A Stiglerian View on Banking Supervision

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Stiglerian view on regulation as capture (1971)

- Regulation offers ideal opportunities for intransparent redistribution.

- Producers in a much better position to understand and influence regulation than consumers.

- Therefore, regulation captured by producers.

- Peltzman (1976): consumer interests have an impact on regulative equilibrium.

- Applications of this literature in financial market regulation: US banking regulation of market entry restrictions.

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Banking industry's interest in supervision

- Highly technical and complex nature of supervisory regulation: good preconditions for capture.

- **Barriers to entry**:
  - Tight supervisory rules could possibly function as barriers to market entry.

- **Preference for laxity**:
  - If supervision is not effective as protective tool, domestic banks would simply regard supervision as a cost burden.

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Difficulties with empirical testing

- Opposite signs for the impact of the banking industry's potential impact on supervision.

- No a priori exclusion of public interest view possible.

=> Three-step testing procedure

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Testable hypotheses

- *H1: Relevance of the private interest view*

  There is a significant link between the characteristics of the supervisory system and banking stability.
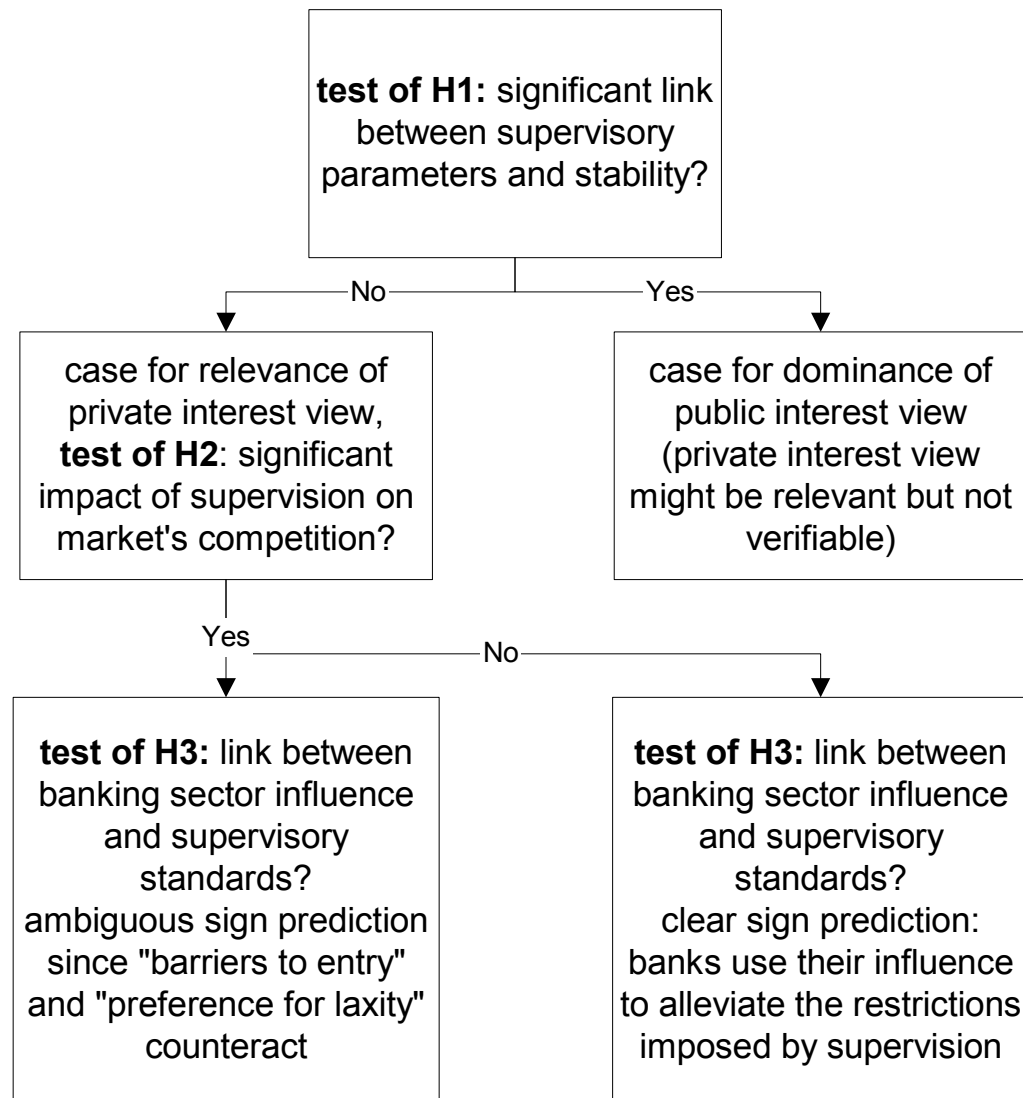
- *H2: Barriers to entry*

  The competition of financial services markets depends on the stringency of supervision. A high degree of supervisory stringency reduces competition.

- *H3: Preference for laxity*

  Countries with a relatively influential banking sector are, ceteris paribus, countries with relatively low supervisory standards and costs.

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Tree-step testing approach


```
                    ┌─────────────────────────────┐
                    │ test of H1: significant link │
                    │   between supervisory        │
                    │   parameters and stability?  │
                    └─────────────────────────────┘
              ──No──────────────┴──────────────Yes──
             ▼                                       ▼
┌─────────────────────────┐        ┌─────────────────────────┐
│ case for relevance of   │        │ case for dominance of    │
│ private interest view,  │        │ public interest view     │
│ test of H2: significant │        │ (private interest view   │
│ impact of supervision on│        │ might be relevant but not│
│ market's competition?   │        │ verifiable)              │
└─────────────────────────┘        └─────────────────────────┘
       Yes──────────No──────────
      ▼                          ▼
┌─────────────────────────┐  ┌─────────────────────────┐
│ test of H3: link between│  │ test of H3: link between │
│ banking sector influence│  │ banking sector influence │
│ and supervisory         │  │ and supervisory          │
│ standards?              │  │ standards?               │
│ ambiguous sign prediction│  │ clear sign prediction:  │
│ since "barriers to entry"│  │ banks use their influence│
│ and "preference for laxity"│ to alleviate the restrictions│
│ counteract              │  │ imposed by supervision   │
└─────────────────────────┘  └─────────────────────────┘
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Variable definition and data source (1)

- Construct variables that serve as proxies for the strength of prudential rules and variables that represent the strength of the respective interest groups.

- In addition construct several variables to control for other explanatory factors.

- Sources:
  - Surveys conducted by the World Bank and the U. S. Office of the Comptroller of the Currency (OCC).
  - IFS and World Bank data

- *Strength of supervisory regulation*
  - Total budget for supervision
  - Number of supervisors per institution
  - Official supervisory power

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Variable definition and data source (2)

- *Banking industry variables*
  - *Bank claims/GDP, Bank assets, deposits, loans*
  - *Number of banks*
- *Banking competition variables*
  - Lending minus deposit rate
  - Concentration (% of total assets/deposits accounted for by 3 largest banks)
- *Interindustry rivalry variables*
  - Insurance dummy (1 if banks are allowed to sell insurance)
  - Insurance penetration (premiums/GDP) and density (premiums/population)
- *Ownership variables (not successful)*
  - % of banks/bank assets that are government owned
  - % of banks/bank assets that are foreign owned

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Variable definition and data source (3)

- *Banking system safety and soundness variables*
  - Number of banks closed in last 5 years
  - Crisis dummy (1 if a country experienced a banking crisis according to Caprio/Klingebiel, 1999)
- *Macroeconomic variables*
  - GDP, GDP/capita
  - Population
- *Supervision structure variables*
  - Dummies for multiple bank supervisor and central bank involvement
- *Other variables*
  - Private monitoring index
  - Deposit insurance dummy
  - OECD and EU dummy

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Empirical models and methodology (1)

H1: Relevance of the private interest view

$$S_i = \alpha + \beta_1 SUP_i + \beta_2 C_i + \varepsilon_i$$

H2: Barriers to entry

$$COMP_i = \alpha + \beta_1 SUP_i + \beta_2 C_i + \varepsilon_i$$

H3: Preference for laxity

$$SUP_i = \alpha + \beta_1 B_i + \beta_2 I_i + \beta_3 S_i + \beta_4 C_i + \varepsilon_i$$

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Empirical models and methodology (2)

- Estimate several specifications selecting different combinations of the respective proxy variables.

- OLS and Logit regressions using White and Huber/White heteroskedasticity consistent covariance estimates.

- Endogeneity problem and potential measurement errors
  => Use instrumental variable procedures additionally.

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Estimation results: relevance of the private interest view (H1)
(dependant variable: CRISIS)

	(1)	(2)	(3)	(4)	(5)
BUDGET/ ASSETS	226.2526 (0.7402)	115.5582 (0.8627)	299.2640 (0.6571)	-176.2492 (0.7955)	239.9885 (0.7262)
DI		1.827320** (0.0275)			
MONITOR			0.250335 (0.9349)		
CB				-1.484122 (0.1257)	
MULTIPLE					0.264357 (0.7445)
GDPCAPITA	-6.62E-05* (0.0859)	-0.000101** (0.0321)	-5.77E-05 (0.1630)	-9.99E-06* (0.0523)	-6.74E-05* (0.0959)
Constant	0.778839 (0.1636)	0.091577 (0.8917)	0.489893 (0.8010)	2.045046* (0.0796)	0.740585 (0.1958)
McFadden R-squared	0.121121	0.209155	0.090846	0.177193	0.1222605
N	35	35	33	35	35

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Estimation results: barriers to entry (H2)

	CONC1		DRATES		FOREIGN1	
BUDGET/ ASSETS	6314.850 (0.2554)	-2751.420 (0.5305)	5444.376** (0.0233)	4256.048* (0.0923)	4821.832 (0.5657	-4197.664 (0.4544)
ASSETS/GDP		-1.372384*** (0.0000)		-1.697712* (0.0589)		2.092148*** (0.0000)
Constant	51.26983*** (0.0000)	54.16240*** (0.0000)	6.034815*** (0.0001)	8.598640*** (0.0020)	43.92110*** (0.0000)	38.35308 (0.0000)
Adj. R-squared	0.006696	0.032146	0.073284	0.068663	-0.013838	0.074492
N	43	39	37	35	44	39

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Estimation results: preference for laxity (H3)
(dependant variable: BUDGET)

	(1)	(2)	(3)	(4)	(6)
CLAIMSGDP	-55.58529**	-56.18351**	-54.93925**	-54.32665**	-64.77470**
	(0.0218)	(0.0158)	(0.0173)	(0.0137)	(0.0250)
CONC1	0.050819	0.015308			-0.024432
	(0.8313)	(0.9475)			(0.9055)
INSUR	33.64866**	31.20449**	26.62701**	25.30852**	
	(0.0164)	(0.0179)	(0.0182)	(0.0163)	
INSPEN	-12.52122	20.01542	24.46130	49.34437	
	(0.9566)	(0.9232)	(0.9074)	(0.7829)	
INSUR*INSPEN					368.1552**
					(0.0303)
CRISIS	2.279620		-0.017789		4.089653
	(0.8753)		(0.9990)		(0.7495)
GDP	4.24E-05***	4.17E-05***	4.09E-05***	4.06E-05***	4.03E-05***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	4.422598	7.450915	12.53331	11.44378	23.82833
	(0.8070)	(0.5345)	(0.4582)	(0.1580)	(0.2469)
Adj. R-squared	0.812212	0.815351	0.815490	0.818604	0.804016
N	33	34	36	37	33

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Estimation results: preference for laxity (H3)
(dependant variable: BUDGET/ASSETS)

	(1)	(3)	(4)	(5)	(7)
CLAIMSGDP	-0.000714**	-0.000701*	-0.000668**	-0.000644**	-0.000772**
	(0.0486)	(0.0504)	(0.0407)	(0.0439)	(0.0335)
CONC1	-2.37E-06	-2.92E-06			-2.14E-06
	(0.4636)	(0.3865)			(0.4825)
INSUR	5.76E-05	7.60E-05	4.10E-05	5.84E-05	
	(0.7962)	(0.6779)	(0.8543)	(0.7501)	
INSPEN	-0.001462	-0.000665	-0.001707	-0.000923	
	(0.3522)	(0.5806)	(0.3093)	(0.4502)	
INSUR*INSPEN					-0.000997
					(0.5028)
CRISIS	-4.23E-05		-3.76E-05		-5.67E-05
	(0.8350)		(0.8532)		(0.7596)
Constant	0.000789	0.000715*	0.000677*	0.000574**	0.000823
	(0.1010)	(0.0627)	(0.0827)	(0.0297)	(0.0501)
Adj. R-squared	0.081981	0.096909	0.106520	0.112922	0.110239
N	32	34	32	34	32

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Conclusions I

- The difference of supervisory systems in terms of stringency has no significant impact on the likelihood of a banking crisis.

=> Scope for the private interest view following Stigler's capture theory.

- Some evidence that tougher supervision is associated with higher interest rate margins.

- However, higher supervisory standards do not significantly effect concentration in the banking market.

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Conclusions II

=> Concentrate on the "preference for laxity" hypothesis which is clearly supported.

- The regulated banking industry exerts influence on supervisory standards.

- Evidence that industry presses for lax and low-cost supervisory standards.

- Not likely in European reform debate: Industry resistance against supervisory centralisation motivated by protectionism.

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