

## Finance and growth in developing countries

### L2 Financial repression: Theory and evidence

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## From Financial Restriction to Financial Repression

McKinnon (1973) and Shaw (1973) mount a powerful critique of the "financial restriction" policies followed by most LDCs since WWII/independence (*China?*):

- Government-created **credit rationing**
- Financial repression, by depressing real interest rates, reduces saving, hinders financial deepening
- Investment suffers in both quantity & quality terms
- Negative effects on growth through investment

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## What is the rationale for Financial Restriction?

- In the framework of Import Substitution Industrialization Development Strategies
- Harrod-Domar: force savings and govt intervention (that is, public investment) will drive industrialization
- Financial restriction encourages financial institutions (ie banks, not SM) and financial instruments (ie money, not equities) from which the government can **tax** (expropriate seigniorage)
- Such measures are to increase the flow of domestic resources to the public sector without higher taxes, inflation or interest rates, but **DISTORTIONS!!!**

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## Rationale (2)

- Government manipulates financial system to promote development goals through fin repression
- Financial repression generates Revenue (to govt)
- One source: **implicit tax on fin intermediation**
- Another source: **implicit subsidy**; government benefits by obtaining access to financing at below-market interest rates.
- Giovannini and De Melo (1993): on average, governments in their sample of developing countries extracted about 2% of GDP in revenue from financial repression

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## What is Financial Repression?

- ceilings on nominal interest rates (MAIN)
- quantitative controls and selective credit allocation across government considered priority sectors, regions or activities;
- high minimum reserve requirement
- loan decisions of SO banks guided by political factors
- forced allocation of assets or loans to the public sector by private commercial banks, for example, statutory liquidity ratios (required to hold a proportion of assets in the form of government debt).

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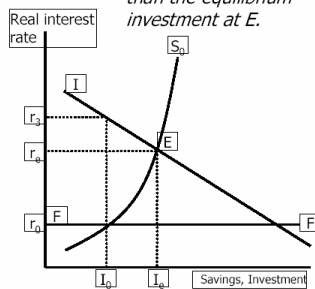
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## Financial Repression

- Savings  $S_0$  corresponding to the economic growth rate  $g_0$  are a function of the real interest rate.
- The line FF represents the nominal interest rate ceiling causing the real deposit rate to remain below the equilibrium.
- Real investment  $I_0$  is equal to the amount of savings at the real interest rate  $r_0$ .



*With this policy of interest rate control, investment  $I_0$  is lower than the equilibrium investment at E.*

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### How do interest rate ceilings distort the economy?

- increasing the preference of individuals for current consumption as opposed to future consumption, as a result, by **reducing savings**
- reducing the supply of funds through the banking system (**disintermediation**)
- leading bank borrowers to choose more **capital-intensive project** due to low interest rate on loans
- financing **low-yielding project** more heavily

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### Implications of Financial Repression

- **severe inefficiencies/distortions**
  - restrict the development of financial intermediation
  - increase the spread between deposit and lending rates
  - and reduce saving and investment in the economy

**What is the solution? Eliminate distortions: Liberalization!!**

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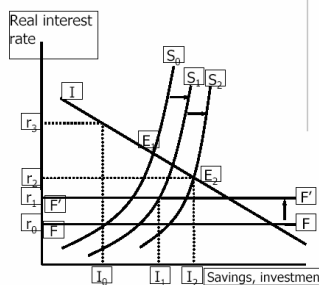
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### Financial Liberalization

- The interest rate ceiling is increased from FF to FF'.
- The growth rate increases from  $g_0$  to  $g_1$ .
- Savings shift to the right from  $S_0$  to  $S_1$ .
- Investment increases to  $I_1$ .
- Control over interest rates is totally removed, savings moves to  $S_2$  corresponding to the growth rate  $g_2$ . The equilibrium is now  $E_2$ . The real interest rate is  $r_2$  and investment is  $I_2$ .




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So in MS, liberalization solves...

- The removal of controls expected to boost saving and financial deepening through higher real interest rates
- Greater saving raises investment
- Higher real interest rates encourage firms to undertake more productive investment projects
- Abolition of directed credit facilitates more efficient allocation of credit by banks

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Before the clash with evidence:  
A two-slide historical digression on  
McKinnon-Shaw mechanisms

- McKinnon (*MKED*, Brookings 1973) and Shaw (*FDeepED*, OUP 1973)
- McKinnon's *complementarity* hypothesis
- Shaw's *debt-intermediation view*
- Cf. their demand for money functions
- McKinnon's has income, etc and INVESTMENT
- Shaw's has income etc and opportunity cost of holding money

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Before the clash with evidence:  
A two-slide historical digression (2)

- McKinnon: assumes investors can only self-finance
- Shaw: assumes investors don't (*external finance*)
- McKinnon: a rise in the interest (deposit) rate stimulates demand for K by increasing savings
- Shaw: a rise in the interest (deposit) rate stimulates lending potential of financial intermediaries
- Complementary approaches because most projects are financed partly by own funds and partly with borrowing.

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### Evidence from Financial Reforms: 1970s and 1980s

- Latin America: ‘Good-bye financial repression, hello financial crash’ (JDE 1985)
- Liberalizations of the 1970s and 1980s in Colombia, Uruguay, Venezuela, Argentina, Brazil, Chile, Mexico, Turkey, Israel, Philippines and Indonesia resulted in **financial fragility and crisis**
- Real interest rates soared to +20%, accumulation of bad debts/bad loans, bank failures, investment suffered, speculation flourished

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- Commonly assumed that financial liberalization causes financial deepening
- Policy implication: financial liberalization good for growth
- Evidence from some reforms shows cases where liberalization followed by financial fragility (Latin America, Asia)
- Financial markets can help promote economic development and/or growth... However, relationship is more complex
- Premature financial liberalization may have negative effects because of inappropriate sequencing, weak institutions (prudential regulation) or imperfect competition

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### Conflict between Traditional Theory and Evidence

- The MS model predicts financial liberalization has **positive** effects on saving, investment and growth
- Evidence supports view “good-bye financial repression, hello financial crash”
- Reconciling the two involves recognizing that MS contains some **crucial** implicit assumptions and omissions

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## Assumptions and Omissions

The traditional liberalization thesis is based on the following implicit assumptions / omissions:

- Perfect information
- Perfect competition
- Institutions-free analysis
- No role for stock markets
- Ignores destabilizing effects of capital flows

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## Imperfect information is endemic in financial markets

- In loan contracts, borrower is usually more informed than lender
- Imperfect Information: information is distributed **unequally** between two parties in a financial transaction
- Asymmetric information: problems of Adverse Selection and/or Moral Hazard

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## Asymmetric Information Problems

### **Adverse selection:**

- those likely to produce an adverse outcome for lender more likely to be selected (e.g. high risk borrowers)
- exacerbated by high real interest rates

### **Moral hazard:**

- borrower has incentives to act in a way not acceptable to lender (excessive risk-taking)
- exacerbated by high real interest rates

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## Imperfect Competition

- Emerging markets are characterised by lack of competition in banking
- Difficult to achieve perfect competition in banking because: imperfect information leads to market segmentation and market power for lenders (Stiglitz, 1985)
- free entry inconsistent with prudential controls
- Second best: reasonable degree of competition

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## Role of Institutions

Absent from the MS analysis:

- Quality of the legal system
- contracts
- property rights
- bankruptcy procedures etc.
- Quality of prudential regulation and supervision
- Transparency

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## LDC mix

Combination of imperfect information, imperfect competition, poor quality of institutions, inefficient stock markets, destabilising influence of short-term capital flows

could mean that financial liberalization may lead to:

- too high real interest rates
- macroeconomic instability
- asset price bubbles
- deterioration of asset quality in bank balance sheets
- financial fragility and crisis

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## Credit Rationing

Stiglitz and Weiss (AER, 1981) show credit rationing may emerge **endogenously** (i.e., not govt created).

Assumptions:

- Economy populated by a bank and a group of borrowers, each of whom has a single, one-period project in which he (or she) can invest.
- Each project requires a fixed amount of funds,  $L$ , and this is the amount that each borrower must obtain to implement the project.
- Each borrower must pledge **collateral** in value  $C < L$

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### Stiglitz-Weiss model:

Each project requiring funding has a distribution of **gross payoffs**,  $F(R, \theta)$

→  $R$ : project's return and borrower cannot affect it

→  $\theta$ : measures the **riskiness** of the project

- Projects yield either  $R$  (if they succeed) or 0 (fail)
- The higher value  $\theta$  represents an increase in risk. An increase in  $\theta$  captures an increase in the **variance** of the project's return, while leaving its mean constant. Shifts in  $\theta$  are thus assumed to be **mean preserving**

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- Borrower receives the fixed amount of loans,  $L$ , at the contractual interest rate  $r$  and defaults on the loan if the project's return  $R$  plus the value of the collateral  $C$  are insufficient to repay the loan.

- Bank receives either the full contractual amount  $(1+r)L$  or the maximum possible,  $R + C$ .

- If lenders face no **collection** or **enforcement costs**, the return to the bank is:

$$\min \{R + C; (1+r) L\}$$

- Return to the borrower:

$$\max \{R - (1+r) L; - C\}$$

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**Increase in  $r$  triggers two types of effects:**

**adverse selection effect**

→ by increasing the riskiness of the pool of applicants, less risky borrowers drop out of the market

**adverse incentive effect, or moral hazard effect:**

→ Borrowers are induced to choose projects for which the probability of default is higher (because riskier projects are associated with higher expected returns).

→ This has a negative effect on the lender's expected profit, which may dominate the positive effect of an increase in the contractual interest rate.

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**First result ( $\partial \tilde{\rho} / \partial r > 0$ ):**

- positive effect of an increase in the contractual interest rate on the bank's expected rate of return on its loans ( $\rho$ ) may be partly offset by the negative effect due to the increase in the riskiness of the pool of borrowers.
- If the latter effect dominates,  $\rho$  will not be monotonically related to  $r$  and **rationing** may incur in equilibrium.

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- The non-market-clearing rate  $r$  is both **optimal** and **efficient**, because bank profits are at a maximum level and risky borrowers are rationed out.
- Thus, under imperfect information, lending rates that are below market-clearing levels can be observed even in competitive credit markets.
- Such non-market-clearing lending rates reflect an **efficient response** to profit opportunities.
- **Implication:** Increases in interest rates, beyond credit-rationing level, can be counterproductive.

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- Stiglitz-Weiss model is helpful to understand why in some developing countries bank credit is severely rationed with bank lending rates unresponsive to excess demand for credit
- Degree of riskiness of projects can be **endogenously** related to the level of economic activity---which itself depends on the amount of loans available
- This link creates a channel through which credit rationing can be **exacerbated and may display persistence** over time

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- Recap**
- MacKinnon-Shaw: from financial restriction to financial repression
  - Credit rationing is bad and is govt created
  - Get govt out
  - Goodbye financial repression, hello financial crash
  - Credit rationing may be endogenous, not govt's fault... (adverse selection and adverse incentive)

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**Discussion Questions**

Relate our discussion about financial repression today to the theoretical and empirical ideas we discussed under growth-and-finance.

Identify (and discuss how) three of the assumptions underlying financial repression are unlikely to hold in a poor country context.

If you are designing financial sector policies for an emerging market, what are the three main policy actions you propose in light of the financial repression literature.

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## Finance in developing/ transition countries

### L3 Financial repression: Theory and EVIDENCE

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### Financial Repression

- McKinnon (1973) and Shaw (1973) mount a powerful critique of the “financial restriction” policies followed in the frame of ISI strategies
- Government-created **credit rationing**
- Financial repression, by depressing real interest rates, reduces saving, hinders financial deepening. Investment suffers in both quantity & quality terms with negative effects on growth through investment
- Critique: Stiglitz-Weiss, sequencing and “goodbye, hello”
- What does the evidence say?

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### Financial Repression

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## Plan

1. How important is FR in generating government revenue? (Giovannini and de Melo AER 93)
2. What are the direct costs of FR (over through the real interest rates)? (*India*, Demetriades and Luintel, REStat 97)
3. What are the political economy detts of FR? (*TEs*, Denizer, Desai and Gueorguiev, CES, 2006)
4. Can FR be good for growth and financial deepening? (South Korea, Demetriades and Luintel, JDE 2001)

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## Giovannini and de Melo 1993 AER

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## Giovannini and de Melo 1993 AER

- ISI: Government-created **credit rationing** that results in artificially low cost of domestic funding to governments
- LDCs: weak tax collection systems (evasion etc)
- LDCs: costly tax administration
- Policy advice from IMF/WB has been "incomplete": must recognize related distortions or policy complementarities
- How important is FR in generating government revenue? (Giovannoni and de Melo AER 93)
- If financial liberalization is adopted, what are the consequences in terms of govt revenue?

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### Giovannini and de Melo 1993 AER

- If financial liberalization is adopted, what are the consequences in terms of govt revenue?
- How big are the interactions between financial controls and OTHER tax policies
- OTHER=view of govt imposed controls on domestic fin mkts as a form of taxation!
- Size of govt revenue from FR reveals extent to which FL policies need to be accompanied by changes in taxation and govt spending

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### Giovannini and de Melo 1993 AER

- Insight 1: FR policies need to include restrictions on international capital flows (otherwise, bypassed through offshore fin intermed)
- GM exploit international dimension of FR
- FR allows govt to finance themselves artificially cheap: international interest rates reflect the shadow (true, scarcity) cost of funds

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### GM1993 AER: Two important asides

- Aside 1: although FR can be seen as tax, it should not be confused with the inflation tax (base for later is high-powered money, for former includes non-monetary assets held by domestic residents)
- Aside 2: recognize complementarities btw FR and inflation tax (e.g., limited array of fin instruments cause negative real interest rates to increase money demand)

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### GM1993 AER: Measurement

- Differently from previous studies, revenue from FR estimated **directly** from (repressed) interest rates data (*debts flows and stocks*)
- Measure of govt revenue from FR includes only interest expenses from central govt
- Foreign borrowing measured only on external commercial debt and both domestic and foreign borrowing are measure ex post

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### GM1993 AER: Measurement

- To compute average foreign interest rate on commercial debt:
- (1) total annual dollar interest payments (reported to World Bank)
- (2) change in interest rates arrears
- (3) average annual debt outstanding and disbursed
- Thus the nominal effective dollar (ie, foreign, shadow, true) interest rate is given by  $[(1)+(2)]/(3)$

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### GM1993 AER: Measurement

- To compute the domestic interest rate on commercial debt:
- (1) total annual local currency interest payments on central govt domestic debt
- Understates FR by excluding central banks, state-local govt, SOEs
- (3) average annual debt outstanding and disbursed
- Thus the nominal effective domestic interest rate is given by  $(1)/(3)$

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### GM1993 AER: Measure

- Govt revenue from FR is calculated as the difference between
- the foreign borrowing cost and
- the domestic borrowing cost
- TIMES the average annual stock of domestic debt

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### GM1993 AER: Estimates (Table 1)

TABLE 1—THE SIZE OF REVENUE FROM FINANCIAL REPRESSION

Country	Sample	Revenue from financial repression	
		Percentage of GDP	Average rev from FR/ tax rev. around 10%
Algeria	1974–1987	4.30	11.42
Brazil	1983–1987	0.48	1.57
Colombia	1980–1984	0.24	2.11
Costa Rica	1972–1984	2.33	12.76
Greece	1974–1985	2.53	7.76
India			8
Indonesia			0
Jamaica			4
Jordan			0
Korea			6
Malaysia			1
Mexico			5
Morocco			9
Pakistan			0
Panama			9
Papua New Guinea			0
Philippines	1975–1986	0.48	3.88
Portugal	1978–1986	2.22	6.93
Sri Lanka	1981–1983	3.40	19.24
Thailand	1976–1986	0.38	2.57
Tunisia	1978–1987	1.49	4.79
Turkey	1980–1987	2.20	10.89
Zaire	1974–1986*	0.46	2.48
Zimbabwe	1981–1986	5.50	19.13

These figures suggest that FLlb without fiscal ref is dangerous (ie will generate budgetary problem)

\*The sample for Zaire does not include the years 1981, 1982, and 1983.

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### GM1993 AER: Main point

- Govt revenue from FR is calculated using international dimension of FR
- On average, 10% of govt revenue comes from FR
- These figures suggest that Fin LIb not accompanied by fiscal ref **aiming at substituting for the revenue loss** will generate budgetary problem and will be resisted by govt!
- IFIs did not anticipate this in their lending

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Demetriades and Luintel  
REStat 1997

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2. Demetriades and Luintel REStat 1997

- Objective is to assess **direct** costs of FR (using *INDIA* data)
- Note general difficulties of the McKinnon-Shaw FR hypothesis (sequencing, inst)
- Stress specific difficulties of the McKinnon-Shaw FR hypothesis: interest rate elasticities of savings/investment “rarely conform to the MS predictions”
- Direct costs = FR has effects on fin depth that are additional (or **are independent of**) to those of the real interest rate

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DL 1997

- In MS, role of financial institutions is largely passive
- “Perfectly competitive banking model”
- Transform deposits into loans at zero cost
- Such model not adequate to LDCs:
  - A) LDCs banking industry: small number of banks and collusion is common
  - B) Asymmetric info in loans generates market power for lenders

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## DL 1997: TASK ONE

- Capture empirically a broader array of repressionist policies (beyond IR ceilings)
- Capture banks' *non-interest rate* methods to influence volume of bank deposits
- Annual Reports of the Reserve Bank of India for branching, deposit rates, repressionist policies
- Nine types of repressionist policies
- 6 on IR controls: deposit rate (fixed?, ceiling?, floor?) and lending rate (fixed?, ceiling?, floor?)
- Intensity of direct credit program, required reserve ratio and required liquidity ratio
- PrinComp Financial Repression Index

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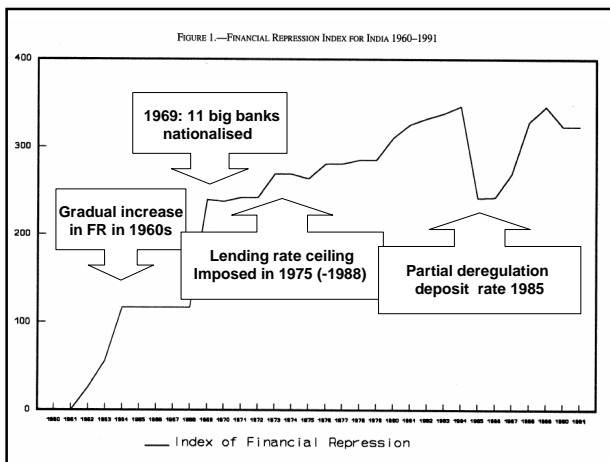
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## DL Task two: FPC Index works?

- First objective is to examine impacts of repressionist policies on financial deepening
- Hypothesis is that such policies affect deepening independently from IR
- Log of financial depth (bank deposits/GDP) is:

$$LFD_t = a_0 + a_1LY_t + a_2R_t + a_3LB_t + a_4FPC_t + u_{1t}$$

Where Y is real pc GDP, R is RIR, LB is population density of bank branches and FPC is financial repression index

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### 3. Denizer Desai Gueorguiev

- Focus on the so-called Transition Economies
- Instead of looking at the effects of financial repression, DDG look at its determinants
- Mainly Political Economy factors
- How political institutions, by shaping the incentives politicians face, can determine the choice of financial policy?

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### *Denizer Desai Gueorguiev*

- Hypothesis is that easy money for govt debt financing is not the driver in TEs, but “need to protect” old state sector
- Legacies of communist banking supports this possibility:
  - Banking remains among the most state-controlled parts of the economy in TEs
  - Inherited portfolios are concentrated in few sectors/firms and big/lots of bad loans
  - Debt contracts enforcement is weak (weak courts, bankruptcy legislation, etc)

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### *Denizer Desai Gueorguiev 2006*

- Dets of three proxies for FR
- 1. Dummy for direct credit (1 if > 25% of total credit in economy)
- 2. Real discount rate of (CB's base rate)
- 3. Level of financial intermediation: ratio of money supply (M2) to GDP

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## Denizer Desai Gueorguiev 2006

- Political economy explanatory variables
- *COMMP* Share of seats in parliament held by members of the Communist Party, or its direct descendant or set of descendants.
- A high percentage for *COMMP* can be interpreted as an indicator “insider” control of the legislature, low development of a party system, lack of political succession in parliament, and so on.
- In general, then, *COMMP* measure the degree of “persistence” of pre-reform elites in legislatures.

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## Denizer Desai Gueorguiev 2006

- *FRACTION* To measure the degree of polarization in parliaments, Rae fractionalization index which measures likelihood that two legislators chosen at random belong to different political parties.
- *GOVSTR* level of parliamentary support for the government by simply adding up all seats that the government coalition can claim, divided by the total number of seats in parliament.
- Results for FR as a fc of these pol econ factors

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Table 4. Pooled Probit Estimation for Directed Credit

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Intercept</i>	-2.921 (8.706)**	-2.726 (8.794)**	-0.625 (9.932)	-2.488 (5.462)*	-4.013 (3.369)**	-3.717 (4.681)*
<i>Part Seats</i>	0.733 (0.534)	0.441 (0.762)	0.809 (0.486)	3.270 (1.617)*	-0.125 (0.813)	-0.481 (2.527)
<i>Fraction Index</i>	0.213 (0.009)**	0.214 (0.100)**	0.195 **	0.220 (0.0181)**	0.242 (0.157)	0.245 (0.151)
<i>COMMP<sub>it</sub></i>	2.210 (0.274)**					
<i>COMMP<sub>it</sub>×CEE<sub>it</sub></i>		1.682 (1.205)				
<i>COMMP<sub>it</sub>×FSU<sub>it</sub></i>		2.901 (1.012)**				
<i>FRACTION<sub>it</sub></i>			-2.113 (0.939)*			
<i>FRACTION<sub>it</sub>×CEE<sub>it</sub></i>				0.485 (1.794)		
<i>FRACTION<sub>it</sub>×FSU<sub>it</sub></i>				-3.256 (1.308)*		
<i>GOVSTR<sub>it</sub></i>					2.688 (1.645)	
<i>GOVSTR<sub>it</sub>×CEE<sub>it</sub></i>						2.336 (2.548)
<i>GOVSTR<sub>it</sub>×FSU<sub>it</sub></i>						2.097 (2.963)
Observations	70	70	70	70	43	43
Log Likelihood	-26.826	-26.703	-28.936	-27.060	-15.204	-15.174
R <sup>2</sup>	48.472	49.006	45.859	48.563	47.957	48.630
Fraction of Correct Predictions	78.571	80.000	80.000	77.143	81.205	86.047

Note: Coefficients are generated using probit estimation. Standard errors are in parentheses. \*p<0.05, \*\*p<0.01. Significance tests are two-tailed.

← CCCP dummy

R1: the more commie seats (status quo), the more FR

R1: FSU is this not CEE  
R2: More fractionalized parliam, less FR

R2: FSU is this not CEE  
R3: Govt majority doesn't matter much

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Demetriades and Luintel  
JDE 2001

Recall FR was bad in India,  
it will be good in Korea now

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4. Demetriades and Luintel JDE 2001

- In MS, role of financial institutions is largely passive
- Assumption of “perfectly competitive banking sector” should be relaxed
- In monopolistic setting, ceiling on lending rate may alter volume even if the deposit rate is fixed by govt, say through marketing or new branches
- So, financial deepening can occur WITHOUT an increase in the deposit rate of interest (a bit more formal than in 1997...).

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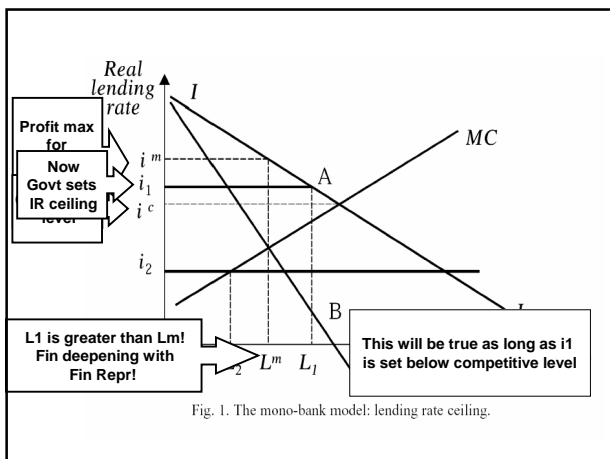
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## DL 2001: TASK ONE

- Capture empirically a broader array of repressionist policies (beyond IR ceilings)
- Capture banks' *non-interest rate* methods to influence volume of bank deposits
- Annual Reports of the Reserve Bank of Korea for , deposit rates, repressionist policies
- Four types of repressionist policies
- 2 on IR controls: deposit rate (ceiling?) and lending rate (ceiling?)
- Required reserve ratios on time deposits, and required reserve ratios on demand deposits
- PrinComp Financial Repression Index

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## DL: FPC works?

- Objective is to examine impacts of repressionist policies on financial deepening
- Hypothesis is that such policies affect deepening independently from IR
- Log of financial depth (bank deposits/GDP) is:

$$L_t = \mu + \theta_1 y_t + \theta_2 r_t + \theta_3 FR_t + e_t$$

Where  $y$  is real pc GDP,  $r$  is RIR,  
FR is financial repression index

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Dependent variables: L1 is commercial banks deposits to GDP ratio, L2 adds dev banks, postal bank etc.						
Table 1 Financial development models						
Regressors	Model A		Model B		Model C	
	Dependent variable		Dependent variable		Dependent variable	
	$L_1$	$L_2$	$L_1$	$L_2$	$L_1$	$L_2$
Intercept	-5.9014* (2.5325)	-6.8567** (2.4204)	-7.8567* (3.2460)	-7.5102** (2.981)	-5.2720* (2.234)	-6.4634** (2.333)
$L_{t-1}$	0.7177** (0.0967)	0.7166** (0.106)	0.7116** (0.1119)	0.6585** (0.1239)	0.7308** (0.092)	0.6861** (0.101)
$r_t$	0.3995* (0.171)	0.4617** (0.176)	0.5130* (0.2144)	0.4951** (0.1969)	0.3496* (0.150)	0.4345** (0.157)
$r_t$	0.0032 (0.002)	0.0023 (0.002)	0.0024 (0.0027)	0.0031 (0.0033)	0.0030 (0.002)	0.0021 (0.002)
FR <sub>t</sub>	0.1508* (0.064)	0.1358* (0.060)	-	-	-	-
LRC	-	-	0.4955* (0.2161)	0.2953 (0.1523)	-	-
FR <sub>2,t</sub>	-	-	-	-	0.0439* (0.0186)	0.0426* (0.017)
Adjusted R <sup>2</sup>	0.9373	0.9399	0.9451	0.9575	0.9375	0.9607
AR(1)	1.5720	2.7135	-	-	1.5846	2.5008
Sargan's test	0.6585	2.1973	-	-	0.5513	1.6792
<b>FR IS GOOD!!!</b>						
And the real interest rate is not even sig again...						
<b>Stability tests</b>						
1989-1994						
Wald: $\chi^2(6)$	0.8530	0.678	-	-	1.3779	0.6841
Chow: $F(6,28)$	0.2564	0.221	-	-	0.3023	0.1807
1986-1994						
Wald: $\chi^2(5)$	1.8478	0.7323	-	-	2.1221	0.5844
Chow: $F(5,29)$	0.3695	0.1464	-	-	0.4244	0.1169
1980-1994						
Wald: $\chi^2(5)$	7.9502	5.9895	8.8738	6.5339	8.2234	6.0604
Chow: $F(5,29)$	1.5900	1.1979	1.7747	1.3068	1.6447	1.2721

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### DM's 2001 message

- *DM's 1997 message:* Direct effects of FR in India were negative and substantial
- Direct effects of FR in South Korea were positive and substantial
  
- It depends on banking industry behaviour
  
- Lesson: Market failure does not guarantee government success

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### SUMMARY

*Evidence on FR...*

- *shows that it is an important source of govt revenue*
  
- *shows that FR can have positive or negative effects on Financial Development*
  
- *shows that political economy determinants are important*

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### Discussion questions

- Briefly define financial repression and financial liberalization.
  
- How important is financial repression in generating government revenue? Present and assess some of the estimates available in the empirical literature we reviewed in class.
  
- What are the main determinants of financial repression? Use the various papers we reviewed in class the role political economy factors play in this process.
  
- What are the implications of financial repression in terms of financial deepening and economic growth? Use the experience of two developing countries of your choice to illustrate your answer.

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