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Discussion of “A Solution to Two Paradoxes of International Capital Flows”

Rui Albuquerque

Boston University and CEPR

IMF 7th Jacques Polak Annual Research Conference
Capital Flows

Motivation

Why does capital not flow from rich to poor countries?

- Lucas (1990): there is wide cross-country variation in income per capita which, if transposed to cross-country variation in interest rates, predicts massive capital flows
- Argument equates the interest rate to the marginal product of capital
- Lucas shows that there are other sources of heterogeneity that can off-set differences in income per capita and equalize interest rates

Results of This Paper

- This paper breaks the link between the interest rate and the marginal product of capital due to a financing friction

$$r = \text{wedge} \times \text{MPK}(K)$$

- It shows that differences in income per capita can be off-set by varying the extent of financing frictions to keep interest rates equalized
- Financing friction also explains why FPE does not hold
- When capital is freely mobile there is a bypass of the local, less efficient financial sector:
 - Local savers put their money in accounts abroad and local economy gets inflow of FDI with source-country financing

A Taste of the Model

- 2-country x 2-sector x 2-factor trade model merged with Holmstrom and Tirole (1998)
- Agents face occupational choice: lenders vs. entrepreneurs
- Moral hazard problem in effort choice generates an *endogenous* borrowing constraint to entrepreneurs:
 - Entrepreneur has to keep enough of the marginal product of capital to be induced to work
 - A less than efficient share of the marginal product of capital goes to the lender and the lender in turn supplies less capital

A Taste of the Model

- In addition, there is an *exogenous* borrowing constraint
 - After an initial investment K_i , firm i is faced with a liquidity shock. It continues operating only if it invests an additional $\rho_i K_i$.
 - Continuation results in expected profits $\lambda R_i K_i$
 - In the first best, firm continues iff $\lambda R_i K_i > \rho_i K_i$, i.e., for $\rho_i \leq \rho^{FB}$.
 - In the second best, the cost associated with the incentive constraint implies that firm continues if $\rho_i \leq \rho^{SB} < \rho^{FB}$
 - Equilibrium in the paper is worse than second best: firm continues if $\rho_i \leq \theta \rho^{SB} < \rho^{SB}$

Results and Discussion

- Borrowing constraints break the link between interest rate and marginal product of capital:

$$r = f(\text{financing frictions})\text{MPK}(K)$$

- Paper can account for the Lucas paradox
- Paper not subject to criticism of FPE because under financial autarky interest rates depend on goods prices and financial market conditions

- Why do we need two borrowing constraints?
- There is a lower bound to θ : lenders can always get $(\lambda R_i - c_{in})K_i$ from entrepreneurs, so that for any $\rho_i K_i < (\lambda R_i - c_{in})K_i$ payment is guaranteed
 - When $c_i = 0$ first best is achieved; θ is irrelevant
 - However, for $c_i > 0$, small cross-country differences in θ can have large effects

Comment on interpretation of θ

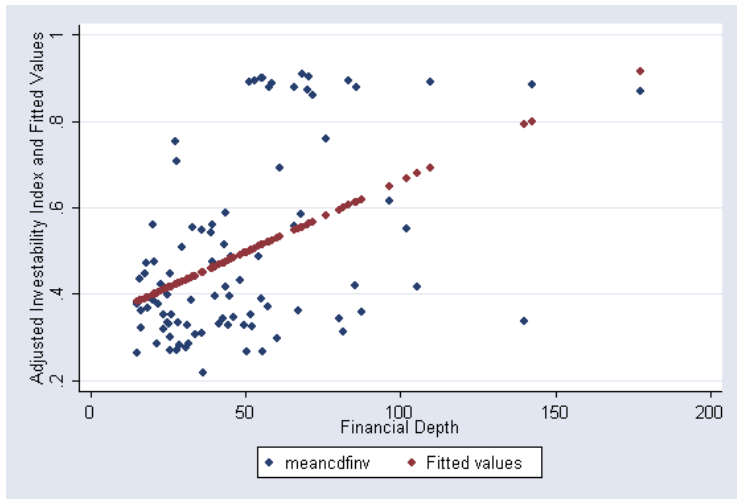
- Parameter θ is interpreted as capturing the level of financial development
- Is θ tied to the local legal environment or to lower productivity in the local financial sector?
- In the second case, we should see FDI into the local banking sector resolving the problem
- Why don't local firms tap foreign lenders just to finance their liquidity needs, bypassing θ ?
- Thinking more about θ and attempting to quantify it is important to help solve the Lucas paradox, since this is ultimately a quantitative issue.

Comment on Bypass Result

- The capital market bypass equilibrium is very interesting and intuitive
- Do we see such capital flows in the data? Quick smell test:
 - 1 Expropriation risk is more severe for foreign investor
 - 2 Multinationals borrow heavily in domestic markets
 - 3 Countries impose restrictions on financial inflows and outflows
- Are we replacing a puzzle with another puzzle?

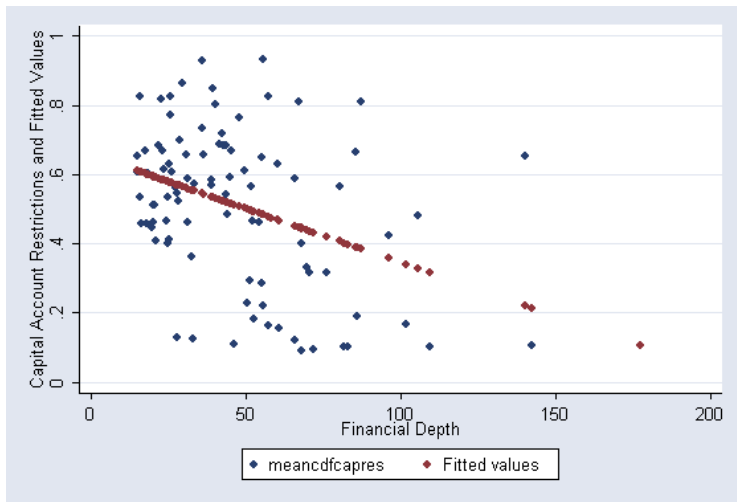
The Bypass Result and ...

Local Financial Development vs Capital Flow Restrictions: (1) Investability Index



The Bypass Result and ...

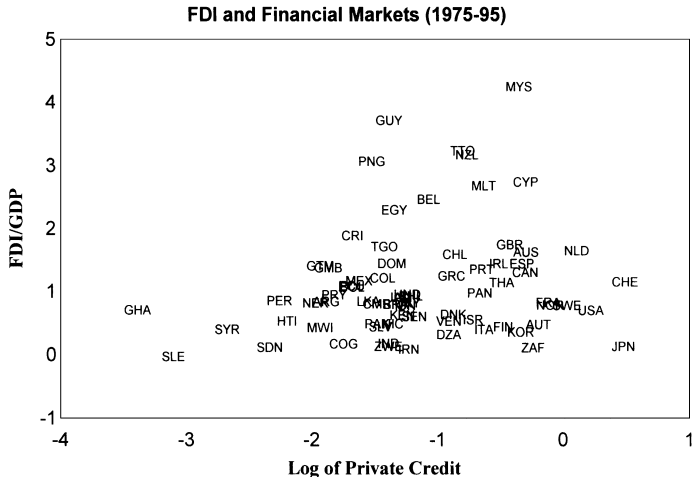
Local Financial Development vs Capital Flow Restrictions: (2) Capital Account Restrictions



The Bypass Result and ...

Local Financial Development vs FDI

L. Alfaro et al. / Journal of International Economics 64 (2004) 89–112



Comment on variety of patterns on capital flows

- Paper generates two-way gross capital flows with a small net-flow
- This is very interesting and arises as a by-product of the inefficiency of the local market
- In Albuquerque-Bauer-Schneider (2007) the same pattern of flows arises because investors in each country are heterogeneous, and in fact large gross flows and a small net-flow are required to explain the data on portfolio equity flows

Conclusion

- This is a very interesting paper
- Merges financial market frictions with international trade
- Provides a model that qualitatively goes in the right direction to resolve the Lucas paradox
- Raises many interesting questions