

Loans and Lenders

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Comments by
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Financial system in Northern China 19th-C+

Conflicting visions and interpretations:

- Usury & exploitation & monopoly
- Credit & intermediation & competition

Financial system in Northern China 19th-C+

Contributions:

- New database of lending
- Analysis of interest rates

Financial system in Northern China 19th-C+

Too much or too little?

Rich set of institutional forms

Lending contracts

- short and long
- within and across markets

Retail and other trade credit

ROSCAs

Land and other collateral

Example contract

“Originating a contract for a loan of silver to Xu Tingbin who is inconvenienced and short of funds. He is today borrowing from Xing Youyi pure silver in the amount of 10 taels exactly. It is clearly stated that this will accrue a monthly interest of 2%. In case the silver is not paid, the defaulting party has posted as collateral 2 mu [1/3 acre] of flat land at Yidaokou.”

Rich set of institutional forms

Lending contracts

- short and long
- within and across markets

Retail and other trade credit

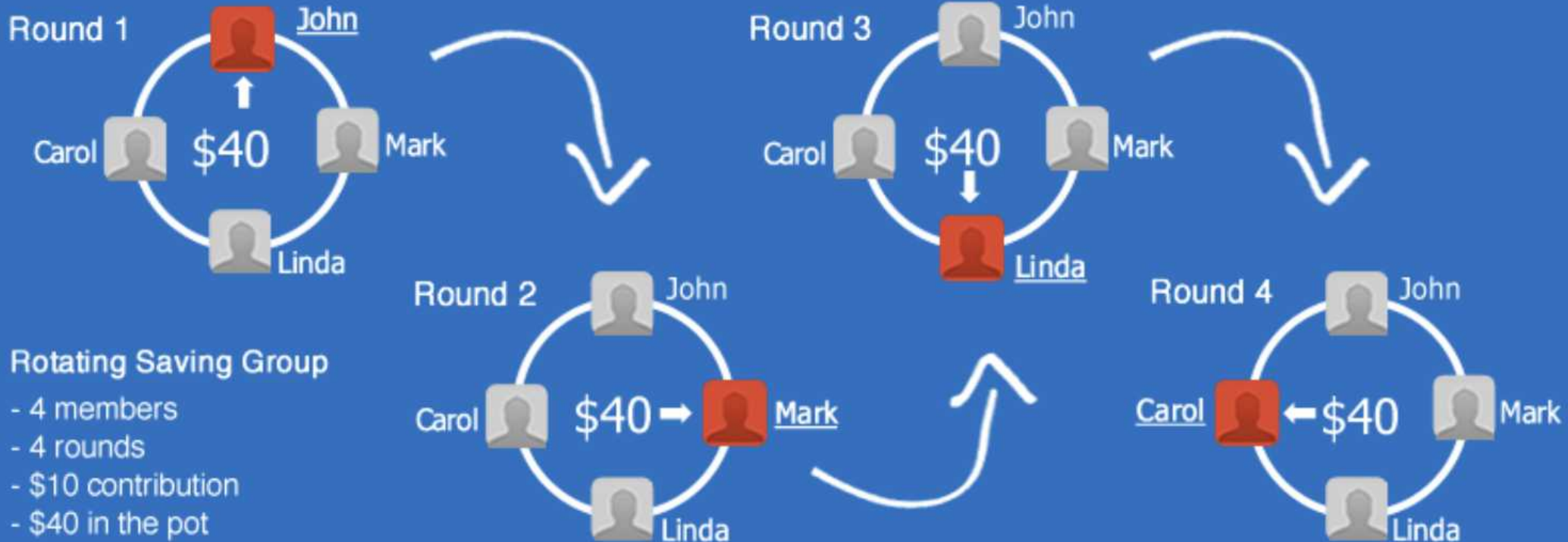
ROSCAs

Land and other collateral

ROSCAs

Source: collaborativefinance.org/rosca/fixed-allocation/

Rotating savings and credit association



Rich set of institutional forms

Lending contracts

- short and long
- within and across markets

Retail and other trade credit

ROSCAs

Land and other collateral

Money versus in-kind (grain) loans

Seasonal cycle in prices.

Evidence of insurance

Cost of depreciation. Storage tech had high fixed cost?

Only for small numbers of people? No! c. 50% (similar to fraction holding monetary debts)

Seasonal grain prices

Burke, Marshall, Lauren Falcao Bergquist, and Edward Miguel. 2020. "Sell Low and Buy High: Arbitrage and Local Price Effects in Kenyan Markets." *The Quarterly Journal of Economics* 134 (2): 785–842.

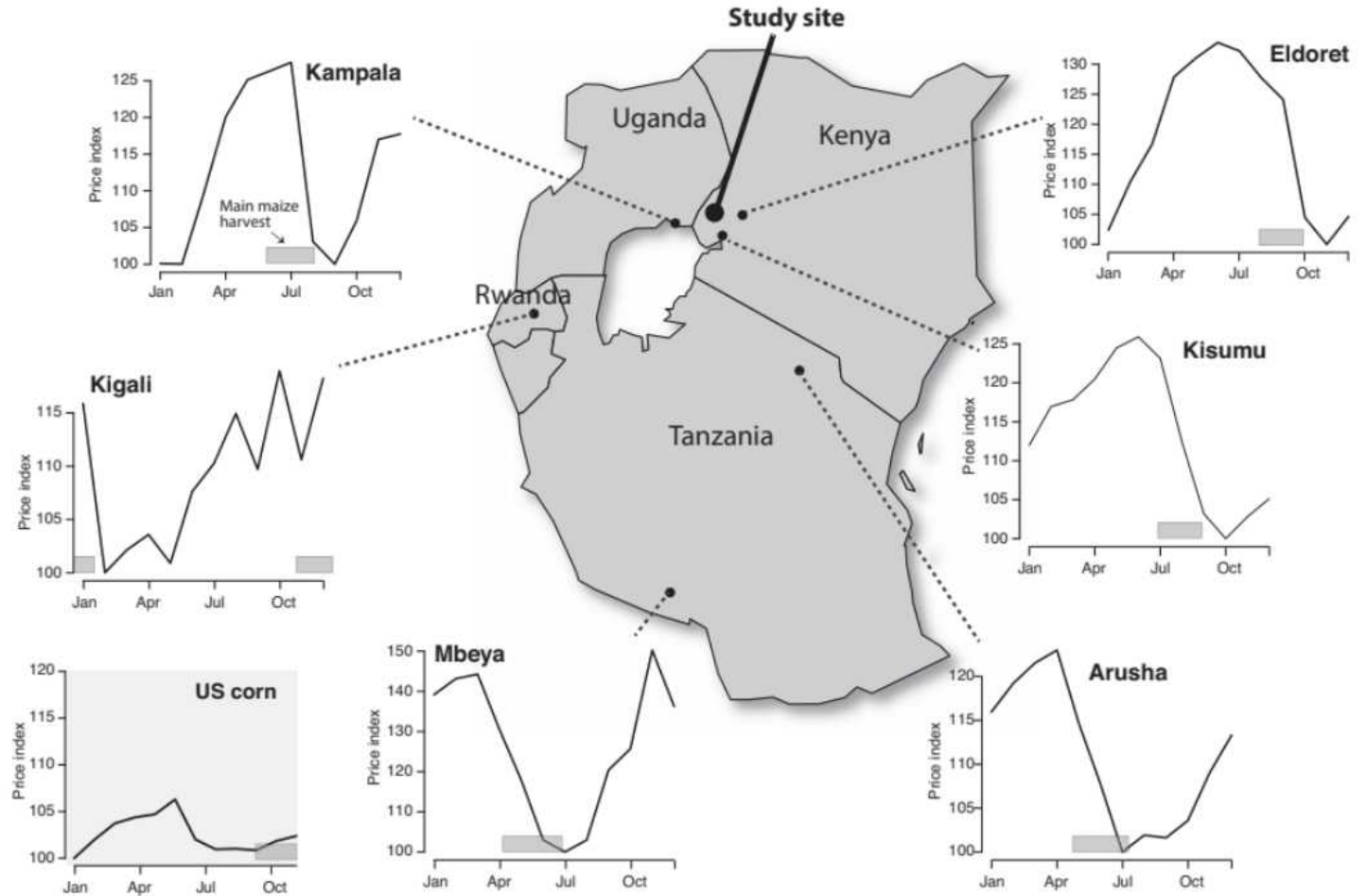
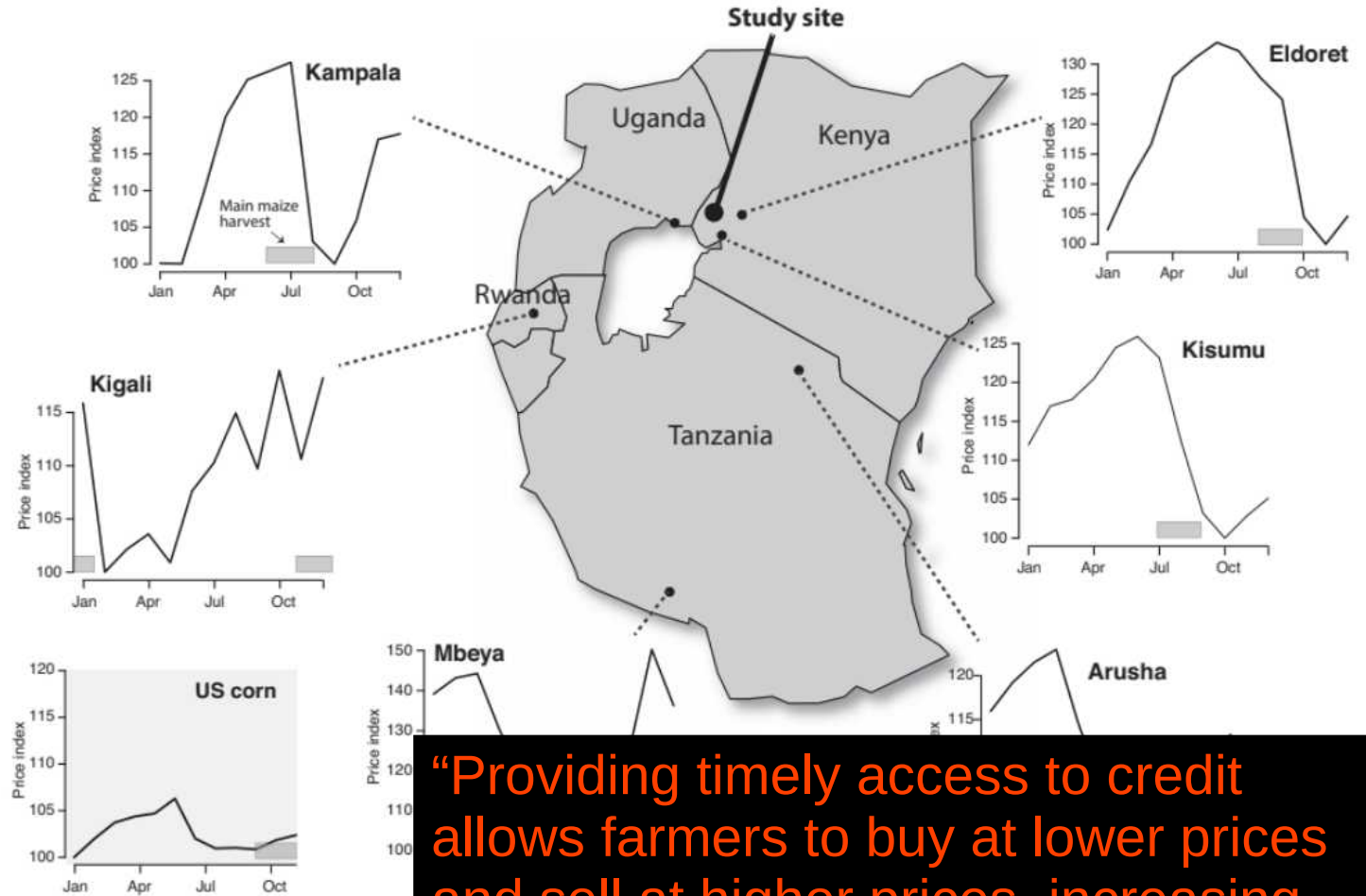


FIGURE I
Monthly Average Maize Prices

Seasonal grain prices

Burke, Marshall, Lauren Falcao Bergquist, and Edward Miguel. 2020. "Sell Low and Buy High: Arbitrage and Local Price Effects in Kenyan Markets." *The Quarterly Journal of Economics* 134 (2): 785–842.



“Providing timely access to credit allows farmers to buy at lower prices and sell at higher prices, increasing farm revenues and generating a return on investment of 29%.”

Rich set of institutional forms

Overlap & choice & substitution

→ limits on market power

→ market integration

Market integration: what's the test?

Flows

Spatial correlation

Who?

Levels or changes

LOOP

Wedges / Spreads

Lenders' market power

Frictions in the capital market

Intertemporal consumption problem

Ramsey model
w/ capital market

$\exp(-\rho t) u(c_t)$

$f'(k)$

$g=n=0$

Discount rate ρ

Rate of return $\{ r, MPK \}$

Net borrowing b_t

Own capital stock k_t

Intertemporal consumption problem (Euler eq'n)

Compare rate of return
to discount rate

Intertemporal consumption problem (Euler eq'n)

$$MPK < \rho$$

Bring more consumption to
the present → borrow

Consumption falling: $dc/dt < 0$

Intertemporal consumption problem (Euler eq'n)

$$MPK < \rho$$

Bring more consumption to the present → borrow

Consumption falling: $dc/dt < 0$

$$MPK > \rho$$

Send more consumption to the future → save

Consumption rising: $dc/dt > 0$

Intertemporal consumption problem (Euler eq'n)

Steady state:

Discount rate
equals rate of
return

$$\rho = MPK$$

or maybe

$$\rho = \{ MPK , r \}$$

Add heterogeneity in time preference

(after Banerjee & Moll, AEJ:Macro, 2010)

ρ_{lo} patient

ρ_{hi} impatient

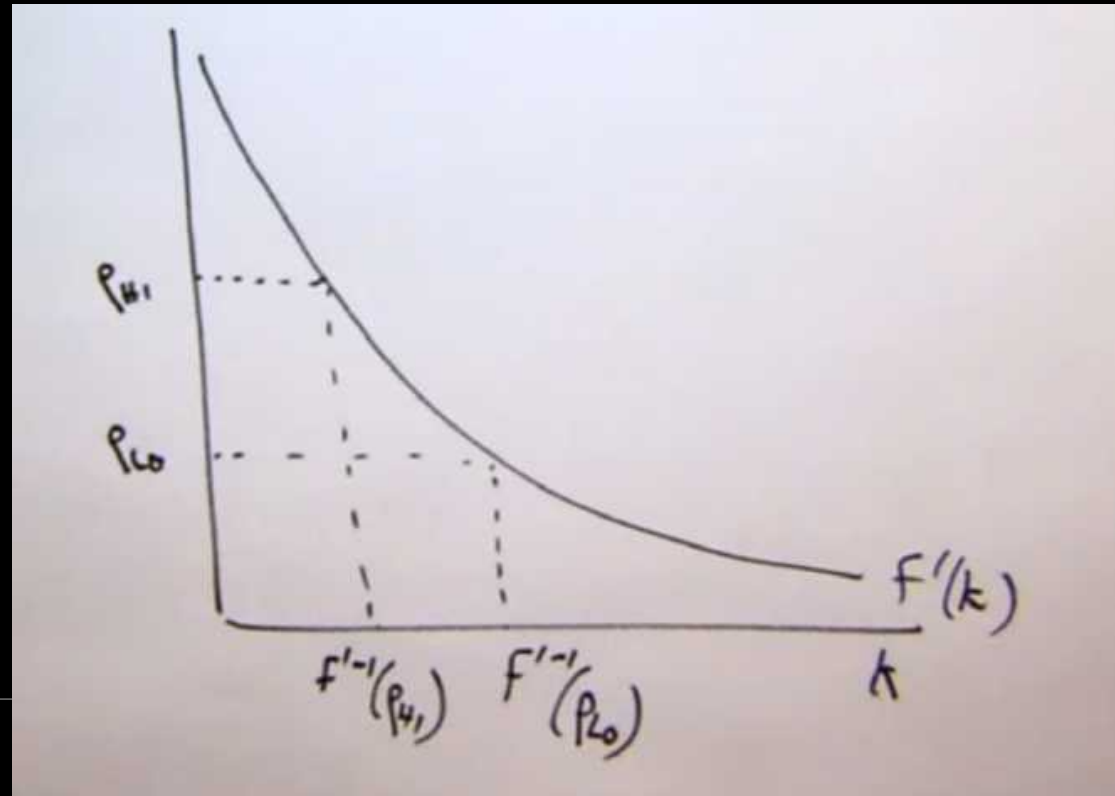
$\rho_{lo} < \rho_{hi}$

Steady states, various assumptions

Case 1: no capital market for anyone

$$\rho_i = MPK_i$$

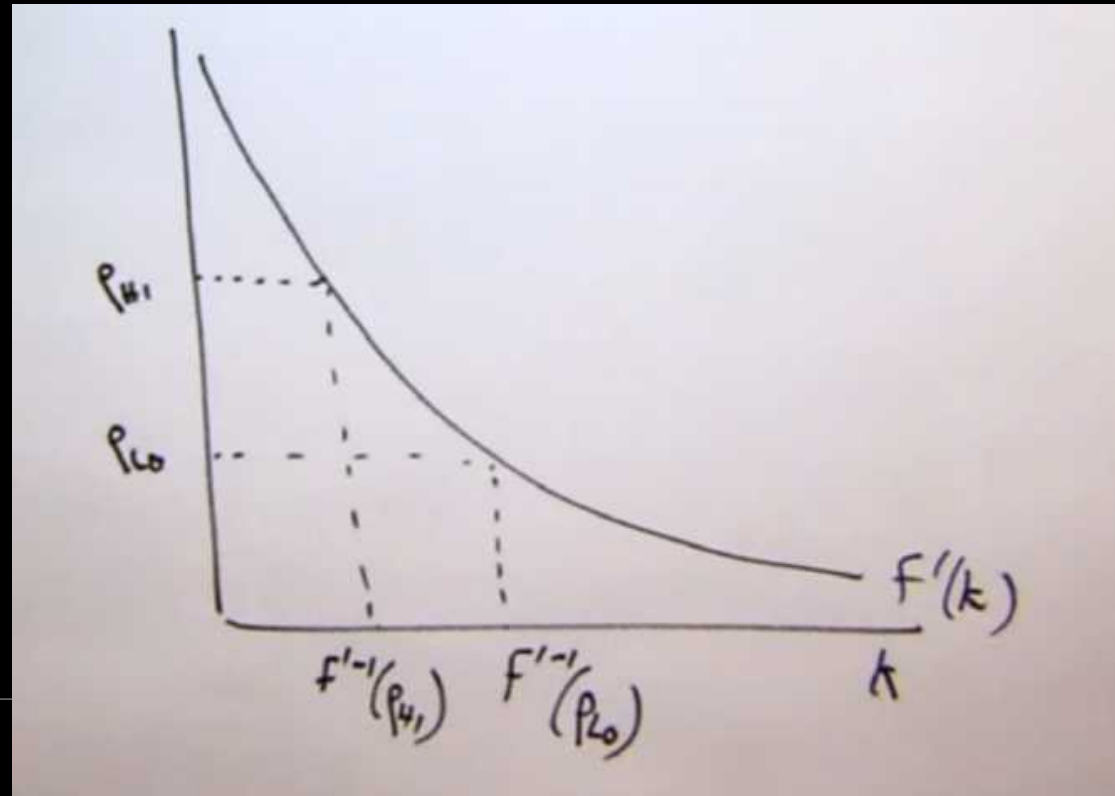
r undefined



Steady states, various assumptions

Case 2: segmented capital market by type

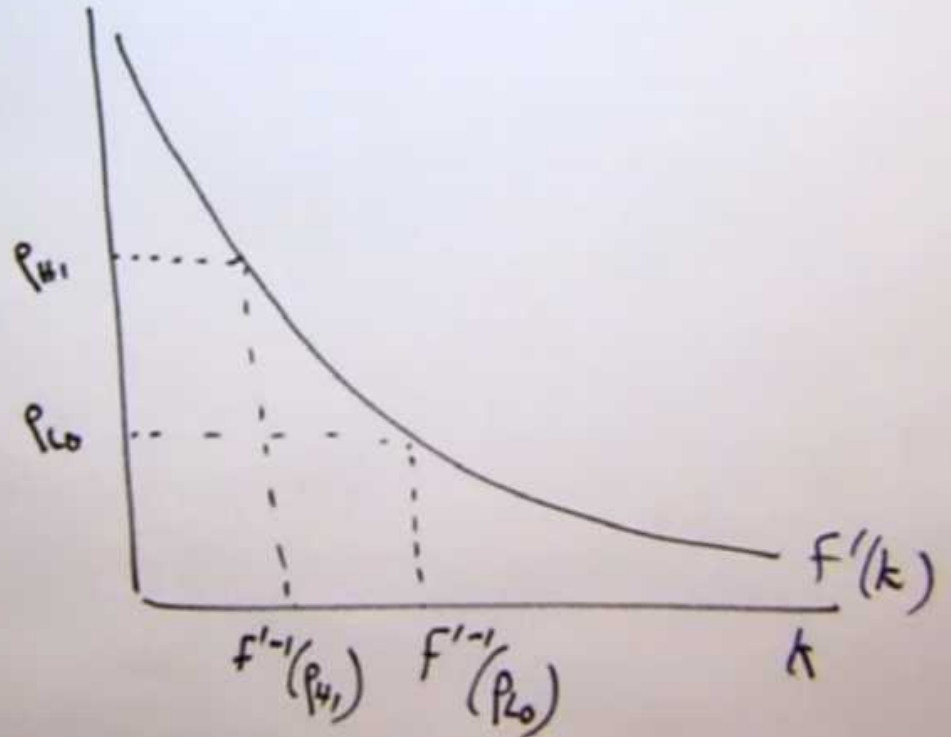
$$\rho_i = MPK_i = r_i$$



Steady states, various assumptions

Case 3: integrated capital markets

r



Steady states, various assumptions

Case 3: integrated capital markets

r

Steady states, various assumptions

Case 3: integrated capital markets

h_i : borrowing

l_o : lending

(forever)

Steady states, various assumptions

Case 3: integrated capital markets

hi: consumption falling

lo: consumption rising

(forever)

Steady states, various assumptions

Case 3: integrated capital markets

This case seems unsustainable in the long term.

Steady states, various assumptions

Case 4: integrated capital markets with cap on borrowing

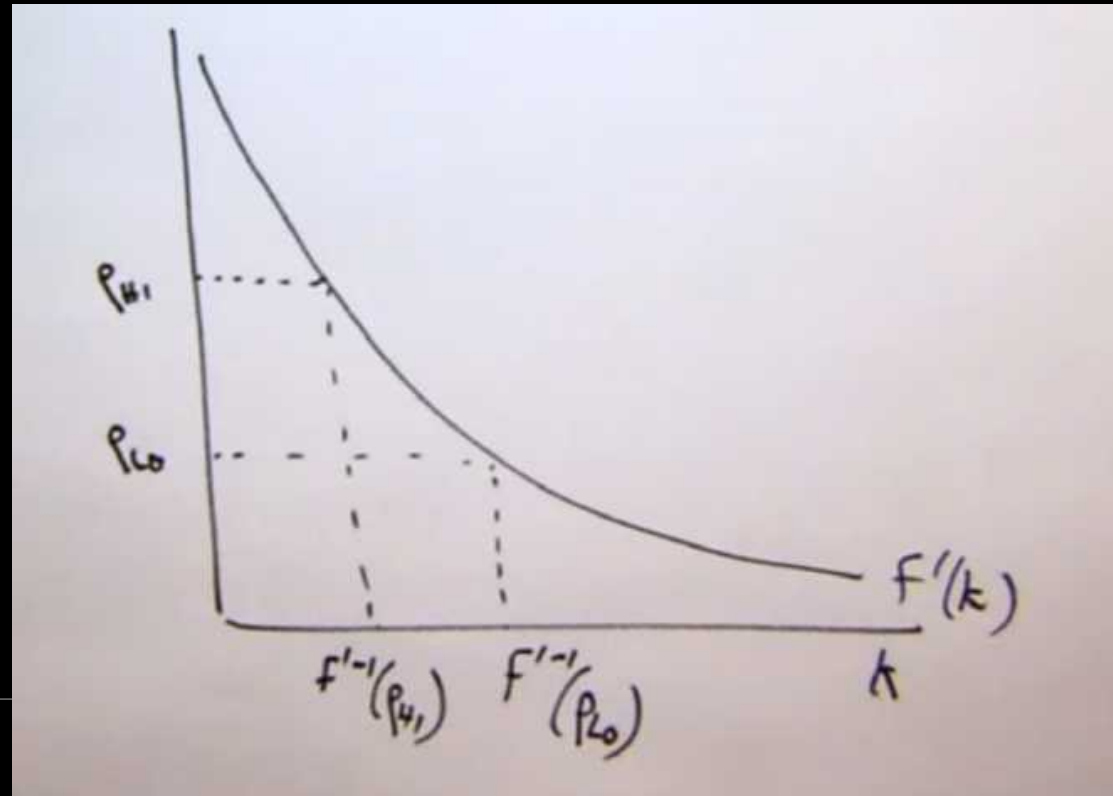
$$r_t < \rho_{hi}$$

starts off in 'Les Mis' direction
'hi' hits borrowing constraint
'lo' clears LR capital market

Steady states, various assumptions

Case 4: integrated capital markets with cap on borrowing

$$r_t < \rho_{hi}$$



Constraint: lower bound on consumption

Borrowing cap

Bankruptcy

Transfers (UBI)

Inalienable...

- Human capital (free labor)
- Usufruct land rights (serfdom, ejidos)

Conclusion

New database on lending in 19th-C China

Interest rates don't look 'usurious' on avg

... except in grain, b/c seasonal prices

Flows and spat-corr suggest market integration

Some insurance features

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