Corruption in Bank Lending to Firms: *Cross-Country Micro Evidence on the Beneficial Role of Competition and Information Sharing*

by

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Outline

- Objectives ,Main findings and Other findings
- Hypothesis Setting
- Data and Variables
- Empirical Results
- Conclusion
- Suggestion

Objective.

"Whether …

- ✓ Bank Competition
- ✓ Information Sharing

…help ***reduce corruption*** in bank lending?"

Main findings.

- YES! Confirmed by empirical results.

- ↑ competition in banking ➡ ↓ corruption in bank lending.
- ↑ Information sharing ➡ ↓ corruption in bank lending

via credit registries/bureaus

both directly and indirectly through its interaction with bank competition.

Other findings

- objective courts and better law enforcement tend to reduce lending corruption
- government- and foreign-owned firms as well as exporting firms tend to be subject to less lending corruption
- greater private and foreign ownership of the banking industry are associated with more integrity in lending

Hypothesis Setting.

- Nash Bargaining Model:

Nash Bargaining Model

- Players

Bribe taker (The lending officer)	⟺	Bribe payer (The firm)

- *Wants*: Bribes to increase incomes.
- Brides <u>VS</u> the cost of being caught and penalized

- *Wants*: to secures 1 unit of loan for investment project.
- Benefit of loans with better terms <u>VS</u> the cost of bribery

Nash Bargaining Model

$$R = R(Comp_b, Comp_f, I)$$

- *"R" is "fair interest rate" the firm pay for its investment project, in the absence of corruption.*
- *"I" is the amount (or the set) of information available to the bank (loan officer) when examining the loan application.*
- $Comp_b$ stands for the degree of competition in the banking sector
- $Comp_f$ the degree of competition the firm faces in its product market.

Nash Bargaining Model

Variables

- *p : the probability of detecting bribery*
- *$c(B)$:* the amount of penalty imposed on a loan officer
- *B:* the amount of bribe taken
- *R*: Fair interest without corruption
- $R - \Delta$: Interest Rate with corruption
- π*: The profit of the firm from its investment project.*
- *d_f : Disagreement point of firm*
- *d_b : Disagreement point of loan officer*

Nash Bargaining Model

The expected payoff to the loan officer is

$$= (1-p)B - pc(B)$$

The expected payoff of the firm is

$$= (1-p)(\pi - R + \Delta - B) + p(\pi - R - B)$$

$$= (1-p)\Delta + \pi - R - B$$

The Nash bargaining problem is thus given by

$$\text{Maximize } \left[(1-p)B - pc(B) - d_b\right]^{\alpha} \times \left[(1-p)\Delta + \pi - R - B - d_f\right]^{1-\alpha}$$

$$= \left[(1-p)B - pc(B)\right]^{\alpha} \times \left[(1-p)\Delta - B\right]^{1-\alpha}$$

<u>Where</u> α = the bargaining power of the bank loan officer

$1-\alpha$ = the bargaining power of the firm

Nash Bargaining Model

First – Order condition for Nash bargaining solution(Log of objective function; $B^*(\alpha, \Delta, p)$:

$$\alpha \frac{(1-p) - pc'(B)}{(1-p)B - pc(B)} - (1-\alpha)\frac{1}{1-p)\Delta - B} = 0$$

Differentiating the first-order condition with respect to α, Δ, and *p, respectively.*

$$(1)\ \partial B^* / \partial \alpha > 0;\ (2)\ \partial B^* / \partial \Delta > 0;\ \text{and}\ (3)\ \partial B^* / \partial p < 0$$

1. ↓ bargaining power of the lending officer becomes smaller
2. ↓ size of the "pie" to bargain over decreases
3. ↑ the probability of detecting bribery goes up.

⇒ amount of bribe ↓

Nash Bargaining Model

- Competition and Barrier to Entry.

Hypothesis 1:

1.1 Higher concentration (less competition) in the banking sector is associated with more bank lending corruption.

1.2 Higher entry barriers (less competition) in the banking sector is associated with more bank lending corruption.

1.3 Competition on the borrowers' side is associated with more bank lending corruption.

- Information Sharing

Hypothesis 2:

2.1 Information sharing among lenders is associated with less bank-lending corruption.

2.2 Information sharing among lenders also reduces bank-lending corruption through its attenuating effect on the impact of bank concentration and entry barriers on lending corruption (as in Hypotheses 1.1-1.2).

Hypothesis Testing

- Empirical Results:

Data and Variables

(1) the World Bank Business Environment Survey (2000) - direct firm-level information on the degree to which corruption in bank lending represents an obstacle to firms in 80 countries.

(2) the data compiled by Barth et al. (2006)

- detailed information about various dimensions of bank competition and regulation across different countries during 2001-2003

(3) the data from Djankov et al. (2007)

- on public credit registries and private credit bureaus in 129 countries during 1978-2003

Testing Hypothesis

- Banking Competition and Corruption in Lending

Model:

$$
\begin{aligned}
Bank\ Corruption_{i,j} = \alpha + \beta'\,Bank\ Competition\ Measures_{j} + \alpha_1 State_{i,j} + \alpha_2 Foreign_{i,j} \\
+ \alpha_3 Exporter_{i,j} + \alpha_4 Firm\ Size_{i,j} + \alpha_I Industry\ Dummies_{i,j} \quad (1) \\
+ \theta'\,Macro\ Controls_{j} + \varepsilon_{i,j}
\end{aligned}
$$

Table 3 Bank Competition and Corruption

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banking Sector Variables								
Bank Concentration (Deposit)	0.787		1.155					
	[0.032]**		[0.006]***					
Bank Concentration (Asset)		0.602		0.847				
		[0.067]*		[0.033]**				
Entry Barrier	0.124	0.114	0.214	0.190		0.155		0.038
	[0.071]*	[0.093]*	[0.010]**	[0.017]**		[0.036]**		[0.588]
Application Denied			0.426	0.355		0.609		
			[0.129]	[0.215]		[0.045]**		
HHI					0.753	1.113		0.828
					[0.003]***	[0.006]***		[0.001]***
H-Statistics							-1.369	-1.222
							[0.001]***	[0.004]***
Private Bank Ownership	-0.005	-0.004	-0.004	-0.003	-0.002	-0.005	-0.005	-0.006
	[0.083]*	[0.292]	[0.236]	[0.165]	[0.603]	[0.054]*	[0.043]**	[0.075]*
Foreign Bank Ownership	-0.009	-0.011	-0.01	-0.005	-0.006	-0.002	-0.002	-0.009
	[0.012]**	[0.010]**	[0.016]**	[0.091]*	[0.116]	[0.523]	[0.470]	[0.014]**
Firm-level Variables								
Government	-0.248	-0.286	-0.285	-0.237	-0.294	-0.247	-0.252	-0.246
	[0.007]***	[0.003]***	[0.003]***	[0.007]***	[0.002]***	[0.008]***	[0.006]***	[0.006]***
Foreign	-0.094	-0.11	-0.113	-0.106	-0.109	-0.097	-0.104	-0.101
	[0.072]*	[0.051]*	[0.055]*	[0.036]**	[0.057]*	[0.090]*	[0.059]*	[0.056]*
Competitor	0.003	0.026	0.029	-0.036	-0.011	-0.049	-0.059	0.009
	[0.955]	[0.650]	[0.616]	[0.468]	[0.847]	[0.320]	[0.221]	[0.854]
Fair Court	-0.038	-0.04	-0.04	-0.047	-0.044	-0.029	-0.038	-0.034
	[0.051]*	[0.028]**	[0.031]**	[0.016]**	[0.028]**	[0.143]	[0.055]*	[0.075]*
Law Enforcement	-0.095	-0.087	-0.09	-0.098	-0.094	-0.106	-0.099	-0.098
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
General Financing Obstacle	0.259	0.235	0.237	0.255	0.232	0.261	0.258	0.259
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Firm Size	-0.01	-0.018	-0.017	-0.013	-0.02	0.0004	0.0002	-0.01
	[0.268]	[0.082]*	[0.102]	[0.143]	[0.068]*	[0.957]	[0.975]	[0.236]
Exporter	-0.165	-0.17	-0.177	-0.151	-0.168	-0.18	-0.156	-0.164
	[0.006]***	[0.010]***	[0.007]***	[0.014]**	[0.010]***	[0.002]***	[0.011]**	[0.007]***
Other Controls								
Creditor Right	-0.035	-0.029	-0.025	-0.056	-0.056	-0.055	-0.045	-0.037
	[0.508]	[0.653]	[0.708]	[0.256]	[0.347]	[0.315]	[0.389]	[0.473]
Deposit Insurance	0.218	0.168	0.13	0.199	0.166	0.138	0.151	0.186
	[0.118]	[0.208]	[0.338]	[0.125]	[0.271]	[0.342]	[0.265]	[0.165]
Other Macro-controls	*yes*	*yes*	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Industry Dummies	*yes*	*yes*	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Number of Countries	54	56	44	44	53	41	48	47
Observations	4214	4256	3439	3439	4232	3362	3968	3948

$H_{1.1}$: More competition, Reduce corruption

$H_{1.2}$: Entry of Barrier, Strict Regulations, Less Corruptions

$H_{1.3}$: Don't find; Firm competition effects corruption in lending.

Testing Hypothesis

- Information Sharing, Competition ,and Corruption in Lending.(Table 4,5)

Model:

$$\begin{aligned} Bank\ Corruption_{i,j} &= \alpha + \beta'\, Bank\ Competition\ Measures_j + \boxed{\delta'\, Information\ Sharing\ Measures_j} \\ &+ \alpha_1 State_{i,j} + \alpha_2 Foreign_{i,j} + \alpha_3 Exporter_{i,j} + \alpha_4 Firm\ Size_{i,j} \qquad (2) \\ &+ \alpha_I Industry\ Dummies_{i,j} + \theta'\, Macro\ Controls_j + \varepsilon_{i,j} \end{aligned}$$

Table 4 Information, Competition and Corruption

	(1)	(2)	(3)	(4)	(5)	(6)
Public Credit Registry	0.108	0.15	0.079		0.045	0.068
	[0.421]	[0.228]	[0.563]		[0.748]	[0.630]
Private Bureau	-0.411	-0.334	-0.188		-0.319	-0.32
	[0.007]***	[0.019]**	[0.215]		[0.033]**	[0.034]**
Public Registry Age			0.005			
			[0.386]			
Private Bureau Age			-0.009			
			[0.001]***			
Negative Only (Private Bureau)				-0.276		
				[0.340]		
Negative and Positive (Private Bureau)				-0.42		
				[0.022]**		
Negative Only (Public Registry)				0.025		
				[0.945]		
Negative and Positive (Public Registry)				0.209		
				[0.161]		
Firm Auditing		-0.242	-0.237	-0.289	-0.256	-0.269
		[0.002]***	[0.003]***	[0.000]***	[0.002]***	[0.002]***
Bank Concentration (Deposit)					0.956	
					[0.006]***	
Bank Concentration (Asset)						0.72
						[0.064]*
Entry Barrier					0.182	0.161
					[0.008]***	[0.016]**
Application Denied					0.351	0.292
					[0.152]	[0.222]
Private Bank Ownership	-0.001	-0.002	-0.003	0.0001	-0.003	-0.003
	[0.736]	[0.443]	[0.222]	[0.988]	[0.268]	[0.223]
Foreign Bank Ownership	-0.003	-0.003	-0.003	-0.001	-0.008	-0.007
	[0.442]	[0.369]	[0.300]	[0.702]	[0.023]**	[0.035]**
Government	-0.284	-0.257	-0.258	-0.238	-0.295	-0.29
	[0.002]***	[0.005]***	[0.005]***	[0.013]**	[0.002]***	[0.003]***
Foreign	-0.092	-0.067	-0.083	-0.034	-0.097	-0.094
	[0.074]*	[0.234]	[0.139]	[0.606]	[0.116]	[0.130]
Competitor	-0.017	-0.014	-0.016	-0.005	0.007	0.011
	[0.726]	[0.781]	[0.748]	[0.922]	[0.897]	[0.850]
Fair Court	-0.036	-0.033	-0.036	-0.036	-0.046	-0.045
	[0.040]**	[0.078]*	[0.054]*	[0.058]*	[0.010]***	[0.008]***
Law Enforcement	-0.097	-0.099	-0.096	-0.105	-0.084	-0.086
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
General Financing Obstacle	0.252	0.247	0.25	0.26	0.22	0.22
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Firm Size	-0.0001	0.004	0.006	0.003	-0.0001	-0.0004
	[0.990]	[0.705]	[0.517]	[0.807]	[0.994]	[0.973]
Exporter	-0.224	-0.191	-0.198	-0.189	-0.193	-0.2
	[0.000]***	[0.000]***	[0.000]***	[0.001]***	[0.003]***	[0.002]***
Creditor Rights	-0.054	-0.058	-0.032	-0.095	-0.037	-0.034
	[0.316]	[0.266]	[0.559]	[0.154]	[0.520]	[0.569]
Deposit Insurance	0.246	0.259	0.248	0.261	0.261	0.233
	[0.044]**	[0.028]**	[0.021]**	[0.089]*	[0.016]**	[0.031]**
Bank Accounting Disclosure	0.024	0.064	0.135	-0.051	0.113	0.108
	[0.811]	[0.490]	[0.193]	[0.704]	[0.272]	[0.332]
Other Macro Controls	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Industry Dummies	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Number of Countries	56	56	55	42	43	43
Observations	4212	3950	3888	3368	3154	3154

$H_{2.1}$: Information Sharing less corruption in lending.

$H_{2.2}$: Information Sharing less corruption in lending through Bank concentration and Entry Barriers.

The effects of competition and information sharing on bank lending corruption are also "economically significant".

Table 5 Magnitude of the Effects: Competition, Information and Corruption

		1	2	3	4
Bank Concentration	1 standard dev. Increase	-0.061	0.013	0.018	0.030
	Change from Minimum to Maximum	-0.272	0.057	0.079	0.136
Application Denied	1 standard dev. Increase	-0.035	0.008	0.010	0.017
	Change from Minimum to Maximum	-0.139	0.023	0.040	0.076
Entry Barrier	1 standard dev. Increase	-0.062	0.014	0.018	0.030
	Change from Minimum to Maximum	-0.269	0.084	0.080	0.105
Private Bureau	Change from 0 to 1	0.122	-0.035	-0.037	-0.050
Firm Auditing	Change from 0 to 1	0.099	-0.027	-0.030	-0.042
Deposit Insurance	Change from 0 to 1	-0.104	0.016	0.030	0.058
Government	Change from 0 to 1	0.114	-0.033	-0.034	-0.047
Foreign	Change from 0 to 1	0.038	-0.009	-0.011	-0.018

Testing Hypothesis

- Competition and Corruption in Countries with and without Private Bureaus.(Table 6)

“Suspect that the presence of good information sharing mechanisms will reduce the impact of bank concentration and bank entry barriers on lending corruption.”

Analysis:

Divided samples into countries “with private bureaus” and “without private bureaus ”

Table 6 Competition and Corruption in Countries with and without Private Bureaus

	Countries With Private Bureau		Countries Without Private Bureau	
	(1)	(2)	(3)	(4)
Bank Concentration	-0.216	-0.506	1.538	1.584
	[0.602]	[0.390]	[0.000]***	[0.000]***
Entry Barrier	0.094	0.095	0.103	0.215
	[0.205]	[0.107]	[0.368]	[0.052]*
Application Denied		-0.515		0.927
		[0.129]		[0.000]***
Private Bank Ownership	-0.004	-0.001	-0.004	0.003
	[0.504]	[0.896]	[0.343]	[0.452]
Foreign Bank Ownership	-0.001	0.001	-0.009	-0.007
	[0.865]	[0.870]	[0.109]	[0.135]
Government	-0.078	-0.07	-0.31	-0.33
	[0.661]	[0.751]	[0.001]***	[0.002]***
Foreign	-0.097	-0.146	-0.068	-0.052
	[0.236]	[0.128]	[0.348]	[0.502]
Competitor	-0.036	0.049	0.035	0.051
	[0.570]	[0.452]	[0.586]	[0.450]
Fair Court	0.023	-0.007	-0.058	-0.068
	[0.469]	[0.840]	[0.006]***	[0.001]***
Law Enforcement	-0.122	-0.115	-0.057	-0.069
	[0.000]***	[0.001]***	[0.053]*	[0.026]**
General Financing Obstacle	0.212	0.173	0.272	0.246
	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Firm Size	0.003	-0.003	0.002	-0.016
	[0.766]	[0.824]	[0.821]	[0.154]
Exporter	-0.153	-0.048	-0.188	-0.247
	[0.076]*	[0.662]	[0.003]***	[0.000]***
Creditor Right	-0.213	-0.264	0.034	0.058
	[0.002]***	[0.000]***	[0.664]	[0.344]
Deposit Insurance	0.342	-0.052	0.092	0.084
	[0.046]**	[0.836]	[0.597]	[0.428]
Bank Accounting Disclosure	-0.077	-0.153	0.247	0.078
	[0.605]	[0.457]	[0.084]*	[0.430]
Other Macro-controls	*Yes*	*Yes*	*yes*	*yes*
Industry Dummies	*Yes*	*Yes*	*yes*	*yes*
Number of Countries	26	18	27	25
Observations	1844	1225	2294	2138

Countries "with Private Bureaus" has ***lower corruption in lending than*** Countries "without private Bureaus."

Robustness Test

- Using Probit Analysis and Instrument Variable Analysis. (Table 7)

Y-Variable (dummy):

$$\text{Corruption Dummy} \begin{cases} 0 & \text{; no obstacle} \\ 1 & \text{;Minor, Moderate, Major} \end{cases}$$

Table 7 Probit Analysis: Competition, Information and Corruption

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit	Probit	Probit	IV Probit	IV Probit	IV Probit
Bank Concentration (Asset)	0.839		0.775	2.425		1.24
	[0.074]*		[0.083]*	[0.000]***		[0.026]**
Bank Concentration (Deposit)		0.947			2.461	
		[0.039]**			[0.000]***	
Entry Barrier	0.23	0.243	0.194	1.061	1.134	0.491
	[0.006]***	[0.007]***	[0.008]***	[0.000]***	[0.000]***	[0.000]***
Application Denied	0.521	0.579	0.41	2.095	2.534	0.79
	[0.099]*	[0.069]*	[0.145]	[0.006]***	[0.001]***	[0.023]**
Public Registry			0.055			0.128
			[0.728]			[0.419]
Private Bureau			-0.305			-0.589
			[0.054]*			[0.001]***
Firm Auditing			-0.286			0.04
			[0.006]***			[0.639]
Private Bank Ownership	-0.005	-0.004	-0.005	-0.008	-0.006	-0.005
	[0.197]	[0.261]	[0.062]*	[0.001]***	[0.012]**	[0.143]
Foreign Bank Ownership	-0.009	-0.009	-0.009	-0.011	-0.009	-0.006
	[0.036]**	[0.036]**	[0.028]**	[0.013]**	[0.033]**	[0.222]
Government	-0.305	-0.305	-0.311	-0.334	-0.33	-0.314
	[0.002]***	[0.002]***	[0.001]***	[0.004]***	[0.005]***	[0.008]***
Foreign	-0.137	-0.132	-0.102	-0.151	-0.13	-0.209
	[0.031]**	[0.031]**	[0.136]	[0.075]*	[0.135]	[0.012]**
Competitor	0.042	0.042	0.025	0.129	0.133	0.129
	[0.509]	[0.511]	[0.668]	[0.026]**	[0.025]**	[0.031]**
Fair Court	-0.037	-0.036	-0.031	0.016	0.023	0.004
	[0.039]**	[0.045]**	[0.089]*	[0.633]	[0.507]	[0.887]
Law Enforcement	-0.087	-0.085	-0.095	-0.037	-0.035	-0.082
	[0.000]***	[0.000]***	[0.000]***	[0.149]	[0.189]	[0.003]***
General Financing Obstacle	0.212	0.212	0.211	0.167	0.16	0.209
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Firm Size	-0.015	-0.015	0.005	0.005	0.002	0.011
	[0.145]	[0.149]	[0.629]	[0.471]	[0.765]	[0.241]
Exporter	-0.189	-0.181	-0.168	-0.123	-0.121	-0.12
	[0.002]***	[0.002]***	[0.011]**	[0.103]	[0.117]	[0.110]
Creditor Rights	-0.039	-0.039	-0.048	-0.034	-0.02	-0.094
	[0.559]	[0.551]	[0.455]	[0.391]	[0.639]	[0.014]**
Deposit Insurance	0.249	0.273	0.28	1.433	1.564	0.868
	[0.068]*	[0.052]*	[0.019]**	[0.000]***	[0.000]***	[0.000]***
Bank Accounting Disclosure	0.085	0.069	0.122	0.282	0.18	0.302
	[0.573]	[0.628]	[0.351]	[0.009]***	[0.079]*	[0.029]**
Other Macro-controls	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Industry Dummies	*Yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Number of Countries	43	43	43	32	32	31
Observations	3363	3363	3154	2263	2263	1929
F-Tests				0.000***	0.000***	0.000***

Bank competition *reduces likelihood that* firm rates bank corruption as obstacle.

Private Bureaus has *significant impact on reducing* the probability firm rates bank corruption as obstacle .(corruption)

"Consistence with previous findings"

Robustness Test

- More Macro Controls. (Table 8)

Table 8 Information, Competition and Corruption with More Controls

	(1)	(2)	(3)	(4)	(5)	(6)
Public Registry	0.148	0.044	0.156	0.051	0.128	-0.031
	[0.226]	[0.756]	[0.208]	[0.727]	[0.262]	[0.833]
Private Bureau	-0.284	-0.309	-0.271	-0.305	-0.296	-0.309
	[0.064]*	[0.051]*	[0.077]*	[0.060]*	[0.025]**	[0.030]**
Firm Auditing	-0.249	-0.255	-0.248	-0.256	-0.243	-0.269
	[0.001]***	[0.002]***	[0.001]***	[0.002]***	[0.002]***	[0.001]***
Bank Concentration		0.947		0.949		0.814
		[0.006]***		[0.006]***		[0.027]**
Entry Barrier		0.18		0.177		0.104
		[0.011]**		[0.017]**		[0.083]*
Application Denied		0.35		0.341		0.35
		[0.160]		[0.178]		[0.165]
Private Bank Ownership	-0.002	-0.003	-0.002	-0.003	-0.003	-0.003
	[0.449]	[0.281]	[0.465]	[0.280]	[0.345]	[0.367]
Foreign Bank Ownership	-0.003	-0.008	-0.003	-0.008	-0.004	-0.007
	[0.286]	[0.024]**	[0.380]	[0.029]**	[0.163]	[0.039]**
Government	-0.256	-0.294	-0.246	-0.293	-0.252	-0.298
	[0.004]***	[0.002]***	[0.006]***	[0.002]***	[0.008]***	[0.002]***
Foreign	-0.068	-0.097	-0.071	-0.097	-0.071	-0.084
	[0.243]	[0.117]	[0.222]	[0.115]	[0.221]	[0.165]
Competitor	0.002	0.01	-0.002	0.009	-0.006	-0.003
	[0.973]	[0.860]	[0.972]	[0.870]	[0.899]	[0.949]
Fair Court	-0.022	-0.044	-0.024	-0.044	-0.032	-0.048
	[0.256]	[0.025]**	[0.237]	[0.024]**	[0.113]	[0.011]**
Law Enforcement	-0.095	-0.083	-0.092	-0.083	-0.097	-0.085
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
General Financing Obstacle	0.239	0.219	0.24	0.219	0.243	0.223
	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***	[0.000]***
Firm Size	0.003	-0.0003	0.003	-0.0004	0.003	0.003
	[0.728]	[0.975]	[0.747]	[0.971]	[0.744]	[0.810]
Exporter	-0.176	-0.189	-0.176	-0.189	-0.2	-0.194
	[0.001]***	[0.002]***	[0.001]***	[0.002]***	[0.000]***	[0.003]***
Creditor Right	-0.055	-0.038	-0.054	-0.038	-0.012	-0.013
	[0.262]	[0.492]	[0.275]	[0.500]	[0.812]	[0.827]
Deposit Insurance	0.274	0.267	0.233	0.259		
	[0.021]**	[0.014]**	[0.042]**	[0.016]**		
Bank Accounting Disclosure	0.034	0.108	0.034	0.106		
	[0.735]	[0.307]	[0.722]	[0.309]		
Control of Corruption	-0.16	-0.032				
	[0.126]	[0.751]				
TI Corruption Index			-0.081	-0.017		
			[0.090]*	[0.756]		
Official Supervisory Power					0.051	0.045
					[0.012]**	[0.039]**
Private Monitoring Index					-0.022	-0.006
					[0.497]	[0.844]
Other Macro-controls	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Industry Dummies	*yes*	*yes*	*yes*	*yes*	*yes*	*yes*
Number of Countries	56	43	56	43	55	43
Observations	3950	3154	3950	3154	3898	3154

Conclusion

- We focus on the role of market institutions, in particular on **market competition** and **information-sharing mechanisms in the form of credit bureaus** (and public credit registries) in *reducing* bank-lending corruption.
- Controlling for firm characteristics and including bank and macro controls, we find that both **competition** among banks and **information sharing** among lenders (especially via private credit bureaus) are both important in reducing corruption.

Conclusion

- Information sharing among can help reduce the ability and incentive of loan officers to demand bribes from credit applicants.

Suggestion

- For countries that have severe corruption problems should impose more competition in banking sectors, to solve corruption problems.
- Findings regarding information sharing also shed light on <u>the positive role that market institutions like private credit bureaus</u> can play in reducing corruption in bank lending.

Q&A