log GDP pc 2008-12	-0.331***	-0.281***	-0.264***	-0.274***	-0.422***	-0.453***
	(-6.28)	(-5.50)	(-5.21)	(-4.86)	(-4.70)	(-6.20)
Law (ICRG, 2008-12)	-0.359***	-0.266***	0.762**	0.768**	4.132***	2.433***
	(-8.05)	(-5.02)	(2.35)	(2.33)	(3.73)	(2.82)
IQ2012*Law			-0.012***	-0.013***	-0.049***	-0.031***
			(-3.20)	(-3.20)	(-4.15)	(-3.37)
Democracy		-0.169	-0.168*			
		(-1.57)	(-1.70)			
Econ Globalization 2008-12		-0.013***	-0.011***	-0.009**		
		(-3.51)	(-2.96)	(-2.48)		
Rents % GDP 2008-12		0.017***	0.016***	0.016***		0.018***
		(3.87)	(3.69)	(4.08)		(4.09)
America		-0.401***	-0.354**	-0.258*		
		(-2.96)	(-2.44)	(-1.87)		
Asia		-0.394***	-0.327***			
		(-3.40)	(-2.63)			
Africa		-0.687***	-0.526***	-0.261		
		(-4.42)	(-3.12)	(-1.53)		
Europe		-0.047	0.035			
		(-0.33)	(0.24)			
Legal (UK)		-0.141	-0.132			
		(-1.26)	(-1.28)			
Legal (Scandinavian)		-0.872***	-0.632***	-0.434***		
		(-6.76)	(-5.02)	(-3.68)		
Legal (Germany)		-0.066	-0.037			
		(-0.43)	(-0.25)			
Obs.	133	126	126	131	129	129
R-sq	0.73	0.83	0.85	0.83	0.62	0.77
Kleibergen-Paap rk Wald F statistic					8.13	10.07
Hansen J statistic (P-value)					0.66	0.29

Robust t statistics are in (); ***, **, and * represent significance at the 1, 5, and 10% levels, respectively. In Models 5 and 6, IQ 2012, Law (ICRG) and their interaction are assumed endogenous. A similar set of instruments as in main results is used.

Figure B1. Marginal effect of IQ 2012 on Corruption at different levels of Law (ICRG) (based on Model 6 in Table A1)

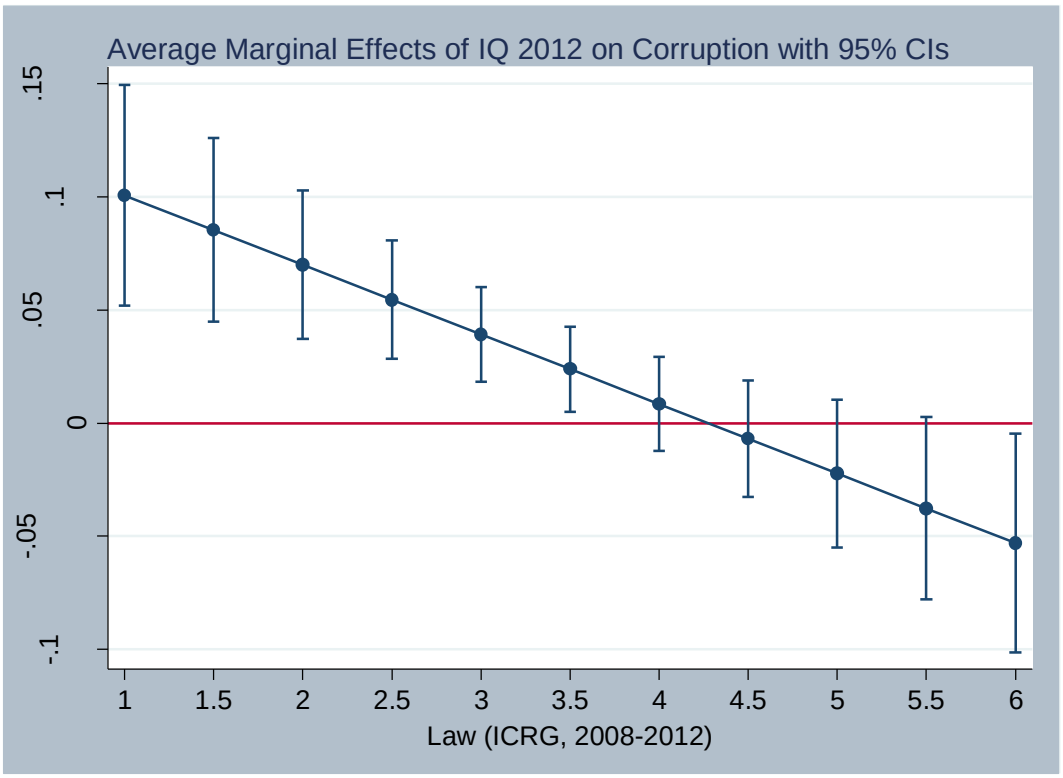


Table B2. CCA and Transparency International Corruption index (reversed)

	(1)	(2)	(3)	(4)	(5)	(6)
	Transparency International Corruption (reversed) 2013-2016					
	OLS				2SLS	
CCA	-0.030	-0.108	0.491	0.631*	2.424***	2.038***
	(-0.22)	(-0.63)	(1.54)	(1.98)	(3.20)	(3.94)
log GDP pc 2008-12	-7.279***	-5.951***	-5.273***	-5.473***	-6.649***	-8.550***
	(-6.71)	(-6.02)	(-4.63)	(-4.57)	(-3.83)	(-5.50)
Law (ICRG, 2008-12)	-6.630***	-5.485***	7.956	9.524	54.225***	34.367***
	(-6.44)	(-4.90)	(1.17)	(1.40)	(2.82)	(2.65)
CCA*Law			-0.161*	-0.182**	-0.671***	-0.456***
			(-1.99)	(-2.23)	(-3.25)	(-3.32)
Democracy		-4.599*	-3.931			
		(-1.68)	(-1.52)			
Econ. Globalization		-0.273***	-0.252***	-0.231***		
		(-3.01)	(-2.75)	(-2.89)		
Rents % GDP (2008-12)		0.228**	0.216**	0.259***		0.401***
		(2.04)	(2.11)	(3.21)		(2.67)
America		-6.356**	-5.680*	-6.522**		
		(-2.13)	(-1.78)	(-2.33)		
Asia		-3.442	-1.944			
		(-1.01)	(-0.54)			
Africa		-12.653***	-9.231*	-7.941*		
		(-2.94)	(-1.86)	(-1.97)		
Europe		2.185	3.568			
		(0.82)	(1.26)			
Legal (UK)		-2.459	-2.266			
		(-0.94)	(-0.95)			
Legal (Scandinavian)		-15.415***	-12.229***	-8.321***		
		(-6.02)	(-4.82)	(-3.11)		
Legal (Germany)		-1.963	-1.938			
		(-0.63)	(-0.62)			
Obs.	98	94	94	97	96	96
R-sq	0.77	0.85	0.86	0.85	0.73	0.79
Kleibergen-Paap rk Wald F statistic					12.02	8.65
Hansen J statistic (P-value)					0.67	0.32

Robust t statistics are in (); ***, **, and * represent significance at the 1, 5, and 10% levels, respectively. In Models 5 and 6, CCA, Law (ICRG) and their interaction are assumed endogenous. A similar set of instruments as in main results is used.

Figure B2. Marginal effect of CCA on Corruption (reversed Transparency International index) (based on Model 5 in Table A2)

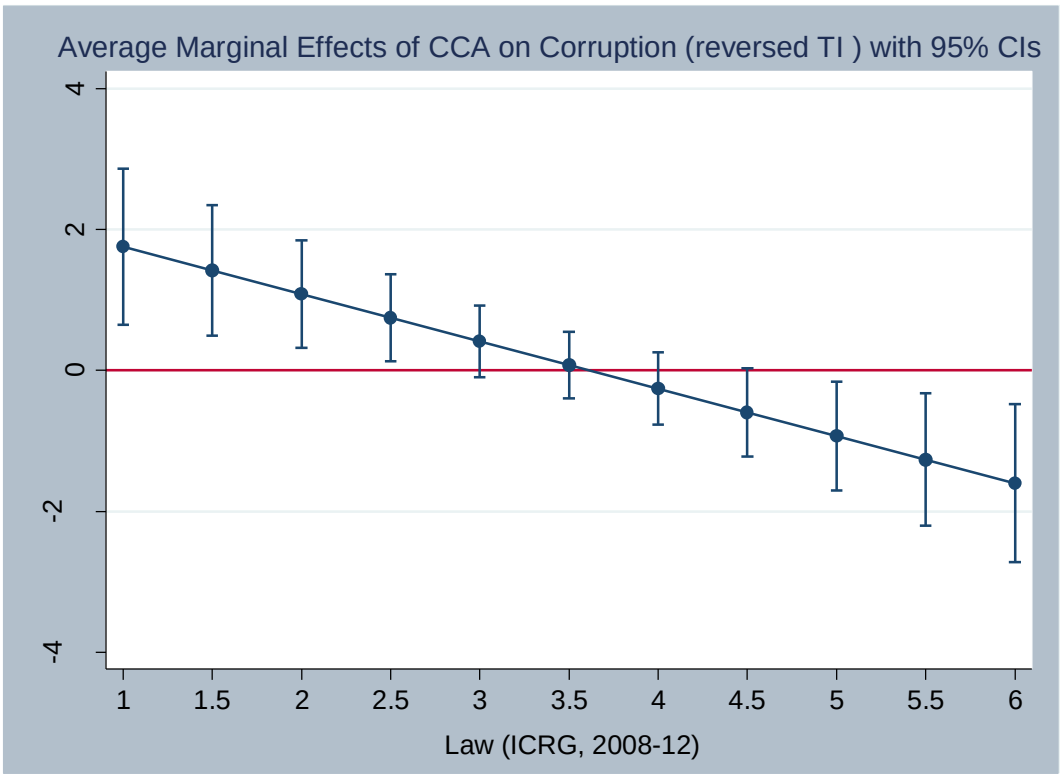


Table B3. CCA and Corruption (ICRG, rescaled)

	(1)	(2)	(3)	(4)	(5)	(6)
	Corruption (ICRG, reversed, 2013-14)					
	OLS				2SLS	
CCA	-0.000	-0.010	0.054***	0.069***	0.201***	0.180***
	(-0.00)	(-0.75)	(2.68)	(3.56)	(4.31)	(4.50)
log GDP pc (2009-12)	-0.378***	-0.302***	-0.229***	-0.239***	-0.324***	-0.414***
	(-4.61)	(-3.60)	(-2.85)	(-2.88)	(-3.09)	(-3.83)
Law (ICRG, 2008-12)	-0.421***	-0.335***	1.101***	1.200***	4.700***	3.694***
	(-6.37)	(-4.43)	(2.82)	(3.11)	(4.67)	(3.81)
CCA*Law			-0.017***	-0.019***	-0.056***	-0.045***
			(-3.65)	(-3.94)	(-5.18)	(-4.35)
Democracy		-0.381**	-0.310*			
		(-2.01)	(-1.73)			
Econ. Globalization		-0.012**	-0.010*	-0.008		
		(-2.05)	(-1.72)	(-1.53)		
Rents %GDP, 2008-12		0.014*	0.013*	0.015***		0.019
		(1.71)	(1.93)	(2.70)		(1.52)
America		-0.805***	-0.733***	-0.432*		
		(-4.02)	(-3.55)	(-1.91)		
Asia		-0.775***	-0.615***			
		(-3.28)	(-2.65)			
Africa		-1.284***	-0.918***	-0.296		
		(-4.38)	(-2.88)	(-1.10)		
Europe		-0.343*	-0.195			
		(-1.71)	(-0.97)			
Legal (UK)		-0.002	0.019			
		(-0.01)	(0.11)			
Legal (Scandinavian)		-1.227***	-0.887***	-0.766***		
		(-5.97)	(-4.69)	(-4.02)		
Legal (Germany)		0.188	0.190			
		(0.70)	(0.73)			
Obs.	98	94	94	97	96	96
R-sq	0.68	0.77	0.80	0.79	0.60	0.67
Kleibergen-Paap rk Wald F statistic					12.02	8.65
Hansen J statistic (P-value)					0.36	0.14

Robust t statistics are in (); ***, **, and * represent significance at the 1, 5, and 10% levels, respectively. In Models 5 and 6, CCA, Law (ICRG) and their interaction are assumed endogenous. A similar set of instruments as in main results is used. We use re-scaled corruption index from ICRG. The corruption index of ICRG is more concerned with actual or potential corruption in the form of excessive patronage, nepotism, job reservations, 'favor-for- favors', secret party funding, and suspiciously close ties between politics and business. It is from 0 (most corrupt) to 6 (least corrupt). We have rescaled it by subtracting original scores from 6.

Figure B3. Marginal effect of CCA on Corruption (re-scaled ICRG index) (based on Model 5 in Table A3)

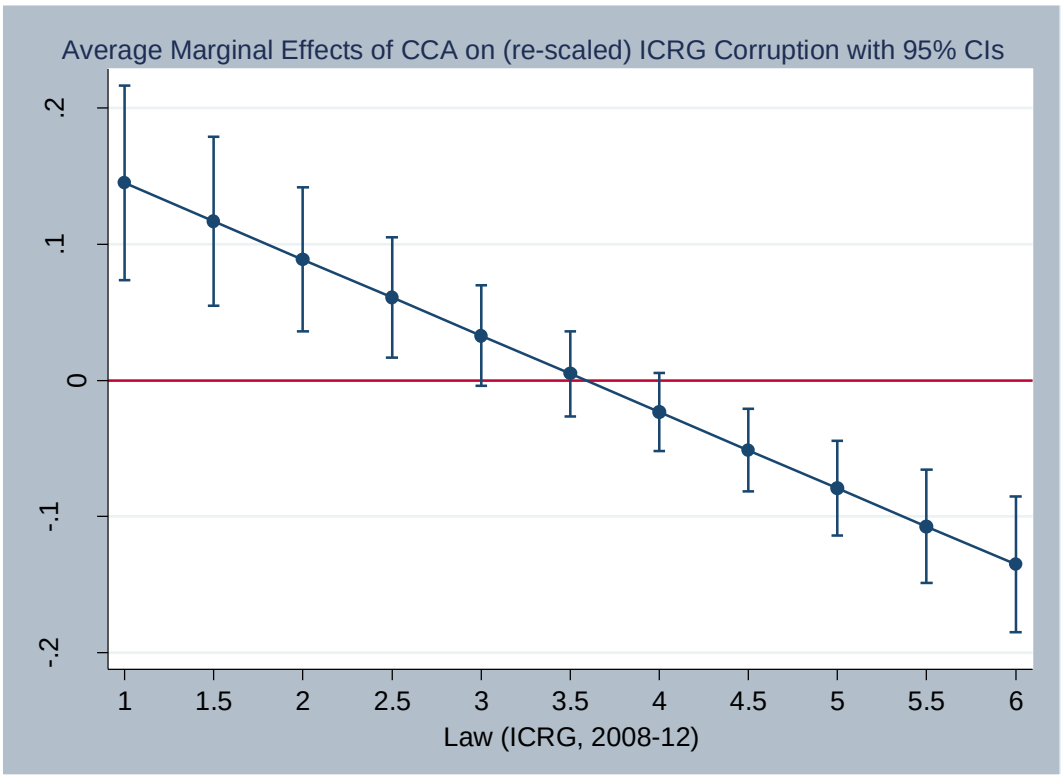


Table B4. CCA and Corruption (re-scaled ICRG) and Law (WGI)

	(1)	(2)	(3)	(4)	(5)	(6)
	Corruption (ICRG, rescaled, 2013-14)					
	OLS				2SLS	
CCA	0.006	-0.002	-0.003	0.003	-0.016	0.003
	(1.10)	(-0.28)	(-0.41)	(0.58)	(-0.82)	(0.21)
log GDP pc (2008-12)	0.008	0.040	0.036	0.035	-0.388*	-0.308
	(0.13)	(0.62)	(0.63)	(0.56)	(-1.68)	(-1.59)
Law (WGI, 2008-12)	-1.142***	-1.202***	0.443	0.326	6.488**	3.902**
	(-13.36)	(-11.61)	(1.24)	(0.93)	(2.26)	(2.25)
CCA*Law			-0.018***	-0.017***	-0.074***	-0.049***
			(-4.61)	(-4.39)	(-2.70)	(-2.96)
Democracy (2008-12)		-0.084	-0.086			
		(-0.55)	(-0.58)			
Econ. Globalization (2008-12)		0.005	0.006	0.008**		
		(1.26)	(1.61)	(2.13)		
Rents % GDP (2008-12)		0.002	0.002	-0.001		0.012
		(0.31)	(0.50)	(-0.12)		(1.21)
America		-0.647***	-0.538***	-0.216		
		(-4.59)	(-3.77)	(-1.45)		
Asia		-0.608***	-0.527***			
		(-4.26)	(-3.85)			
Africa		-0.647***	-0.391**	0.152		
		(-3.34)	(-2.21)	(1.01)		
Europe		-0.371**	-0.260*			
		(-2.51)	(-1.75)			
Legal (UK)		0.175	0.184*			
		(1.49)	(1.77)			
Legal (Scandinavian)		-0.820***	-0.621***	-0.671***		
		(-4.74)	(-3.67)	(-4.21)		
Legal (Germany)		0.296	0.329*			
		(1.54)	(1.88)			
Obs.	98	94	94	97	96	96
R-sq	0.84	0.88	0.90	0.89	0.61	0.78
Kleibergen-Paap rk Wald F statistic					1.95	2.7
Hansen J statistic (P-value)					0.16	0.03

Robust t statistics are in (); ***, **, and * represent significance at the 1, 5, and 10% levels, respectively. Rule of law of WGI captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. F statistics in Models 5 and 6 show that our instruments for CCA, Law (WGI) and their interaction are weak.