

# Lecture 3: Financial Markets and Development

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- Reduce credit constraints on investors
- Enable the transfer of funds to individuals with better investment opportunities.

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$$\log c(t) + E_t \log c(t + 1)$$

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- Fixed cost  $\zeta > 0$  of participating to the market for risky assets

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- $V^F > V^N$  :

$$W > W^* = \frac{\zeta}{1 - (q/Q)^{\beta/(1+\beta)}}$$

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## Dynamics in Equilibrium

- Individuals using the market for risky assets

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- Let  $\chi_\xi(t) = W^*(\xi)/(1 - \alpha)K^\alpha(t)$

$$K(t+1) = \frac{\beta}{1 + \beta} \left[ q \int_I^{\chi_\xi(t)} IdG(I) + Q \int_{\chi_\xi(t)}^I IdG(I) \right] (1 - \alpha) K(t)^\alpha$$

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- More capital  $K(t)$  improves the financial market (i.e. more individuals can efficiently use it)
- Inverse U-shaped relation between growth and inequalities (Kuznet effect)

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- Rajan and Zingales (1998) show that lack of financial development has particularly negative effects on sectors that have greater external borrowing needs
- Jayaratne and Strahan (1996) document how banking deregulation that increased competition in US financial markets led to more rapid financial and economic growth within the United States.



# Credit Market Imperfection and capital Investments

A “convex” world

$$\begin{aligned} \max_{c_t} \quad & \sum_{t=0}^{\infty} \beta^t u(c_t) \\ & c_t + s_t \leq y_t \\ & y_t = f(s_{t-1}); y_0 = \omega \end{aligned}$$

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- For any  $\omega$ , convergence to a Unique steady state  $c^*, y^*, s^*$
- Initial inequalities do not matter

# Credit Market Imperfection and Human capital Investments (Galor and Zeira 1993)

The model

- Individuals Utility

$$\begin{aligned} \max_{c(t), b(t)} & (1 - \delta) \log c_i(t) + \delta \log b_i(t) \\ \text{st} & c_i(t) + b_i(t) \leq y_i(t) \end{aligned}$$

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- Assume

$$w^s - h(1 + r) > (2 + r)w^u$$

(With wealth  $x > h$  it is always profitable to invest in human capital)

# Credit Market Imperfection and Human capital Investments (cont'd)

## Analysis

- if  $x < h$

$$U_s(x) = \log(w^s - (1+i)(h-x)) + \log(1-\delta)^{1-\delta} \delta^\delta$$

$$U_u(x) = \log((1+r)(w^u + x) + w^u) + \log(1-\delta)^{1-\delta} \delta^\delta$$



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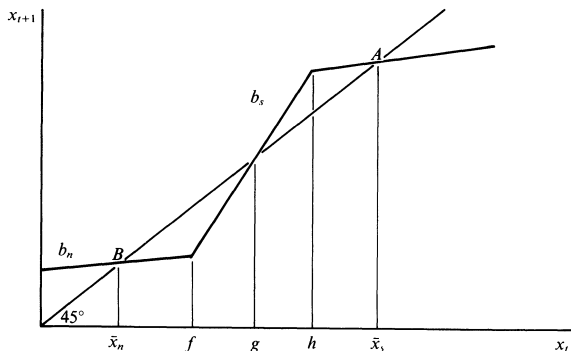
- $U_s(x) > U_u(x)$

$$x > f \equiv \frac{(2+r)w^u + (1+i)h - w_s}{1-r}$$

# Credit Market Imperfection and Human capital Investments (cont'd)

## Analysis

$$x_{t+1} = \begin{cases} b^u(x_t) = \delta((1+r)(w^u + x_t) + w^u) & x_t < f \\ b^s(x_t) = \delta(w^s + (1+i)(x_t - h)) & f \leq x_t < h \\ b^s(x_t) = \delta(w^s + (1+r)(x_t - h)) & x_t \geq h \end{cases}$$



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- Poor individuals with  $x < g$  converge to  $x_n$
- Rich individuals converge to  $x_r$
- An economy initially poor stay poor in the long run: Initial Wealth distribution matters

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- Piketty (1997) and Aghion and Bolton (1997) the effect of inequalities on Interest rates
- Proto (2006) the effect on rental prices

- Positive effect of Financial Markets on Development due to better risk diversification opportunities

# Finance and Development

## Summary

- Positive effect of Financial Markets on Development due to better risk diversification opportunities
- Imperfect Credit markets and poverty affect access to rentable investments and growth